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The City in the Islamic World

Volume 2

Edited by
Salma K. Jayyusi,
Renata Holod,
Attilio Petruccioli and
André Raymond

BRILL

The City in the Islamic World

Volume 1

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Section 1, The Near and Middle East

Edited by

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Special editors

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PREFACE AND ACKNOWLEDGEMENTS

This book was initially created by the urge that has taken hold of me almost thirty years ago: to enhance the beleaguered and suppressed knowledge of Arabic culture and of Arab/Islamic civilisation outside the Arab world; to try to demonstrate the similarities but also the dissimilarities, the points of convergence and the points of divergence in major avenues of Arab and non-Arab, mainly Western, traditions, and, by this means, perhaps to help bring out the underlying unity of human cultures. This was made especially urgent by the paucity, outside the Arab world, of material representing Arabic culture, thought and literature, and Arab/Islamic civilisation.

I founded East-West Nexus/PROTA for this purpose, with the specific aim of providing the English-speaking world, to the best of my ability, with some of the finest manifestations of the Arab creative talent, past and present. I believe, indeed, that the creative fruits of all cultures are the rightful inheritance of all peoples, and there is confirmation of this in the interest people show in reading the novels and poems of other cultures in translation, of gazing at their monuments and works of art, of listening to their music and watching their dances and performances. It was crucial, I felt, that an attempt was made, at this juncture in time, to foster a genuine understanding of other human triumphs, and of another human civilisation, the Arab-Islamic, that has made such a contribution to the progress of world culture. A Eurocentric emphasis vis-à-vis human progress is not merely flawed. It leads further to the deepening of negative factors between peoples—something whose consequences have become only too evident in recent times. Only when the resplendent gifts, proffered by all the peoples of the world, for the furtherance of aesthetic, philosophic and spiritual goals within humanity are recognized—only then can true civilisation be finally achieved.

In my efforts to foster such understanding, I was upheld and invigorated both by a select group of colleagues in America where this work had its beginnings, and also by colleagues in Europe and the Arab world who shared this view with me.

THIS BOOK:

It was Lewis Mumford's book, *The City in History*, which first awoke in me the idea of providing, for a world audience, a volume on 'the city in the Islamic world'. In his elaborate and beautifully written book, Mumford failed to speak of a single Islamic city—as though such cities were created and inhabited outside the built world, indeed outside human history itself. He had not a word to say of centuries of a luminous civilisation, of an urbanity grounded in magnificent cities that were citadels of learning and discovery, of invention and art, boasting urban gardens and magnificent architecture—nowhere finer than in the Andalusi metropolises to which flocked so many seekers of knowledge from East and West, who having learned and translated all they could, took the fruits of their knowledge back with them to their own countries.

My own love of cities was an additional spur. As a child I was struck with awe when reading the elaborate descriptions of Jurji Zaydan (1861–1914) in his many novels, of pre-modern Islamic cities in various parts of the old Islamic empire. A Lebanese Christian, he was a genuine admirer of the heritage Arabs and other Muslims had handed down in the sphere of urban culture, and his writings were eye openers to the high level of sophistication and complexity Islamic cities had attained in their time. My young mind was imbued with images of great events, processions, palaces, libraries, of public baths and fragrant gardens, of spacious and elaborately designed mosques. Mumford's omission of all cities Islamic brought these childhood images surging back to my mind, and I resolved forthwith to bring out a specialised book on the city in the Islamic world.

However, I was faced at the outset with two major challenges: the first to obtain financial sponsorship for a work I visualised as a voluminous, comprehensive account of the Islamic city, the second to engage the interest of some of the leading specialist scholars on the Islamic city, who would undertake the specific editing of the work.

It was clear that such a major work would perforce need a subsidy. It took me eleven years to find one, when I finally sought the help of my friend, Abdallah al-Nasir, the Saudi Cultural Representative at the Saudi Cultural Mission in London. His understanding of my work in general, and of the need for disseminating Arabic culture in the world, had been always profound, manifested in a constant readiness to help whenever he could. He it was who spoke to Dr. Khalid al-{Angari, Minister of Higher Education in Saudi Arabia and one of the most enlightened and responsible guardians of culture in our part of the world. Dr. {Angari was enthused with the idea of the book and immediately assumed the responsibility for helping us accomplish the project. He spoke to his Royal Highness, Prince Abd al-Aziz ibn Fahd, who is well-known for his enthusiastic interest in Arabic civilisation and culture, and we had our subsidy.

As for identifying the proper editors, specialised in the city in the Muslim world, there was no great difficulty involved. I had read some of Professor André Raymond's excellent work, and was struck by its scope, depth and style. I had also come to know Dr. Attilio Petruccioli when he held in the 1990s the Aga Khan Chair at the MIT in Cambridge, Mass. where I live, and I had come to admire his overriding preoccupation with his vast area of specialization. He and I met several times during the mid-1990s to discuss the endeavour and to work out a provisional, preliminary table of contents for a book which was yet to be born. My friend, Professor Oleg Grabar, one of the world's most renowned Islamic city specialists, further urged me to contact Professor Renata Holod at Penn University, with a view to her becoming the third specialised editor the projected work needed. She was immediately enthusiastic about the project, lending it her wide knowledge of the subject, her characteristic precision and zest. This was a wonderful meeting of minds, fruitful, amiable and totally rewarding; and here I should like to extend my heartfelt thanks to all three of this book's specialised editors, for their insight, their precision, their creativity and their unfailing care. It was the greatest pleasure to work with them.

To the contributors for this volume we owe many thanks. Each of them gave this book the fruits of his or her own specialisation and, by their serious and meticulous effort they cooperated on giving to the world readership a rounded and comprehensive account on the Islamic city, its past and present, and the complex role it has played in the history of human civilisation. They are indeed the backbone of this work.

And we all join in thanking His Royal Highness, Prince Abd al-Aziz ibn Fahd ibn Abd al-Aziz for his most generous subsidy, which made it possible for us to collaborate in bringing this work to fruition. Our deep gratitude goes also to Dr. Khalid al-{Angari who proved to be a staunch supporter of civilizational projects aimed at furthering knowledge about Arab/Islamic culture, and its role as builder and enhancer of world culture. We also thank Ustadh Abdallah al-Nasser for his initiating role in facilitating this work and for his thorough understanding of the need to give Arabic culture and civilization their rightful place within contemporary world culture.

Salma Khadra Jayyusi
Editor of Islamic Civilisation Series
EAST-WEST NEXUS/PROTA

INTRODUCTION

Recent calamitous events have shone a light of attention and renewed curiosity on the Islamic world in a most insistent fashion. Whether it was the attack on the World Trade Center, the search for the Taliban in Afghanistan, the war in Iraq, the unsolved problem of Palestine or even the most recent assault on Beirut, all have put the Islamic world in the centre of media attention. Yet, beneath that roiled surface, there is much that warrants a deeper, more sustained look. The purpose of this book, then, is to focus on the sites of life, politics, and culture where current and past generations of the Islamic world have made their mark. These are, of course, its cities, large and small, forgotten or dynamically growing. Such an initiative is all the more important as there has been much new research on the nature of these cities in the past decades. Yet, in spite of this large body of detailed information, there are few recent volumes attempting to present a new summary or digest of it all; and none in the Arabic language.

Since this volume is a contribution of many authors, the approach must be as inclusive as possible, looking from different perspectives and with varying methods for urban studies at functions and on special or regional cases. The single leading concept, nonetheless, has been to consider the city as a living organism. The city, then, consists of parts that are deeply interconnected, with patterns of residence, circulation, public spaces, and facilities, mutually and dynamically collaborative, to yield a culture of urban life. And as any living organism, the city should be seen in continuous transformation and not in frozen images. The city has a birth and a death as well.

Unlike many previous volumes dealing with the city in the Islamic world, this one has been specially expanded not only to include snapshots of historical fabric but also to deal with the transformation of this fabric into modern and contemporary urban entities. Rather than focusing on specific historic fabrics alone, often the sites of political and nationalist image-making, attention has been drawn to the entire flow of urban processes up to and including the present, encompassing such phenomena as the introduction of wheeled transport, the impact of colonial structures and administration, and the overwhelming changes brought about by demographic migrations of recent years.

We have chosen to title this volume "City in the Islamic World" specifically to circumvent the no longer productive discourse on the "Islamic City." These issues have been debated for some decades now and are reflected in the review of the literature in the first chapter. Rather, by assembling specifically focused studies on the organic, regional, and chronological aspects of the city, we hope to bring a richer database into circulation; and from it derive a more viable view of how cities functioned and continue to function as loci of identity and culture.

While the large-scale changes in cities have been sufficiently documented by official sources and maps, the smaller-scale impact of individual decisions can now be better retrieved and made apparent. Thanks to an almost continuous stream of new publications dealing with archival data, we have a closer and closer view of the concerns and transformations of urban life. For example, the social service centres dotting the cityscapes were founded and funded by various members, male and female, of the ruling elites. These are now better known, thanks to the publication of numerous pious foundation documents (Arabic waqf or hubus, Persian vaqf). As well, continuous work on official and private family archives has illuminated aspects of urban life and change. The massive Ottoman material, including cadastral and taxation records, throws new light on regional variations. The greater availability of materials in the former soviet Central Asian republics allows for a larger comparative scope. And the increasing attention to, and availability of, family papers, whether held in chests or stored in reused olive oil dolias, allow for microanalysis down to the single domestic unit.

For the presentation of the city as a continuous and dynamic organism, study of the near past, namely the nineteenth and twentieth centuries, clearly becomes crucial. In this pursuit, all colonial archives as well as material stored in the planning offices and agencies of municipalities are invaluable. For example, the Vincennes Archives de la Guerre, Les Archives d'Outre-Mer in Aix-en-Provence, the India Office Library in London, and similar such collections can yield data that change our perceptions about the early modern city.

Materials such as cadastral surveys and insurance maps created for a different initial purpose have now begun to be utilized for the interpretation of the history of urban fabric. For example, the Pervititch map of Istanbul of 1922–1945 for fire insurance, the cadastral surveys in the French tradition at the scale of 1:500 in areas of former French control and impact (such as Syria and Algeria), and even the survey recording the church properties of Toledo, can be regarded as palimpsests of urban life. More recently, new tools applied to the analysis of urban form ranging from satellite imaging to geographic data collected through GIS and GPS have further strengthened and deepened the basic data. Further, discourse about urban form analyses has been accelerated through new centres and systems of diffusion of information. These are, for example, the Centre for the Study of the Built Environment (CSBE) in Jordan, the Equipe Monde Arabe et Méditerranée/(URBAMA/EMAM) at the University of Tours, IREMAM at the CNRS and the University of Aix-en-Provence, the School of Architecture of Bari, the Archnet website (archnet.org) sponsored by the Aga Khan Trust for Culture, and a burgeoning list of periodicals on architecture and urbanism produced anywhere from Morocco to Turkey and Iran.

While few historical studies of cities have extended their attention into contemporary time, dealing with the urban setting as it has been experienced by its users holds great promise. The urban experience has been recognized as a rich source by many writers, among them most recently Orhan Pamuk, in his Istanbul. More anthropologically conducted studies, such as that on Sefrou in Morocco by C. Geertz, H. Geertz, and L. Rosen also show that every urban dweller has a specific experience of a place, while sharing in even the densest environment. These experiences are very much a product of age, class, status, and gender.

The images of urban settings with their monuments as well as small-scale daily activities are windows into the social and economic life of the city. The publication and increasing accessibility of historic photographic collections such as those of the Library of Congress, the University of Bamberg Collection, and the volumes of cityscapes comparing old and new (for example, those of Morocco, gathered by Said Mouline as Repères de la Mémoire), anchor our ideas about individual city settings.

The method for studying urban fabric, begun by Saverio Muratori and continued by the school of Versailles, has been applied to cities in the Islamic world since the 1980's, and has brought ever-richer results. Either at the scale of buildings or at the scale of urban fabric, this method has allowed for the integration of data from maps, texts, and excavations, as is the case of the Cairo study by Philippe Panerai and Sawsan Noweir, or in several of the articles in this volume.

Contributions of archaeological investigations over the last four decades have brought to light massive detail about the construction, continuity, expansion, and usage of urban fabric. Whether in projects of rescue archaeology or in extensive horizontal exposures, chronological shifts, and changes in function are now better documented. For example, the excavations in Beth Shan have shown massive Umayyad investment in a ruinous late antique city. And Navarro Palazon's exposure of several hectares of residential fabric in Murcia has allowed a reconstruction of the medieval Islamic city. Work on the ruins of old Samarkand-Afrasiyab has brought to light palatial structures as well as the foundation of the congregational mosque (masjid al-jami{). Alastair Northedge has combined new mapping techniques with sondage and textual sources to give a newer, fuller picture of the palace city of Samarra. The investigation of Jean Passini in the basements of Toledo, coordinated with old church property registers, has mapped the first Islamic city there.

At the same time, scholars using geographical and legal texts have developed new theoretical perspectives about the use of space within the city, and about the ordering and function of urban territory. Public and private zoning, inheritance law, and concepts of urban nomenclature and administration have been investigated by a variety of scholars, among them Saleh Hathloul, Paul Wheately, and Baber Johansen. Through these efforts, Islamic civilization has been clearly re-articulated as, primarily, an urban civilization.

New urban construction at large scale has been a constant feature of the twentieth (and twenty-first) century. The fuller publication and close critique of these new entities can reveal the extent of continuities and ruptures within urban thinking and imagination. At best, these large-scale interventions can introduce environmental amelioration and psychological relief to an otherwise overburdened urban sprawl. For example, the Middle East Technical University's planting programme has been able to modify the microclimate of Ankara. The Cairo Park commissioned by the Aga Khan has inserted a massive new green presence into the brown horizon of an eighteen million—large megalopolis. New capitals for new states have created large zones of public interaction, allowing for newer methods of communication and formation of national identities. Whether Ankara within a newly constituted secular republic of Turkey of the 1930s, Islamabad and Dhaka in the new Islamic republic of Pakistan of the 1960–70s, or the new setting for the Saudi monarchy in Riyadh of the 1970s, the new city fabric holds present and future urban experience within its structure of public buildings, highways, apartments, and parks. Conservation and restoration-attempts to recuperate and reconstitute urban and territorial morphology can only be partial at this scale of change; nonetheless, they deserve attention and resources, as they are still the loci of living patterns. Whether in the territory of the hills of Hunza, or the urban fabric of Tunis, the small-scale spaces create intimate corners for life. Finally, the newest leap into myth-making futures is represented by the waterfronts in Abu Dhabi or Dubai, with scales of construction visible even at satellite level.

In introducing the material of this book and its arrangement, we have paid special attention to the fact that we see the city as an organic whole. Therefore, whatever their functions and characteristics, whether past or present, they all contribute to it. The study of the city within the Islamic world has had a long history, one that has been recounted and theorized by the late Paolo Cuneo, now updated in Part I, section 1. Included is, of course, a post-colonial critique of several key early works. André Raymond, in his consideration of the city as an Arab or Islamic city, addresses some of the problems in designating an urban entity as one or the other. Nonetheless, it is through the lens of Islamic law, when it was applied to city living, that the special characteristics of the city called "Islamic" can be discerned, as is elaborated in Part I, section 3. Based on law cases that were post-positive reactions to the situation of urban life, dealing with heights of buildings, harm to the neighbour, or more general zoning, one can ask the question whether Islamic law, the shari{a, modified the physical layout of the city and to what extent. This question is particularly important when considering urban organisms that have been inherited by the Islamic empires from earlier urban fabrics and traditions of city life. Part I, section 4 lays out some of the details of this inheritance. On the other hand, early in the history of Islamic expansion, there was a perceived need to found new, exclusively Muslim settlements, tied most often to army encampments and to dynastic palace cities. This dyad of city and palace continued to have special reverberation within Islamic space, and was key to the development of the idea of what is "civilized" (tamaddun, mutamaddin) and what is not. Thus, the new madinas, whether east or west, in fact, became that image of Islamic civilization. Part I, section 5 records the phenomenon of new city foundation and its role in developing an Islamic hegemony.

Dealing with the city as an organism is also dealing with a description of its functions. Thus, the city at work is a section within the volume that pays particular attention to those functions that provided it with water, communication, education, administration, public order, private retreat, and civic life. All these together assure the proper and continuous health of the organism.

The city has always functioned as the locus of religious practice for Muslims, as well as for Christian and Jewish communities within the Islamic world. Any congregational mosque had to be situated in an agglomeration of contiguous buildings designated as madina. Furthermore, beginning with Mecca, Medina, and Jerusalem, and including numerous, lesser but, nonetheless, important shrines, among them Karbala, or Mashhad, urban centres have been vessels for, and supporters of, piety and pilgrimage.

The kaleidoscopic composition of the dar al-islam obliges us to take a closer look at the regional and chronological differentiation of the city. This has become possible thanks to the variety of specialized studies. Thus, in this part of the volume, we have made an effort to represent cities ranging from the Atlantic to the Indian Ocean. Cultural geographies created regional models that encompassed ideas of space and landscape extant before Islam, and it was their relationship to new models of social life and power that have contributed to shaping the city within the Islamic world. The selection of case studies is arranged regionally and chronologically, and this arrangement is meant to bridge the "gap" between what has been called traditional and modern.

Many new cites in the early centuries of the Islamic world were founded with an intentional design. Yet, that very design has been consumed by their success as urban centres. In the end, the diagram for the city was challenged and disaggregated by the application of the Islamic legal system and usage to form a new and individualized urban fabric, in which private space was vouchsafed and public space was a feature of usage but without clear and marked boundaries. Initial diagrams for cities such as the grid, square, or circle, remain as mere memory in texts in the case of successful cities such as Baghdad or Cairo; they can only be fully recuperated from unsuccessful or abandoned sites and entities. Therefore, the archaeological recovery of the initial layout ideas and plans has been essential, as in the case of Qasr al-Hayr al-Sharqi and {Anjar in the central lands, Qsar al-Sghir in the west, or Merv in the east. In fact, these sites can now be fertile grounds for the recuperation of surveying techniques and metrology.

While early medieval urbanism can be reconstructed only partially, the early modern city, in some cases, can be experienced as it was conceived and built. In particular, the sixteenth and seventeenth century ideas of layout and urban form are available in the Safavid and

Mughal capitals such as Isfahan, Fathepur Sikri, Agra, or Shahjahanabad. These environments were generated out of Timurid garden and landscape thinking on an exploded scale. They also became the sites of an expansive public culture, epitomized by parades and court viewings, theatrical performances, markets, coffee shops, and banquets. The Ottomans made the Bosphorus their garden and viewing space, while the inherited city of Stambul remained a grouping of villages in an extensive cultivated landscape interspersed with monumental sultanic and elite social service complexes (kulliye). And similarly, in the entire Ottoman Empire, the city would remain without further planning or layout until the Tanzimat period of the nineteenth century.

The establishment of a public ferry system (Shirket-i Hayriye) in Istanbul in the 1850s marked the arrival of "modern" life. Over the horizon of the nineteenth century, city life was impacted dramatically, as the telegraph, the railroad, and public lighting also made their appearance. While these new technologies were means to a greater unification of the territory of the city, the capital in particular, and selected provincial centres as well, their adoption also ushered in closer controls. From taxes to hygiene, all aspects of "new" urban life were now within the purview of the central state government. These techniques of organization brought with them increasing European influence, if not outright control, in Istanbul as well as in Cairo. Additionally, what had been an insistently pedestrian city, with densely packed habitation zones, was now making room for the newly reintroduced wheeled transport. Systems of production previously organized through guilds disappeared in favour of imported technicians; agricultural monocultures fed an extensive export network replacing an earlier organization of territory. With the arrival and expansion of colonialist empires, many nineteenth and early twentieth century cities in the Islamic world became the recipients of a different model of urban space and social interaction. Not unexpectedly, these habits of receiving urban ideas did not stop with the colonialist era. The newly independent states have continued implanting the large-scale developments, whether commercial or state-funded, and often the least successful of European or American planning and building practices.

As a result, we are now looking at a massively changed picture of urban life. The present manner of urban planning and layout has been separated from earlier urban experiences that, in fact, had defined the Islamic world. Not only have most urban centres grown exponentially in population and territory, they have already set aside, or are at the risk of forgetting, their own past experiences with urban living. The area of historical fabric per city probably does, at best, not reach more than 10–15 percent of the built-up zone. Nevertheless, the older urban fabric still has valuable lessons to teach, among them a complexity of spatial and chronological relationships, rather than a mechanical linearity of experience. Even if only preserved as a museum of forms, it functions as a guarantor of local identity. More importantly, it serves as a repository of design principles and ideas in opposition to self-referential plans invented by "star" architects. Its potential to generate alternative models for a habitable environment has yet to be fully activated.

Renata Holod
Attilio Petruccioli
André Raymond

PART ONE

GENERAL TOPICS

SOME HISTORIOGRAPHICAL NOTES ON THE ISLAMIC CITY WITH PARTICULAR REFERENCE TO THE VISUAL REPRESENTATION OF THE BUILT CITY

Giulia Annalinda Neglia

The Orientalist Approach

At the beginning of the twentieth century European scholarship on the Islamic city was based mainly on two approaches: one who attributed the structure of Islamic cities to social and religious factors and another one who sought to describe their structure through an approach which was more dependent on an analysis of the urban structure and its physical features. The first of these approaches comes from English and particularly German Orientalist studies for which the Islamic city represented a theoretical rather than an actual horizon informed by archaeological, historical, and social interests: it was an urban system connoted by a "different" structure from the "western" one since it was based on a different social organization. The second approach comes from Orientalist studies of French derivation for which a knowledge of the Islamic city was much more immediate and tangible since it was born from the actual conquest of extensive territories around the Mediterranean. For this approach the Islamic city represented a system to be described in detail in order to be controlled politically. Actually, these two approaches were never completely separate. Instead, they constituted two different attitudes that travelled in tandem for a long time until modern historiography subjected them to a critical revision.

The origin of Orientalist studies on the Islamic city[1] springs from an interest in the cities of North Africa that was cultivated, from the

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[1] Some of the most important works that have sketched the main lines of this debate in relation to urban studies are: M. E. Bonine, E. Ehlers, T. Krafft, and G. Stöber, eds., *The Middle Eastern City and Islamic Urbanism: An Annotated Bibliography of Western Literature* (Bonn, 1994); M. Haneda, "An Interpretation of the Concept of Islamic City," in *Islamic Urban Studies: Historical Review and Perspective*, ed. M. Haneda and T. Miura (London and New York, 1994); M. Kisaichi, "The Maghrib," in *Islamic Urban Studies: Historical Review and Perspective*, ed. M. Haneda and T. Miura (London and New York, 1994); P. Guichard, "Les villes d'al-Andalus et de l'Occident musulman aux premiers siècles

1920s onwards, by historians such as William and Georges Marçais, Roger Le Tourneau, Louis Massignon, and Robert Brunschvig. These historians described the salient features of Islamic cities from various points of view: architectonic-urbanistic and socio-economic. Though they used different approaches and methodologies in their studies, they all postulated the unity of Muslim urbanism. Using the specific knowledge derived from their research into North African cities, they formulated an urban model that was then applied to all Arab-Islamic, Turkish, Iranian, and Berber-Andalusian territories. Influenced by Max Weber's[2] and Henry Pirenne's[3] work, the descriptions of the characteristics of cities in the Islamic world had a universalizing tendency, in opposition to the descriptions of European cities.

Even though William and Georges Marçais[4] deserve credit for having shifted scholarly attention from the study of monuments to the study of the urban fabric of Islamic cities, their theories nevertheless apply the principles of urban organization verified for the Maghreb without distinction to all regions of the Islamic world. Starting from reflections on the importance of the role of religion in the codification of Islamic urban form, on the idea of conflict between urban populations and nomads, and the stagnation of Islamic society, the two Marçais hypothesized a representative model for the structure of the Islamic city based on: the presence of the congregational mosque at the heart of the city, the suq structure organized hierarchically from the mosque to the city gates and associated with the presence of specialized buildings, a divi-

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de leur histoire. Une hypothèse récente," in Genèse de la ville islamique en al-Andalus et au Maghreb occidental, ed. P. Cressier and M. Garcia-Arenal (Madrid, 1998).

[2] M. Weber, Wirtschaft und Gesellschaft (Tübingen, 1922).

[3] H. Pirenne, Les villes du moyen âge (Brussels, 1927).

The two above-cited texts have considerably influenced European historians' vision of the medieval European city. Weber's theories in particular have led Orientalist historians to use a universalizing and comparative methodology to describe the structure of the Islamic city.

[4] W. Marçais, "L'Islamisme et la vie urbaine," in Comptes rendus de L'Académie des Inscriptions et Belles Lettres (1928), 86–100; G. Marçais, Tunis et Kairouan (Paris, 1937); G. Marçais, "L'urbanisme musulman," in 5e Congr. De la Fédération des Soc. Savantes d'Afrique du Nord, Tunis, 6–8.4.1939 (Algiers, 1940), 13–34; G. Marçais, "La conception des villes dans l'Islâm," Revue d'Alger 2 (1945): 517–533; G. Marçais, L'Architecture Musulmane d'Occident: Tunisie, Algérie, Maroc, Espagne et Sicilie (Paris, 1954); G. Marçais, "Considérations sur les villes musulmanes et notamment sur le rôle du mohtasib," Recueils de la Société Jean Bodin (Brussels) 6 (1954): 249–262; G. Marçais, "L'urbanisme musulman," in Melanges d'histoire et d'archeologie de l'occident musulman, Articles et Conferences de Georges Marçais (Algiers, 1957), 219–231.

sion of the different neighbourhoods on the basis of different ethnic groups, and the absence of any type of municipal organization.

In numerous essays of a socio-economic character on North African cities, Fez in particular, Roger le Tourneau[5] confirmed the Orientalist vision of the Marçais brothers, delineating the organizational features of Islamic guilds on which his theory of the urban structure was based, and describing the characteristics of the Islamic city—the main elements of which comprised the suq, the Friday mosque, the citadel, and the city walls—as if it had sprung up spontaneously, without any plan, in opposition to the countryside, and without any change throughout what Orientalists considered as a long Middle Ages.

Louis Massignon[6] formulated a comparative theory of medieval professional guilds in Europe and medieval Islamic guilds in which he identified the basic structure of the Islamic city formalized on an urban scale in the physical structure of the suq.

Robert Brunschvig[7] adopted the Marçais' spatial model and shared the widespread tendency of Orientalist studies to define the urban form of Islamic cities as "irrational" and without any plan. In his studies he attributed this spontaneous or unplanned form to the legal and administrative organization of Islamic society which determined the modes of construction of urban forms as well as the spatial and structural relations between the different neighbourhoods.

Despite this general tendency to ignore the structural complexities and different "declinations" of each individual urban organism and to read the salient features of the Islamic city in terms of a dichotomy between a progressive European and a stagnant Muslim world, the work of these scholars represents the starting point for modern studies on the Islamic city.

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[5] R. Le Tourneau and L. Paye, "La corporation des tanneurs et l'industrie de la tannerie à Fès," *Hespéris* 21 (1935); R. Le Tourneau, *Fès avant le Protectorat: Etude économique et sociale d'une ville de l'occident musulman* (Casablanca, 1949); R. Le Tourneau, *Fez in the Age of the Marinides* (Norman, OK, 1961); R. Le Tourneau, *La vie quotidienne à Fès en 1900* (Paris, 1965); R. Le Tourneau and H. Terrasse, "Fas," in *Encyclopaedia of Islam*, 2nd ed. (1965), 818–823; R. Le Tourneau, *Les villes musulmanes de l'Afrique du Nord* (Algiers, 1957).

[6] L. Massignon, "Les corps de métiers et la cité islamique," *Revue Internationale de Sociologie* 28 (1920); L. Massignon, "Enquête sur les corporations musulmanes d'artisans et de commerçants au Maroc (1923–1924)," *Revue du Monde Musulman* 58 (1924).

[7] R. Brunschvig, "Urbanisme médiéval et droit musulman," *Revue des Etudes Islamiques* 15 (1947): 127–155.

In the same period, while the Marçais brothers were conducting research on North African cities, the French historian Jean Sauvaget[8] was doing the same in the Middle East, using a different methodology. Indeed, modern historico-morphological research on Syrian cities changed significantly after 1934, when Jean Sauvaget published his article on Latakia. It emerged from his studies that beneath the Late Antique and Islamic urban fabric of many Syrian cities there was a Hellenistic plan with a mono-directional axis. While proposing clear and plausible schemes which were the precursors to later archaeological investigations and urban studies Sauvaget's approach to the study of the Islamic city was still considered Orientalist, since it was based on the interpretation of the structural fabric of medieval Syrian cities as the product of a progressive degradation of the classical plans beneath. Yet Sauvaget deserves credit for having had important intuitions about the morphology of the urban fabric of these cities, gleaned from his pioneering use of French cadastral surveys.

The case of the Syrian administration under the French mandate and Sauvaget's studies are emblematic due to the close temporal relation between the redaction of modern cadastral surveys and the development of urban studies based on a morphological approach.[9] A similar phenomenon is to be found throughout the colonized territories along the borders of the southern Mediterranean, from North Africa to the Middle East. In the period in question English, but more especially French surveys become the most efficient tool for the physical description of the urban organism and a morphological approach to urban studies on Islamic city.[10] Indeed, French cadastral surveys not only constituted a means of control of landed property in the newly colonized territories, but were, more importantly, the first precise instrument for representing the urban organisms of these regions, providing a knowledge and description of the pre-modern structure and form of Middle Eastern and North African cities, and laying the foundations for later urban studies.

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[8] J. Sauvaget, "La citadelle de Damas," Syria 11 (1930); J. Sauvaget, "Le plan de Laodicée-sur-Mer," Bulletin d'Études Orientales de l'Institut de Damas 4 (1934); J. Sauvaget, "Esquisse d'une histoire de la ville de Damas," Revue des Etudes Islamiques 8 (1934); J. Sauvaget, "Le plan de Laodicée-sur-Mer (Note complémentaire)," Bulletin d'Études Orientales de l'Institut Françaises de Damas, 6 (1936); J. Sauvaget, "Le 'tell' d'Alep," in Mélanges Syriens offerts à M. R. Dussaud (Paris, 1939); J. Sauvaget, Alep: Essai sur le développement d'une grande ville syrienne des origines au milieu du XIX^{e} siècle [texte, album] (Paris, 1941); J. Sauvaget, "Le plan antique de Damas," Syria 26 (1949); J. Sauvaget, "L'enceinte primitive de la ville d'Alep," Mélanges de l'Institut Français de Damas, Tome 1, 133–159.

[9] For Syria, for example, see the cartography produced in Aleppo between 1919 and 1931 after the French survey of the urban fabric: (1919) "Alep (édition provisoire)," this is the first map of Aleppo published under the French mandate, edited by the Bureau Topographique de T. F. L. in Beirut, scale 1:5000 or reduced to 1:10000; (1926–30) cadastral plan of Aleppo compiled under the direction of C. Durrafourd (201 cadastral sheets, 133 intra muros and 68 extra muros), the sheets of the ancient city are on a scale of 1:500 and only the sheets for the central part of the suq are on a scale of 1:2000, while the citadel and the less densely populated districts are on a scale of 1:1000; (1930) "Ville d'Alep. Plan d'ensemble du territoire de la ville…," scale 1:20000; (1930) map of Aleppo, scale 1:10000; (1931) "Ville d'Alep. Plan general," four sheets on a scale of 1:5000. In Syria, the work of measuring and drawing the urban fabric was also carried out for Damascus, Tartous, Latakia, and Hama where, except for slight revisions, the 1930s French cadastral surveys are still in use, especially for cartography on an urban scale.

In general, beginning with the use of cadastral surveys in urban studies, the Orientalist approach that had characterized the Western attitude towards the study of Islamic cities which was based on an interpretation of these cities as esoteric and mysterious because little known entities was partly supplanted by a more structurally based epistemological approach, favoured by a better knowledge of the urban fabric. From this moment, interest in the physical structure of cities in these regions was no longer the exclusive domain of simplified surveys, visual representations, or literary descriptions, but became part of a more widespread interest in urban and architectonic classification carried out by colonialists, beginning in the eighteenth century with the *Description de l'Egypte* and culminating in the redaction of cadastral surveys.[11]

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[10] For cities in Algeria and Egypt, cadastral surveys of the urban fabric were begun at the end of the nineteenth century. For Algeria, as an example, see some of the cartography for the city of Blidah: "Plan General d'Alignement de la Ville de Blida" of 1842, "Ville de Blidah" cadastral plan of 1866 or 1915, or the series of historical plans, beginning with "Blidah" in 1935. For cities in Egypt, cadastral surveys of the urban fabric began when the Egyptian Survey Authority compiled a series of maps and plans of Cairo on a scale of 1:500, 1:1000, 1:5000 at the end of the nineteenth century. The Egyptian Department of Survey has integrated the existing cartography on Cairo with the "Map of Islamic Historical Monuments in Cairo" on a scale of 1:5000 and based on a 1947 survey.

[11] In Islamic cities cadastral surveys were only introduced in the twentieth century as a direct result of European colonization. Prior to this time there were other methods for the registration of landed property and for taxation, such as the endowment property registers, called *waqf* in the Middle East and *habous* in North Africa. While they did not provide a cartographic reconstruction of the urban fabric, they did nevertheless give the data necessary for any attempt to reconstruct the individual property units.

These registers, which have represented the main source for important studies on the Islamic city, do not allow one, however, to describe the physical urban organism as a whole, since the *waqf* registers did not cover all the property in a city. Moreover, Research publications from the same period on the physical structure of cities in those areas of the Islamic world that had not been colonized by Europeans were less numerous than those on North Africa and the Middle East, partly because of the lack of adequate descriptive tools. Though, at the beginning of the twentieth century, measured drawings of the cities of Central Asia, the Anatolian Peninsula, and Iran were made by local scholars.

The bases of urban studies on central Asian cities were laid before the Soviet Revolution by the Russian scholars W. Barthold[12] and V. A. Shishkin.[13] By studying the main Arabic and Persian written sources on central Asian urban centres in pre-Mongol medieval Russia (Turkestan), they were able to produce a cross-section of the historical topography of cities in this region.

While European scholars were studying in this period the cities of the Near East and North Africa using the Orientalist approach described above, Soviet scholars introduced the semantic fields of "feudal city" and "medieval city" and described the structure of Central Asian cities as well in terms of a dichotomy between their urban structure and that of western European and Russian cities.

As with Central Asian cities, only a few studies, when compared to the large number of studies on North African and Middle Eastern cities, were carried out in the first decades of the twentieth century on urban physical structures in Iran. Moreover, even though during the Shah's reign cadastral surveys were compiled,[14] in the first decades of the twentieth century scholarship was focused above all on the study

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their descriptions are codified in such a way that it is not always possible to reconstruct the plan of the property in question.

For the debate on the representation of the Islamic city before the twentieth century see: D. Behrens-Abouseif, "Alternatives to Cadaster Maps for the Study of Islamic Cities," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1993): 92–95; A. Raymond, "Cartographie et histoire des villes arabes, quelques remarques générales," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1993): 22–31.

[12] W. Barthold, *Istoriko-geograficheskii obzor Irana* (St. Petersburg, 1903); W. Barthold, *Turkestan down to the Mongol Invasion* (first published in Russian in 1910; London, 1928). Later, with his excavations in Samarkand, Barthold spread throughout the future Soviet Union a methodological approach to urban studies that combined historical and archaeological enquiry.

[13] V. A. Shishkin, *Goroda Uzbekistana* (Tashkent, 1943).

[14] In Iran, too, cadastral surveys were compiled under the Shah on a scale of 1:2000.

of Iranian art and architecture or, again from an Orientalist perspective, on the archaeology of pre-Islamic strata rather than the physical structure of Islamic cities.[15]

In this period the most important urban studies were those carried out by the French urbanist Eugene E. Beaudouin and the American historian Arthur Upham Pope on Isfahan[16] which remained without sequel for many years.

Despite the fact that in Anatolia, at the beginning of the twentieth century, accurate surveys of the main cities were compiled[17] which would have allowed the further development of studies on Islamic urban structure, even here European scholarship was mainly focused either on the archaeology of Hellenistic or pre-Hellenistic sites or on the capital, Istanbul, which represented the vestiges of the ancient world and the cradle of European civilization. Thus, the strata of the Islamic phases in the construction of the city were ignored.[18] In this period, urban studies were mainly conducted by local historians for the Turkish government,[19] while research by European scholars only began once they were allowed access to the Ottoman archives after the fall of the Ottoman empire.

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[15] E. Herzfeld and F. Sarre, *Archäologische Reise im Euphrat und Tigris Gebiet* (Berlin, 1911–20); G. Bell, *Palace and Mosque at Ukhaidir* (Oxford, 1914); D. T. Rice, "The City of Shapur," *Ars Islamica* 2 (1935): 174–189; A. Godard, "Isfahân," *Athâr-é-Irân. Annales du Service Archéologique de l'Iran* 1 (1937): 7–176; L. Lockhart, *Famous Cities of Iran* (Brentford, 1939); E. Herzfeld, *Geschichte der Stadt Samarra* (Berlin, 1948).

[16] E. E. Beaudouin and A. U. Pope, "City Plans," in *A Survey of Persian Art*, ed. A. U. Pope and P. Ackerman (London, 1939), 1391–1410; E. E. Beaudouin, "Ispahan sous les grands chahs (XVII^e siècle)," *Urbanisme* 2, no. 10 (1933).

[17] Already in the Ottoman period accurate maps and surveys were made of Istanbul and Smyrne. Then in 1904–1906 the "Plans d'assurance d'Istanbul et de Smyrne" by C. E. Goad, scale 1:600, 1:3.600. In the first decades of the twentieth century a cadastral survey of Istanbul was compiled. In 1922–1945 the "Plans d'assurance d'Istanbul de Pervitich" was completed by J. Pervitich, on a scale of 1:250, 1:375, 1:500, 1:600, 1:1000, 1:2000, 1:2400, 1:4000. For this subject, see: P. Pinon, and S. Yerasimos, "Relevés après incendie et plans d'assurance. Les précurseurs du cadastre Stambouliote," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1993): 112–129.

[18] H. H. von der Osten, "An Unnoticed Ancient Metropolis of Asia Minor," *Geographical Review* 18 (1928); D. T. Rice, "Nicaea," *Antiquity* 3 (1929); D. T. Rice, "British Excavations at Constantinople," *Antiquity* 4 (1930); E. Mamboury and T. Wiegand, *Die Kaiserpaläste von Konstantinopel zwischen Hippodrom und Marmara-Meer* (Berlin, 1934); R. Mayer, *Byzantion-Konstantinupolis-Istanbul: Eine genetische Stadtgeographie* (Vienna and Leipzig, 1943); E. Mamboury, "Istanbul: Un nouvel élément pour la topographie de l'antique Byzance," *Archäologischer Anzeiger: Beiblatt zum Jahrbuch des Archäologischen Instituts* 49 (1934): 50–61; C. Alzonne, *Istanbul* (Paris, 1936); R. Bova Scoppa, *Stanbul* (Milano, 1933); R. Busch-Zantner, "Zur Kenntnis der osmanischen Stadt," *Geographische Zeitschrift* 38 (1932): 1–13; A. Cuda, "Stadtaufbau in der Türkei," *Die Welt des Islams* 21 (1939): 1–84.

[19] O. Ergin, *The Historical Development of Urbanism in Turkey* [in Turkish] (Istanbul, 1936).

The Revision of the Orientalist approach

This initial phase of scholarship on the Islamic city, and especially of urban studies on North African cities, produced a representative model of the structure of the Islamic city that was too homogeneous. This model was subjected to an initial critical revision in the 1950s, when Edmond Pauty[20] elaborated the theories of William and George Marçais, Henri Terrasse,[21] and Henry Pirenne on North African cities and refined the models proposed by them, thereby beginning a process of classification of diverse urban structures based on geographical, social, historical, and economic factors that would predominate in the following years.

Emphasizing the role of Islam as an urban religion and proposing an urban model in terms of its divergence from the medieval European city, he suggested a distinction between spontaneous and planned cities, concluding that in most cases Islamic cities were founded by dynasties or monarchs and, thus, did not develop autonomously. Pauty's distinction not only represented the starting point for a process of revision of Orientalist studies, but also allowed scholars to focus their attention on the necessity of dealing with the actual history and form of these cities instead of their theoretical models.

In the following years, Pauty's theories were taken up by Gustav von Grunebaum, Ira M. Lapidus, Xavier de Planhol, H. A. R. Gibb, and Harold Bowen, who examined the salient features of the Islamic city mainly in terms of the socio-political organization of its inhabitants.

Gustav von Grunebaum[22] based his work on the Islamic city on the Marçais' theories (from which he partially distanced himself by drawing a distinction between rural villages and urban agglomerations, for which he held their theories to be valid) and, to some extent, Brunschvig's studies. Grunebaum ascribed the origins of certain elements in the urban structure—such as the narrow, winding streets—to the spontaneous, unplanned nature of Islamic cities and their internal chaos, as well as to the hectic nature of neighbourhood life. Focusing his attention on the socio-political structure of urban organization, he stressed the absence of municipal institutions and community structures, in the European sense, and even concluded that the—self-enclosed and autonomous—neighbourhoods themselves were what defined their residents as a community.

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[20] E. Pauty, "Villes spontanées et villes créées en Islam," Annales de l'Institut d'Études Orientales 9 (1951).

[21] H. Terrasse, Villes impériales du Maroc (Grenoble, 1938); H. Terrasse, "L'architecture musulmane d'Occident," Les Cahiers de Tunisie 4 (1956): 137–144; R. Le Tourneau and H. Terrasse, s.v. "Fas," Encyclopaedia of Islam, 2nd ed. (1965): 818–823.

[22] G. E. von Grunebaum, "Die Islamische Stadt," Saeculum 6 (1955): 138–153; G. E. von Grunebaum, "The Structure of the Muslim Town," in "Islam: Essays in the Nature and Growth of a Cultural Tradition," Memoirs of the American Anthropological Association 81 (1955): 141–158; G. E. von Grunebaum, "The Muslim Town and the Hellenistic

Referring to a vast geographical area, from Egypt to Central Asia, Ira M. Lapidus[23] applied a flexible analytical model to the study of the Islamic city which could be modified according to period and region, though he tended mainly to describe urban society rather than urban form. Moreover, he substituted the term "Islamic city" with either "Muslim city" or "Islamic society," while in his studies on Mamluk society in Syria he introduced the concept of a "mosaic" society: an organic network of ethnic and religious groups at the basis of urban morphology which found its essential conformation in the neighbourhood.

Gibb's and Bowen's[24] theories enriched the debate by drawing on von Grunebaum's work which made a distinction between city and rural village, and Lapidus' vision of a mosaic society.

Still from an Orientalist perspective, Xavier de Planhol[25] underlined the lack of civic government in Islamic cities and societies, and attributed this scarce civic sense to the nomadic origins of its inhabitants.

Town," *Scientia*, 1955, 364–370; G. E. von Grunebaum, "The Sacred Character of the Islamic Cities," in *Melanges Taha Husain*, ed. A. Badawi (Cairo, 1962); G. E. von Grunebaum, "The Structure of the Muslim Town," in *Islam: Essays on the Culture and Growth of a Cultural Tradition* (London, 1961).

[23] I. M. Lapidus, *Muslim Cities in the Later Middle Ages* (Cambridge, 1967); I. M. Lapidus, ed., "Muslim Cities and Islamic Society," in *Middle Eastern Cities: A Symposium on Ancient, Islamic and Contemporary Middle Eastern Urbanism* (Berkeley, 1969), 47–79; I. M. Lapidus, "Traditional Muslim Cities: Structure and Change," in *From Medina to Metropolis*, ed. C. L. Brown (Princeton, NJ, 1973), 51–69; I. M. Lapidus, "The Early Evolution of Muslim Urban Society," *Comparative Studies in Society and History*, 15 (1973): 21–50; I. M. Lapidus, "Muslim Cities as Plural Societies: The Politics of Intermediary Bodies," in *Urbanism in Islam*, ed. Y. Takeshi (Tokyo, 1989), 133–164.

[24] H. A. R. Gibb and H. Bowen, *Islamic Society and the West: A Study of the Impact of Western Civilization on Moslem Culture in the Near East*, vol. 1 (London, 1950).

[25] X. de Planhol, *The World of Islam* (Ithaca, 1959); X. de Planhol, *Les Fondements Géographiques de l'Histoire de l'Islam* (Paris, 1968).

Eliyahu Ashtor[26] and Claude Cahen[27] revised von Grunebaum's theoretical model and applied it to a different geographical region, that of Syrian and Iraqi cities in the tenth-twelfth centuries. Using the example of Damascus in the early medieval period, Ashtor sought to demonstrate the existence of an urban autonomy in Islamic cities based on the role of the *rais*, *muhtasib*, and *qadi*. Cahen, on the other hand, stressed that the guilds were a motive of urban dis-aggregation, due to their religious orientation which tended towards mysticism, and that civil order was maintained by organized groups of urban bandits.

In this debate on the structure of the Islamic city the theses of Shmuel Tamari[28] shifted attention from a social to a more structural perspective, reintroducing an interest in morphological data and urban structure. With his classification of Islamic cities into four types—Hellenistic-Mediterranean, Iranian-Mesopotamian, Southern-Arabian, and Residential—he demonstrated that, while the Islamic city was the result of diverse schemes and influences, it then developed autonomously, finding its own morphological individuality through time.

Equally interested in urban morphology, Sauvaget's pupil, Nikita Elisseeff,[29] carried out urban studies on Damascus, refining on the former's method and asserting the impossibility of applying Massignon's theories to Damascus, since Islamic urban form was determined by social and economic factors more than by legislative ones.

Despite these isolated attempts to extend the debate on the Islamic city to other regions of the Islamic world and to deal with it from the perspective of its physical structure, until the 1960s this debate was the almost exclusive terrain of French historians and English sociologists who continued to study North African cities in order to delineate an urban model that would be valid for all cities in the Muslim world.

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[26] E. Ashtor, "L'administration urbaine en Syrie médiévale," *Rivista degli Studi Orientali* 31 (1956); E. Asthor, "L'urbanisme syrien à la basse-époque," *Rivista degli Studi Orientali* 31 (1958): 181–209; E. Ashtor, "Républiques urbaines dans le Proche-Orient à l'époque des Croisades," *Cahiers de la Civilisation Médiévale* 18 (1975).

[27] C. Cahen, "Mouvements populaires et autonomisme urbain dans l'Asie musulmane du moyen age," *Arabica* 5, no. 3 (1958), 6, no. 1 (1959), 6, no. 3 (1959); C. Cahen, *Mouvements populaires et autonomisme urbane* (Leiden, 1959); C. Cahen, "Y a-t-il eu des corporations professionelles dans le monde musulman classique?" in *The Islamic City: A Colloquium*, ed. A. H. Hourani and S. M. Stern (Oxford, 1970), 51–64, in which he criticizes Massignon's theories on the guild corporations.

[28] S. Tamari, "Aspetti principali dell'urbanesimo musulmano," *Palladio*, nos. 1–4 (1966): 45–82.

[29] N. Elisséeff, "Damas à la lumière des théories de Jean Sauvaget," in *The Islamic City*, ed. A. H. Hourani and S. M. Stern (Oxford, 1969), 157–177.

Many of the contributions to the debate on the structure of the Islamic city which marked the scholarship of this period were published in the proceedings of conferences, including those organized by Ira M. Lapidus in 1969[30] and Albert H. Hourani and Samuel M. Stern in 1970.[31] The latter conference in particular traced the course of these studies, in the wake of Hourani's observations on the North African origins of the model that G. Marçais extended to the whole of the Muslim world, of the impossibility of generalizing this model, and of Stern's criticisms of the theories put forward by Massignon, von Grunebaum, Ashtor, and Cahen. Stern rejected the possibility of a comparative hypothesis between medieval European and Islamic urban structure, since in the latter case autonomous organizations were still in their infancy.

After 1970, following this revision of the approach to research on the Islamic city, the debate began to diversify, due to the contribution of English and American geographers, sociologists, and architects who rejected the unified and abstract model proposed up to that time. They focused their interest, instead, on the role of religion in the codification of Islamic urban form and society, or on the structure of cities in other regions, especially the Middle East.

In this period anthropologists such as Dale Eickelman and Kenneth Brown proposed different urban models from those already delineated by sociological studies, though their research remained tied to the Maghreb. Beginning with an analysis of a neighbourhood in the city of Boujad in Morocco and comparing it with other regions, Eickelman[32] considered the theories of Massignon and Marçais inadequate to outline a definitive model of the Islamic city. Rejecting Lapidus' model of a mosaic society and his theories on the neighbourhood which were only useful for describing social rather than urban models, Eickelman identified in the neighbourhood an intellectual rather than a physical structure, based on a mutual sense of nearness and on the dynamic structure of social relations.

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[30] I. M. Lapidus, Middle Eastern Cities: A Symposium on Ancient, Islamic and Contemporary Middle Eastern Urbanism (Berkeley, CA, 1969).

[31] A. H. Hourani and S. M. Stern, eds., The Islamic City: A Colloquium (Oxford, 1970); A. H. Hourani, "The Islamic City in the Light of Recent Research," in The Islamic City: A Colloquium (Oxford, 1970), 1–24; S. M. Stern, "The Constitution of the Islamic City," in The Islamic City: A Colloquium (Oxford, 1970), 25–50.

[32] D. Eickelman, "Is There an Islamic City? The Marking of a Quarter in a Moroccan Town," IJMES 5 (1974).

Brown[33] extended the work of scholars such as Lapidus, Stern, and Hourani on Middle Eastern cities to North African cities. In his essay on Salè, he moved away from Lapidus' theories and closer to Eickelman's and Gibb's ideas, demonstrating that in a city which had the typical morphological structure of a North African medina, the sense of community, autonomous organization, and solidarity was instead very strong.

In the 1980s the debate on the structure of the Islamic city became more heated and a series of conferences—especially those organized by Robert B. Sergeant (1980),[34] Ismail Serageldin and Samir el-Sadek (1982),[35] Aydin Germen (1983),[36] Kenneth L. Brown (1986),[37] Carl L. Brown,[38] Abdulaziz Y. Saqqaf (1987),[39] and Takeshi Yukawa (1989)[40]—marked the transition to this new phase of scholarship.

Since there was a growing awareness that every urban organism has its own unique identity, which is different from others in terms of geographical and historical circumstances, the perception of the impossibility of using generalizations to describe a unified model determined a change of approach and a new attitude dominated the field of urban studies on the Islamic city. The arguments which epitomize this debate are those of Eugen Wirth, Besim Selim Hakim, Jean Claude Garcin, and Janet Abu-Lughod.

Hakim[41] sought the derivation of the urban structure of cities, still generically defined as Islamic, in Islamic law. Applying a methodology similar to Brunschvig's he maintained that the general lines for the construction of the Islamic city had been determined on the basis of statutory rules and regulations. Thus, Arab cities could be called Arabo-Islamic, since Islamic law functioned as a guideline both for building and for urban life.

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[33] K. L. Brown, "An Urban View of Moroccan History: Salé 1000–1800," Hespéris–Tamuda 12 (1971): 5–106; K. L. Brown, People of Salé: Tradition and Change in a Moroccan City 1830–1930 (New York, 1976).

[34] R. B. Serjeant, ed., The Islamic City (Paris, 1980). Studies on Arabia and Yemen.

[35] I. Serageldin and S. el-Sadek, eds., The Arab City: Its Character and Islamic Cultural Heritage (Riyadh, 1982).

[36] A. Germen, ed., Islamic Architecture and Urbanism (Dammam, 1983).

[37] K. L. Brown, M. Jolé, P. Sluglett, and S. Zubaida, eds., Middle Eastern Cities in Comparative Perspective (London and Ithaca, 1986); K. L. Brown et al., eds., Urban Crisis and Social Movements in the Middle East (Paris, 1989).

[38] C. L. Brown, ed., From Medina to Metropolis: Heritage and Change in the Near Eastern City (Princeton, NJ, 1973).

[39] A. Y. Saqqaf, ed., The Middle East City: Ancient Traditions Confront a Modern World (New York, 1987).

[40] T. Yukawa, ed., Urbanism in Islam: The Proceedings of the International Conference on Urbanism in Islam (ICUIT), Oct. 22–28, 1989 (Tokyo, 1989).

[41] B. S. Hakim, Arabic–Islamic Cities: Building and Planning Principles (London, 1986); B. S. Hakim, "The 'Urf' and its role in diversifying the architecture of traditional Islamic cities," Journal of Architectural and Planning Research 11, no. 2 (1994): 108–127.

In line with other morphological studies, Wirth's[42] theories set out to describe an urban model based on a comparison between the structures of pre-Islamic cities in North Africa, Western Asia, and the Middle East. Indeed, his theories, together with those of Sauvaget, are at the basis of morphological studies on the Islamic city. While scholarship in the Orientalist tradition used a generalized scheme, deriving from the observation of specific urban structures in specific cultural and geographic areas which then became a general point of reference for urban structures that were actually widely differentiated in terms of time and space, the work carried out by Wirth and Sauvaget brought specific morphological data, geographical differentiation, and a reading of the urban fabric to bear on this more generalized debate, thereby paving the way for modern studies on the Islamic city. Beginning with a comparative analysis of the functions and morphology of cities in North Africa and Western Asia, Wirth concluded that it was not possible to define such cities as "Islamic," since none of their characteristics could be directly related to Islam as a religion. Rather, the structure of the medieval Islamic city derived from its oriental substratum. The tree-lined routes, the cul-de-sac system, the division into separate and mutually independent neighbourhoods, the dog-leg entrances, the courtyard dwelling type were all already present in the most ancient cities of Mesopotamia. Only the suq seemed to be an element unique to the Islamic city, since it was present neither in the ancient East nor in Europe. On the basis of these considerations he suggested replacing the term "Islamic" with "Oriental," rejecting the term "Arab", since the same urban characteristics could be found in Turkish and Iranian cities.

In the same period the debate on the structure of the Islamic city was enriched by Hicham Djaït's work on al-Kufa.[43] Through a careful analysis of texts relating to the primitive city of al-Kufa, Djaït revealed the ordered character of urban topography in the early phases of anthropic development and demonstrated that in the case of cities built over military encampments, the structure of the urban fabric derived from the original military layout which was divided internally, for political reasons, according to ethnic groups. In his theories he criticized Wirth's approach, since it was based on purely geographical presuppositions and had rejected the term "Islamic." He shared, in some respects, the notion of continuity and related the structure of the Islamic city to that of the Greco-Roman and ancient eastern city.

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[42] E. Wirth, "Die Orientalische Stadt. Ein Überblick aufgrund jüngerer Forschungen zur materiellen Kultur," *Saeculum* 26 (1975): 45–94; E. Wirth, "Villes islamiques, villes arabes, villes orientales? Une problématique face au changement," in *La ville arabe dans l'Islam*, ed. A. Bouhdiba and D. Chevallier (Tunis and Paris, 1982), 193–215; E. Wirth, "Zur Konzeption der islamischen Stadt: Privatheit im islamischen Orient versus Öffentlichkeit in Antike und Okzident," *Die Welt des Islams* 25 (1985): 50–92; E. Wirth, *Die Orientalische Stadt im islamischen Vorderasien und Nordafrika* (Mainz, 2000).

[43] H. Djaït, *al-Kûfa: Naissance de la ville islamique* (Paris, 1986).

Janet Abu-Lughod[44] confirmed that the model of the Islamic city so far defined was the result of an Orientalist perspective based on the observation of a few case studies in a limited area. In her essays, she warned of the dangers of generalizing specific morphological and geographical data that had led the so-called Orientalists to assimilate cities from widely differing geographical areas, and instead advanced an idea of the formation of the Islamic city through a morphological process based not only on legal, political, and religious systems but also on specific cultural factors.

Robert Ilbert's[45] contribution went along the same revisionist lines. Keeping to theoretical positions, his thesis transformed the concept of the Islamic city into a tool for abstract analysis. Starting from an analysis of actual morphological data, he extrapolated general concepts, identifying the Islamic city with a concept that did not correspond to actual urban structures, but rather to the critical selection of certain features taken out of their historical context and thereby invalidated by a series of contrasts, due to the widely differing urban structures in question.

In order to conserve at least in part the urban model defined by Orientalist scholars, while at the same time recognizing its tendency to over-generalization, the French historian Jean-Claude Garcin,[46] using the example of Cairo, based his theories on the chronological diversification of Islamic urban development and the division of this over-simplified Orientalist model into periods. The first phase of this division corresponds to the foundation of a new urban centre or the occupation and reorganization of an existing city. The second phase corresponds to the transformation of urban centres with the advent of military aristocracies, while the third phase corresponds to the formation of the traditional city, beginning with the crisis at the end of the fourteenth century. This was a city enclosed within its defensive walls and characterized by closed-off, separate, and specialized neighbourhoods, seemingly chaotic and labyrinthine, which constituted the prototype for Orientalist generalizations.

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[44] J. L. Abu-Lughod, "The Islamic City: Historic Myth, Islamic Essence, and Contemporary Relevance," IJMES 19 (1987); J. L. Abu-Lughod, "What is Islamic about a City? Some Comparative Reflections," in Urbanism in Islam: The Proceedings of the International Conference of Urbanism in Islam (Tokyo, 1989).

[45] R. Ilbert, "La ville islamique: réalité et abstraction," Cahiers de la recherche architecturale, nos. 10–11 (1982): 6–13.

[46] J.-C. Garcin, "Le Caire et l'évolution urbane des pays musulmans," Annales Islamologiques 25 (1991): 289–304; D. Behrens-Abouseif, S. Denoix, and J.-C. Garcin, "Le Caire," in Grandes Villes Méditerranéennes du Monde Musulman Médiéval, ed. J.-C. Garcin (Rome, 2000).

In this context, Andrè Raymond's studies in the 1980s,[47] especially The Great Arab Cities, have represented a cornerstone of urban studies on the Islamic city, by rejecting the other major Orientalist prejudice, based on the notion of stagnation and a vision of Islamic cities as economically backward. In his essays on Cairo, Aleppo, and Tunis, Raymond has demonstrated that the Ottoman Empire represented a period of expansion, rather than decline, for Islamic cities. Applying a methodology that combines an historical with a morphological approach—beginning with an examination of waqf archival documents in order to obtain a social, economic, and historical cross-section of the dynamics of urban development and with the aid of morphological information on urban growth given by the position of newly founded specialized buildings within the urban fabric—he has pointed out that the general decline of Islamic cities began with European colonization after the fall of the Ottoman Empire.

Finally, in these years, a further series of conferences organized by the Aga Khan Award for Architecture resulted in the publication of proceedings and texts on the architecture of the Islamic city.[48] Even though the subject matter of these conferences was mainly contemporary architecture, they were part of the rise of a more general interest in the study of the Islamic city as an actual physical space for research, not an abstract, speculative model. The role of the Aga Khan Award for Architecture has been even more important, since, together with the above-mentioned conferences, it has made clear that a regional approach to the study of the physical city linked to the study of the specific morphological data, building types, and techniques of construction of the diverse regions that go to make up the Islamic world is needed in order to overcome the Orientalist impasse in the study and urban renewal of Islamic cities.

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[47] A. Raymond, "Signes urbains et étude de la population des grandes villes arabes à l'èpoque ottomane," Bulletin d'Études Orientales de l'Institut Français d'Études Arabes de Damas 27 (1974): 183–193; A. Raymond, "Le déplacement des tanneries à Alep, au Caire et à Tunis à l'époque ottomane: Un 'indicateur' de croissance urbaine," Revue d'Histoire Maghrébine, nos. 7–8 (1977): 192–200; A. Raymond, The Great Arab Cities in the 16th–18th Centuries: An Introduction (New York, 1984).

[48] J. G. Katz, ed., Architecture as a Symbol and Self–Identity (Cambridge, MA, 1980); L. Safran, ed., Housing: Process and Physical Form (Cambridge, MA, 1980); L. Safran, ed., Places of Public Gathering in Islam (Cambridge, MA, 1980); L. Safran, ed., Toward an Architecture in the Spirit of Islam (Cambridge, MA, 1980); M. B. Sevcenko, ed., Adaptive Reuse: Integrating Traditional Areas into the Modern Urban Fabric (Cambridge, MA, 1983); R. Powell, ed., Regionalism in Architecture (Cambridge, MA, 1985).

The regional approach

In the 1980s, when a substantial amount of knowledge on the Islamic city and its architecture had already been acquired, it was possible to compile a series of historical-encyclopaedic works, such as the *Encyclopaedia of Islam*[49] and the *Encyclopaedia Iranica*,[50] the precursor to which is recognisable in the bibliography on Islamic arts and architecture compiled by A. C. Creswell.[51]

In the same period, Paolo Cuneo's book on the Islamic city was published.[52] This probably represents the single most systematic work on the history of the cities and different regions of the Muslim world. Its historical approach was associated with a regional one, while the analysis of the most salient urban features of the different regions was conducted on the basis of the underlying features and diverse influences that over time had determined a diversity of urban forms. The uniqueness of this work is confirmed by the fact that its comprehensive and organic treatment has been equalled only recently by Paul Wheatley's work.[53]

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[49] *Encyclopaedia of Islam*, 2nd ed. (Leiden, 1960).

[50] E. Yarshater, ed., *Encyclopaedia Iranica* (London, 1988).

[51] K. A. C. Creswell, *A Bibliography of the Architecture, Arts and Crafts of Islam, Second Supplement Jan. 1972 to Dec. 1980 (with Omissions from Previous Years)* (Cairo, 1984), the third volume of a bibliographic collection that began with K. A. C. Creswell, *A Bibliography of the Architecture, Arts and Crafts of Islam to 1 Jan. 1960* (Cairo, 1961); K. A. C. Creswell, *A Bibliography of the Architecture, Arts and Crafts of Islam, Supplement Jan. 1960 to Jan. 1972* (Cairo, 1973).

[52] P. Cuneo, *Storia dell'urbanistica: Il mondo islamico* (Rome, 1986).

[53] P. Wheatley, *The Places where Men Pray Together: Cities in Islamic Lands Seventh through the Tenth Centuries* (Chicago, 2001).

Using a morphological and historical approach, the latter has described the urban structures of the different regions of the Muslim world both in relation to their territorial context and their urban structure.

From another perspective, Paolo Cuneo's encyclopaedic approach represents an opposite trend with respect to the more widespread one of the 1980s which consisted in an interest in specific cities in the Muslim world and was often expressed through the formation of different schools or groups of scholars with a similar methodological approach or interest in the study of the physical structure of Islamic cities.

The first identifiable school, and perhaps the one that has always been the most active in research on the physical structure of the Islamic city, is the French school, mainly oriented toward the study of cities in the regions of their ex-colonies. This school has had its main theoretical points of reference in the work of scholars such as Andrè Raymond[54] and Philippe Panerai.[55]

Using the methodology developed by André Raymond, which combines a historical with a morphological approach, the work of scholars such as Jean Paul Pascual, Robert Ilbert, and Silvy Denoix[56] has favoured an approach based on historical and archival research.

In his studies on the structure of the Islamic city Philippe Panerai has adopted the urban studies methodology developed in Italy by Aldo Rossi and Carlo Aymonino in the 1960s which they applied to Italian and other European cities. He describes the model of the Islamic city as radial, enclosed by walls, with the congregational mosque at the centre and the suqs linking it to the city gates. For Panerai the urban fabric develops in terms of autonomous neighbourhoods based on a social organization and is thus somewhat similar to the mosaic city model.

Starting from Panerai's methodology which is closely linked to an analysis of morphological data, though adopting different approaches, Pierre Pinon has mainly used historical data to trace the various phases of urban development, while Serge Santelli has used the measured drawing of residential buildings as a means of describing the urban structure mainly of Tunisian, but also of Middle Eastern and African cities.[57] Jean-Charles Depaule[58] has combined a descriptive-classifying approach to architecture with a sociological one, while Jean-Claude David has used a hybrid method in his study of the structure of the Islamic city. David's methodology could be considered somewhere between Raymond's and Panerai's, combining a classifying approach to the study of urban morphology, based on the measured drawing, with a historical one, based on the study of waqf documents, and a geographical one, based on statistical research. From this methodological admixture, developed in his studies on Aleppo, David has obtained a completely original synthesis that has led him to have interesting intuitions on the morphology of the Islamic city.

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[54] A. Raymond, "Signes urbains et étude de la population des grandes villes arabes à l'èpoque ottomane," Bulletin d'Études Orientales de l'Institut Français d'Études Arabes de Damas 27 (1974): 183–193; A. Raymond, "Le déplacement des tanneries à Alep, au Caire et à Tunis à l'époque ottomane: Un 'indicateur' de croissance urbaine," Revue d'Histoire Maghrébine, nos. 7–8 (1977): 192–200; A. Raymond, The Great Arab Cities in the 16th–18th Centuries: An Introduction (New York, 1984).

[55] P. Panerai, "Sur la notion de ville islamique," Peuples Méditerranéens—Mediterranean Peoples 46 (1989): 13–30.

[56] S. Denoix, "History and Urban Forms. A Methodological Approach," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Centre 1–2 (1993): 70–81.

In France, the research centres where these studies have been carried out are: the Institut de Recherches et d'Études sur le Monde Arabe et Musulman in Aix en Provence[59] which is especially concerned with the history of the city; the Équipe Monde Arabe et Méditerranée (ex URBAMA-Urbanisation du Monde Arabe) of the French C.N.R.S. at the University of Tours, where geographers and town-planners carry out research on contemporary Arab cities,[60] and the Maison de l'Orient Méditerranéen in Lyons,[61] which is especially concerned with historico-morphological studies.

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[57] Ph. Revault and S. Santelli, eds., Harar, une cité musulmane d'Ethiopie/Harar, a Muslim City of Ethiopia (Paris, 2004).

[58] J.-C. Depaule and S. Noweir, L'habitat urbain dans l'Orient arabe, éléments d'architecture (Paris, 1984); J.-C. Depaule, "Daily Life and Living Space in the Mashriq," in Middle Eastern Cities in Comparative Perspective, ed. K. Brown, M. Jolé, P. Sluglett, and S. Zubaida (London, 1986), 203–211.

[59] Groupe de Recherches et d'Études sur le Proche Orient, eds., L'Habitat traditionnel dans les pays musulmans autour de la Méditerranée (Cairo, 1988).

[60] Centre d'Études et de Recherches sur l'Urbanisation du Monde Arabe, ed., Présent et avenir des Médinas, Fasc. 10–11 (Tours, 1982); Centre d'Études et de Recherches sur l'Urbanisation du Monde Arabe, ed., Petites villes et villes moyennes dans le Monde Arabe, Fasc. 16–17 (Tours, 1986); Centre d'Études et de Recherches sur l'Urbanisation du Monde Arabe, ed., Eléments sur les centres-villes dans le Monde Arabe-Material on City Centres in the Arab World, Fasc. 19 (Tours, 1988); Centre d'Études et de Recherches sur l'Urbanisation du Monde Arabe, ed., L'eau et la ville dans les pays du Bassin Méditerranéen et de la Mer Noire, Actes du Colloque de Rabat, 20–22 Octobre 1988, Fasc. 22 (Tours, 1991); J.-F. Troin, ed., Recherches urbaines sur le monde arabo-musulman—Urban Research on the Middle East (Tours, 1993).

[61] J. Metral and G. Mutin, eds., Politiques urbaines dans le Monde arabe, Études sur le Monde Arabe, no. 1 (Lyons: Maison de l'Orient Méditerranéen, 1984).

In Italy interest in the study of Islamic cities began at the University of Rome, with the work of a group of scholars that included Attilio Petruccioli,[62] Florindo Fusaro,[63] and Ludovico Micara.[64] Beginning with a general interest in urban morphological data, based on the work of Saverio Muratori and Ludovico Quaroni, they initiated studies on the Islamic, especially Mediterranean, city that were characterized by a keen interest in the physical structure of urban fabric and so were close to those of Panerai's French School.

The research methodology on Islamic cities introduced by Attilio Petruccioli consists in a reading of the urban fabric using epistemological tools developed in the field of morphological and typological studies. Considering the city as a living organism, Petruccioli's research is based on the idea that the history of every city is inscribed in its urban fabric and so it is possible to decipher the various phases of its transformation through a structural reading of the building fabric. This approach begins with a reading of cadastral surveys and compares the data obtained from them with historical data.

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[62] L. Micara and A. Petruccioli, "Metodologie di analisi degli insediamenti storici nel mondo islamico," Istituto Poligrafico e Zecca dello Stato, no. 4 (1986): 27–40; A. Petruccioli, "The Arab City neither Spontaneous nor Created," in "Environmental Design: Trails to the East, Essays in Memory of Paolo Cuneo," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Centre 1–2 (1997–98–99): 22–34; A. Petruccioli, "New Methods of Reading the Urban Fabric of the Islamicized Mediterranean," in Built Environment (Oxford), ed. N. Nasser, 28, no. 3 (2002): 202–216; A. Petruccioli, "La permanenza della città classica nei tessuti arabi del Mediterraneo," in L'africa romana. Lo spazio marittimo del Mediterraneo occidentale: geografia storica ed economica, ed. M. Khanoussi, P. Ruggeri, and C. Vismara (Rome, 2002), 3:2267–2278. Since 1983 he is editor of the journal Environmental Design: Journal of the Islamic Environmental Design Research Centre; see especially the monographic issues "Urban Morphogenesis, Maps and Cadastral Plans" (1993) and "Urban Fabric" (1989); M. Cerasi, A. Petruccioli, A. Sarro, and S. Weber, eds., Multicultural Urban Fabric and Types in the South and Eastern Mediterranean (Beirut, 2007); A. Petruccioli, After Amnesia. Learning from the Islamic Mediterranean Urban Fabric (Bari, 2007).

He has also organized numerous conferences on the Islamic city, amongst which, annual international conferences since 1982: for example, in 1989 "History and Project: the Historic Centres of the Maghreb"; in 1991 "The Islamic Town from Cadastral Plans"; in 1999 the ISUF conference in Florence "Transformations of Urban Form: From Interpretations to Methodologies in Practice. Six International Seminars on Urban Form" with a section dedicated to "The Islamic City"; and in 2003 the conference "The Planned City" in Trani (Apulia), which included several papers on the Islamic city.

[63] F. Fusaro, La città islamica (Bari, 1984).

[64] L. Micara, Architettura e Spazi dell'Islam. Le Istituzioni Collettive e la Vita Urbana (Rome, 1985); L. Micara, "Ghadames: house and urban fabric in a Town-Oasis of Central Lybia," in Transformations of Urban Form: From Interpretations to Methodologies in Practice. Six International Seminars on Urban Form, ed. R. Corona and G. L. Maffei (Florence, 1999); L. Micara, "Città storica e architettura moderna in Libia. Il caso di Tripoli," in Architettura Moderna Mediterranea, Atti del Convegno Internazionale, Bari 10 aprile 2002, ed. G. Strappa and A. B. Menghini (Bari, 2003), 81–96; L. Micara, "Scenari dell'abitare contemporaneo: Tripoli medina mediterranea," Piano Progetto Città, Rivista dei Dipartimenti di Architettura e Urbanistica di Pescara, nos. 20–21 (2003): 134–141.

Other Italian scholars, though not trained in the Roman School, have developed a similar interpretative methodology. Amongst these is Roberto Berardi. With a keen interest in the morphology of the city as a physical entity, he has managed to decipher the "alphabet" of the urban fabric of Tunis by breaking it down into its component parts.

Since the 1990s, the research centre in Italy where an interest in Islamic cities with a strong morphological orientation, continuing the tradition of Saverio Muratori's School, has been developed is the Facoltà di Architettura at the Politecnico di Bari.

In the 1980s in Germany various research groups conducted studies on Islamic, especially Middle Eastern, cities, using both an historical and a geographical approach. These were the geographers at the Institut für Geographie of the Friedrich-Alexander-Universität Erlangen-Nürnberg,[65] especially Eugen Wirth, the historians at the Orientalisches Seminar of the Eberhard Karls Universität Tübingen,[66] especially Heinz Gaube, and those at the Technische Universität Berlin, especially Dorothée Sack.

Wirth's urban studies and his theoretical definitions of the structure of the Oriental-Islamic city, already begun in the 1960s, are based on a geographical-morphological approach that defines the specificity of the Islamic city in relation to the commercial system of the suqs.[67]

Heinz Gaube's studies on the Islamic city use an analysis of historical documents and inscriptions to reconstruct the history and structure of Islamic cities in the various phases of their urban development. Based on a keen interest in the city as a physical entity, his studies have led him, in tandem with the geographer Wirth, to elaborate interesting interpretative syntheses of the urban structures of Islamic cities, especially in Syria and Iran.

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[65] A. Escher, Studien zum traditionellen Handwerk der orientalischen Stadt. Wirtschafts—und sozialgeographische Strukturen und Prozesse anhand von Fallstudien in Marokko (Erlangen, 1986); A. Escher and E. Wirth, eds., Die Medina von Fes. Geographische Beiträge zu Persistenz und Dynamik, Verfall und Erneuerung einer traditionellen islamischen Stadt in handlungstheoretischer Sicht (Erlangen, 1992).

[66] One of the main projects of scholars in this research centre is the TAVO, the Tübinger Atlas des Vorderen Orients, Wiesbaden 1977–1993, especially the production of a thematic cartography on the cities that have been the subject of their research.

[67] The work of German geographers that began with Wirth's research on commercial systems and bazaars, continued with M. Scharabi, Der Bazar: das traditionelle Stadtzentrum im Nahen Osten und seine Handelseinrichtungen (Tübingen, 1985), which is probably the most systematic text on the bazaar in the Islamic world, with a collection of images, measured drawings, and bibliographies on the commercial structure of the bazaar, divided by types.

Beginning with her research on the urban structure of Damascus, Sack's studies—whose methodology is based on an historical approach but with a marked orientation toward a morphological approach—are moving toward a revived interest in the archaeology of Islamic cities. Other scholars, such as the Swiss Stefano Bianca,[68] are concerned with the urban renewal of Islamic cities.

In the United States studies on the Islamic city began with Oleg Grabar's research, who was the first scholar to teach the History of Islamic Art in the USA, but were concerned more with architecture than with the city as a physical entity. An interest in Islamic architecture and urban form has become the objective of many scholars and research centres: Renata Holod[69] at the School of Art and Science, University of Pennsylvania; Nasser Rabbat[70] at the Aga Khan Program for Islamic Architecture, MIT; Gülru Necipoglu[71] at the Aga Khan Program for

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[68] S. Bianca, *Architektur und Lebensform im islamischen Stadtwesen. Baugestalt und Lebensordnung in der islamischen Kultur, dargestellt unter besonderer Verarbeitung marokkanischer Quellen und Beispiele* (Zürich, 1979); S. Bianca, *Städtebau in islamischen Ländern* (Zürich, 1980); S. Bianca, J.-C. David, G. Rizzardi, Y. Beton, and B. Chauffert-Yvart, *The Conservation of the Old City of Aleppo*, Technical Report UNESCO (Paris, 1980); S. Bianca, "Evolution d'une politique de réhabilitation: le cas de Alep," in *La réhabilitation des cités anciennes*, Actes du Colloque International tenu à Salé les 6–9 Octobre 1988, ed. Association Bou Regreg (Casablanca, 1990); S. Bianca, *Hofhaus und Paradiesgarten: Architektur und Lebensformen in der islamischen Welt* (Munich, 1991).

[69] R. Holod, ed., *Studies on Isfahan: Proceedings of the Isfahan Colloquium*, *Iranian Studies* (Special Issue), no. 7 (1974), especially the article by Lisa Golembek: L. Golombek, "Urban Patterns in Pre-Safavid Isfahan" (with Comments on Urban Patterns by Renata Holod) *Iranian Studies*, no. 7 (1974): 18–48; R. Holod and Khan H. Uddin, *The Mosque and the Modern World* (London, 1997). The latter's interest in Islamic cities has led her to edit conference proceedings—for example, R. Holod, ed., *Conservation as Cultural Survival*. Proceedings of Seminar Two in the Series: Architectural Transformations in the Islamic World, held in Istanbul, Turkey, September 26–28 1978 (Cambridge, MA, 1980)—and to carry out research on archaeology and settlements in Tunisia.

[70] N. Rabbat, "Writing the History of Islamic Architecture in Cairo," *Design Book Review* 31 (1994): 48–51; N. Rabbat, *The Citadel of Cairo: A New Interpretation of Royal Mamluk Architecture* (Leiden, 1995); N. Rabbat, "The City," *Encyclopedia of the Qur'an* (Leiden, 2001); N. Rabbat, "The Social Order in the Layout of the Islamic City," *Al-Mouhandis al-Arabi* 78 (1984): 9–11.

[71] G. Necipoglu, *Architecture, Ceremonial, and Power: The Topkapı Palace in the Fifteenth and Sixteenth Centuries* (New York and Cambridge, MA, 1991); G. Necipoglu, *The Age of Sinan: Architectural Culture in the Ottoman Empire* (London and Princeton, 2005). Necipoglu is editor of the journal *Muqarnas: An Annual on the Visual Culture of the Islamic World*, founded by Oleg Grabar.

Islamic Architecture, Harvard; Irene Bierman and Donald Preziosi[72] at the UCLA Center for Near Eastern Studies, in the Art History Department, Los Angeles; and Nazar al-Sayyad[73] at the Center for Middle Eastern Studies, University of California, Berkeley, who has studied the history of architecture in relation to its urban context.

Using an approach based on the study of the history of architecture and the archaeology of the Islamic city in order to reconstruct its urban history, in 1974 Renata Holod edited the monograph on Isfahan for *Iranian Studies, The American Journal of Iranology*, thereby initiating contemporary studies on Iranian cities.

Nasser Rabbat's interest in the Islamic city, especially Cairo and Syrian cities, is based on the study of historical and archival documents which he uses as the principal means of reconstructing the history of architecture in relation to the transformation of its urban context.

Likewise, Gülru Necipoglu's studies are based on an analysis of archival documents in order to reconstruct architectural history on an urban scale. In her studies on Topkapi Palace in Istanbul, by examining the Topkapi scrolls she has been able to elucidate its spatial structure in relation to the urban context and Turkish and Islamic cultural traditions.

Beginning with Lapidus' theories on the Islamic city and a meticulous historical enquiry, Nazar al-Sayyad has examined the form of Islamic military cites and the morphology of cities in the early centuries of Islam in order to define the Arab-Islamic elements in their urban structure. His interest is now moving toward processes of transformation of the physical structure of traditional and modern cities.

In the 1980s, starting from the interest of the above-mentioned schools in specific regions of the Islamic world, the scholarship and hence the literature on the different physical forms and structures of the traditional Islamic city proliferated. This fresh approach, applied to contingent geographical, political, social, historical, and economic conditions, dealt with the specific—that is, not theoretical—problem of urban structure and form, and so managed to overcome the Orientalist impasse created by an over-generalized model. It has, thus, represented a methodological point of reference for modern studies on the physical structure of the Islamic city. Moreover, the interest of international research centres has acted as a springboard for a renewed interest on the part of local research centres in the morphological and physical specificity of their own urban centres.

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[72] I. A. Bierman, R. A. Abou-El-Haj, and D. Preziosi, eds., *The Ottoman City and Its Parts: Urban Structure and Social Order* (New York, 1991).

[73] N. Al-Sayyad, *Streets of Islamic Cairo: A Configuration of Urban Themes and Patterns* (Cambridge, MA, 1981); N. Al-Sayyad, "Notes on the Islamic City: Aspects of Physical and Non-Physical Structure. The Costs of Not Knowing," in *Proceedings of the 1986 EDRA Conference*, ed. J. Wideman (Madison, WI, 1986); N. Al-Sayyad, "Space in an Islamic City," *Journal of Architectural and Planning Research* 2 (1987); N. Al-Sayyad, *Cities and Caliphs: On the Genesis of Arab Muslim Urbanism* (New York, 1991). Al–Sayyad is editor of the journal *Traditional Dwellings and Settlement Review: Journal of the International Association for the Study of the Traditional Environment*.

Thanks to these combined efforts in the field, today there are many studies on the urban structures of the different regions that go to make up the variegated panorama of cities in the Islamic world, even though there is still a notable imbalance in studies on urban physical structures in favour of some regions rather than others.

Spain

In the 1980s, research on the Islamic city in Spain was mainly conducted by a Hispanic-French group of scholars. Starting from the work of the Orientalist Leopoldo Torres Balbás,[74] they used data from archaeological excavations as the main tool in their reading of urban structure. Applying a methodology that combines archaeological research with an interpretation of cadastral surveys, they produced various studies on Andalusian and Moroccan cities, thereby filling the void left by architects who had abandoned this field of research. Their work has often been part of the projects of the Casa del Velázques[75] in Madrid (the French Cultural Centre), which is concerned also (though not only) with research on the morphology of Islamic cities in Andalusia, and the Centro de Estudios Arabes in Granada, directed by Antonio Almagro, under whose aegis numerous reconstructions of the urban structure of Andalusian cities have been carried out.

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[74] L. Torres Balbás, "La ciudad musulmana," *Revista Universitaria* 6, no. 25 (1938): 97–112; L. Torres Balbás, "Hallazgos arquéologicos en la alcazaba de Málaga," *Al-Andalus* 2 (1934): 344–357; L. Torres Balbás, "Excavaciones y obras en la Alcazaba de Málaga (1934–1943)," *Al-Andalus* 9 (1944): 173–190; L. Torres Balbás, "Notas sobre Sevilla en la época musulmana," *Al-Andalus* 10 (1945): 196–214; L. Torres Balbás, "Les villes musulmanes d'Espagne et leur urbanisation," *Annales de l'Institut d'Études Orientales* (Alger) 6 (1947): 5–30; Torres Balbás L., "Los contornos de las ciudades hispanomusulmanas," *Al-Andalus* 15 (1950): 437–486; L. Torres Balbás, "Estructura de las ciudades hispanomusulmanas: la medina, los arrabales y los barrios," *Al-Andalus* 18 (1953): 172–197; L. Torres Balbás, *Resumen histórico del urbanismo en España* (Madrid, 1954); L. Torres Balbás, *Ciudades Hispano-musulmanas* (Madrid, 1971).

[75] P. Cressier, "Histoire et archéologie de la ville islamique (Al-Andalus–Maroc). Les activités de la Casa de Velásquez," *Medina. Cité du Monde* 2 (1996): 104–106; P. Moret and P. Cressier, "La Casa de Velázquez y los estudios ibéricos," in *La cultura ibérica a través de la fotografía de principio de siglo. Un homenaje a la memoria*, ed. J. Blánquez Pérez and L. Roldán Gómez (Madrid, 1999), 43–47; P. Cressier, "Casa de Velázquez," in

Within this general frame of reference, some of the most important work on the Islamic city in Spain has been the historico-archaeological work carried out by the following: Julio Navarro Palazón[76] on Murcia, under the aegis of the Centro de Estudios Arabes, whose task was made easier by the demolitions that have allowed him to carry out archaeological research on the urban fabric and residential buildings; Jean Passini on Toledo; and André Bazzana and Patric Cressier on Andalusia and Morocco. To these we may add Pierre Guichard's[77] historical studies on Spain, in particular Valencia, and B. Pavón Maldonaldo's[78] work on Spain in general.

Using a philological approach to the analysis of fifteenth century cadastral records, Passini's[79] studies have attempted a reconstruction

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100 imágenes: *Pasado y presente de la Arqueología española*, ed. J. Blánquez Pérez (Madrid, 2000), 254–257.

[76] J. Navarro Palazón, "Siyâsa: una madîna de la cora de Tudmîr," *Annual Report on English and American Studies*, 5 (1985): 171–189; J. Navarro Palazón, "Murcia como centro productor de loza dorada," in *Congresso Internazionale delle Università degli Studi di Siena* (Florence, 1986), 129–143; J. Navarro Palazón, "Excavaciones arqueológicas en la ciudad de Murcia durante 1984," in *Excavaciones y prospecciones arqueológicas* (Murcia, 1987), 307–320; J. Navarro Palazón, *Una vivienda islámica en Murcia. Estudio de su ajuar (siglo XIII)* (Murcia 1991); J. Navarro Palazón, "Aproximación a la cultura material de Madînat Mursiya," in *Murcia musulmana*, ed. F. Arroyuelo and F. José (Murcia, 1989), 253–356.

[77] P. Guichard, *Structures sociales "orientales" et "occidentals" dans l'Espagne Musulmane* (Paris, 1977); P. Guichard, "Les Mozarabes de Valence et d'Al-Andalus entre l'histoire et le mythe," *Revue de l'Occident Musulman et de la Méditerranée* 40 (1985): 17–27; P. Guichard, *Les musulmans de Valence et la reconquête (XI^e^–XIII^e^ siècles)*, 2 vols. (Damascus, 1990–1991); A.-L. de Prémare and P. Guichard, "Croissance urbaine et société rurale à Valence au début de l'époque des royaumes de Taifas (XI^e siècle de J.-C.) Traduction et commentaire d'un texte d'Ibn Hayyan," *Revue de l'Occident Musulman et de la Méditerranée* 31 (1981): 15–30.

[78] B. Pavón Maldonado, *Ciudades hispanomusulmanas* (Madrid, 1992).

[79] J. Passini and J.-P. Molénat, "Persistance parcellaire et évolution diachronique à Tolède. L'impasse de la Bajada del Pozo Amargo et sa mosquée," in *Mélanges de la Casa de Velazquez*, 1992: 181–198; J. Passini, "Plan parcellaire et urbanistique médiévale islamique," *Le Moyen âge, Revue d'histoire et de Philologie* 1, no. 99 (1993): 27–39; J. Passini, J.-P. Molénat, and S. Sánchez-Chiquito de la Rosa, "El barrio de Santa Justa y el Mesón del Lino al final de la Edad Media," *Anales Toledanos* 31(1994): 65–122; J. Passini, "La ville de Tolède au Moyen Âge: apport du parcellaire, du texte et du bâti à l'étude du quartier de San Ginés," *Les Cahiers de Saint-Michel de Cuxá* 33 (2002): 61–66; J. Passini, *Casas y casas principales urbanas. El espacio doméstico de Toledo a finales de la Edad Media* (Toledo, 2004).

of the structure of medieval Islamic cities in Andalusia, in particular Toledo. He has paid special attention to the relation between residential building typology and urban fabric and has been able to reconstruct accurately the urban structure of these cities in the Islamic period.

Cressier's[80] and Bazzana's[81] work is based on an examination of the archaeological strata of Islamic cities in Andalusia and an analysis of cadastral records. They have attempted a reconstruction of the urban structure of cities in Andalusia and Morocco during the first phases of anthropic development. Cressier in particular has been able to investigate these urban structures without conducting excavations, by using a method similar to that of the Italian School, of reading the various phases of urban development through an analysis of the cadastral records.

Using a different methodology, Marianne Barrucand[82] has studied Spanish and Moroccan cities, in particular Meknes, concentrating her research on the history and structure of palace architecture in relation to urban context. Finally, though not concerned with the urban context as a whole, Pedro Chalmeta's[83] studies on the Spanish market system have provided interesting information both on the structure of Spanish markets and suqs in general.

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[80] P. Cressier, "L'Alpujarra médiévale: une approche archéologique," Mélanges de la Casa de Velázquez 19 (1983): 89–124; P. Cressier, "Fonction et évolution du réseau castral en Andalousie orientale: le cas de l'Alpujarra," in Castrum 3. Guerre, fortification et habitat dans le monde méditerranéen au Moyen-Âge (Madrid and Rome, 1988), 123–134; P. Cressier, "Le Catastro de la Ensenada (v. 1752): La structure des petites 'villes' islamiques d'Andalousie," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Centre 1–2 (1993): 38–43; P. Cressier, and L. Erbati, "La naissance de la ville islamique au Maroc. Campagne 1996," Nouvelles archéologiques et patrimoniales 1 (1997): 13–14; P. Cressier and M. Garcia-Arenal, eds., Genèse de la ville islamique en al-Andalous et au Maghreb occidental (Madrid, 1998).

[81] A. Bazzana, "Eléments d'archéologie musulman dans Al-Andalus: caractères spécifiques de l'architecture militaire arabe de la ragion valencienne," Al-Qantara 1 (1980): 339–363; A. Bazzana, P. Cressier, L. Erbati, Y. Montmessin, and A. El Aziz Touri, "Première prospection d'archéologie médiévale et islamique dans le Nord du Maroc (Chefchaouen–Oued Laou–Bou Ahmed)," Bulletin d'Archéologie Marocaine 15 (1983–84): 367–450; A. Bazzana and P. Cressier, Shaltish/Saltés (Huelva): Une ville médiévale d'al-Andalus (Madrid, 1989); A. Bazzana, "Urbanismo e hidráulica (colectiva y doméstica) en la Saltés almohade," in Casas y palacios de al-Andalus. Siglos XII y XIII (Madrid and Barcelona, 1995), 139–156.

[82] M. Barrucand, L'Architecture de la Qasba de Moulay Ismail à Meknes (Rabat, 1976); M. Barrucand, L'urbanisme princier en Islam: Meknès et les villes royales islamiques post-médiévales (Paris, 1985); M. Barrucand, "Stadtgründungen als Herrschaftssymbol. Bemerkungen zur Architektur islamischer Herrscherstädte des 16. und 17. Jahrunderts," in 22. Deutscher Orientalistentag 1983 in Tübingen. Ausgewählte Vorträge (Stuttgart, 1985), 395–403; M. Barrucand, "Die Palastarchitektur Mulay Isma'ils: Die Qasaba von Meknes," Madrider Mitteilungen 30 (1989): 506–523; M. Barrucand and A. Bednorz, Maurische Architektur in Andalusien (Cologne, 1992).

North Africa

From the mid 1980s there have been numerous urban studies on North Africa cities that favour a reading of the city as a physical entity. These studies have used the cadastral surveys compiled in the first decades of the twentieth century as their main documentary source and have often complemented these records with detailed measured drawings of the urban fabric and architecture.

The cartographic representation of the urban organism deriving from this extensive corpus of measured drawings of urban fabric and architecture has been carried out not only by European scholars but also by many local research centres that are concerned with the renewal and conservation of North African medinas and has resulted in the redaction of numerous plans of the ground floors in the medinas.[84]

In Tunisia especially, the various Associations de Sauvegarde de la Médina which operate even for the medinas in smaller cities are promoting research in collaboration with universities and international research centres as well as the compilation of corpora of measured drawings and the monitoring of historic centres.[85] Amongst the most active research centres on North African cities are the AIMS (American Institute for Maghreb Studies) and EMAT (Centre for Maghrib Studies in Tunis).

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[83] P. Chalmeta, El señor del zoco en España: edades media y moderna. Contributional estudio de la istoria del mercato (Madrid, 1973).

[84] In Tunisia, for example, ground floor plans of Tunis medina on a scale of 1:200 were executed by the Association de Sauvegarde de la Médina; ground floor plans of Kairouan medina by Paola Jervis and Paolo Donati, redesigned by the draughtsmen of the Association de Sauvegarde de la Médina; ground floor plans of Hammamet medina by Mario Face; and ground floor plans of Sfax medina by Michel van der Meerschen. In Morocco, ground floor plans of Essaouira are at present being completed by Attilio Petruccioli and Mirco Accorsi.

[85] See, for example, the Atelier Méditerranéen Nabeul 2003 organized by the ASM of Nabeul in order to draw up the general guidelines for the recovery of smaller medinas in Tunisian cities, in collaboration with the Institut National du Patrimoine (Tunis), the École Nationale d'Architecture et d'Urbanisme de Tunisi, the Institut Supérieur des Beaux Arts di Tunisi, the École Polytechnique d'Architecture et d'Urbanisme d'Alger, the Facoltà di Architettura del Politecnico di Bari, the Facoltà di Architettura di Palermo, and the École d'Architecture Languedoc-Roussillon di Montpellier.

The tradition of urban studies that has seen in the measured drawing of aggregates of residential buildings the tool for describing urban form was initiated in North Africa by the work of Jacques Revault.[86] He classified residential buildings in North Africa into four types, with each type based on the same compositional principles. Despite the fact that his studies have used a lower scale of reference with respect to the subject of the present article, describing the relation between residential buildings and urban fabric and the aggregative logic of residential buildings within it, they have nevertheless constituted representative cross-sections of the entire urban fabric. The importance of such research resides in the fact that, unlike earlier studies, the Marçais' especially, which was focused exclusively on specialized buildings, Revault's work has initiated a fresh scholarly interest in residential buildings. The studies by Mona Zakariya[87] and Jean-Claude Garcin[88] on Cairo have developed from Revault's studies. Still on an architectural scale, Serge Santelli's[89] research has documented the residential buildings in this region.

Amongst the works closely linked to a reading of the physical structure of North African Islamic cities as an aggregate of residential and public buildings are Roberto Berardi's studies on Tunis.[90] They have represented an important methodological point of reference for a reading of North African cities, due to their syntactical deconstruction of the urban fabric, based on the identification of the discrete elements that shape it and the application of simple operations to them that has allowed him to determine the structure of the suqs and dwellings. Other monographic works, such as those by Paola Jervis Donati[91] on Kairouan, Marcello Balbo and Daniele Pini[92] on Salé, and Samuel Pickens[93] and Michael Bonine[94] on Morocco, are part of the growing corpus of individual research projects conducted on North African cities.

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[86] J. Revault, *Palais et demeures de Tunis (XVIII^e^ et XIX^e^ siècles)* (Paris, 1967); J. Revault and B. Maury, *Palais et maisons du Caire du XIV^e^ au XVIII^e^ siècle*, 3 vols. (Cairo 1977–1979); J. C. Garcin, B. Maury, J. Revault, and M. Zakarya, *Palais et maisons du Caire*, vol. 1, *Epoque mamelouke (XIII^e^–XVI^e^ siècles)* (Paris, 1982); B. Maury, A. Raymond, J. Revault, and M. Zakarya, *Palais et maisons du Caire*, vol. 2, *Epoque ottomane (XVI^e^–XVIII^e^ siècles)* (Paris, 1983); J. Revault, *Palais, demeures et maisons de plaisance de Tunis et ses environs* (Aix-en-Provence, 1984); J. Revault, L. Golvin, and A. Amahan, *Palais et demeures de Fès* (Paris, 1985–1989); J. Revault, "Reflexions sur l'architecture domestique en Afrique du Nord et en Orient," in *L'Habitat traditionnel dans les pays musulmans autour de la Méditerranée*, vol. 1, *L'Héritage architectural: formes et functions*. Rencontre d'Aix-en-Provence, 6–8 juin 1984, ed. Groupe de Recherches et d'Études sur le Proche-Orient (Cairo, 1988), 315–321.

[87] M. Zakariya, "Typologie de l'habitat dans le Caire médiévale: contribution à l'étude de l'espace central," *Cahiers de la recherche architecturale*, nos. 10–11 (1982): 116–125.

[88] J.-C. Garcin, B. Maury, J. Revault, and M. Zakariya, *Palais et maisons du Caire* (Paris, 1982–1983); J.-C. Garcin, *Espace, pouvoirs et idéologies de l'Egypte médiévale* (London, 1987); J.-C. Garcin, "Le Caire et l'évolution urbaine dans des pays musulmans à l'époque médiévale," *Annales Islamologiques* 25 (1991).

[89] S. Mouline and S. Santelli, Rabat. *Numéro spécial du Bullettin d'Informations Architecturales* (Paris, 1986); S. Santelli, "Mahdiya," in "Urban Fabric," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Centre* 1–2 (1989): 54–59; S. Santelli, *Atlas des Medinas Tunisiennes* (Paris, 1992); S. Santelli, *Médinas: L'Architecture Traditionnelle en Tunisie* (Tunis, 1993); S. Santelli, *Tunis: Le Creuset Méditerranéen* (Paris, 1995); S. Santelli, "L'Atelier Harar," *Archiscopie*, no. 34 (October 2003).

[90] R. Berardi, "Lecture d'une ville: la médina de Tunis," *L'Architecture d'Aujourd'hui*, no. 153 (1970–1971): 38–43; R. Berardi, "Alla ricerca di un alfabeto urbano: la medina di Tunisi," *Necropoli* 9–10 (1970): 27–48; R. Berardi, "Signification du plan ancien de la ville arabe," in *La ville arabe dans l'Islam* (Paris, 1982), 187; R. Berardi, "On the

Interest in Cairo as a physical entity has developed from the studies of Laila {Ali Ibrahim[95] and André Raymond,[96] the most eminent scholars of the architectural and urban history of this city in the Mamluk and Ottoman periods. Beginning with their studies of the waqf documents, they have developed a new methodological approach to a reading of this city's urban structure. Studying the composition of the inhabitants,

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City," in "Urban Fabric," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Centre* 1–2 (1989): 8–17.

[91] P. Jervis Donati, "Kairouan," in "Urban Fabric," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1989): 36–53.

[92] M. Balbo, D. Pini, and M. F. Zniber, "Quelle stratégie d'approche pour la Médina de Salé?" in *La réhabilitation des cités anciennes*, Actes du Colloque International tenu à Salè les 6–7–8–9 Octobre 1988, ed. Association Bou Regreg (Casablanca, 1990); M. Balbo and D. Pini, eds., *Medina di Salè: studi e ipotesi di riqualificazione urbana* (Milan, 1993).

[93] S. Pickens, *Les villes impériales du Maroc: Fès, Marrakech, Meknès, Rabat-Salé* (Paris, 1990).

[94] M. E. Bonine, "The Sacred Direction and City Structure: A Preliminary Analysis of the Islamic Cities of Morocco," *Muqarnas* 7 (1990): 50–72. This article on the sacred orientation of the urban fabric, which rotated over time to coincide with the orientation of the mosques, is one of the more interesting essays on the urban structure of Moroccan cities, and its conclusions may be applied to other Islamic cities.

[95] L. A. Ibrahim, "Residential Architecture in Mamluk Cairo," *Muqarnas* 2 (1984): 47–59.

[96] A. Raymond, "La conquête ottomane et le dèveloppement des grandes ville arabes. Le cas du Caire, de Damas et d'Alep," *Revue de l'Occident Musulman et de la Méditerranée* 27 (1979): 115–134; A. Raymond, "Les grands waqfs et l'organisation de l'espace urbain à Alep et au Caire à l'èpoque ottomane (XVI^{e}–XVII^{e} siècles)," *Bulletin d'Études Orientales de l'Institut Français d'Études Arabes de Damas* 31 (1980): 113–128; A. Raymond, "La géographie des hÊra du Caire, au XVIII^{e} siècle," in *Livre du centenaire de l'IFAO* (Cairo, 1980); A. Raymond, *The Great Arab Cities in the 16th–18th Centuries: An Introduction* (New York, 1984); A. Raymond, *Grande villes arabe à l'époque ottomane* (Paris, 1985); A. Raymond, *Le Caire* (Paris, 1993); A. Raymond, *Le Caire des Janissaires: L'apogee de la ville ottomane sous {Abd al-Rahman Katkhuda* (Paris, 1995); A. Raymond, "The Residential Districts of Cairo's Elite in the Mamluk and Ottoman Periods (Fourteenth to Eighteenth Centuries)," in *The Mamluks in Egyptian Politics and Society*, ed. T. Philipp and U. Haarmann (Cambridge, MA, 1998), 207–223; A. Raymond, *Cairo* (Cambridge, MA, 2000).

the spatial organization, the urban economy and facilities in Cairo in the Mamluk period, Laila {Ali Ibrahim has demonstrated that, different from the common Orientalist notion, the residential buildings and suq grew in an ordered, not in a chaotic manner in this phase of urban expansion. André Raymond, describing the structure of Cairo in the Ottoman period, has demonstrated the urban explosion that determined its various phases of development by using waqf documents that record the foundation of new mosques and baths and by relating these new foundations to the development of the urban fabric.

Following the research carried out by Laila {Ali Ibrahim and André Raymond, many other scholars have used waqf records as a means of reconstructing Cairo's urban history. Doris Behrens-Abouseif[97] has been especially concerned with the urban development of the northern and eastern districts of Cairo, while Leonor Fernandes[98] has used waqf documents as a means of reconstructing its architectural history. The historian Nelly Hanna[99] has reconstructed the history of the Bulaq district of Cairo, using waqf documents and the *Description de l'Egypte*. Federico Cresti[100] has carried out demographic studies on Algiers in the

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[97] D. Behrens-Abouseif, "A Circassian Mamluk Suburb North of Cairo," *Art and Archaeology Research Papers* 14 (1978): 17–23; D. Behrens-Abouseif, "The North Eastern Extension of Cairo under the Mamluks," *Annales Islamologiques* 17 (1981); D. Behrens-Abouseif, *Azbakiyya and its Environs: From Azbak to Isma{il, 1476–1879* (Cairo, 1985); D. Behrens-Abouseif, "Locations of Non-Muslim Quarters in Medieval Cairo," *Annales Islamologiques* 22 (1986); D. Behrens-Abouseif, *Egypt's Adjustment to Ottoman Rule: Institutions, Waqf and Architecture in Cairo (16th and 17th Centuries)* (Leiden, 1994); D. Behrens-Abouseif, "Qaytbay's investments in the city of Cairo: Waqf and power," *Annales Islamologiques* 32 (1998); D. Behrens-Abouseif, ed., *The Cairo Heritage: Essays in Honor of Laila Ali Ibrahim* (Cairo, 2001).

[98] L. Fernandes, "Three Sufi Foundations in a 15th Century Waqfiyya," *Annales Islamologiques* 17 (1981): 141–156; L. Fernandes, "Some Aspects of the Zawiya in Egypt at the Eve of the Ottoman Conquest," *Annales Islamologiques* 19 (1983): 9–17; L. Fernandes, "The Foundation of Baybars al-Jashankir: Its Waqf, History and Architecture," *Muqarnas* 4 (1987): 21–42; L. Fernandes, *The Evolution of a Sufi Institution in Mamluk Egypt: The Khanqah* (Berlin, 1988).

[99] N. Hanna, *An Urban History of Bulaq in the Mamluk and Ottoman Periods* (Cairo, 1983); N. Hanna, *Construction Work in Ottoman Cairo (1517–1798)* (Cairo, 1984); N. Hanna, "La Maison Waqf Radwan au Caire," in *L'habitat traditionnel dans les pays Musulmans autour de la Méditerranée*, vol. 1, ed. Groupe de Recherches et d'Études sur le Proche-Orient (Aix en Provence, 1984); N. Hanna, *Habiter au Caire: La maison moyenne et ses habitants aux XVII^e et XVIII^e siècles* (Cairo, 1991).

[100] F. Cresti, "The Boulevard de l'Impératrice in Colonial Algiers (1860–1866)," in "Maghreb: From Colonialism to a New Identity," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Centre* 1 (1985): 54–59; F. Cresti, "Alger à la période turque. Observations et hypothéses sur la population et sa structure sociale," *Revue de l'Occident Musulman et de la Méditerranée* 44 (1987): 125–133; F. Cresti, "Beni

Ottoman period using travellers' accounts and the information found in the waqf registers on the number of mosques and baths.

Studies on Cairo and other Egyptian cities have also been carried out by scholars from various disciplines. Sylvie Denoix[101] has used an historical approach based on an analysis of archival and archaeological documentation. Philippe Panerai,[102] interested in the morphology of the Islamic city, has based his research on measured drawings as well as on an analysis of cadastral plans and the structural relations between the different parts of the city. Robert Ilbert[103] has studied Cairo and Alexandria from an historical perspective while also touching on morphological aspects. Jean-Charles Depaule[104] has studied the residential systems of Cairo using an approach that combines typological and sociological disciplines, while Wladyslaw B. Kubiak[105] has used historical and archaeological sources in order to describe the structure of al-Fustat.

Amongst the various research centres monitoring architecture in Cairo, the following have made important contributions: the Deutsches Archäologisches Institut in Cairo, which publishes its results in Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo, and the Institut Français d'Archéologie Orientale du Caire, which publishes its results in Bulletin, Mémoires, and Annales Islamologiques.

Abbes," in "Urban Fabric," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1989): 28–35.

[101] S. Denoix, Décrire le Caire—Fustat—Misr d'après ibn Duqmaq et Maqrizi: L'histoire d'une partie de la ville du Caire d'après deux historiens égyptiens des XIV^e^–XV^e^ siècles (Cairo, 1992); S. Denoix, ed., Le Khan al-Khalili et ses environs. Un centre commercial et artisanal au Caire du XIII^e^ au XX^e^ siècle (Cairo, 1999).

[102] S. Noweir and P. Panerai, "Cairo: The Old Town," in "Urban Fabric," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1989): 60–67.

[103] R. Ilbert, Helipolis: Le Caire 1905–1922—genése d'une ville (Paris, 1981); R. Ilbert, "Note sur l'Egypte au XIX^e^ siècle: Typologie architecturale et morphologie urbane," Annales Islamologiques 17 (1981): 343–357; R. Ilbert, "Mèthodologie et idéologie: la recherche française sur les politiques urbaines en Egypte," K. Brown, M. Jolé, P. Sluglett, and S. Zubaida, eds., Middle Eastern Cities in Comparative Perspective (London,1986), 103–114; R. Ilbert, "Entre deux mondes: Archives et lecture d'une ville," Revue de l'Occident Musulman et de la Méditerranée 46 (1987): 9–12.

[104] J.-C. Depaule, L'habitat urbain dans l'Orient arabe, éléments d'architecture (Paris, 1984); J.-C. Depaule et al., Actualité de l'habitat ancien au Caire: le Rab' Qizlar (Cairo, 1986).

[105] W. B. Kubiak, Al-Fustat: Its Foundation and Early Urban Development (Cairo, 1987).

The Middle East

In the 1980s, following in the footsteps of a large number of French and German scholars, urban studies on Middle Eastern cities intensified and had as their general field of interest the structure of the city as a physical entity and the commercial system of the suqs.

Studies on Syrian cities developed from the research of Heinz Gaube and Eugen Wirth on Aleppo[106] in which a close examination of literary sources and inscriptions was combined with an extensive survey of specialized buildings in the ancient city from which they were able to reconstruct the urban fabric from the early centuries of the Islamic conquest onwards. The different approaches of these two German scholars, historical and geographical respectively, have been combined in the redaction of a series of thematic maps that represent the urban structure of Aleppo in the pre-modern and modern era, especially the route system and the religious, public, and commercial structures.

A further contribution to our knowledge of Aleppo has been made by Jean-Claude David.[107] Using a different methodology in his reading of the building fabric, especially the structure of the suq, pious foundations, and courtyard dwellings, he has been able to make morphological and typological deductions that can be applied more generally to other cities in the same region.

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[106] H. Gaube and E. Wirth, *Aleppo. Historische und geographische Beiträge zur baulichen Gestaltung, zur sozialen Organisation und zur wirtschaftlichen Dynamik einer vorderasiatischen Fernhandelsmetropole*, 2 vols., Beihefte zum TAVO, B, Nr. 58 (Wiesbaden, 1984).

[107] J.-C. David, "Alep, dégradation et tentatives actuelles de réadaptation des structures urbaines traditionnelles," *Bulletin d'Études Orientales de l'Institut Français d'Études Arabes de Damas*, Tome 28, 1975 (1977); J.–C. David, "Urbanisation spontanée et planification; le faubourg ancien nord d'Alep (XV^{e}–XVIII^{e} siècle)," *Les Cahiers de la recherche architecturale* 10–11 (1982): 14–18; J.-C. David and B. Chauffert-Yvart, *Le waqf d'IpšÒ PÊÊâ Alep (1063–1653): Étude d'urbanisme historique* (Damascus, 1982); J.-C. David, "La formation du tissu de la ville arabo-islamique; apport de l'étude des plans cadastraux d'Alep," in "Urban Morphogenesis: Maps and Cadastral Plans," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Centre* 1–2 (1993): 138–155; J.-C. David, "L'habitat permanent des grands commerçants dans les khans d'Alep à l'époque ottomane," in *Les Villes dans l'Empire Ottoman: Activités et Sociétés*, ed. D. Panzac (Paris, 1994), 85–123; J.-C. David, *La suwayqat {AlÒà Alep* (Damascus, 1998); J.-C. David and M. al-Dbiyat, "La ville en Syrie et ses territoires: héritages et mutations," *Bulletin d'Études Orientales de l'Institut Français d'Études Arabes de Damas* 52 (2000): 17–27; J.-C. David and G. Degeorge, *Alep* (Paris, 2002).

Numerous other scholars have been concerned with the physical structure of Aleppo.[108] Anette Gangler,[109] in her monographic work based on an extensive architectural survey of residential buildings, which she then used in the compilation of descriptive maps of the urban aggregation, has analyzed the physical structure of the BÊnqÖsÊ district. Using historical data, Yasser Tabbaa[110] has produced studies and a reconstruction of the urban structure of Aleppo in the Ayyubid period.

Still speaking of Aleppo, yet again one cannot ignore André Raymond’s[111] contribution to our understanding of the city’s commercial and urban structure in the Ottoman period. In his reading of Aleppo he often compares it with Tunis and Cairo, and through studying waqf documents, travellers’ accounts and historical topography, he has demonstrated its urban growth in the Ottoman period.

Following Raymond’s studies, other architectural historians have used waqf documents to reconstruct the urban fabric of Aleppo in the same period. Antoine Abdel Nour[112] has analysed the physical structure of residential buildings between the sixteenth and eighteenth centuries, using sharia-court registers. On the basis of an analysis of archival documents and field research, Jihane Tate[113] has reconstructed the history of a waqf and its relation to the district. Based on a reading of the waqf documents, Heghnar Watenpaugh[114] has put forward the thesis of a decentralization of the urban structure of Aleppo in the Ottoman period.

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[108] See also G. A. Neglia, “Persistences and Changes in the Urban Fabric of the Old City of Aleppo,” *Environmental Design: Journal of the Islamic Environmental Design Centre* 1–2 (2000–2001): 32–41; G. A. Neglia, “Bab Qinnasrin à Alep,” in *Bulletin of the Max van Berchem Foundation* (Geneve), n. 20 (December 2006); 3–4; G. A. Neglia, “An interpretation of the urban fabric: The structure of pre-Islamic Aleppo,” in *Urban Morphology. Journal of the International Seminar on Urban Form*, vol. 11, n. 1 (2007): 43–58.

[109] A. Gangler, *Ein traditionelles Wohnviertel im Nordosten der Altstadt von Aleppo* (Tübingen, 1993).

[110] Y. Tabbaa, “Circles of Power: Palace, Citadel, and City in Ayyubid Aleppo,” *Ars Orientalis* 23 (1993): 181–200; Y. Tabbaa, *Constructions of Power and Piety in Medieval Aleppo* (Philadelphia, 1997).

[111] A. Raymond, “Signes urbains et étude de la population des grandes villes arabes à l’èpoque ottomane,” *Bulletin d’Études Orientales de l’Institut Français d’Études Arabes de Damas* 27 (1974): 183–193; A. Raymond, “Le déplacement des tanneries à Alep, au Caire et à Tunis à l’époque ottomane: Un ‘indicateur’ de croissance urbaine,” *Revue d’Histoire Maghrébine* 7–8 (1977): 192–200; A. Raymond, *La Syrie d‘aujourd‘hui* (Aix-en-Provence, 1980); A. Raymond, *La ville arabe, Alep à l‘époque ottomane, XVIe–XVIIIe siècles* (Damascus, 1990); A. Raymond, “Alep a l’époque ottomane, XVIe–XIXe siècles,” in “Alep et la Syrie du Nord,” *Revue du Monde Musulman et de la Méditerranée* (Aix-en-Provence), no. 62 (1990).

[112] A. Abdel Nour, “Types architecturaux et vocabulaire de habitat en Syrie au XVIe et XVIIe siècle,” in *L’espace social de la ville arabe*, ed. D. Chevallier (Paris, 1979); A. Abdel Nour, “Habitat et structures sociales à Alep aux XVIIe et XVIIIe siècle d’après des sources arabes inédites,” in *La ville arabe dans l’Islam*, ed. A. Bouhdiva and D. Chevallier (Tunis, 1982).

[113] J. Tate, *Une waqfiyya du XVIII siècle à Alep. La waqfiyya d’al-HÊM ÖsÊ al-AmÒrÒ, traduction et commentaire* (Damascus, 1990).

The research of a number of these scholars, especially Gaube and Wirth, has generated interest on behalf of international organizations for the conservation of the world architectural heritage, such as UNESCO.[115] This interest continues today in the constant monitoring of the ancient city by a Syro-German group GTZ/Directorate of the Old City.[116]

In the 1980s the most exhaustive research on Damascus was carried out by Dorothée Sack,[117] who used an approach to urban studies that combined historical and archival research with measured drawings of the urban fabric and the principal monuments. Her work describes the urban transformation of Damascus through the compilation of historical and thematic maps of the route systems, mosques, and suqs in different periods and identifies in the streets, neighbourhoods, water systems, and suqs the basic elements of the urban structure.

Michael Meinecke's[118] work on a district of the ancient city is more closely linked to the study of architecture, as is that of Stefan Weber[119] who has shown a typological interest in nineteenth century Damascus. Jean-Paul Pascual's[120] approach to historical inquiry, on the other hand, is through an analysis of *waqf* documents. Applying the same methodology as Nelly Hanna in her research on Cairo, Pascual's work on Damascus has continued that of Raymond on Aleppo and Cairo, producing an accurate description of its urban form at the end of the sixteenth century.

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[114] H. Zeitlian Watenpaugh, *The Image of an Ottoman City: Imperial Architecture and Urban Experience in Aleppo in the 16th and 17th Centuries* (Leiden, 2004).

[115] S. Bianca, J.-C. David, G. Rizzardi, Y. Beton, and B. Chauffert-Yvart, *The Conservation of the Old City of Aleppo*, Technical Report UNESCO (Paris, 1980).

[116] This interest has manifested itself in a series of colloquia and conferences, amongst which: M. Fansa, ed., *Damaskus-Aleppo: 5000 Jahre Stadtentwicklung in Syrien* (Mainz, 2000). In 2005 the city of Aleppo received the Veronica Rudge Green Prize in Urban Design at GSD/Harvard for the rehabilitation of the historic centre of Aleppo.

[117] D. Sack, "Damaskus, die Stadt intra muros," *Damaszener Mitteilungen* 2 (1985): 207–290; D. Sack, *Damaskus: Entwicklung und Struktur einer orientalischen Stadt* (Mainz, 1989).

[118] M. Meinecke, "Der Survey des Damaszener Altstadtviertels as-SÊihyÒa," *Damaszener Mitteilungen* 1 (1983): 189–247.

[119] S. Weber, "The Creation of Ottoman Damascus. Architecture and Urban Development of Damascus in the 16th and 17th centuries," ARAM 9–10 (1997–1998): 431–470; S. Weber, "Der Marga-Platz in Damaskus—Die Entstehung eines modernen Stadtzentrums unter den Osmanen als Ausdruck strukturellen Wandels (1808–1918)," *Damaszener Mitteilungen* 10 (1998): 291–344, Taf. 77–88; S. Weber, "The Transformation of an Arab-Ottoman Institution: The Suq (Bazaar) of Damascus from the 16th to the 20th Century," in *Seven Centuries of Ottoman Architecture: A Supra-National Heritage*, ed. N. Akin, S. Batur, and A. Batur (Istanbul, 2000), 244–253.

[120] J.-P. Pascual, *Damas à la fin du XVI siècle d'après trois actes de waqf ottomans* (Damascus, 1983); J.-P. Pascual, ed., "Villes au Levant: Hommage a André Raymond," Numéro Spécial de la *Revue du Monde Musulman et de l2a Méditerranée* 55/56 (1990).

In Syria the main research centres on the city as a physical entity are: the Institut Français de Damas[121] which has sponsored numerous urban studies and monitors many urban centres, publishing its results in the *Bulletin d'Études Orientales*;[122] the Direction Générale des Antiquités et des Musées[123] which publishes *Les Annales Archéologiques Arabes Syriennes*; and the Deutsches Archäologisches Institut which publishes the *Damaszener Mitteilungen*.

In Lebanon urban studies on Tripoli have been carried out by Hayat Salam-Liebich[124] and Nimrod Luz[125] on Mamluk commercial and religious architecture, while the Deutsches Orient-Institut in Beirut[126] studies and monitors Mamluk urban structures there.

Studies on Islamic Jerusalem have been carried out by Mahmoud K. Havari,[126bis] on Ayyubid architecture, Michael H. Burgoyne,[127] on

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[121] Many of the more recent publications represent research of a historical or geographical kind on the main Syrian cities, amongst which: P. Canivet and J.-P. Rey-Coquais, eds., *La Syrie de Byzance à l'islam* (Damascus, 1992); S. Atassi, J.-P. Pascual, M. Kandalaft, et al., *Damas extra-muros: MÒdÊ SultÊÒ , présentation des édifices répertoirés et analyse* (Damascus, 1994); M. Dbyiyat, *Hama et Homs en Syrie centrale: Concurrence urbaine et developpement régional* (Damascus, 1995); B. Marino, *Le faubourg du MÒdÊn à Damas à l'époque ottomane* (Damascus, 1997); Y. Roujon and L. Vilan, *Le Midan, actualité d'un faubourg ancien de Damas* (Damascus, 1997).

[122] See especially the monographic issue of the *Bulletin d'Études Orientales*, Tome LII–2000 (Damascus, 2001) and the article J.-C. David and M. al-Dbiyat, "La ville en Syrie et ses territoires: héritages et mutations," *Bulletin d'Études Orientales* 52 (2000): 17–27.

[123] La Direction Générale des Antiquités et des Musées, *QÊimat al-mabÊÒ al-athrÒya al-musajjala wal-mu{adda lil-tasjÒl fÒ madÒnat Dimashq hattÊ bidÊyat {Êm 1983* (Damascus, 1983).

[124] Hayat Salam-Liebich, *The Architecture of the Mamluk City of Tripoli* (Cambridge, MA, 1983).

[125] N. Luz, "Tripoli Reinvented: a case of Mamluk Urbanization," in *Towns and Material Culture in the Medieval Middle East*, ed. Y. Lev (Leiden, 2002), 53–71.

[126] The Deutsche Orient-Institut in Beirut (directed by Stefan Weber), together with Centre de Restauration et Conservation, at the Tripoli Town Council and the Lebanese University (Tripoli) have an interdisciplinary programme for the recovery of the ancient centre of Tripoli based on historical enquiry and measured drawings of Mamluk architecture.

[126bis] M. K. Havari, Ayyubid Jerusalem. An architectural and Archaeological Study, (Oxford 2007).

[127] M. H. Burgoyne, *Mamluk Jerusalem: An Architectural Study* (London, 1987).

Mamluk architecture, and Sylvia Auld and Robert Hillenbrand,[128] on Ottoman architecture. Their research which represents the final product of a series of historical inquiries and field surveys on Mamluk and Ottoman buildings sponsored by the Waqf Council of Jerusalem relates the architectural to the urban structure of the walled city in these crucial phases of urban development and gives indications as to the main lines of urban development for the same periods, thanks to the use of ground plans that show the distribution of specialized architecture within the urban fabric.

In this context we must also mention the monograph on the Dome of the Rock by Oleg Grabar and Sari Nuseibeh.[129] Though this work deals primarily with a single monument, in its visual and structural relation to the Holy Sepulchre, the authors also give a spatial reading of the whole of the ancient city of Jerusalem.

Today there is as yet no systematic research being carried out on residential buildings in Jerusalem. The only systematic work on residential buildings in an urban context within the same region is that on Bethlehem by Philippe Revault, Catherine Weill-Rochant, and Serge Santelli;[130] and on Palestinian urban mansions edited by Riwaq-centre for architectural conservation.[130bis]

The research centres operating in Jerusalem and monitoring its building and architectural heritage are the British School of Archaeology in Jerusalem and Islamic Waqf Department.

In Jordan the historian and archaeologist Hugh Kennedy[131] has described the passage from a Byzantine urban structure to an early Islamic one, while Donald Whitcomb[132] has studied Islamic archaeology in the Fatimid period. The research centre operating here is the centre for the study of the Built Environment (CSBE).

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[128] S. Auld and S. Hillenbrand, *Ottoman Jerusalem: The Living City, 1517–1917* (London, 2000) and, in particular, Catalogue of Buildings by Yusuf Natsheh.

[129] O. Grabar and S. Nuseibeh, *The Dome of the Rock* (New York, 1996).

[130] P. Revault, C. Weill-Rochant, and S. Santelli, *Maisons de Bethléem* (Paris, 1997).

[130bis] D. Khasawneh, *Memories Engraved in Stones. Palestinian Urban Mansions*, (Ramallah 2001); Riwaq eds., *Riwaq's Registry of Historic Buildings in Palestine*, 3 rolls (Ramallah 2007).

[131] H. Kennedy, "From Polis to Medina: Urban Change in Late Antique and Early Islamic Syria," *Past and Present* 106 (1985): 3–27; H. Kennedy, "The Towns of Bilad al-Sham and the Arab Conquest," in *Proceedings of the Symposium on Bilad al-Sham During the Byzantine Period* (Muharram 9–13, 1404 A.H./November 15–19, 1983), ed. M. Adnan Bakhit and M. Asfour, vol. 2 (Amman, 1986), 88–99.

[132] D. Whitcomb, "Excavations in {Aqaba: First Preliminary Report," *Annual of the Department of Antiquities of Jordan* 31 (1987): 247–266; D. Whitcomb, "A Fatimide

In the 1980s, leaders in the debate on the physical structure of Iranian cities[133] (albeit with different approaches and methodologies and drawing different conclusions) were: Heinz Gaube and Eugen Wirth,[134] with their research on the commercial structures of the bazaars; Heinz Gaube,[135] with his research on the structure and morphology of Iranian cities; and Michael E. Bonine,[136] with his research on the relation between urban and territorial structures. In their monograph on Isfahan Gaube and Wirth have been able to draw more general conclusions concerning the historical development of the whole urban structure from their fieldwork and historical research on the structure of the bazaar. In his book on Iranian cities Gaube identifies common features in the urban structures of Isfahan, Herat and Bam and other cities in the Islamic world, which he believes are recognizable in the structure of the city walls, bazaars and mosques, as well as those features not in common, given the importance of water and the influence of ancient, non-Western, pre-Islamic circular or square urban plans. Moreover, he identifies the urban plan and structure of Isfahan in the original pre-Safavid route network and derives the square plan of the Herat city walls from the influences of Indian cosmology.

Residence at Aqaba, Jordan," *Annual of the Department of Antiquities of Jordan* 32 (1988): 207–224; D. Whitcomb, *Aqaba—'Port of Palestine on the China Sea'* (Amman, 1988).

[133] Cadastral surveys on a scale of 1:2500 that cover the whole Iranian territory. Those of the urban centres, even the minor ones, from the 1980s, are very interesting. The plans were drawn up by the National Cartographic Centre. Maps of Iranian cities are also collected in: M. Mehryar, Sh. S. Fatullayev, F. F. Tehrani, and B. Qadiri, eds., *Pictorial Documents of Iranian Cities in the Qajar Period*, Shahid Beheshti University and Iranian Cultural Heritage Organization (Tehran, 2000).

[134] H. Gaube and E. Wirth, *Der Bazar von Isfahan* (Wiesbaden, 1978).

[135] H. Gaube, *Iranian cities* (New York, 1979); H. Gaube, "Innenstadt-Aussenstadt: Kontinuität und Wandel im Grundriss von Herat (Afghanistan) zwischen dem X. und dem XV. Jahrhundert," in *Beiträge zur Geographie orientalischer Städte und Märkte*, ed. G. Schweizer (Wiesbaden, 1977).

[136] M. E. Bonine, "The Morphogenesis of Iranian Cities," *Annals of the Association of American Geographers* 69 (1979): 208–224; M. E. Bonine, *Yazd and its Hinterland: A Central Place System of Dominance in the Central Iranian Plateau* (Marburg/Lahn, 1980); M. E. Bonine, "Qanats, Field Systems, and Morphology: Rectangularity on the Iranian Plateau," in *Qanat, Kariz and Khattara: Traditional Water Systems in the Middle East and North Africa*, ed. P. Beaumont, M. E. Bonine, and K. McLachlan (Cambridgeshire, 1989), 34–57.

Herat has also been the subject of research by scholars such as Abdul Wasay Najimi,[137] Rafi Samizay,[138] and Terry Allen.[139] Using the methodology of the German School, Allen has published a history of Herat in the fifteenth century based both on fieldwork and historical research. In reference to the ancient city, and without deviating significantly from Gaube's theories, Najimi has stressed the common features Herat shares with other cities in the Islamic world: the cul-de-sacs, bazaars, and position of the mosques within the urban fabric.

The close relation between the urban structure of Iranian cities and their water systems has also been stressed by Michael Bonine, who has analyzed the relation between these cities and their surrounding environment, both natural and anthropic, and associated their regular structure with the channelling of water. Donald Whitcomb's work on Iranian anthropic structures,[140] on the other hand, like his studies on Jordan, is based on an archaeological interest in the early phases of the Islamic conquest of the region.

Finally, the work of the Iranian scholar Mahvash Alemi[141] has been directed toward a reconstruction of the physical structure of Safavid cities, beginning with an interpretation of historical documents and travellers' accounts, such as those by Pietro della Valle and E. Kaempfer. In her article on Teheran, she used a reprint of a nineteenth century map as her main source for a fresh interpretation of its urban morphology.

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[137] A. W. Najimi, Herat: The Islamic City (London, 1988).

[138] R. Samizay, "Herat: Pearl of Khurasan," in "Urban Fabric," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1989): 86–93.

[139] T. Allen, Timurid Herat (Wiesbaden, 1983).

[140] D. Whitcomb, "The City of Istakar and the Marvdasht Plain," in Akten des VII. Internationalen Kongresses für Iranische Kunst und Archäologie, München 7.–10. September 1976 (Berlin, 1979), 363–370; D. Whitcomb, "Islamic Archaelogy at Susa," Paléorient 11 (1985): 85–90; D. Whitcomb, Before the Roses and the Nightingales: Excavations at Qasr-I Abu Nasr, Old Shiraz (New York, 1985).

[141] M. Alemi, "The 1891 Map of Tehran: Two Cities, Two Cores, Two Cultures," in "Maghreb: From Colonialism to a New Identity," ed. Attilio Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1 (1985): 74–84; M. Alemi, "Urban Spaces as the Scene for the Ceremonies and Pastimes of the Safavid Court," in "Mughal Architecture: Pomp and Ceremonies," ed. Attilio Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1991): 98–107; M. Alemi, "The Relation Between The Royal Complexes and Cities," in Transformations of Urban Form. ISUF '99 (Florence, 1999); M. Alemi, "Il giardino reale in Persia e la sua relazione con il disegno urbano," in Giardini Islamici: architettura, ecologia. Atti del Convegno, Genova, 8–9 Nov. 2001, ed. M. Matteini and A. Petruccioli (Genoa, 2001); M. Alemi, "Giardini reali e disegno del paesaggio ad Esfahan e nel territorio iraniano alla luce dei documenti inediti di Pascal Coste," in "Opus," Quaderno di Storia, Architettura, Restauro (Università degli Studi Gabriele D'Annunzio a Chieti), no. 7 (2003).

In the 1980s the debate on the structure of the Islamic city in Iraq was marked by Hicham Djaït's work on al-Kufa.[142] Using historical documents and comparing the urban structure of al-Kufa with other cities, he found the Arab characteristics of its urban morphology in the structure of residential neighbourhoods and in the relation between khitat and the central public area.

In the same years, studies on the physical structure of Baghdad from an historical and morphological perspective were carried out by C. I. Beckwith and the Iraqi Department of Archaeology in collaboration with the Iraqi-Italian Institute of Archaeology in Baghdad.

Taking into account reciprocal cultural, historical, and morphological influences, Beckwith's[143] research has traced the source of the urban model of Baghdad in the Central Asian and Iranian circular urban plan.

Starting from the 1970s, the Iraqi Department of Archaeology and the Iraqi-Italian Institute of Archaeology in Baghdad[144] have carried out an architectural survey of the monuments of the Karkh and Rusafa neighbourhoods with the aid of waqf documents and historical sources in order to delineate the historical topography of these districts.

In his studies on Baghdad and Basra from a mainly historical perspective, and especially in his work on Baghdad, Ahmad al-{AlÒ SÊlih[145] has been able to produce evidence of the structure of its urban fabric and morphology during the Abbasid Caliphate.

Studies on the traditional urban structure of Mosul are more numerous than those on Baghdad, since the former's urban fabric has undergone only slight transformations. In this context we must mention the research carried out by HÊshim Khudayr al-JanÊbi and YÖsuf DhannÖb. In his work on Mosul and other Iraqi cities, HÊshim

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[142] H. Djaït, al-Kûfa: Naissance de la ville islamique (Paris, 1986).

[143] Ch. I. Beckwith, "The Plan of the City of Peace: Central Asian Iranian Factors in Early {AbbÊsid Design," Acta Orientalia Academiae Scientiarum Hungaricae 38, nos. 1–2 (1984).

[144] V. Strika and J. KhalÒ, "The Islamic Architecture of BaghdÊd: the Results of a Joint Italian–Iraqi Survey," Annali 47, no. 3, Supplement 52 (1987).

[145] A. SÊlih, BaghdÊd, the City of Peace: Buildings and the Residential System at the Beginning of the {Abbasid Caliphate [in Arabic] (Baghdad, 1985); A. SÊlih, Topography of Basra in the Early Islamic Period [in Arabic] (Baghdad, 1986).

Khudayr al-JanÊbi[146] has traced from a geographical perspective the salient features of the urban structure of the old city and has produced maps of the neighbourhoods and suq. The same interest in the representation of the physical structure of Mosul has characterized the work of YÖsuf DhannÖb.[147] His studies, sponsored by the Department of Construction of Mosul, are based on a survey of public, religious, and residential buildings. Through his work of representation and classification of single buildings there emerges a cross section of the entire urban structure.

Central Asia

Until the 1980s, research on Central Asian cities was the almost exclusive domain of scholars from the ex-USSR, since non-Soviets did not have access to bibliographic sources nor could they carry out field surveys. Moreover, another problem impeded the development of studies on the historical structure of Central Asian cities on a broader scale of reference: many of the cities that had arisen next to nomadic encampments had vanished without trace. The history of the salient urban features in these regions was, therefore, often the province of archaeologists rather than scholars studying urban physical structures.

Modern studies on Islamic cities in Central Asia began with the work of A. M. Belenitskii, I. B. Bentovich, and O. G. Bolshakov[148] who from an historico-archaeological perspective sought to revise Russian and Soviet Orientalist studies on medieval Central Asian cities. *Svednevekovyi gorod Svendei Azii* included cartographic reconstructions that described the transformations of the urban structure of Merv, Samarkand, and Bukhara from the Arab conquest to the Mongol invasions.

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[146] H. K. al-JanÊbi, *Der Suq (Bazar) von Baghdad: Eine wirtschafts und social-geographische Untersuchung* (Erlangen, 1976); H. K. al-JanÊbi, *Inner Structure of the Old City of Mosul* [in Arabic] (Mosul, 1982); H. K. al-JanÊbi, *Urban Geography of the City of Irbil* [in Arabic] (Irbil, 1987).

[147] Y. DhannÖb et al., *The Buildings of Mosul* [in Arabic], vols. 1–3 (Mosul, 1982).

[148] A. M. Belenitskii, I. B. Bentovich, and O. G. Bolshakov, *Svednevekovyi gorod Svendei Azii* (Leningrad, 1973); O. G. Bolshakov, *Svednevekovyi gorod Blizhnego Vostoka, VII–seredina XIIIV: Sotsial'noekonomicheskie otnosheniyai* (Moscow, 1984).

After the publication of these works, various symposia on Islamic cities in Central Asia—such as the one organized in 1989 by the Institute of History of the Uzbek Academy of Science[149]—were held in the 1980s, in which, however, the city as a physical entity was given only a marginal treatment.

In the same decade individual studies on cities in this region were carried out and made a notable contribution to their urban history: for example, A. Anarbaev's work[150] in which archaeological data were used to interpret the architectonic and urban structure of medieval Panjikant, Samarkand, and Nasaf, and the work by non-Soviet scholars, such as Ernst Giese.[151]

More recently, and partly thanks to the greater accessibility of the sources, a keen interest in the physical structure of Central Asian cities has developed and several monographs on Bukhara and Samarkand[152] have been published, especially after the International Symposium sponsored by the Samuel H. Kress Foundation and the Aga Khan Program for Islamic Architecture at Harvard and MIT.[153] The research carried out by Anette Gangler, Heinz Gaube, and Attilio Petruccioli on Bukhara,[154] for example, has been collected in a recent publication in which the various phases in the evolution of urban structure—from a large scale of reference to individual architectural monuments—are analyzed. Finally, Robert D. McChesney[155] is amongst the scholars who have used waqf documents to reconstruct the architectural and social history of Central Asian cities.

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[149] Many of the papers have been collected in R. G. Mukminova, ed., *Pozdne-feodal'nyi gorod Srednei Azii* (Tashkent, 1990).

[150] A. Anarbaev, *Blagoustroistvo svednevekovgo goroda Srednei Azii, V-nachalo XIII v.* (Tashkent, 1981).

[151] E. Giese, "Aufbau, Entwicklung und Genese der islamisch-orientalischen Stadt in Sowjet-Mittelasien," *Erkunde* 34 (1980): 46–60.

[152] G. Andriani, D. Catania, F. Gigotti, L. Guastamacchia, L. Pisano, C. Rubini, and P. Traversa, "Samarkand: the Planned City," in *The Planned City? ISUF International Conference*, ed. A. Petruccioli, M. Stella, and G. Strappa (Bari, 2003), 595–599.

[153] A. Petruccioli, ed., *Bukhara: The Myth and the Architecture* (Cambridge, MA, 1999).

[154] A. Gangler, H. Gaube, and A. Petruccioli, *Bukara: The Eastern Dome of Islam, Urban Development, Urban Space, Architecture and Population* (Stuttgart and London, 2004).

[155] R. D. McChesney, *Waqf in Central Asia: Four Hundred Years in the History of a Muslim Shrine, 1480–1889* (Princeton, 1991); R. D. McChesney, "Reconstructing Balkh: The Vakfiya of 947/1540," in *Studies on Central Asian History*, ed. D. DeWeese (Bloomington, 2001); R. D. McChesney, "Architecture and Narrative: The Khwaja Abu Nasr Shrine. Part One: Constructing the Complex and its Meaning, 1469–1696," *Muqarnas* 18 (2001); R. D. McChesney, "Architecture and Narrative: The Khwaja Abu Nasr Shrine. Part Two: Representing the Complex in Word and Image, 1696–1998," *Muqarnas* 19 (2002).

Anatolia

Studies on the physical structure of Islamic cities in Anatolia have developed in tandem with those on Arab and Balkanic cities in the Ottoman period, though they have been concentrated above all on Istanbul. Robert Mantran[156] was the first scholar to carry out research on the structure of Turkish cities. Starting from an analysis of archival documents, he has studied urban structure, economic life, and the different social groups in Istanbul.

Research more closely linked to the definition of the physical structure of Anatolian cities was later carried out by Dogan Kuban[157] and U. Tanyeli.[158] Kuban has ascribed the structural origin of the Turkish city to the diverse influences of Islamic, Central Asian-Iranian, Anatolian-Byzantine, and traditional Turko-Nomadic urban models. Tanyeli has developed Kuban's theses and, beginning with the classification of Anatolian cities into three types (eastern Anatolian cities enclosed by walls, eastern Anatolian cities without defensive walls, and western Anatolian cities bordering on Byzantine territory) and a reading of their urban structure, he has ascribed the origins of their most salient features to Turko-Iranian urban models and the contribution of nomadic populations. Finally, Sevgi Aktüre's[159] studies on the Anatolian city in the Ottoman period have analyzed their urban spatial structure in relation to their social and economic structures.

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[156] R. Mantran, Istanbul dans la seconde moitié du XVII^{e} siècle. Essai d'histoire institutionnelle, économique et sociale (Paris, 1962); R. Mantran, La vie quotidienne à Constantinople au temps de Soliman le magnifique et de ses successeurs (XVI^{e} et XVII^{e} siècles) (Paris, 1965); R. Mantran, "Foreign Merchants and the Minorities in Istanbul during the Sixteenth and Seventeenth Century," in Christians and Jews in the Ottoman Empire, vol. 1, The Central Lands, ed. B. Braude and B. Lewis (New York, 1982), 127–137.

[157] D. Kuban, "Anadolu-Türk "ehri Tarihî Geli'mesi, Sosyal ve Fizikî Özellikleri üzerinde Bazi Geli'meler," Vakiflar Dergisi 7 (1968).

[158] U. Tanyeli, Anadolu-Türk Kentinde Fiziksel Yapinin Evrim Sürecisi: 11.–15.yy (Istanbul, 1987).

[159] S. Aktüre, 19. Yüzyil Sonunda Anadolu Kenti, Mekânsal Yapi Çözümlemesi (Ankara, 1978); S. Aktüre, "The Islamic Anatolian City," in "Urban Fabric," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1989): 68–79.

Systematic urban studies on Istanbul have seen in W. Müller-Wiener's work[160] on urban and architectural structures the most comprehensive cartographic reconstructions of the city in the various phases of its anthropic development.

Maurice Munir Cerasi's work[161] on the physical structure of Istanbul, on the other hand, elucidates its morphological organization. In his research Cerasi describes the structure of the "Levantine" city, which finds in Istanbul its main point of reference, through an elucidation of the morphological and spatial relations between the different structures that comprise the urban fabric and between the urban fabric and the morphology of the site.

Halil Inalcik[162] has described Istanbul's salient urban features in relation to the structure of the Islamic city. Using the term "Islamic Ottoman" city to refer to a social model based on the qadi and waqf system and the idea of privacy, he has described an urban model divided spatially into residential districts with autonomous functions, and public and commercial zones, planned and controlled by a central power, with the function of connecting the residential districts.

Apart from Cerasi's and Inalcik's studies on the spatial organization of Ottoman Istanbul and the relation between architecture and urban-scape, many other studies have been carried out: for example, by I. Aslanoglu,[163] J. Erzen,[164] J. M. Rogers,[165] A. Kuran,[166] Godfrey Goodwin,[167] Enis Kortan,[168] S. Yérasimos,[169] and Pierre Pinon,[170] who has paid special attention to the study of cadastral surveys. Amongst the scholars who have used waqf documents as their main source for a reconstruction of the urban history of Istanbul, Haim Gerber[171] has maintained, through his work on Edirne and Bursa, that the waqf was an efficient instrument of urban control, while Suraiya Faroqhi[172] has been concerned mainly with the relation between the city and its urban economy.

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[160] W. Müller-Wiener, Bildlexikon zur Topographie Istanbuls: Byzantion—Konstantinupolis—Istanbul bis zum Beginn des 17. Jahrhunderts (Tübingen, 1977); W. Müller-Wiener, "Der Bazar von Izmir: Studien zur Geschichte und Gestalt des Wirtschaftszentrum einer ägäischen handelsmetropole," Mitteilungen der Fränkischen Geographischen Gesellschaft 27–28 (1980–1981): 420–454; W. Müller-Wiener, "Das Kavak Sarayi: Ein verlorenes Baudenkmal Istanbuls," Istanbuler Mitteilungen 38 (1988): 363–376.

[161] M. M. Cerasi, "Open Space, Water and Trees in Ottoman Urban Culture in the XVIIIth–XIXth Centuries," in "Water and Architecture," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 2 (1985): 36–49; M. M. Cerasi, "Place and Perspective in Sinan's Townscape," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1987): 52–61; M. M. Cerasi, La Città del Levante. Civiltà urbana e architettura sotto gli Ottomani nei secoli XVIII–XIX (Milano, 1988); M. M. Cerasi, "Città e architettura nel Settecento," in "Istanbul, Constantinople, Byzantium," Rassegna: Problemi di architettura e dell'ambiente 72, no. 4 (1997): 36–51; Cerasi M. M., "Type, Urban Context and Language in Conflict: Some Methodological Implications," in Typological Process and Design Theory, ed. A. Petruccioli (Cambridge, MA, 1998), 179–188; M. M. Cerasi, "Un Barocco di Città—trasformazioni linguistiche e tipologiche nel Settecento ad Istanbul," Quaderni di Storia dell'Architettura 3 (2000): 81–102; M. M. Cerasi and A.-I. Melling, "Costantinopoli tra naturalismo e prospettiva," Rassegna di studi e notizie della civica raccolta delle stampe Achille Bertarelli 27 (2003): 191–230.

[162] H. Inalcik, "Istanbul: An Islamic City," Journal of Islamic Studies 1 (1990).

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[163] I. Aslanoglu, "Siting of Sinans Kulliyes in Istanbul," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1987): 154–161.

[164] J. Erzen, "Imperializing a City: Istanbul of the Sixteenth Century," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1987): 88–97.

[165] J. M. Rogers, "Sinan as Planner: Some Documentary Evidence," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1987): 174–191.

[166] A. Kuran, "A Spatial Study of Three Ottoman Capitals: Bursa, Edirne, and Istanbul," *Muqarnas* 13 (1996): 114–131.

[167] G. Goodwin, "Sinan and City Planning," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1987): 10–19.

[168] E. Kortan, "The Role of Sinan's Work Within the Urban Context," in "Mimar Sinan: The Urban Vision," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1987): 140–145.

[169] S. Yérasimos, "Istanbul Ottomana," *Rassegna: Problemi di architettura dell'ambiente* 72, no. 4 (1997): 24–35.

[170] P. Pinon, "Les tissus urbains ottomans entre Orient et Occident," in *Proceedings of the 2nd International Meeting on Modern Ottoman Studies and the Turkish Republic* (Leiden, 1989), 15–45; A. Borie, P. Pinon, and S. Yérasimos, "Tokat: essai sur l'architecture domestique et la forme urbaine," *Anatolia Moderna* 1 (1991): 239–273; P. Pinon, "Essai de définition morphologique de la ville ottomane des XVIII^{e}–XIX^{e} siècles," in *La culture urbaine des Balkans*, vol. 3, *La ville des Balkans depuis la fin du Moyen Age jusqu'au début du XX^{e} siècle* (Paris and Belgrade, 1991), 147–155; P. Pinon, "Métamorphose d'une ville," in "Byzance-Istanbul," *Critique* 48, nos. 543–544 (1992): 712–720; P. Pinon, "La cartographie urbaine d'Istanbul et les incendies au XIX^{e} siècle: les plans de lotissements après incendies et les cadastres d'assurances," in "La ville en Feu," Actes du Colloque du Laboratoire TMU, ed. S. Yérasimos and F. Friès, *Cahiers*, nos. 6–7 (1993): 37–44; P. Pinon, "Topographie des lotissements et transformations urbaines d'Istanbul dans la seconde moitié du XIX^{e} siècle," in *Histoire économique et sociale de l'Empire ottoman et de la Turquie* (1326–1960), Actes du Sixième Congrès International (Leuven–Paris 1995), 687–703; P. Pinon and S. Yérasimos, "Relevés après incendie et plans d'assurances: les précurseurs du cadastre stambouliote," in "Environmental Design: Urban Morphogenesis, Maps and Cadastral Plans," ed. A. Petruccioli, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1993):112–129; P. Pinon, "Essai de typologie des tissus urbains des villes ottomanes d'Anatolie et des Balkans," in *7 Centuries of Ottoman Architecture: "A Supra-National Heritage"* (Istanbul, 2000), 174–198.

[171] H. Gerber, "The Waqf Institution in Early Ottoman Edirne," *African and Asian Studies* 17 (1983); H. Gerber, *Economy and Society in an Ottoman City: Bursa 1600–1700* (Jerusalem, 1988).

These brief historiographical notes have attempted to trace the main lines of the debate that has characterized studies on the traditional Islamic city, starting from changes in the scholarly approach to its physical structure with the advent of regional studies in the 1980s. Despite their concise nature, and with reference to more wide-ranging critical and bibliographical works on the Islamic city in general,[173] we have sought to outline the course that has led from a revision of the Orientalist approach to contemporary urban studies. The resulting balance seems tipped in favour of a renewed interest in such urban organisms, seen in the numerous contributions of scholars and research centres, using a range of methodologies, to the study of the diverse physical forms and structures of Islamic cities.

[English translation by Lisa Adams]

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[172] L. T. Erder and S. Faroqhi, "The Development of the Anatolian Urban Network During the Sixteenth Century," *Journal of the Economic and Social History of the Orient* 23 (1980): 265–303; S. Faroqhi, *Towns and Townsmen of Ottoman Anatolia: Trade, Crafts and Food Production in an Urban Setting, 1520–1650* (Cambridge, MA, 1984); S. Faroqhi, *Towns and Townsmen of Ottoman Anatolia, Trade, Crafts, and Food Production in an Urban Setting 1520–1650* (Cambridge, 1984); S. Faroqhi, "The Anatolian Town and its Place within the Administrative Structure of the Ottoman State (1500–1590)" in *From Mantzikert to Lepanto, The Byzantine World and the Turks 1071–1571*, ed. A. Bryer and M. Ursinus, *Byzantinische Forschungen*, XVI (1991), 209–244: S. Faroqhi, "Migration into Eighteenth-Century 'Greater Istanbul' as Reflected in the Kadi Registers of Eyüp" in *Eyüp'te Sosyal Ya‘am*, ed. T. Artan (Istanbul, 1998), pp. 33–48; S. Faroqhi, "Urban Space as Disputed Grounds: Territorial Aspects to Artisan Conflict in Sixteenth to Eighteenth-Century Istanbul" in *Stories of Ottoman Men and Women: Establishing Status, Establishing Control*, (Istanbul, 2002), 219–234; S. Faroqhi, "Pious Foundations in the Ottoman Society of Anatolia and Rumelia: a Report on Current Research," in *Stiftungen in Christentum, Judentum und Islam vor der Moderne. Auf der Suche nach ihren Gemeinsamkeiten und Unterschieden in religiösen Grundlagen, praktischen Zwecken und historischen Transformationen*, ed. M. Borgolte and T. Lohse (Berlin, 2005), 223–256; S. Faroqhi, "Die historische Forschung und das frühmoderne Istanbul," in *Istanbul: vom imperialen Herrschersitz zur Megalopolis, Historiographische Betrachtungen zu Gesellschaft, Instituionen und Räumen*, ed. Yvuz Köse (Munich, 2006).

[173] See in particular M. E. Bonine, E. Ehlers, T. Krafft, and G. Stöber, eds., *The Middle Eastern City and Islamic Urbanism: An Annotated Bibliography of Western Literature* (Bonn, 1994); M. Haneda and T. Miura, eds., *Islamic Urban Studies. Historical Review and Perspective* (London and New York, 1994).

THE SPATIAL ORGANIZATION OF THE CITY

André Raymond

1. The Hypothesis of the Muslim City

1.1

The concept of a "Muslim" city was forged between 1920 and 1950 by the French Orientalist school of Algiers, notably by its chief protagonists William and Georges Marçais and, after them, by Roger le Tourneau.[1] It was then supplemented by Jean Sauvaget and Jacques Weulersse, of the "Damascus school."[2] This theoretical quest was accompanied by a noteworthy succession of monographs on a number of large Arab cities: by Gaston Deverdun on Marrakesh (1959); by Jacques Caillé on Rabat (1949); by Roger le Tourneau on Fez (1949); by R. Lespès on Algiers (1930); by Marcel Clerget on Cairo (1934); by Jean Sauvaget on Damascus and Aleppo (1934, 1941); and by Jacques Weulersse on Antioch (1934).[3]

All these scholars were, it will be noted, French; a fact pointed out by Stephen Humphreys who spoke of "the great French tradition of Islamic urban studies" and of "a thin but steady stream of publications

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[1] See W. Marçais, "L'Islamisme et la vie urbaine," in *Articles et Conférences* (Paris, 1961); G. Marçais, "L'urbanisme musulman," in *Mélanges d'histoire et d'archéologie*, 2 vols. (Algiers, 1957); and R. Le Tourneau, *Les villes musulmanes de l'Afrique du Nord* (Algiers, 1957). Janet Abu-Lughod has shed a good deal of light on the development of this Orientalist tradition from the Marçais brothers to G. von Grunebaum in "The Islamic City," IJMES (1987). I have myself tackled this problem in "Islamic City, Arab City: Orientalist Myths and Recent Views," *British Journal of Middle Eastern Studies* 21, no. 1 (1994).

[2] J. Sauvaget, "Esquisse d'une histoire de la ville de Damas," REI 4 (1934); idem, *Alep: Essai sur le développement d'une grande ville syrienne* (Paris, 1941); J. Weulersse, "Antioche, Essai de géographie urbaine," BEO 4 (1931); and *Paysans de Syrie et du Proche-Orient* (Paris, 1946).

[3] G. Deverdun, *Marrakech des origines à 1912*, 2 vols. (Rabat, 1959–61); J. Caillé, *La ville de Rabat jusqu'au Protectorat français*, 3 vols. (Paris, 1949); R. Le Tourneau, *Fès avant le Protectorat* (Casablanca, 1949); R. Lespès, *Alger, étude de géographie et d'histoire urbaine* (Paris, 1930); and M. Clerget, *Le Caire*, 2 vols. (Cairo, 1934). For J. Sauvaget and J. Weulersse, see note 2 above.

(the majority of them by French scholars) on various aspects of the topic."[4] This is not merely a feature of scholarly sociology, of particular interest by virtue of an absence of comparable work in the parts of the world dominated by Great Britain. France was during this period a colonial power whose sway extended over the whole of the Maghreb and over the Levant; and, as such, it is not surprising that the work carried out by these noteworthy scholars should have been influenced by the spirit of the time: a spirit that led members of the dominant caste—the "ruling institution" in H. A. R. Gibb's phrase—to regard the urban realizations of subject populations (viewed as outdated and even backward) with a degree of condescension. The colonizers' profound antipathy towards the "Turkish" period which had preceded French colonization in all these parts was a further factor, inclining these scholars to discount what existed before the arrival of the French—who regarded themselves as bearers of a modern civilization with ambitions, indeed, to renew the Roman *imperium*.[5]

Such a rapprochement was hard to avoid, given that the colonized Mediterranean regions did in fact indelibly bear the mark of an ancient civilization whose lustre and prosperity were notably in evidence in a wondrous network of prestigious cities: Volubilis, Jamila, Timgad, Dougga, el-Jem, Palmyra, and Apamea were only some of the pearls among the multitude of ancient cities that developed, following the Hellenistic flowering, in the lands conquered by the Romans. Roman ways had set in place there an urbanism whose regularity, quality of municipal institutions and vigorous civic spirit were regarded as difficult to match. The existence of cities endowed with a grandiose, virtually perfect urban organization side by side with irregular Arab cities, full of an exotic charm but apparently chaotic in structure, was a spur to noteworthy works like those of Sauvaget on Damascus, Aleppo, and Latakia; but it provided food, too, for some peevish comparisons. "Nothing," wrote Le Tourneau, "is more alien to a Muslim city of the Maghreb than the rectilinear avenues of a Roman city, or of a modern city. The aerial photograph of any Muslim city gives the impression of a maze or labyrinth."[6] (fig. 1) The parallel between Roman city and

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[4] R. S. Humphreys, *Islamic History* (Princeton: University Press, 1991), 228.

[5] An anthology of "anti-Turkism" could be made out of the work of French scholars from H. de Grammont's *Histoire d'Alger* (Paris, 1887) to J. Sauvaget.

[6] Le Tourneau, *Les villes musulmanes*, 20.

"modern" city (French, in the case of the Maghreb) is not, needless to say, fortuitous.

1.2

There is no great difficulty in defining the principles underlying the Orientalist approach vis-à-vis the Mediterranean Arab cities. Chief among these is the assumption that in a globalizing civilization like the Muslim one every phenomenon must be regarded as specifically Muslim. The Orientalists' initial training (geared chiefly towards the study of religion and its superstructures) led them naturally towards such an extreme viewpoint. R. Ilbert judiciously notes in this regard that, "it is because most Orientalists started out from a simple initial assumption...of the fundamental role of Islam in the structuring of space that they found this when they came to the subject."[7] It is not astonishing, then, to find Islam mentioned in connection with institutions, with the organization of political life, with social and economic activities, of course; but also with the physical structure of city or house, which, from this perspective, can only be designated as "Muslim."

Viewed from such a religious standpoint, *sub specie aeternitatis*, urban phenomena appear as constants within a historical continuum stretching over some thirteen centuries, and within a Muslim world covering three continents, as far as distant China. In his "Urbanisme Musulman," G. Marçais makes reference, one page after the other, to the Fustat of the Fatimids, to the Fez of the Marinids, to the Algiers of the Ottoman deys, in order to describe a city whose illustrative examples are barely more than Maghrebi and represent no more than the particular state of the *madina* (the term used by geographers to designate the ancient centres) at the beginning of the nineteenth century.

The comparison between an urbanism of Antiquity, supposedly endowed with every perfection, and a "Muslim" urbanism characterized, at first sight, by a profound irregularity and by a rejection of all intelligible rules brought Orientalists to some discouraging conclusions regarding the physical structure of cities. The observation of R. Le Tourneau, quoted above, is characteristic of this uncomprehending stance. "Besides," sighs the despondent G. Marçais (without drawing his conclusion), "it is not that Muslims are satisfied with narrow streets that they have failed to see the advantage of the straight line as a path from one point to another."[8] This reference to the Ancient World had especially prejudicial consequences for J. Sauvaget, since it was precisely he who had studied—with precision—the structure of the great Syrian cities in the Roman period; cities whose architecture is still evident in the layout of modern Arab cities (fig. 2). Damascus and Aleppo, he says, provide only "degenerate" images (he uses the word *dégénérescence*) of the city, as reflected in what has befallen the ancient colonnaded avenue to the suq. Of this last he supplies a brilliant demonstration, supported by an eloquent diagram.[9]

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[7] R. Ilbert, "La ville musulmane: réalité et abstraction," *Les Cahiers de la recherche architecturale* 10–11 (April 1982): 12.

Nor is the Muslim city any more endowed (J. Sauvaget once again) with the municipal institutions that marked the cities of Antiquity (and accompanied the development of the medieval western communes). This observation is one of his chief contributions to the Orientalist conception of the Muslim city.[10] Bereft of any specific administration, the city is directly subject to the authority of the prince who governs it on the principles of oriental despotism.

This concept of a dislocated city, divided into antagonistic communities, is perhaps the contribution of J. Weulersse, based on the study of a very particular city—Antioch—which was effectively divided between highly diverse communities (Sunni Muslim Turks, Alawis, and Christians) and was described by the geographer as disjointed, broken up into sectors closed in on themselves, and potentially hostile. From this finally rather local state of affairs, stemming from an exceptional confessional and ethnic diversity, J. Sauvaget derives a law that he applies to Aleppo, where, he says, in the Muslim period, we may note the "dislocation of the urban centre, its fragmentation into small cells that are individualized and particularized, sometimes even antinomic."[11] Deeply impressed by the spectacle of a Sunni Latakia plunged within a rural Alawi environment, J. Weulersse (cited above) makes a similar generalization:

> In the East, the city gives the impression of a foreign body, a cyst as it were, within the country, of a creation imposed on the countryside it dominates and exploits...As such, the economic activity of the cities

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[8] G. Marçais, "L'urbanisme musulman," 227.

[9] Sauvaget, *Alep*, 247.

[10] Sauvaget, "Esquisse," 455–456.

[11] Sauvaget, *Alep*, 248.

> gives an essentially parasitic impression. The city...consumes without producing.[12]

These different themes have been regularly sounded in connection with other cities to be found in a totally different environment.[13]

1.3

The "Muslim" city is, then, characterized above all by what it lacks: the regularity, regulation, and civic spirit of the city of Antiquity; the communal institutions of the medieval city. It is wedded to decline. Under the Ottomans, notes M. Clerget, Cairo "becomes slowly extinguished...allowing the fragments of its glorious past to crumble little by little...Cairo is returning...to the kind of dispersed population favoured by the first Arabs."[14] Here we are concerned only with the Ottoman period so disliked by Orientalists. J. Sauvaget, though, goes still further with the following generalization. The Muslim period, he writes, with regard to Aleppo, "is marked by no positive contribution...All that might be attributed to it is the dislocation of the urban centre." The achievement of Islam "is essentially negative." The city becomes "a loose, inorganic assemblage of quarters."[15]

Dealing as we are here with a "non-city" and a "non-urbanism," it is no surprise that, when they proceed to try and define the major characteristics of the structure of the Muslim city, the authors should find themselves a trifle short on positive criteria and should limit themselves to a listing of not very significant and sometimes not very pertinent features. They conjure up city walls, palace, or fortress (which are not truly specific characteristics), the presence of a central principal mosque (which applies equally to the central cathedral) generally linked to markets where a corporate organization is in evidence (this is found in the West), the existence of public baths (proclaimed as Muslim because necessary for the carrying out of ritual ablution, forgetting the opulence of baths in Antiquity), separate quarters, an omnipresent type of house organized around a courtyard (invariably described as "Muslim," even though its existence in Antiquity and its presence throughout the Mediterranean are commonplace realities). Gustave von Grunebaum, whose "The Structure of the Muslim Town"[16] supplied, in 1955, the standard and approved Orientalist account, considers the elements noted immediately above, but without attempting to draw from them a description of the structure of the Muslim town as promised in the title of his article. He gives detailed consideration to urban institutions (the justice of the qadi, the supervision of morals by the muhtasib), which are, as one might expect, Muslim—as is the population (or the majority at least, since religious minorities are to be found there). His conclusion, while less abrupt than J. Sauvaget's, is not unexpected: "The Islamic town did not represent a uniform type of civilized life as had the Greek or Roman town."[17] It is only fair to note, nonetheless, that G. von Grunebaum marks a clear development in certain respects vis-à-vis strict Orientalist tradition: he points out the existence of different models, in Iran and Turkestan; he notes the beginnings of decay in the organization of the world of late Antiquity; he calls attention (in the wake of the seminal article published by Robert Brunschwig in 1947)[18] to the interest of Muslim jurists regarding urban problems. The fact is that when von Grunebaum's article was written Oriental doctrine on the Muslim city was already beginning to be revised; so that, in a certain sense, the article might be regarded simultaneously as the epitome of the doctrine and its swan-song.

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[12] Weulersse, *Paysans de Syrie*, 86–88.

[13] See, for example, the reflections on the *baldi* (city-dwellers) of Algiers, described as an original population set within a different and hostile rural environment.

[14] Clerget, *Le Caire*, 1:178–180.

[15] Sauvaget, *Alep*, 247–248.

2. The challenge to Orientalist viewpoints on the Muslim city

2.1

There is nothing surprising about such a challenge. In the 1950s, the colonial era within which Orientalism had evolved was entering its final phase. France herself, the favoured site for these urban studies, closed the colonial book in the 1940s (in the Levant) and the 1950s (in Morocco and Tunisia), before the final closure in 1962 (in Algeria). The end had come for a latent Eurocentrism and for the tendency to undervalue civilizations which might, from now on, be more expediently viewed in terms of an understanding and analysis of differences, rather than emphasis on supposed inferiority against a Western model. It does not seem overstated to see this approximate time as marking the end of Orientalism, the latter's final major enterprise being the publication by H. A. R. Gibb and H. Bowen of their *Islamic Society and the West* (1950–57). These two introductory volumes were to be followed by a general picture of Muslim society. This venture was in fact aborted; partly because research was then insufficiently advanced to bring it to fulfilment, and partly on account of the general approach, which (as the title reflects) conformed very closely to the spirit of Orientalism who saw the East as a mirror of the West.

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[16] G. von Grunebaum, "The Structure of the Muslim Town," in Islam, Essays in the Nature and Growth of a Cultural Tradition (Routledge and Kegan, 1955).

[17] Von Grunebaum, "Structure," 154.

[18] R. Brunschvig, "Urbanisme médiéval et droit musulman," REI 15 (1947).

The reassessment—to which the historians of the Turkish school of Lufti Barkan contributed so greatly from the end of the 1930s—of the importance and interest of an Ottoman heritage assumed an equal supplementary importance, in so far as it led to a revaluation of the pejorative vision imposed by Orientalists of the Algiers and Damascus schools with respect to Arab cities prior to colonization. The development of a parallel interest in the inexhaustible archives of the Ottoman period and the progressive use to which these latter were put served to confirm that Arab cities had not, at this time, seen the generalized decline described by specialist and also that elements of administration had been in place. Specifically, this revised viewpoint cast a vivid light on the problem posed in Sauvaget's (in many ways magisterial) work on Aleppo and successfully resolved the obvious contradiction that existed between the unbelievably negative assessments he brought to bear on the Ottoman period and the glittering picture emerging from his own work—a contradiction from which he had contrived to free himself only by an unconvincing final pirouette: "The Aleppo of the Ottomans is a mere *trompe l'oeil*, a sumptuous façade behind which lie only ruins."[19]

2.2

The entry into the scholarly field of specialists from other disciplines clearly contributed to challenging the theory of the implicit primacy of Islam in studies of the city and to breaking the kind of monopoly established in these studies by specialists in religion. Historians brought a more marked awareness of the need to reset the development of cities within a chronological context, stretching over twelve centuries, from the creations or refoundings of the seventh century to the end of the Ottoman period (beginning of the nineteenth). In this context, Claude Cahen's book, *Mouvements populaires et autonomisme urbain*, published in 1959, was seminal. Sociologists brought to the debate an interest in social data and pointed out that, in fact, phenomena studied from an Islamic perspective were generally urban phenomena. Geographers contributed to restating these studies in terms of space (and mapping the various aspects of this), and to reminding that the Muslim world is not merely synonymous with the Arab (or simply Maghrebi) world studied by the Orientalists. In this respect, the contribution of Eugen Wirth, recently manifested in his *Orientalische Stadt* (Mainz, 2000), has been of prime importance.

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[19] Sauvaget, *Alep*, 239.

2.3

An improved knowledge of late Antiquity (to which we are especially indebted through excavations like those of J. Balthy at Apamea) confirmed the intuitions given expression by J. Sauvaget, *in extremis*, in his *Alep*.[20] The progressive disorganization of layout within Antiquity was brought to light specifically by Claude Cahen in 1958, then by Samuel Stern in 1970, and, finally and very forcibly, by Hugh Kennedy in his article "From *Polis* to *Madina*" (1970) where he notes that in the urban communities of fifth- and sixth-century Syria "there was no classical town plan to affect later growth…The 'streets' were narrow winding paths, there was no agora, no colonnades, no theatre."[21] It is, then, quite fruitless to set a flawless ancient urbanism (which no longer existed when the Arab conquest came) over against an anarchic Muslim urbanism. In addition, excavations carried out recently at Palmyra and Bet Shean have revealed significant transitional stages between the late Roman period and the Umayyad period, suggesting continuity rather than any brutal break.[22] The debilitating conclusion drawn from this comparison, with regard to Muslim cities, has thus lost part of its relevance.

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[20] See, in his *Alep*, 248 (the penultimate page of the book!), his observation on the "reduction of the framework of city life to forms more rudimentary actually set in place by the Byzantine period."

[21] Cl. Cahen, "Mouvements populaires et autonomisme urbain," *Arabica* 5 (1958): 226; S. M. Stern, "The Constitution of the Islamic City," in *The Islamic City*, ed. A. H. Hourani and S. M. Stern (Oxford, 1970); and H. Kennedy, "From *Polis* to *Madina*," *Past and Present* 106 (1985): 13–14.

2.4

However, it is in the discounting of any possible identification of a Muslim model—universal and existing, in a sense, outside time—that the revision of the Orientalist conception of the city has doubtlessly found its most radical expression. In his seminal article on Muslim urbanism Georges Marçais speaks of the cities "in Muslim lands" (defined predominantly, in climatic terms, as "countries of thirst"), and, with regard to mainly Maghrebi cities, sets forth examples ranging from the age of conquest to that of the Barbary corsairs. At the opposite end of the chain of those transmitting the doctrine, G. von Grunebaum concedes more cautiously that, "in Iran and Turkestan the original layout of the city would be somewhat different." This is not, though, allowed to hinder his dauntless traversing of the lengthy period separating the first creations of the seventh century from the Ottoman period.[23]

It is an obvious fact (so obvious there is no point in lingering over it) that the Muslim world covers an enormous territory, from the Atlantic Ocean to the Far East, that it stretches into regions whose physical nature and, above all, climate are highly various; whereas the Arab world on which the analyses of Orientalists are almost exclusively based (when, indeed, they do not restrict themselves, according to the particular case, to the Maghreb or the Mashriq) represents only a small part of this immense whole, in terms of surface area and population alike. Oleg Grabar, dealing with artistic forms (though the rationale underlying his approach is, of course, equally applicable to urban structure itself) has clearly shown the difficulty involved in using the sole concept of "Islamic" when considering phenomena and production with respect to regions as various in their historical and cultural traditions, and in their natural characteristics, as those of the "Muslim world" in its widest sense, from Morocco to China, and from Central Asia to tropical Africa.[24] How, after all, are we in the cases of the Maghreb or

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[22] Khaled As{ad, "Ikhtishaf . . . suq fi Tadmur," Annales Archéologiques Syriennes 37–38 (1991); Yoram Tsafrir and Gideon Foerster, "Urbanism at Scythopolis-Bet Shean," Dumbarton Oaks Papers 51 (1997).

[23] G. Marçais, "L'Urbanisme musulman"; von Grunebaum, "Structure."

[24] O. Grabar, "Reflexions on the Study of Islamic Art," Muqarnas 1 (1983): 8.

Indonesia to tackle the problems of providing a city or dwelling with water from a solely Islamic perspective?

Equally thorny is the problem of a-temporality that appears to be entailed in describing a city as a kind of unvarying entity, from the time Islam was preached to the dawn of the nineteenth century. This calls irresistibly to mind J.-Cl. Garcin's questions about the Muslim house which cannot be provided with "an interpretation *ne varietur*," and his enlargement on the subject: "Analogous observations might be made on the 'interpretation' still too often accorded to 'the Muslim city' and the way it is laid out."[25] It is because they have placed themselves beyond time that Orientalists—and indeed most contemporary interpreters—have behaved as though the ancient city whose remains they had before their eyes provided a directly usable image of the "classical" (medieval) city, when in fact it is merely the "modern" (i.e., largely Ottoman) version of the city, shaped by three or four centuries. The "classical" city can only be *reconstructed*, by means of an analysis basing itself on ancient sources. The history of these cities has been too lengthy and has entailed too much contrast for it to be provided with a trans-historical, truly homogeneous interpretation.

2.5

These considerations lead one to think that there is no "Muslim" city of the kind Orientalists have wished to identify. Moreover, the attempt, frequently made, to search out elements in the Quran or in Tradition, which might form the basis for the description of such a city, have produced little more than a meagre harvest of general prescriptions about the protection of private life or the constraints of neighbourhood. The only truly significant text that can be produced is the oft-invoked *hadith* of Muslim: "If you are in disagreement about the width of a street, make this of seven cubits."[26] In contrast, judicial or jurisdictional decisions made by judge or *faqih* have, over the centuries, enriched reflection on the city. This is clearly shown in the work of Robert Brunschvig and, more recently, of Baber Johansen.[27] Although J. Sauvaget has written of the lack of interest and the ignorance of the {ulama in this sphere, they did contribute to forging an urban doctrine; but this is, of course, a matter of history, not of theology.

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[25] J.-Cl. Garcin, "Habitat médiéval et histoire urbaine," in *Palais et Maisons du Caire, I, Epoque mamelouke*, J.-Cl. Garcin et al. (Paris: CNRS, 1982), 216.

[26] See, for example, the interesting study by B. S. Hakim, *Arabic-Islamic Cities* (London, 1986). See the observation by J. Berque, *L'Islam au temps du monde* (Paris: Sindbad, 1984), 206: "To derive more on the matter from the Quran or the Sunna would surely be to go beyond any reasonable extrapolation."

Both this explicit negativity, and the minute critique of false characteristics propounded to define the "Muslim" city have opened the way for a certain nihilism. Having eliminated the irregular road system and the cul-de-sac (found in the ancient East), the house with central courtyard (which is also found in Antiquity) and the division of the city into quarters, Eugen Wirth concluded that the suq, the central business district, is probably "the only and fundamental distinctive criterion for the Near Eastern City which can be considered as Islamic cultural heritage." His proposition is, accordingly, to "renounce the term 'Islamic city' and to prefer the more general 'Oriental city'... Islam seems to be more the inhabitant or occupant of Middle Eastern urban systems than the architect."[28]

It seems to me that this is going too far and I would suggest, bearing in mind the variables of time and place indicated above, that an attempt be made to describe an Arab city that is largely Mediterranean (but naturally also including Iraq, Arabia, and Yemen), taken during the final period of its development, from the beginning of the sixteenth century and before the great mutations produced from the nineteenth century onwards. The profound linguistic and cultural unity of the region under consideration, its community of historical destiny over this period, the existence of still widespread remains of the cities of this time (supplementing the exceptional wealth of Ottoman documentation)—all these things give rise for hope that these "traditional Arab" cities will present sufficient common features and original characteristics for a genuine "urban system" to be demonstrated with regard to them; one that can, of course, be usefully set against other systems—Balko-Anatolian, Irano-Afghan, Moghul, and so on. The work of which this article is part aims, in fact, to make a contribution to such comparisons.

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[27] Brunschvig, "Urbanisme médiéval"; B. Johansen, "The Claims of Men and the Claims of God," in *Pluriformiteit en verdeling* (Nijmegen, 1980), and "The All-Embracing Town and its Mosques," *Revue de l'Occident Musulman et de la Méditerranée* 32 (1981).

[28] E. Wirth, "The Middle Eastern City: Islamic City? Oriental City? Arabian City?" (Lecture given at Harvard University, 1982), typescript, page 9.

The twofold limitation, spatial and temporal, that we take upon ourselves will not, of course, solve every problem, especially the one Orientalists have thought to be able to tackle from a religious perspective. The notion that there is a common urban domain, at any rate from Morocco to Afghanistan, does not rest solely on the impression of a vague set of common features or of a sense of "déjà vu." Certainly there is, far beyond the Arab domain, a common urban one: certain urban structural characteristics to which we shall return (a concentration of markets in the heart of the city, the existence of enclosed quarters, the statistical predominance of dwellings with central courtyard) will be found from Marrakesh to Herat. But there is nothing specifically Muslim about such features. Sometimes they predate Islam. They are bound up with the fact that these diverse regions where the natural constraints are fairly similar are occupied by populations whose commonly shared characteristics (notably concern for the protection of family life) are broadly determined by their religious affiliation; occupied by populations whose social and professional life is deeply affected by the existence of institutions which themselves bear a Muslim character (justice, *hisba*). In short, these cities are (as Wirth noted) Muslim because they are inhabited by Muslim populations. Yet this statement takes us no further along the road to the definition of any particular urban structure that might exist. It is in the bringing together of features, some of which are not specific to the Muslim sphere and others of which exist in other Muslim countries, that we may hope to conjure up the picture of an original urban system for which "traditional Arab city" seems the most appropriate designation. As Jacques Berque observes: "The meaning of a whole lies not in its elements, but in the way it effectively combines these."[29]

3. The structure of the traditional Arab city

If we limit our inquiry to a corpus of large Arab cities situated from Morocco to Iraq, and from Syria to Yemen, in the period from the sixteenth century to the beginning of the nineteenth (which, for virtually all of them, represents the period of Ottoman domination), the major features of urban structure appear fairly constant and exhibit a rationale such that we are justified in speaking of a coherent urban system.[30]

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[29] Berque, *L'Islam au temps du monde*, 219.

3.1

The basic features are the very marked separation existing between zones of economic activity and zones of residence, and the very strong centrality of urban organization (fig. 3). This structure determines the existence of two strongly contrasted zones: a "public" zone occupying the city centre and a "private" zone chiefly devoted to residence. The researches of Baber Johansen have shown how Hanafi jurists were perfectly aware of this division of the city, in connection with the reparation due for crimes where the perpetrator remained unknown (qasama). In the "public" zones, those marked out by the presence of a broad avenue, a large market or an important mosque, responsibility fell on the political authorities. In the "private" zone, a residential district with cul-de-sacs, the people living in the neighbouring houses were to answer for the consequences of any crime committed there.[31]

The urban centre was organized around the pairing constituted by the main suqs, generally set out around the "covered market" (qaysariyya or bedesten, according to region), and the principal mosque. This was well demonstrated by Louis Massignon in his studies on Iraqi and Moroccan cities, where he stressed the role of the goldsmiths' market (sagha), commonly the place where currencies were exchanged. The layout is a standard one: the "mother-cell" of Fez, in the city of the Qayrawanis, is made up "of two mosques, the sanctuary of Moulay Idris and the Mosque of the Qayrawanis, and a central market, the Kisariya."[32] At Aleppo, the market district is set out around the Great Mosque and the suqs that constitute the qaysariyya. It is in this district that major and international trade takes place—whence the necessity of the moneychangers' market. In Cairo, a street bearing the significant name "street of clipped coinage" (al-Maqasis), situated behind the sagha, recalls these functions. Especially precious, costly articles were sold in the "covered market," which was sometimes an enclosed construction, or a grouping of markets (Aleppo) and caravanserais (Khan al-Khalili in Cairo). Here were find numerous caravanserais (funduq, khan, wakala, samsara, according to the city), where international and wholesale trade were transacted. Also in this centre were markets (suqs) specializing in large-scale trade. Crafts of special importance might also be found there, despite the nuisance this must have presented for neighbours; an example of this is the presence of the nahhasin (makers of copper utensils and traders in these) in Cairo. These trades were organized on the principle of strict specialization, which found expression in a division into professional bodies and a fairly rigid geographical distribution.[33] The presence of the Great Mosque, which was also a university, sometimes of international standing (as, for example, with the Qarawiyyin in Fez, the Zaytuna in Tunis, and al-Azhar in Cairo), made this quarter a district marked out by religion and culture alike. Al-Azhar, the chief centre for higher education in the Arab world, brought together a hundred or so teachers and three thousand students.

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[30] I have tackled these problems in Grandes villes arabes à l'époque ottomane (Paris: Sindbad, 1985), and in "La structure spatiale de la ville," in Sciences Sociales et Phénomènes Urbains dans le Monde Arabe, ed. M. Naciri and A. Raymond (Casablanca, 1997).

[31] B. Johansen, "Eigentum, Familie," Die Welt des Islams 19 (1979): 19–24; idem, "Claims of Men," 64–66.

[32] Le Tourneau, Fès, 122, plan on page 375.

By contrast, the presence in this "hyper-centre" of the political power and the administration was not uniform in character. The most important courts were to be found there situated, usually, in the main mosques, as were a number of "administrative" services; in Cairo, the dikkat al-hisba was close by the trading zone that the muhtasib was supposed to supervise. Quite often, though, the higher authorities (sovereign or governor) were settled on the edge of the city (Cairo, Damascus), or even right outside (the Bardo in Tunisia); this was for reasons of security (so as to be safely away from possible popular uprisings) or of convenience (so as to have available the necessary space to lodge their troops). Thus, in Aleppo, the Ottoman pashas had abandoned the Citadel to take up residence outside the walls, in the monastery of shaykh Abu Bakr. Algiers is exceptional in having a remarkable concentration of the organs of power in the centre of the city: the palace of the dey (Janina); the dar al-sikka (mint); the bayt al-mal (financial administration); the premises of the shaykh al-balad (city administration); the prison of the mizwar (police); and so on.[34] Only at a very late date (in 1817) was the Janina transferred to the Qasba, in the upper city, for reasons at once of internal security (fear of unrest among the janissaries) and external security (the risk of naval bombardment), thus placing Algiers in the most common situation.

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[33] I shall return to these economic functions in more detail in a second contribution to this work, "The Economy of the Traditional City."

[34] T. Shuval, La ville d'Alger vers la fin du XVIII^{ème} siècle (Paris: CNRS, 1998), 164–172.

The central district was commonly crossed by relatively broad and regular streets grouped around a central thoroughfare ("Straight Street" in Damascus, of Roman origin, the Qasaba in Cairo (fig. 4), laid out by the Fatimids, the main street crossing Algiers from Bab {Azzun to Bab al-Wad); around a number of parallel streets (in Aleppo on the line of the ancient street, from Bab Antakiya to the Citadel); or around a network of virtually orthogonal streets (in Tunis). Relatively straight, rectilinear streets linked the central zone to the city's gates, allowing quite easy access—essential for economic activity—to the commercial centre. In Tunis the plans clearly show how these essential dual thoroughfares unfold towards the gates of Bab al-Banat and Bab Suwayqa in the north, Bab al-Bahr in the east, and Bab Jadid and Bab al-Jazira in the south.

The dense nature of the commercial centres (large markets and especially caravanserais) permits a fairly precise demarcation of these centres whose dimensions naturally varied according to the importance of the cities and to their economic activity: a little over 2 hectares in Algiers, 6 in Tunis, 9 in Damascus, 10 in Mosul, 11 in Aleppo, 12 in Baghdad, but around 60 in Cairo, the second city of the Ottoman Empire in terms of population and activity. The importance of these centres, along with their very marked individuality vis-à-vis the organization of the city, sometimes led them to be accorded a particular name: as, for instance, with the Mdineh in Aleppo, with Qahira in Cairo (in the centre of the Fatimid foundation which, in fact, stretched out fairly extensively beyond the economic central zone proper) (fig. 5), with the Rab{ in Tunis (a name applied to virtually the whole of the covered suqs surrounding the Zaytuna).[35] The number of economic establishments and the link with the Great Mosque account for the common stability of these centres which, for the most part, have not changed their location from the most ancient times up to the modern age; the Qasaba, the central thoroughfare of the Fatimid city, was still the heart of the city of Cairo in the sixteenth century. Only a single case is known of the centre being moved. This was in Mosul, where the suqs, set normally around the Great Mosque, were moved and set up close to the Citadel and to the spot where the great trade route crossed the Tigris. The circumstances of this, and the reasons for it, are unclear.[36]

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[35] On the Tunis rab{, see the analysis by A. Henia, *Propriété et stratégies sociales à Tunis* (Tunis, 1999), 240–246. Shuval is quite right (*Ville d'Alger*, 182) to make an upward correction of my assessment (above one hectare) for the area of the economic centre in Algiers.

Such a highly centralized structure gave the city considerable suppleness; for, in any period of expansion, the central zone of the markets and the Great Mosque could grow by biting into the residential districts stretching around them. A case in point occurred during the Ottoman period which saw a considerable expansion of the great Arab cities of the Empire. In Aleppo this urban development took the form of a virtual doubling of the Mdineh, from 6 to 11 hectares. In Cairo, similarly, the zone of major economic activity grew from around 40 hectares to around 60.

3.2

Beyond this central region stretched the city's "private" zone, chiefly devoted to private dwellings. It was this zone that saw the development of the "quarters" (hawma, hara, mahalla, according to the particular city) that are one of the distinctive features of the Arab city. They were relatively enclosed in most cases, communication with the outside being by a single street, this main thoroughfare (darb) then branching into the interior in usually irregular streets and ending, finally, in cul-de-sacs (fig. 6). The separation of one quarter from a neighbouring one was effected not by a wall but by a back-to-back structure joining the final houses of the quarter to the final houses of the quarters abutting. The gate (bab) allowed the quarter to be closed at night, this providing a sense of security; but it was not a thorough-going defence against an attack from outside. The quarters were modestly equipped for inhabitants' daily lives: with an oven, sometimes with a bath and an oratory (masjid). But the essential feature was the suwayqa (minor market) of which J. Sauvaget has provided classic descriptions for Damascus and Aleppo. This unspecialized market catered for the daily needs (food, articles for common use) of the population which bought in any further provisions from the city suqs.

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[36] Dina Khoury, State and Provincial Society in the Ottoman Empire: Mosul (Cambridge: University Press, 1997), 202–203.

The irregularity of the streets and the abundance of cul-de-sacs which has so intrigued Orientalists was thus a local phenomenon within the city, one answering to the various needs of the population living in the city's quarters, and not a general characteristic. We have noted how in the centre and towards the gates traffic was catered for by direct, regular thoroughfares. Within their quarters, the inhabitants could be content with irregular streets and cul-de-sacs which, in point of fact, were conducive to their security. The only communications they needed were with the city centre where their active life was passed and where they fulfilled their chief religious obligations (Friday prayer); they had no need of direct contact with the outside. Each quarter consisted of a kind of population pocket, open only towards the centre. In actual fact, the cul-de-sacs represented statistically a little less than half of the road network, their development being restricted to within the quarters: 52 per cent of the road system in Fez and 41 per cent in Aleppo. In Algiers there was a very marked contrast between the lower city, corresponding to the centre (24.5 per cent cul-de-sacs) (fig. 7), and the upper city, where the indigenous population lived (59.9 per cent) (fig. 8). The cul-de-sac was thus a functional feature, localized within a specific sector of the city.

The quarters provided dwelling for a population that could hardly have exceeded around a thousand inhabitants (around 200 families), so that they lived there in a familial environment, akin to a village where everyone knows everyone else; under the supervision of shaykhs, but above all, no doubt, thanks to a self-surveillance that made a major contribution to security. Potential troublemakers, people of bad morals, could, where necessary, be made subject to measures of expulsion that might be submitted to the authorities (some cases went as far as Istanbul). These quarters were the scenes of an active collective life, with familial celebrations (circumcision), collective festivities (a ceremony based around a local saint), rejoicings and processions (like the Damascus {arada); these were enlivened by groups of "youth" (futuwwa) who might possibly transform themselves into self-defence groups or might activate traditional rivalries with groups from other quarters, leading to outright pitched battles, sometimes conducted outside the city.[37]

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[37] For various aspects of the life of the quarters, see especially J. Lecerf and R. Tresse, "Les {Arâda de Damas," BEO 7–8 (1937–38); and Nawâl al-Messiri, "The Concept of the Hâra," Annales Islamologiques 15 (1979).

This division into quarters should not be regarded as a totally negative factor, inclining the city towards fragmentation and anarchy, as suggested by J. Sauvaget and J. Weulersse. On the contrary, such a division was an element that assured the city's stability, made for effective government of the population; it was conducive to its administration in the zone where the greatest part of the population lived and certainly helped facilitate the urbanization of newcomers recently arrived from the rural zones.

3.3

A further characteristic of the city's spatial structure was the fairly rigorous graduation of activities and residence from the central district out towards the extremities of the city. It was noted above how the city centre brought together the most lucrative economic activities, especially those linked to international trade (trade in cloths, and in particular products like coffee, which had begun to play a considerable part in the economy of the region). From this centre, activities tended to spread outwards through the city on a principle of decreasing importance: the less important the trade, the closer to the periphery. Here on the edge would be found activities requiring a good deal of space (rope-makers, mat-makers, traders in grain or other foodstuffs) or giving rise to nuisances not easily tolerable in the centre (ovens, slaughterhouses, tanneries).[38] Any modification of a trade's geographical position within this system may be interpreted as a sign of its progress (if coming closer to the centre) or its decline (if moving further out). A recently introduced activity, like the major trade in coffee, found its immediate spot in the centre of Cairo by virtue of its economic importance; the 62 *wakala* devoted to this business which appeared in the first half of the seventeenth century are all to be found close by the Qasaba, near the Khan al-Khalili, the Gamaliyya quarter, and al-Azhar.

An organization of this kind was so logical and corresponded so clearly to a "natural" spread of the activities in question that it might be viewed as broadly spontaneous in character. Such a finding must be qualified, nonetheless, in the light of what we know about the regular activities of the *muhtasib* and of the judges specifically concerned with the inhabitants' welfare; in the light, too, of surviving records of intervention by the authorities in the most serious cases. The removal of the tanneries in Aleppo, Cairo, and Tunis to more outer districts—made necessary by a phase of urban development—sprang from a decision made at the highest level of the political authority.

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[38] See further in "The Economy of the Traditional City," in this present work.

Such graduation seems, likewise, to characterize the way in which the city was divided with regard to the residence of the different social strata. This has been shown in various recent studies, which, on this point, portray a situation totally at odds with the Orientalist thesis of a social mix stemming from an egalitarianism supposedly characteristic of Muslim society. Jacques Revault's research on high-grade dwellings in Tunis clearly shows how the residences of the élite described by him are localized in a district immediately around the central zone (fig. 9). In her work *Habiter au Caire*, Nelly Hanna identifies three zones, moving from the city centre outwards, that have witnessed the development, respectively, of a prosperous dwelling, an average dwelling and a modest dwelling. Studying the various kinds of ancient construction in the city of Aleppo, J.-C. David localizes them as follows: in the centre, close to the Mdineh and the Citadel, a zone of high-grade dwellings; in a district further out a zone of more modest dwellings; and in the peripheral zones a popular dwelling.[39] Such an arrangement is thoroughly logical. The bourgeoisie of merchants and shaykhs stuck to the zones near the centre, site of the markets and the great mosque-university where they carried out their activities. In those zones characterized by a great density of construction, land was scarcer and more expensive, while the peripheral zone, generally given over to poor and polluting economic activities, was devoted to popular dwelling. Nelly Hanna has calculated the annual rent for a piece of land of a hundred cubits as 171 paras in the centre of Cairo, 76 in the intermediate zone, and 17 on the periphery. The average prices for the houses she studied (which merely, of course, represent a sample, with the most substantial ones over-represented) amounted, respectively, to 20,684, 8,931 and 4,825 paras in these same zones.[40]

In the districts close to the centre, then, was to be found a rich, bourgeois dwelling of the type that has been well studied in Fez, Tunis, and Cairo: characterized by its development around a central courtyard, by vast dimensions permitting a specialization of rooms, and by an elaborate decoration. The presence of a collective dwelling of the *rab{* type (blocks rented out in apartments) facilitated access for the Cairo middle class to the zones close to the centre.[41] Likewise, constructions of the caravanserai type (*funduq*, *khan*, *wakala*) frequently played this role for the middle class in Cairo and other great cities. In the "intermediate" districts, houses potentially retained the general character of the house with courtyard, but on a reduced scale. More elementary houses without a courtyard, of the kind studied by N. Hanna in Cairo, were also found.[42] On the periphery a poor type of dwelling developed, comprising elementary houses (one or two rooms),[43] or else a communal dwelling of the *hawsh* kind: a courtyard surrounded by very rudimentary shacks.[44] Still more precarious dwellings of the "shanty town" type very probably existed—though of these, for obvious reasons (fragility of materials and improvised nature of the construction), no trace has remained. The existence, in Fez and Tunis, of toponyms like al-Nuwayl, designating "mud huts covered with a thatched roof" in the districts on the fringes of the cities, is significant.[45] We may note in passing how much this variety of dwellings is at odds with the Orientalist conception of a uniform Muslim house with courtyard—of which most of the examples studied, especially in Fez, Algiers, Tunis, Cairo, and Aleppo, are actually mansions, large or small, relevant only to the middle and wealthy classes of these cities; and that is not to mention the kind of tall dwelling lacking in a courtyard of which we have so many examples around the Red Sea.

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[39] J. Revault, *Palais et maisons de Tunis*, 4 vols. (Paris: CNRS, 1967–78); N. Hanna, *Habiter au Caire* (Cairo: IFAO, 1991); J.-Cl. David, "Alep, dégradation et tentatives actuelles de réadaptation," *BEO* 28 (1975).

[40] Hanna, *Habiter au Caire*, 185–207.

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[41] J. Revault et al., *Palais et demeures de Fès*, 3 vols. (Paris: CNRS, 1985–92); Revault, *Palais et maisons de Tunis*, 4 vols. (Paris: CNRS, 1967–78); B. Maury et al., *Palais et maisons du Caire*, II, *Epoque ottomane* (Paris: CNRS, 1983); A. Raymond, "Le rab{," *Mélanges de l'Université Saint-Joseph* 50 (1984).

[42] N. Hanna, "Bayt al-Istanbuli," *Annales Islamologiques* 16 (1981).

[43] This poor dwelling is little known for the obvious reason that it has left no trace. One might, paradoxically, refer to the medieval one revealed by the excavations of W. Kubiak and G. Scanlon at Fustat. (*Final Report on Fustat C*, 1989.)

[44] The *hawsh* is precisely described in the *Description de l'Egypte* (*Etat Moderne* II–2) (Paris, 1822): E. F. Jomard, "Description de la ville du Kaire," 662, 696; M. de Chabrol, "Essai sur les moeurs," 516–517. For a Hijazi variety, see S. al-Hathlul, *Al-Madina al-{arabiyya al-islamiyya* (Riyadh, 1994), 86.

[45] Raymond, *Grandes villes*, 323.

3.4

The arguments developed above have already called attention to the importance of segregational factors which—with respect to the spatial organization of the traditional Arab city—are simply an expression of the profound inequality of the social structure. Recent researches have shown, in this regard, just how erroneous the Orientalist conception of an egalitarian society was: one that, in some degree, realized the religious equality existing within the community of believers. What is so striking when studying the realities of the social life of Muslim societies in the modern age is, on the contrary, the depth of social inequality. Perusal of the inheritances preserved for us by the court registers (mahkama) shows the marked difference existing between rich and poor. Moreover, these registers mainly inform us about the patrimonies of the most comfortably off; those of the poorest classes naturally eluded any kind of record following these people's deaths. In Cairo, during the two decades immediately preceding 1700, the proportion of the most insignificant inheritance to the most substantial is that of 1 to 10,000. In Damascus, around 1700, the proportion is 1 to 4,000. Whatever the imperfections of this kind of calculation (which involves patrimonies rather than incomes), the margin is obviously a wide one. When we apply to this comparison an index designed to measure social inequality, that of Gini (whereby 0.00 represents an equal distribution and 1 an absolute inequality), the resulting figures indicate a very strong inequality: the index is 0.74 for Cairo and Damascus round about 1700—a significantly similar figure which appears to confirm the reliability of such calculations. For Algiers at the end of the eighteenth century, the index of social inequality, at 0.80, is higher still.[46]

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[46] A. Raymond, Artisans et commerçants au Caire au XVIII$^{\text{ème}}$ siècle (Damascus: IFD, 1974), 2:375; C. Establet and J.-P. Pascual, Familles et fortunes à Damas (Damascus: IFD, 1994); C. Establet, J.-P. Pascual, and A. Raymond, "La mesure de l'inégalité sociale dans la société ottomane," JESHO 37 (1994); Shuval, Ville d'Alger, 141–142. By way of comparison, in Algiers at the end of the eighteenth century, the 10 per cent most substantial inheritances shared 74 per cent of the total amount. In France, in 1996, 10 per cent of households accounted for 50 per cent of patrimonies. (Le Monde, 2 March 1996.) We might also mention Cairo, where, in 1996, according to M. Kharoufi ("Mobilité du centre ville au Caire," in Naciri and Raymond, Sciences Sociales, 167), 20 per cent of the population appears to have had use of 40 to 50 per cent of the national income.

When compared to those for other societies and other periods, these figures point to an inequality so huge that it is hardly surprising it should find expression in the spatial structure of the city. Many writers, reluctant to abandon Orientalist theses, have hesitated to accept a reality that appears beyond argument when we view the city overall, from a broadly statistical viewpoint, as has been done for Tunis, Cairo and Aleppo. The graduation outwards, from zones of prosperous dwellings in the city centre to zones of poor dwellings on the periphery, appears a perfect illustration of those differences whose importance has been underlined above, even though many individual examples may, of course, be supplied of rich and poor persons living side by side.

These tendencies towards a segregational organization likewise appear in the customary grouping of religious and ethnic minorities; something which should not be regarded as a specifically Ottoman feature, even if the phenomenon was effectively accentuated by the Ottoman practice of the autonomous running of communities. The formation of enclosed quarters for Christians and Jews is a fairly general feature in which the concern to live a separate, homogeneous communal existence with one's own kind—a concern broadly shared by the dominant element (Muslim) and the dominated element (dhimmis, or "protected people")—played an important role alongside the wish of the dominant group to keep different communities apart (so as to supervise them as necessary) (fig. 10). This situation is general in the large Arab cities. What does vary greatly is the geographical siting of the communities within the city itself. When, though, they possess a certain importance and are markedly distinctive, "minority" Muslim communities are grouped together in the same way: the Kurdish quarter of Salhiyya, in Damascus, provides a very ancient example of this. In some cities, grouping by community goes to extreme lengths; this is the case in Jerusalem, with its Muslim, Christian, Armenian, and Jewish sectors, and Antioch, where the city is divided into Turkish, Christian, and Alawi sectors, their siting reflecting their respective political and social importance—the Turks, as the dominant element, occupying the centre, and the Alawis, a poor and ill-treated minority, being thrust out to the edges of the city.

By reason of the dominant caste's natural propensity to remain somewhat exclusive (reinforcing its concern to keep itself apart from the "masses"), the quarters of the élite were often voluntarily segregated: the Mamluk élite in Cairo isolated itself in this way, in the district of the Birkat al-Fil pool, to the south of Qahira; then, in the eighteenth century, in the district of another pool, the Azbakiyya, situated broadly to the west of the urban centre.

3.5

We cannot conclude this description of the structure of the Arab city without tackling the problem of its administration, especially as this is an area where Orientalists, led by Jean Sauvaget, have been very negative—maintaining that the Muslim city received little administration, or even none at all. Rather more thorough studies have shown that this supposed under-administration on the part of the political authorities was a mere myth. The re-siting of the tanneries in Cairo or Tunis, a crucial event in the sphere of urban structure, was ordered at the highest level (the Sultan for Cairo, the Bey for Tunis). The development of the Mdineh in sixteenth-century Aleppo stemmed from successive, even coordinated, action by the pashas of the province. If the activity of the muhtasibs has been clearly recognized, especially in al-Andalus, R. Brunschvig and B. Johansen have pointed out the role of the qadis in the running of the city[47] on a more elementary level. Increased interest vis-à-vis the institution of the waqf/hubus, in its more specifically urban aspects, has demonstrated the crucial role this played in the organization of the city.[48]

Above all, we are beginning to appreciate the importance of the part played by the communities (tawaxif) administered by their shaykhs in the running of the city and the administration of the inhabitants. The extreme diversity of these (professional bodies, geographical communities within their quarters, religious and ethnic communities), together with the variety of geographical zones through which they were spread (central districts for the professional bodies, residential districts for the communities in their quarters) means that they comprised tight networks able to ensure a multiple control over the lives of inhabitants and over urban life. Cairo contained more than 250 professional bodies and 100 communities within quarters, plus various religious and ethnic tawa'ifs. It is here, perhaps, that we should seek the equivalent of institutions of "civil society" whose apparent absence so worries specialists in the political sciences.

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[47] See their articles quoted above, notes 18 and 27.

[48] A. Raymond, "Les grands waqfs et l'organisation de l'espace urbain," BEO 31 (1979). On general aspects, see Le waqf dans l'espace islamique, ed. R. Deguilhem (Damascus: IFD, 1995). On these problems see my contribution, in the present volume, on the administration of the city.

4. Conclusions

It, therefore, seems that, with respect to the vast Mediterranean Arab domain, we may indeed speak of an urban system; one whose coherence sits ill with the speculations of Orientalists about the supposed disorder of the Muslim city. The dislocation diagnosed by J. Sauvaget and J. Weulersse springs from a negative interpretation of the city's division into separate units. If we take, however, into account the city's unarguable success (and its development even, in the period under consideration here), we might also say that these cells, far from threatening the city's overall unity, were actually, each in its own sphere, conducive to the organization and running of the whole. Even in the apparently extreme cases of Jerusalem and Antioch, so utterly split into their multiple religious and ethnic communities, a federating element was at work to ensure the overall functioning; the part played by the market quarter in providing the link between apparently disparate components is evident enough.

In any case, it is not at all clear in principle how cities utterly formless and anarchic, like those described by J. Sauvaget in his most extreme theses, could have stood the test of centuries. We rather need to acknowledge the existence of a strong internal structure underlying the development of these cities into modern times—notably in the case of Aleppo with whose destiny the historian has concerned himself while making no attempt to resolve the glaring contradiction between a disaster he proclaims and a greatness that shows through almost despite himself. It is the very internal logic of their organization and their capacity to evolve—no doubt, with a certain robustness in the face of time's vicissitudes—that have rendered so lasting and so successful the most noteworthy examples of this urban system, from Marrakesh to Baghdad.

LAW AND THE CITY

Besim S. Hakim

This contribution on the law and the city is about the interaction of societal values—which in Islamic culture are directly rooted in religion—with decision-making, the production process, and the resulting built form. The context of the discussion is holistic, beyond the building scale, to produce a clear understanding of the relationship of the part to the whole, the building to its immediate surroundings and to the urban scale. An understanding of the reciprocal effects of the overall built environment and the various levels of the environment, down to single buildings and their design, is crucial to a comprehension of architecture and the city in the context of Islamic culture.

The levels of the environment to be stressed are: the city, neighbourhood, clusters of buildings, and the single building. That order is not always critical to the following discussions, but the relationship between levels should be kept in mind, particularly when trying to interrelate the impact of values underlying decision-making and the nature of the production and construction processes.

Pre-Islamic precedents

The Near East has witnessed in its history developments in law since the most ancient civilizations. Well-known and relatively late examples from Mesopotamia are the laws of Hammurabi, King of Babylon, who reigned from 1792 to 1750 B.C.[1] There has also been a long and ancient tradition of respecting local customs. Pre-Islamic settlement patterns, building typologies, construction techniques, and related decision-making processes influenced the emergent pattern of built form in Islamic cultures. Some Muslim scholars interpret one of the verses in the Quran, the holy book of Islam, as an instruction to accept local traditions and conventions, provided they do not contravene Islamic values, ethics, or law. The Quran is considered by Muslims to be the word of God as revealed to the Prophet Mohammed. The applicable verse (from Surah, or chapter, 7 titled Al-A{raf, verse number 199) uses the Arabic term {urf to refer to an established local tradition for how something is to be done.

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[1] For a detailed study of Babylonian laws see G. R. Driver and J. C. Miles, eds., Babylonian Laws, vol. 1, Legal Commentary (London, 1952).

Contemplation of the complex plan pattern raises the question of how the common wall problems were addressed and resolved (figure 1). Islamic law addressed this and other problems related to this pattern and type of construction. Pre-Islamic legal precedents existed, as evidenced by the work of some scholars.[2]

Formation of urban models

The Prophet Mohammed proclaimed Islam soon after 610 A.D. in Mecca, 450 km. (280 miles) south of Medina, where the Prophet finally settled in 622 A.D. That date represents year 1 of the Islamic calendar. The next decade in Medina which came under the guidance and leadership of the Prophet is considered very important as a source of example and precedent for all aspects of Islamic community living, including building. A number of cases are recorded of the Prophet's attitude to specific problems related to building activity. This is also true of the caliphs who succeeded him, including Umar bin Al-Khattab, the second caliph, who ruled during the period of 634 to 644 A.D. This guidance concerning building proved to be particularly crucial for the Maliki School of Law which evolved under Malik bin Anas (712–795 A.D.) who lived all his life in Medina. Followers of his School of Law live to this day in the *maghrib* countries of Libya, Tunisia, Algeria, Morocco, Andalusia on the Iberian peninsula until the early 1500s, and in Sub-Sahara Africa.

During the first three centuries of Islam a number of schools of thought and approaches to law were formulated. Under the Sunni branch of Islam the survivors are grouped into four schools: Hanafi, Maliki, Shafi{i, and Hanbali. Followers of Sunni Islam constitute the majority in the Muslim world, although in Iran, parts of Iraq, and some communities in Syria and Lebanon, the people are followers of Shi{ism and have their own school of law. It is important to note that the legal differences about building are minor and result from different interpretations by the various schools of law. Thus, the discussion based on the Maliki School in North Africa would largely hold true for other regions of the Muslim world.

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[2] Ibid. Also see my detailed study "Julian of Ascalon's Treatise of Construction and Design Rules from Sixth–Century Palestine," *Journal of the Society of Architectural Historians* 60, no. 1 (March 2001): 4–25. The contents of this treatise draw from Near Eastern customary laws and Roman law. For a comparison of a case that deals with a party-wall that has fallen down and how similar legal solutions addressed this problem from the Neo-Assyrian and Islamic periods, see p. 72 of my "Arab-Islamic Urban Structure," *The Arabian Journal of Science and Engineering* 7, no. 2 (April 1982): 69–79.

Eighty-three years after the Prophet’s death in June 8, 632 A.D. Islam already encompassed a vast territory stretching from the shores of the Atlantic Ocean and the Pyrenees to the borders of China—an area greater than Rome’s at its zenith. This was achieved under the leadership of Abd al-Malik (685–705 A.D.) from his seat in Damascus and his four sons who succeeded him. Across this vast geographic area, three factors influenced the nature of building and planning as it evolved within the framework of Islamic civilization. First, the urban models of pre-Islamic cultures and civilizations in territories converted to Islam influenced the evolution of the structure and form of subsequent Islamic cities. This was particularly true in the region known as the Fertile Crescent and in Iran. Second, the camel was the primary means of transportation, predominating in the Middle East between the fourth and sixth centuries A.D.[3] This important and often forgotten factor had a major impact on the street system and urban form of the Islamic city. Third, the location of most territories of the Islamic world between latitudes 10 and 40 and the resulting similarity in macroclimatic conditions contributed toward certain unifying influences in building practice.[4]

Some historians agree that three discernible urban models evolved within the framework of Islamic civilization. These are the renewed or remodelled pre-Islamic city, the planned and designed city, and the spontaneously created and incrementally grown city.[5]

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[3] See Richard W. Bulliet, The Camel and the Wheel (Cambridge, MA, 1975).

[4] For the climatic advantages of the courtyard house type, which was the most widespread in the Islamic world, see D. Dunham, “The courtyard house as a temperature regulator,” The New Scientist, September 1960: 663–666. For innovation of cooling systems in arid regions see M. N. Bahadori, “Passive cooling systems in Iranian architecture,” Scientific American, February 1978, 144–154.

[5] See Edmond Pauty, “Villes spontanées et villes créées en Islam,” Annales de l’Institut d’Études Orientales 9 (1951): 52–75; and Jean Sauvaget, “Esquise d’une Histoire de la

The renewed city is found most often in previously held Roman territories and is exemplified by Damascus and Aleppo. Earlier structures and configurations were altered to suit the social requirements of the Muslim community. The pre-Islamic Southwest Arabian model of isolated multi-storey structures, such as Sana{a, and particularly prevalent in Yemen, is also classified under this model. Research is required to determine why this type did not spread beyond the few localities in which it arose.

The second type of city was pre-planned and designed by Muslim rulers to be the capital of a dynasty or, more typically, as the seat of a palace complex and its related facilities. A prime example of a preconceived city palace complex constructed as a complete entity was the original round city of Baghdad, while Al-Abbasiyah, south of present Kairouan, was a palace complex; neither survives today. The model influencing the plan and design of this second type of city can generally be identified by the geographic location. In the case of the *mashriq* (eastern regions), pre-Islamic models had a distinct influence, whereas in the *maghrib* (western regions), the influences on the ruler and his experiences determined the model and approach followed. After the collapse of a dynasty, the tradition was to abandon this type of city or palace complex, with the result that today they remain as ruins or are completely obliterated and require restoration by archaeologists.

The third model of the Islamic city proved to be the most enduring and pervasive, and today most of the older areas of capitals and major towns in the Muslim world evolved out of this model. The best examples of the old quarters or *medina* survive in the *maghrib* countries; in some instances, they are severely threatened today by the automobile. Although the organizational principles of this model predate Islam by at least 2500 years and were particularly common in southern Mesopotamia, the strength, characteristics, and longevity of this city type reflect the manner in which building activity was pursued in Islamic society (figure 2).

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ville de Damas," *Revue des Etudes Islamiques* 8, no. 4 (1934): 421–480; and his two-volume study on Alep: *Essai sur le developpement d'une grande ville Syrienne des origins au milieu du XIX siecle* (Paris, 1941).

Understanding urbanism as process and product

Viewing the city as a process and a product is an effective analytical evaluation and planning tool and is indispensable for the study of the Islamic city. The process encompasses decision-making in building activity as guided by Islamic values. It can best be appreciated by viewing the dynamics of building decision-making as affecting two levels of the city: citywide and neighbourhood. Decisions about the citywide level were usually made by the ruler or government; they concerned the birth, growth, and revitalization of a city, and would include the location of the primary mosque, the distribution of the land in the projected boundaries of the city to various ethnic, familial, or tribal affiliations, and the location and configuration of the city's gates and walls. All of these were the result of decisions taken in the first few years of a city's founding.

Other typical primary decisions occurring during a city's growth involved the building of major public buildings such as mosques and public baths, or the location of new cemeteries. Revitalization activity often took place under the leadership of ambitious rulers and governments during eras marked by security and prosperity. Site conditions and the location of determining factors, such as water and natural features useful for defensive purposes, had an impact on macro decision-making and, hence, the resulting urban form.

The dynamics of decisions made at the level of the neighbourhood tended to be of a different nature and the results were of immediate significance. The effect of numerous micro decisions by citizens of a neighbourhood on urban form was indirect and usually obvious only on an aggregate basis, whereas the results of the larger decisions by rulers—such as the location of major mosques, of the suq (market) and its configurations, and of important industries tended to be individually discernible. Building decisions at the neighbourhood level had an impact on both the initiator and on immediate neighbours. Building activity and decisions involved the relationships and interdependence of people, and more specifically neighbours; such activity was therefore the concern of Islamic law.

Examining the city as a product clarifies how a complex, heterogeneous, and sophisticated built form is achievable with a simple set of physical organizational components and a related mechanism of verbal communication used in building decisions. The essential urban elements found in most cities of the Islamic world are the courtyard building, the street system, and the elements above the street.

The Courtyard Building. This is the basic module used for housing and public buildings. The ratio of building area to plot is 1:1. In housing, the courtyard takes up approximately 24% of the ground coverage, and the building is one, two, or occasionally three stories in height. Public buildings differ in their ratio of courtyard size to ground coverage, and the height is one story, as in mosques, but frequently is two stories, as in a *funduk* or *khan* (hostels for merchants). It should be noted that the Prophet affirmed the use of this plan type by building his mosque/residence soon after his arrival in Medina in the form of a square courtyard structure.

The Street System. Street systems are primarily of two types: the through, open-ended street which was considered a public right of way and had to be at least wide enough for two packed camels to pass; and the cul-de-sac which, according to Islamic law, is considered to be the private property of the people having access from it to their front doors (figure 3).

Elements Above the Street. The elements usually found above the street were a *sabat*, a room bridging the street, and the buttressing arches spanning between walls on either side of the street to provide structural strength and support for both opposite walls (figure 4).

In addition to this basically simple set of organizational elements, the Islamic city evolved a sophisticated communication system in the form of a language or vocabulary of building design that operated at all levels of the built environment. At the level of the city, it identified urban elements such as building types, public squares, and other uses. At the building level, it identified spatial configurations and related uses, as well as details of construction, decoration, and symbolic motifs. An important attribute of this language was that it integrated a physical component's form and function into its name. This vocabulary was known and popular amongst most segments of society involved in building activity, and it was an effective communication device between users and builders. Regional variations in the design vocabulary existed, but the language was unified by the similarity of the built form and its constituents.[6]

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[6] For a detailed presentation of a design language at the urban level, see Chapter 2 "A design language: urban and architectural elements" of my book *Arabic-Islamic Cities: Building and Planning Principles*, 2nd ed. ([1979] 1986; London and New York, 1988), 55–101. [Available from Books on Demand, UMI, Ann Arbor, MI].

The fiqh and formation of the rule system

The development of rules for neighbourhood building activity became the concern of the science of fiqh from its very early development.

Fiqh is the Arabic term for jurisprudence or the science of religious law in Islam. It concerns itself with two spheres of activity: {ibadat, dealing with matters concerning ritual observances; and mu{amalat, the legal questions that arise in social life (e.g., family law, law of inheritance, of property, of contracts, criminal law, etc.), and problems arising from building activity and related procedures. The latter were viewed by the fiqh in the same light as other problems resulting from human activities and interaction. In essence, therefore, fiqh is the science of laws based on religion and is concerned with all aspects of public and private life and business.

The bulk of the knowledge developed by the fiqh for most aspects of human relationships, including those of building activity, appeared in the first 300 years of Islam, although subsequent generations developed and refined it. The source for most rules stemmed from Quranic values and from the Hadith, which are the sayings and tradition of the Prophet, particularly during the decade of his leadership and rule in Medina.[7] Note that the recorded nature of most rules in the fiqh literature is implicit in the numerous cases also recorded that include the judgments of local qadis (judges) and the opinions of muftis.[8]

A set of rules documented in the literature of the Maliki School of law is identified and discussed elsewhere.[9] Some of those can be briefly itemized:

- Avoid harm to others and oneself.
- Accept the concept of interdependence.
- Respect the privacy of the private domain of others, particularly avoiding the creation of direct visual corridors.
- Respect the rights of original or earlier usage.
- Respect the rights of building higher within one's air space.

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[7] The term Sunnah is more commonly used to mean the total traditions of the Prophet, including his deeds and life-style, as well as his sayings.

[8] A mufti is a specialist on the law who can give authoritative opinions on points of doctrine. His considered legal opinion is called fatwa.

[9] See Chapter 1 "Islamic law and neighbourhood building guidelines," in my book Arabic-Islamic Cities (full citation in note 6 above), 15–54.

- Respect property of others.
- Neighbours have the right of pre-emption of an adjacent property.
- Seven cubits as the minimum width of public through-streets (to allow two fully loaded camels to pass).
- Avoid placing the sources of unpleasant smells and noisy activities adjacent to or near mosques.

In addition, other rules on the behaviour of the individual and community operate as a self-regulating mechanism. A prime example is the concept of *beauty without arrogance*, which strongly influenced the manner in which exterior facades and elevations of buildings were regarded and treated. This concept is attributed directly to the Prophet Mohammed in the form of the saying, "No person with an atom of arrogance in his heart will enter paradise." According to Muslim, a renowned Hadith scholar, a man said: "A person likes to wear good clothes and shoes." The Prophet answered: "God is beautiful and He loves beauty." By tradition, and allowing for beauty without arrogance, an owner usually decorated only the front door of a building, to express his attitudes and identity. In contrast, the interiors of buildings were decorated, particularly the facades of the courtyard. The sophistication or level of such decoration depended on the financial ability and taste of the owner.

Quranic verses and sayings of the Prophet, which were used as the source for building guidelines, can be found elsewhere.[10] In most cases these verses and sayings were specifically pointed out by the author of a *fiqh* manuscript to back up or elaborate on the reasons and rationale behind a *qadi*'s decision or an opinion of a *mufti*.

The role of local customs ({Urf)

Up to the early years of the twentieth century, we find that within the Islamic world two types of rule systems operated simultaneously. The centrally imposed system, and the localized, community-based customary rules. Both types of "rule system" have had their impact on the traditional built environment of Islamic societies. Ideas and stipulations from the former tended to create a unity of concepts and attitudes to the built environment in the various regions of the Islamic world. The latter tended to influence the details and architectonics of the local built form. These two types of rules operating simultaneously contributed to the phenomenon of the diversity of settlements of sub-regions of the Islamic world, yet unified by the general concepts and attitudes which all regions shared. Essentially, resulting in uniqueness at the micro-level and certain commonalities at the macro-level.

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[10] See Appendix 1 "Selected Quranic verses and sayings of the Prophet" of my *Arabic-Islamic Cities* (full citation in note 6 above), 142–157.

The majority of pre-Islamic Arab societies in Arabia regulated their lives in response to deeply rooted meta-customs known to different tribes in the region and to localized customs followed by a specific tribe. The former usually emanated from religious beliefs and helped to regulate inter-tribal conflicts, such as the concept of *haram* and *hawtah*: essentially the demarcation of space into sacred and profane areas where in the sacred area certain types of activities and behaviour are prohibited.[11] An example of localized customs is the manner in which the *fitra* (an instinctive impulse or innate understanding) generated building solutions which had local specificity and character. A large number of those customs, both at the meta and local levels, continued during the Islamic era because they did not contravene Islamic values and ethics as stipulated in the texts.

Islamic law underwent gradual development and reached maturity during the latter half of the third Islamic century, that is, by around 900 A.D. The sources of law which all Sunni schools of law agree on are the Qur'an, Sunnah (the Prophet's sayings and deeds), *ijma{* (opinion based on consensus of majority of learned Muslims), and *qiyas* (judgment based on reasoning by analogy). In the case of the Hanafi, Maliki, and Hanbali schools, they added *istihsan* (deviation from a common ruling regarding a problem to a ruling based on special circumstances). The Hanbali, and especially the Maliki schools added the concept of *al-istislah* or *al-masaleh al-mursala* (addressing those problems which the primary sources have not addressed before and which require solutions tailored to the special circumstances of time and place). *{Urf* (customs), as a source of legislation, was especially recognized by the Hanafi and Maliki schools and was for practical reasons accepted by all schools in one aspect or another. For the {urf to be followed, it has to be "correct" (that is, it must not contravene clearly specified Islamic laws and prohibitions). Traditional building activities and methods of construction were primarily shaped by local customs, affecting the specificity of design resulting from the art and construction practices of a locality.[12]

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[11] See R. B. Serjeant, "Haram and Hawtah, the Sacred Enclave in Arabia," in *Melanges Taha Husain*, ed. Abdurrahman Badawi (Cairo, 1962). Reprinted in R. B. Serjeant, *Studies in Arabian History and Civilization* (London, 1981).

Fiqh principles (Qawa{id Fiqhiyya) encourage proscriptive rules

There are over one hundred principles upon which Islamic jurisprudence is based.[13] The following are seven, chosen because they have had a direct effect on the traditional built environment. They are here woven together to portray their cumulative rationale:

1. The basis for action is the freedom to act,
2. stimulated and judged by the intentions for those actions,
3. which are constrained by the prevention of damages to others.
4. However, it is sometimes necessary to tolerate lesser damages so as to avoid greater ones.
5. Older established facts must be taken into account by adjusting to their presence and conditions.
6. People's customs must be respected and followed,
7. however, time might change those customs and new solutions will be needed.

When applied to the context of the built environment these principles provided the freedom to act and build restrained by certain limits. They are thus proscriptive in nature, allowing the liberty to generate solutions to specific local problems in response to the site and the conditions around it. An equilibrium is established on the site where the "best" solution is achieved for a specific micro-condition at a specific period in time. Diversity is, thus, achieved in the built environment so that every locality and street becomes unique in character and contributes substantially to its identity. This in turn contributes to the richness of the total built environment. People's customs are fully incorporated in the manner they build and can express their world-view in built form. The system also recognizes and adapts to changes in those customs across time.

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[12] For a thorough analysis of how the {urf contributed to the diversity of architecture and urban form of traditional cities in the Islamic world, see my study "The Urf and its role in diversifying the architecture of traditional Islamic cities," *Journal of Architectural and Planning Research* 11, no. 2 (Summer 1994): 108–127.

[13] Mustafa Ahmed Al-Zarka, *Sharh al-Qawa{id al-Fiqhiyya*, 2nd ed. (Damascus, 1989). The author is the son of Ahmed bin Muhammad al-Zarka (d. 1938) who wrote the first edition of this book. For a literature review and an extensive bibliography see the article by Wolfhart Heinrichs, "Qawa{id as a genre of legal literature," in *Studies in Islamic Legal Theory*, ed. Bernard G. Weiss (Leiden, 2002), 365–384.

There are numerous aspects of the built environment which can clarify the working of this system. Two concepts are introduced and briefly defined. One is the spatial concept of the *fina'* which is the space enveloping a building, usually in the range of 1 metre (3 feet) in width, and which surrounds all the exterior configurations of a structure. Within it the owner has certain rights and responsibilities. The other is a physical entity called the *sabat*, which is a structure bridging a public right-of-way and is constructed for additional space. There are specific rules which must be adhered to for construction, especially the manner in which the supports are resolved. The working of these and many more examples as governed by the above principles is available elsewhere.[14]

A simulation of the building process

To appreciate the interaction between the mechanisms of the building process, consider the following simulation which includes one example for each component of a five-part framework devised by this author to represent the physical factors that shaped the traditional Islamic city, particularly at its neighbourhood level. This framework encompasses all building activity issues touched on in the *fiqh* literature of the Maliki School of Law. The components are: (1) streets, including through streets and cul-de-sacs, and related elements; (2) locational restrictions of uses causing harm, such as smoke, offensive odour, and noise; (3) overlooking issues, including visual corridors generated by doors, window openings, and heights; (4) walls between neighbours and their rights of ownership and usage; and (5) drainage of rain and waste water.

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[14] See pages 27–30 of my *Arabic-Islamic Cities* (full citation in note 6 above). For how we can learn from traditional concepts, processes and techniques see my article "Learning from traditional Mediterranean codes," in *Council Report III/IV*, published by The Town Paper (Gaithersburg, MD, 2003), 42, 43, 63.

Imagine that a man wants to build on a vacant lot or to reuse a site on which a dilapidated house stands. If the intention is to rebuild a structure for the same use, then he can proceed with no objections; if the plan is to build a public bath or bakery, however, then he will more than likely be faced with objections from the neighbours. The reasons given are that such new public uses will create harm in three ways; (1) by generating additional traffic on the street(s) providing access to the facility, thus, causing the people living nearby to have to adjust to this new condition; (2) by the nuisance of the smoke generated; and (3) by diminishing the value of the adjacent houses because of the impending adjacent public uses and the nuisances that will result. Two frequently cited sources supporting these complaints are used by the fuqaha' (plural of faqih, a jurisprudence scholar), for preventing the change in use. The Quran says: "And diminish not the goods of the people, and do not mischief in the earth working corruption" (26:183). From the sayings of the Prophet comes: "Do not harm others or yourself, and others should not harm you or themselves" (cited by Ahmad and Ibn Majah).

After exploring other uses for the site, the owner decides to build a house. He asks a local builder to construct it; the two will communicate with each other about the design requirements by using the local design language. This is done by identifying each part according to its name in the design language. To illustrate, examples from the local language in the Tunis region are used: the owner requires one skifa (entrance lobby with entry doors placed so that no one can see directly into the courtyard from the outside), with two dukkana facing each other (built-in benches provided in the skifa, traditionally used by the male owner or occupant to receive casual visitors or salesmen). He specifies that the wust al-dar (open courtyard in the centre of the house) should have under it a majin (cistern for the collection of rainwater from the roofs), and one burtal (a colonnaded gallery off the courtyard giving importance and sometimes sun protection to the room behind) off the main room. Around the courtyard he asks the builder for three bit trida (simple rooms) and one bit bel-kbu u mkasar (a primary room common in middle- and upper-middle-class houses), which is usually located opposite the entrance to the court. This primary room is divided into (1) a central alcove called a kbu, usually containing built-in seating and elaborate wall and ceiling decorations, and used to receive close relatives and friends; (2) two small rooms symmetrically located on each side of the kbu called maqsura and used as bedrooms; and (3) two alcoves, constructed opposite each other, with built-in beds and/or storage. The built-in beds could be placed on one or both sides of the alcove and are usually framed with a decorative wooden structure called hanut hajiam. This listing could continue on to the smallest details of decoration and finishes (figure 5).

If the house is relatively complex, then the builder will more than likely sketch out the plan and any other details, but for his own use and not to communicate with the owner. When the design language is not adequate for both owner and builder to clarify a point, then either one, but more commonly the owner, takes the builder to see a house to indicate what he has in mind.

The builder is expected to know about the customs and traditions of building practice and the principles to be followed and respected. Surprisingly, the detailed implications of building rules were not common knowledge among the lower ranks of builders. Often, references are made in ancient manuscripts to implemented building decisions that were violations and were later ordered by the local judge qadi to be demolished or corrected in response to a neighbour's complaints. It seems, however, that the more established and older builders with many years of experience who were often hired by affluent clients had detailed insights of the rules.

Having determined the usage of the site and using the design language for planning purposes, the builder and owner examine the likely effects on their requirements and decisions of existing surrounding buildings. If a window exists on one of the neighbour's walls, for example, then its location had to be taken into consideration in the building of the new house because of the respect for the principle of the earlier rights of usage. The new owner of the house had the responsibility to avoid creating a direct visual corridor from the existing window into his private domain; in effect he had to pre-empt problems that could arise from having visual access to his house.

Rather than building another adjacent wall, a neighbour's wall could be used to insert beams for support. This practice was specifically encouraged by the Prophet: "A neighbour should not forbid his neighbour to insert wooden beams in his wall" (cited by Abu Hurairah). Nonetheless, there were elaborate guidelines to be respected for using a neighbour's wall and for the associated problems of subsequent maintenance rights. For example, the ratio of the wall to be used depended on its ownership. In the case of rebuilding a dilapidated house, correct identification of the ownership of adjacent walls was therefore crucial. Careful examination of the wall was guided by criteria that determined whether ownership was single or joint. The most common of these criteria was to discover the nature of the akd or wall bond at the corners or junction of two walls, by examining the materials and mortar to resolve whether the two walls were built together. This practice which was sanctioned by the Prophet is traceable to the decade of 622–632 A.D. in Medina and is still followed today in the older parts of Islamic cities under the local customary law, or {urf.

The problem of drainage of rain and wastewater also had to follow certain rules and guidelines. Drainage of rainwater was a particularly delicate problem because excess water was not to be barred from others. This principle is directly attributed to two sayings of the Prophet: "If you deny excess water, you will deny the benefits of pasture" (cited by Abu Hurairah), and "Muslims are partners in three things: water, pasture, and fire" (cited by Abu Dawood and Ibn Majah via Ibn Abbas).

As to the relationship of houses to streets, assume that one side of a house adjoins a through street and the owner wants more space. One option is to build a sabat (room bridging the street). To support the structure on the opposite side, the owner could acquire permission from the owner of the facing building, but the granting of such permission was not totally irrevocable and, thus, this alternative depended on the owner's perception of his future relationship with his opposite neighbour. More than likely, the owner would choose to use columns for support, keeping himself and his heirs totally independent of his neighbour. Another option would be to use columns for supporting both sides, opening up the future possibility of being able to sell the sabat to the owner of the opposite building, and generally upgrading the marketability of the house.

The preceding illustrations provide only an overview of the issues involved in the typical building process of a house. Many other cases, some of them extremely involved, may be found elsewhere.[15] This discussion is adequate, however, to illuminate the fact that the built form was a direct outcome of the dynamics of decision-making, using specific mechanisms and governed by fiqh rules derived from Islamic values embodied in the Qur'an and the Hadith.

Conclusion

I shall conclude this contribution with two discussions. The first assumes that the traditional system offers a great deal to learn from for our contemporary period and for the future. The second suggests numerous areas for further research that are necessary to develop our knowledge and understanding of the workings of the traditional system and, by extension, enable us to develop a comprehensive theory of the traditional Islamic city.

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[15] See Chapter 1 of my Arabic-Islamic Cities (full citation in note 6 above).

Learning from the past. The traditional system of building and of urban activities in most cities of the Islamic world was an incremental and constantly rebalanced process of development involving the synthesis of religious and socio-cultural conventions. The system was self-regulating, so that any significant departure or contravention of the rules and conventions created a situation where corrective action had to be undertaken; in the absence of such action, the intervention of the *qadi* (local judge) provided the prescription for normalizing the conflict within the system, in line with the established norms and rules operational in the community.

Specifically, three experiences are valuable to the contemporary context. The first is the importance of the legal framework as the prime shaper of the urban environment, particularly environments at the level of the neighbourhood. Certainly this is also true today with zoning ordinances, subdivision regulations, and building codes. However, the nature of the legal framework is where the Islamic city can provide fresh insight. The *fiqh* building rules were derived from societal values based on religious beliefs and were supported by adequate elaboration of the intent of each rule. Specific numerical prescriptions were not indicated and only rarely cited as an example of how a specific problem ought to be resolved. In essence, the rules functioned as performance criteria, as opposed to contemporary building and planning laws which are based on standards. The former is qualitative, intent- oriented, and responsive to changes in requirements or site conditions, whereas the latter is quantitative, numerically oriented, and not responsive to changes in requirements or location. Not only is the performance criteria approach more sophisticated in terms of addressing each building problem within its own context, but the aggregate results it helps to create as built environment are diverse and complex. Laws based on standards address all problems uniformly, with results of repetitiveness and monotony in the built environment. The best examples are the thousands of suburbs that were developed in the West, particularly in the United States during the twentieth century, and especially since World War II.

The second lesson is the use of a building "design language" as a communication and design-decision-making aid. The components of the language integrate the three-dimensional form and function of the design element being communicated. This mechanism helps the user and builder to communicate with each other. It also preserves and perpetuates design-configurations and forms which have proved their durability through experience without hindering diversity in the individual design solution.

The third primary lesson is in the nature of the physical organization. As mentioned earlier, the system of courtyard buildings serviced by cul-de-sacs and through streets pre-dates Islam; however, Islamic civilization developed and refined this system and spread it across a vast geographic area, aided by the simultaneous development and acquisition of *fiqh* knowledge as it pertained to interventions in the built environment. Some highlights of the attributes of this organizational system follow. The courtyard plan form is able to accommodate diverse uses. The densities created in housing are efficient without sacrificing the privacy of the individual unit. Streets as an access network are maximally utilized, as in the example of the central portion of Tunis Medina. All streets take up 12.5% of the gross built up area and only 13.3% of those are cul-de-sacs serving 28.5% of all buildings, i.e. a relatively low proportion of cul-de-sacs serving a high proportion of buildings. *Sabats* (rooms over streets) are used to create extra space for private users, simultaneously providing cover to the public in the streets. In the central portion of Tunis Medina, 8% of all streets are covered by *sabats*, in addition to 7.5% covered by vaulting, providing coverage to a total of 15.5% of the city's streets.

There are numerous attributes in addition to those mentioned above, such as the use and details of decoration and ornament in the realm of art. Another important attribute which has received some attention before is the energy saving attributes of the built form within the context of an arid region, aided by energy saving practices and devices such as the wind tower, air vent, cisterns for storing water and keeping it cool, and the ice maker.[16] Other practices were the collection and storage of rainwater in cisterns under the courtyard of buildings, the effective use of basements as living quarters during the hot season, and the recycling of building materials.

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[16] Refer to the references in note 4 above, and see the numerous examples from Iran in E. Beazley and M. Harverson, *Living with the Desert: Working Buildings of the Iranian Plateau* (Warminster, Wilts, England, 1982).

Although this discussion addresses Islamic environments, there are universal benefits; it is hoped that the value of this information will be of interest and use to peoples of other cultures today and in the future. Amos Rapoport clearly points out the relevance and importance of this information, when he says:

> The broader our sample in space and time, the more likely we are to see regularities in apparent chaos, as well as to understand better those differences that are significant. Thus, the more likely we are to see patterns and relationships, and these are the most significant things for which to look. Being able to establish the presence of such patterns may help us deal with the problem of constancy and change.... It is very important to understand constancies as well as change, since our culture stresses change to an inordinate degree. Also, if apparent change and variability are an expression of invariant processes, this is extremely important because the reasons for doing apparently different things remain the same.[17]

Areas for further research. The following suggestions for study and research are not exhaustive, but should be considered as an essential preliminary list of topics which are necessary to be undertaken for generating the knowledge and the building blocks, so that a serious attempt can take place in constructing a theory of urban form in Islamic cultures. The list suggests topics dealing with the settlement level followed by those of relevance at the cluster/neighbourhood level, and then those of value at the single building level. Some of the suggestions are of significance to all three levels combined, and some to two levels. The list of topics follows:

1. Pre-Islamic conceptions of the urban settlement and the city in the Near East and especially in the western region of the Arabian Peninsula. How did the Arabs who were converted to Islam apply the concepts in establishing new settlements and in adapting existing towns and cities, such as the case of Damascus and Aleppo? To my knowledge, no substantive studies are available which address patterns in land tenure, ownership rights, and control of space, and how those patterns affected the configurations of buildings, streets, and the alignment of shops in commercial areas and markets.

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[17] A. Rapoport, "Cultural Origins of Architecture," in *Introduction to Architecture*, ed. J. C. Snyder and A. J. Catanese (New York, 1979), 18.

2. The process of land demarcation and sub-division in the early formation of Islamic cities. This is the initial process undertaken for allocating land to public and private uses. Did the allocation of private land precede considerations for the layout of public right-of-ways? What was the technique in undertaking this task? Or was the process in the reverse direction?[18]
3. A detailed study of the principles and workings of land allotment, iqta{, and revivification, ihyax, of land within and on the fringes of settlements. The Prophet applied the principle of iqta{ in Medina soon after he settled there. There are abundant descriptions of that example in the Arabic literature and it should be possible to reconstruct what occurred at that time using a process of simulation based on the available information.[19]
4. The process of territorialization of land, ikhtitat, in the initial and early formation of the quarter, mahalla, or neighbourhood level. After land was allotted to a group of people, they were responsible for its territorialization into clusters of plots and allocating adequate land for access which eventually became the streets and cul-de-sacs. Since this phenomenon occurred during the early formation of most Islamic cities, it is difficult to find adequate and reliable information describing this process. Yet it is very important to develop a number of alternative scenarios for purposes of constructing theory.
5. How did the institution of waqf function in terms of its impact on buildings and by extension on urban form? What was the impact on the processes of growth and change? There are a large number of studies on the institution of waqf which originates with the teaching of the Prophet. An important saying by him is "If you wish,

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[18] J. Akbar attempted to explain this in his "Khatta and the territorial structure of early Muslim towns," Muqarnas 6 (1989): 22–32. The effort addresses important issues and should be viewed as a good start. More extensive research is needed. Here the techniques and skills of archaeologists would be most valuable. A good example of an earlier study is by archaeologist J. Schmidt, "Strassen in Altorientalischen Wohngebieten: eine Studie zur Geschichte des Städtebaus in Mesopotamien und Syrien," Deutsches Archäologisches Institut Abteilung Baghdad: Baghdader Mitteilungen (Berlin) vol. 3 (1964): 125–147.

[19] See the book Wafa al-Wafa, by Nuraldin al-Samhudi (d. 1505), 4 parts in two volumes (Beirut, 1955). As for the principle and implementation of Ihya{, information based on the legal literature of the predominant Islamic schools of law Madhahib aided by on site archaeological investigations of cities which were influenced by a specific school of law would clarify the workings of this principle.

retain its origin (*habbasta aslaha*) and provide it as charity" cited by al-Bukhari. The Hanafi School of Law defines the *waqf* as: "the detention of the corpus from the ownership of any person and the gift of its income or usufruct, either presently or in the future, to some charitable purpose."[20] Most of the studies available deal with specific buildings designated as *waqf* but, to my knowledge, there are no studies which attempt to explain the impact of a large number of buildings and real estate on the city as a whole, its processes of growth and change, and the consequence on urban form across time.

6. What were the various types of tenure and ownership of land and buildings? What was the effect of taxation on the various types of tenure? There is a great deal of information available regarding these questions in the classical Arabic sources and more recently in late nineteenth century Ottoman sources. A sketchy attempt to address these issues was published, but to my knowledge no extensive studies are available which tackle these questions.[21]
7. The institution of *hisba*: what was its jurisdiction and responsibilities, and its impact on urban management? What were the overlap and/or interaction with the judge's (*qadi's*) realm of jurisdiction? There are a number of well-known *hisba* manuals from the eastern *mashriq* and western *maghrib* regions of the Islamic world which should be carefully examined for answering these questions. Further clarifications will emerge from a process of detailed study and analysis of these manuals.
8. Local customs (*{urf*) in design and building construction were a primary engine affecting decision-making and the choice of design solutions in a specific locality. The School of Law (*madhab*), having the jurisdiction in a locality, sanctioned those customs, provided the custom did not contravene principles of Islamic law (*Shari{a*). Research is required for a comparative analysis of "solutions" which

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[20] H. Cattan, "The law of Waqf," in *Law in the Middle East*, ed. M. Khadduri and H. J. Liebesny (Washington, D.C., 1955).

[21] See M. Serageldin with W. Doebele and K. ElAraby, "Land tenure systems and development controls in the Arab countries of the Middle East," in *Housing Process and Physical Form*, Proceedings of Seminar Three held in Jakarta, Indonesia, March 1979, sponsored by the Aga Khan Award for Architecture (1980), 75–88.

were generated within the umbrella of the various schools of law and the manifestation of those solutions in physical terms, particularly noting the differences in solutions to similar problems. This research would rely on cases of rulings by customary law as recorded by local judges (*qadis*) and in the compilations of specialists on law (*muftis*), aided where feasible by onsite investigations.

9. Field research of numerous cities within major regions of the Islamic world which are designed to document the design language (linguistic {urf), indicating the sources for the terms, their meaning, and the actual physical configuration and arrangements which the vocabulary of the local design language referred to, including their implication for the design of buildings and the shaping of urban form. Comparative study of the results of these surveys would greatly enhance our understanding of the built form qualities of those cities.[22]
10. Symbolic manifestations occurs at different levels of the built environment, the design and details of decorations in various locations of a building, such as part of the main entrance, around windows, and on the walls surrounding the interior courtyards. In a locality embedded in religious associations, the location of a mosque, water wells for public use, and other elements in the settlement is influenced by historical and religious associations. Comparative research of such examples in various regions of the Islamic world is necessary.[23]
11. Mathematics, geometry, surveying, and engineering techniques, which were used in building design and construction. Little serious research on these interrelated aspects has been undertaken. Recent scholarship is very encouraging, however this area of investigation is open to a great deal of research possibilities.[24]

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[22] For a detailed discussion of what is the "design language" see chapter 2 of my book *Arabic-Islamic Cities* (full citation in note 6 above). For what is the "linguistic {urf " see my article "The 'Urf' and its role…" (full citation in note 12 above).

[23] See chapter 4: Symbolism and Form, of my edited study *Sidi Bou Sa{id, Tunisia: A Study in Structure and Form*, (Halifax, N.S., 1978) [Available from Books on Demand, UMI, Ann Arbor, MI]. That chapter analyzes symbolism in that village at three levels: (i) the village, (ii) entrances, windows, and steps, and (iii) surface embellishments such as plaster carvings, stonework, and tiles.

[24] See the articles by W. Chorbachi, "In the Tower of Babel: Beyond symmetry in Islamic design," *Computers and Mathematics with Applications* 17, no. 4–6 (1989): 751–789; and Alpay Ozdural, "Omar Khayyam, Mathematicians, and Conversazioni with Artisans," *Journal of Society of Architectural Historians* 54, no. 1 (March 1995): 54–71; and the

12. Building materials and construction techniques. What were their attributes and limitations? How and in what context were materials used separately or in combination with others? For what purposes and how was recycled material used? What were the structural limitations of materials, and how did builders innovate within those constraints?
13. Traditional energy-saving practices and techniques, for example, the utilization of water, cooling devices such as wind towers, and methods for disposing of human and animal excrement. Although research on these topics is mostly available for Iran, very little has been done for other regions. Comprehensive studies are needed to understand design solutions used for dealing with conditions in different climate zones and topographical features.
14. A study which focuses on the use of the courtyard in the design and planning of houses, with particular attention to its use as a customary inherited element, i.e. when used unconsciously as a customary practice without concern to its design potentials vs. its intentional use as a device embodied with design possibilities and opportunities for climate control.
15. An atlas of Islamic cities in various regions of the Islamic world which would document: (i) city maps drawn in the same format, using the same system of colours, and supplemented by the necessary aerial photographs; (ii) morphological patterns at the levels of the city, neighbourhood, and building clusters that would include, for example, the patterns of public through streets and private cul-de-sacs, and the analysis of the typology's strengths and weaknesses. Certain peculiarities would also be studied, such as the preference for the location of a small mosque (*masjid*) at the strategic junction of a fork in the street system;[25] and (iii) study of building types drawn to the same scale and presented in plans, elevations, and sections.

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published manuscript of Ca'fer Efendi, *Risale-i Mimariyye: An early 17th century Ottoman treatise on architecture*, trans. Howard Crane (Leiden, 1987).

[25] The utilization of this type of junction, which results from the convergence of two streets into one, within this morphological type can also be traced as far back as 2000 B.C. in Ur, southern Mesopotamia. See Exhibit 2 of my article "Arab-Islamic Urban Structure," *Arabian Journal for Science and Engineering* 7, no. 2 (April 1982): 69–79; Also the street analysis in Chapter 3: Spatial Structure and Built Form, in my *Sidi Bou Sa{id, Tunisia*, 19–56 (full citation in note 23 above).

I hope that the above list of topics will be valuable for those concerned with the lack of a theory of urban form in traditional Islamic cities. Topics addressing other detailed aspects can be developed and added. It is important to stress that we are at a point in the development of this field which necessitates co-operative efforts to address the above issues. Cooperation can be achieved in many ways, through: (i) effective and accessible communication tools, such as the World Wide Web pages of the Internet. Web sites can be created by individual scholars and institutions where the latest research is summarized and/or made available for downloading to personal computers; (ii) focused symposia and conferences; and (iii) testing in contemporary projects by recycling the principles underlying traditional ideas and procedures.[26] If all these are carried out, then an achievement of this magnitude will not only be of immense value to the Islamic world and its numerous sub-cultures, but it will also be a significant contribution to our understanding of urbanism and the urban phenomenon as a cultural expression within a global context.

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[26] I have constructed a framework for action which was published in the article "Urban design in traditional Islamic culture: Recycling its successes," *Cities* 8, no. 4 (November 1991): 274–277. On June 7, 1997 I delivered a keynote address at a Vision symposium in Riyadh, Saudi Arabia, which was organized by Arriyadh Development Authority (ADA), on the occasion of the completion of phase 1 of a three-phase planning process known as Metropolitan Development Strategy for Arriyadh (MEDSTAR). One of the proposals I made in that address was based on the principle of bottom-up decision-making at the neighbourhood level. This principle was operational in all traditional cities and settlements in the Islamic world and was replaced, in the case of Saudi Arabia, by a top-down decision-making structure during the mid years of the twentieth century as a result of Western influences and for reasons related to local political preferences. My proposal was to create neighbourhood organizations whose task would be to coordinate decisions affecting the well being of a neighbourhood including matters related to design and planning. This would create a situation where neighbourhoods would be encouraged to compete with each other for the best ideas and designs which would alleviate or solve pervasive and common problems, such as safety in neighbourhood streets, greening of streets by planting and maintaining trees and shrubs, and creating pleasant pedestrian paths which would ensure the safety and protection of women and children. My other proposal was to rewrite the city's planning codes in a manner, which will utilize the wisdom inherent in the traditional codes, in lieu of trying to fix codes which were formulated in the early 1980s and which have proved to be inferior, as it is evident in various parts of the city. I have also addressed similar issues for the context of historic towns in the Maghrib countries of North Africa in a lecture titled: "Reviving the Rule System: An approach for revitalizing traditional towns in Maghrib," at the conference titled "The Living Medina: The Walled Arab City in Architecture, Literature, and History" held in Tangier, Morocco, June 1996, sponsored by the American Institute of Maghribi Studies (AIMS). It was subsequently published by the same title in *Cities* 18, no. 2 (April 2001): 87–92.

INHERITED CITIES

Hugh Kennedy

Many, if not most of the cities which existed in the early Muslim world had existed in one form or another before the coming of Islam. There were important exceptions: Kufa and Basra in Iraq, Fustat in Egypt, Qayrawan in Tunisia, and, of course, Baghdad and Samarra were all founded through government action to provide bases for Muslim settlers and suitable new centres for government. Other new towns seem to have emerged more gradually in response to new patterns of power and settlement: Murcia in eastern Andalus, Fez in Morocco, Mosul in northern Iraq, Shiraz in Fars, and Kirman in southern Iran are all examples of this latter pattern. Political authority was also wielded from ancient centres: Córdoba, Damascus, Rayy, and Merv are all cities whose origins were lost in the mists of antiquity.

The inherited cities of the early Islamic period are an especially interesting field of study because they give us an opportunity to examine how the coming of a new élite language and religion and the emergence of new political and military systems affected the structures of everyday life.

Archaeological evidence necessarily provides the foundations for this enquiry but in the way of things it is very patchy and does not always answer the questions we are asking. Many of the cities the Muslim state inherited are still thriving today and their past is difficult to recover beneath the modern streets and buildings. Damascus, Jerusalem, Aleppo, Córdoba, and Bukhara are all sites where the centre of the ancient city remains the centre of urban life today. But there are a significant number of other sites which survived from antiquity into the Islamic period but which have subsequently been deserted. Among these Jerash in Jordan (probably de-urbanized in the ninth and tenth centuries), Nishapur in northeastern Iran, and Merv in Turkmenistan (both effectively deserted after the Mongol conquests of 1218–20) are sites where the ancient and early Islamic cities are wide open to archaeological investigation. Balkh would be the same, if political conditions in Afghanistan were more encouraging for archaeology. In some other cities, the urban centre has moved, thus allowing the site of the ancient and early Islamic city to be investigated. Such is the case at Samarqand where the walls and citadel of the old city, destroyed at the time of the Mongol invasions, lie just outside the modern city developed by the Timurids and their successors. Fustat presents a complex picture where the Roman fortified citadel, dating from the reign of Trajan (98–117), was expanded by the foundation of the Muslim city to the north in the seventh and eighth century while this in turn was largely deserted during the twelfth century as the centre of urban life moved further north to Cairo, eventually allowing both Roman and early Islamic centres to be investigated by archaeologists.

The archaeological evidence varies widely and different sorts of material enable us to ask different questions. Broadly speaking, we can make a division between the stone built cities of the ancient Byzantine lands and the mud-brick and rubble cities of the Sasanian east. The largely brick built cities of early Islamic Egypt are only just beginning to be investigated. Spain and North Africa had some late antique urban centres in stone, though in general these have been subject to less thorough investigation than the material from Syria.

The importance of these distinctions between regions and construction techniques is that they fundamentally shape the sort of questions we can ask about the aspect of inherited cities and the way they changed, stone architecture enduring more than mud. In all provinces of the caliphate, we can make general observations about the distribution of cities and which ones thrived and which declined, but the nature of the evidence is quite varied. At a more specific level, the picture varies considerably from area to area. In Syria, and to a lesser extent in the Muslim west, we can look at the urban topography of some cities, that is to say that we can observe how street plans and the design of individual buildings evolved. In sites like Jerash[1] and Baysan[2] we can observe the evolution of the street scene and even in a city like Aleppo, continuously overbuilt to the present day, we can make meaningful judgments about the way in which the street plan did, or did not change, with the coming of Islam. Such precision is rarely possible from the Muslim east. Even from sites like Samarqand, Merv, and Qasr-i Abu Nasr where there has been some scientific excavation of the urban built environment, the information yielded has been limited. The excavations in the old city of Merv present late Sasanian housing but give little indication of later evolution, if any; Samarqand gives some information about the evolution of an élite centre, Qasr-i Abu Nasr the layout and evolution of a small urban nucleus within the walls of the citadel. Despite these limitations, the eastern Islamic material can give us a sense of the macro-geography of the city, the extent to which pre-Islamic cities expanded in the early Islamic era or changed their sites.

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[1] On the street plan of Jerash, Carl H. Kraeling, *Gerasa: City of the Decapolis* (New Haven, 1938).

[2] Yoram Tsafrir and Gideon Foerster, "Urbanism at Scythopolis-Bet Shean in the Fourth to Seventh Centuries," DOP 51 (1997): 85–146.

In this chapter, I would like to examine three main areas of the early Muslim world, greater Syria (Bilad al-Sham), Iran and the Muslim East, and the Muslim West, looking first at the distribution of inherited cities and then at the morphology of individual sites.

The cities of Bilad al-Sham[3]

It is the area of Bilad al-Sham, the Levantine provinces, which had been ruled by the Byzantines that we find the clearest evidence about the cities the Muslims inherited. Of the larger cities in the area, Damascus and Jerusalem survived and remained important cities in the early Islamic period. Damascus certainly expanded in the period because of its political role as capital of the Umayyad caliphate from 661 to 750 and, although we know little about the urban, as opposed to the monumental, history of early Islamic Jerusalem, its position as a cult centre would suggest that urban life continued.

The other provincial capitals fared less well. Antioch had been the capital of the whole of the late Roman East, one of the great cities of the Empire and seat of one of the four ancient patriarchates of the Christian church. Evidence, both written and archaeological, suggests that the city had been in decline, economically and physically since the mid-sixth century, but it retained its political primacy until the end of Byzantine rule. The city survived into Islamic times as a middle-sized provincial town[4] but in the long term it must have suffered from the rise of nearby Aleppo, itself an ancient city but one which grew rapidly in the centuries after the Muslim conquest. Chalcis survived as early Islamic Qinnasrin and there was new early Muslim settlement outside the walls of the classical city. For a while, it remained important politically as capital of the *jund* which bore its name but even before the end of the Umayyad period it, too, was being supplanted by Aleppo as the most important city in the area.

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[3] The literature on Roman and Islamic Syria is vast. For an introduction to Syria in antiquity see Warwick Ball, *Rome in the East* (London, 2000) and Kevin Butcher, *Roman Syria and the Near East* (London, 2003). For changes in late antiquity, Clive Foss, "The Near Eastern Countryside in Late Antiquity: a review article," JRA, Supplementary series, 14 (1995): 213–234; Idem, "Syria in Transition, A.D. 550–750," DOP 51 (1997): 189–270. For the changes in the early Islamic period, Hugh Kennedy, "From Polis to Medina: urban change in late antique and early Islamic Syria," *Past and Present* 106 (1985): 3–27.

Apamea had continued to be an important political centre until the end of the sixth century but it suffered grievously from its sack by the Persians in 573. The city put up little resistance to the incoming Muslim armies and the ancient metropolis of Syria II was reduced to the size and status of a small country town. Further south, the urban centre of Scythoplis/Baysan, capital of Palestine II, continued to be developed with new streets and porticoes until the end of the Umayyad period, though, as with other cities, this may represent continuing vitality in only a small part of the area of the ancient city.[5]

The cities of the coast suffered most from the new political circumstances as the Mediterranean became a war zone rather than a means of communication, though it must be remembered that the Persian invasions of the first decade of the seventh century had already disrupted much of the ancient commerce. In addition to suffering the damage wrought by the reduction of sea commerce, Beirut had been ruined by an earthquake in the mid-sixth century. It may have recovered from that but any such recovery has left no trace in either the literature or the archaeological record.[6] The geographer al-Ya{qÖbÒ says that Beirut, along with other coastal towns like Tripoli, Jubayl, and Sidon were inhabited by Persians (*Furs*) transported there by the first Umayyad caliph Mu{awiya b. Abi Sufyan.[7] This suggests that, although the sites were still inhabited, there was little or no continuity of population. Tyre and Caesarea both seem to have remained important urban centres until the early seventh century and Caesarea was the only city where there was prolonged resistance to the Muslim invaders. After the Muslim conquest, both sank into comparative obscurity and, like Antioch, any importance they did have was due to their military or political role rather than their commercial vitality. It was not until the early eleventh century that the coastal ports of the Levant began to expand once more with the appearance of western merchants in the eastern Mediterranean.

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[4] See Hugh Kennedy, "Antioch: from Byzantium to Islam and back again," in *The City in Late Antiquity*, ed. John Rich (London, 1992), 181–198.

[5] See Hugh Kennedy, "Gerasa and Scythopolis: Power and Patronage in the Byzantine Cities of Bilad al-Sham," *Bulletin d'Études Orientales* 52 (1997): 199–204.

[6] Linda J. Hall, *Roman Berytus: Beirut in Late Antiquity* (New York, 2004).

[7] Al-Ya{qÖbÒ, *KitÊb al-buldÊn*, ed. Michaël Jan de Goeje (Leiden, 1892), 327.

Bostra, capital of the province of Arabia, never became important in Muslim times. Its continued commercial importance in the late sixth century is suggested by the Bahira legend which describes the youthful Prophet Muhammad coming to the city as part of the trading caravan from Mecca and being impressed by the teaching of the saintly monk. But we know from other sources that it had been sacked by dissident Ghassanids in the late sixth century and in Umayyad times it lost any political importance it may still have had to nearby Damascus.[8] The most southerly of the ancient capitals, Petra, is never mentioned in the accounts of the Muslim conquest, nor is there any archaeological evidence for new construction after the mid-sixth century. The recently excavated great church was destroyed by fire in the mid sixth century and never subsequently rebuilt.[9] This negative evidence suggests that the city had entirely lost its urban character a hundred years before the coming of the Muslims.

If few of the major political centres of the late Roman Empire survived as major cities in the Islamic period, there seems to have been more continuity among the smaller towns, especially those away from the coast. As is often the case for this period, the archaeological evidence is more revealing than the scanty literary sources for the first two centuries of Islamic rule. From this we can see that a city like Jerash continued to be inhabited throughout the Umayyad period. New housing was constructed and a large new mosque built to house what was presumably an expanding Muslim population.[10] The citadel at nearby Philadelphia/Amman was extensively rebuilt and by the mid-eighth century boasted an imposing new palace, a mosque, baths and élite houses while another congregational mosque was constructed in the lower town. All this gives an impression of urban vitality which finds no little echo in the written sources. Similarly, the continuing, or revived, commercial importance of Palmyra/Tadmur is suggested by the development of a new suq along the old colonnaded street that had formed the spine of the Roman city.

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[8] Maurice Sartre, *Bostra: des origins à l'Islam* (Paris, 1985).

[9] Zbigniew Fiema, et al., *The Petra Church* (Amman, 2001).

[10] For a preliminary report on this important discovery, Alan Walmsley, "The Newly-Discovered Congregational Mosque of Jarash in Jordan," *Al-ʿUsur al-Wusta: The Bulletin of Middle East Medievalists* 15 (2003): 17–24.

It is only in Bilad al-Sham that the archaeological record enables us to make some assessment of the impact of the Muslim conquests on the built environment and architecture of the towns, and here we enter into the debate about the nature of late antique cities. The question of the shape and appearance of the late antique city has been the subject of lively controversy. There used to be a tacit assumption that the classical city with its regular plan, broad colonnaded streets, and monumental buildings survived almost unaltered until the coming of Islam introduced a new sort of "Islamic city" with narrow winding streets, blank-walled houses, and no public buildings apart from the mosque. Recently this picture of abrupt change has been challenged and modified. It is clear that the regularity and monumentality of the classical city, if it had ever existed in any sort of pristine state, had changed and developed in late antiquity. Many of the monumental buildings of the classical era, the theatres and huge baths, had fallen into disuse, not maintained in the changed circumstances. Even more significant was the closure and ruination of the great temples, a process begun in the mid-fourth century and largely complete by the beginning of the sixth. These temples had formed the central point of many town plans; the sacred ways which led to them were also the broadest and most prestigious streets and the arches and propylaea which added dignity to these processional routes were central features of the townscape. The abandonment of the pagan temples in a city like Jerash in the fifth and sixth centuries meant disruption of the entire urban fabric. And, of course, the rise of Christianity meant new religious buildings inserted into the ancient city, creating new routes and spaces.

It was not just the monumental buildings that changed in late antiquity. The broad streets and regular open spaces on the ancient city began to be eroded and encroached upon by housing and retail spaces. In towns throughout the Levant, the streets of late antiquity came to look increasingly like the narrower lanes of the archetypal, though later, Islamic city. The evolution was far from complete. In provincial capitals like Scythopolis, the governors laid out new streets and squares in the sixth century and when the Emperor Justinian gave orders for the restoration of Antioch after the disastrous earthquake of 540, he made it clear that it was to be a classical city of the old sort, with stoas, agoras, theatres, and baths. When the same Emperor extended the *cardo* of Jerusalem towards the Nea Church he was building, he laid out a broad, straight colonnaded street of which Augustus or Hadrian might have been proud.

Of course, the coming of Muslim rule naturally affected towns. The most obvious difference was the appearance of a new sort of religious building, the mosque. The impact of the mosque on the cityscape varied greatly from city to city. In Damascus the Umayyad mosque occupied the great temenos which had previously enclosed a pagan temple and a Christian cathedral. In Jerusalem, the vast precinct of Herod's temple which may have been derelict since the destruction of the building after the Roman conquest of A.D. 70 became the centre of the Muslim cult with the construction of the Dome of the Rock and the Aqsa mosque. In both these cases the new religious monuments occupied traditional sacred areas.

Both these cases were unusual. In other cities the mosque was built in an area that had hitherto been residential or commercial. Once again the clearest evidence comes from Jerash where we can see the emplacement of the Christian cathedral of the fourth century and the mosque of the seventh or eighth in the existing urban structure. The mosque, only discovered and partially excavated in the last two years, was a large, rectangular, hypostyle building, erected by a cross-roads in the classical street plan that seems to have been the centre of the early Islamic settlement. In Aleppo the mosque, in the heart of the suqs, may have occupied the site and adopted the footprint of an ancient forum, just across the street from the cathedral. In some cities there are literary records suggesting the sharing of sacred space between Christians and Muslims, the mosque occupying part of the church. This picture receives striking archaeological support from the small Negev town of Subeita, where the tiny mosque occupied part of narthex of the south church without, apparently, interrupting the functioning of the Christian building. Both church and mosque fell into ruin together when the town was abandoned, probably in the eighth or ninth century.

The effect of the Muslim conquest on the ancient street plan has been much debated and is a central issue in the emergence of the "Islamic city." In his pioneering study of Aleppo,[11] Jean Sauvaget argued that the classical street plan remained virtually intact until the tenth century when a period of anarchy and lack of firm government allowed merchants to build their stalls in the centre of the street and so create the suq as it has existed to the present day. Recent archaeological work has shown that this picture needs to be modified. The sÖq in the colonnaded street at Palmyra, which in many ways confirms the changes suggested by Sauvaget, dates from the late seventh or eighth century, some two hundred years before the time he proposed. A startlingly new perspective is suggested by recent evidence from Scythopolis. In the city centre there was a broad, straight street flanked by arcaded porticoes. On stylistic grounds this was dated to the Byzantine period and seen as evidence of the continuing commitment of the authorities to the norms of classical urban planning. However, excavations have uncovered a mosaic inscription showing beyond doubt that the street was constructed by the local governor on the orders of the Caliph Hisham in the 730s.[12] Not only were the Muslim authorities constructing an urban feature of clearly classical aspect, the governor was acting as his pre-Islamic predecessors would have done, to beautify and enhance the built environment of the city and creating an inscription to commemorate his actions and the patronage of the ruler who had ordered it.

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[11] Jean Sauvaget, *Alep* (Paris, 1941).

The evidence from Bilad al-Sham suggests that the coming of the new Islamic dispensation did affect the appearance and function of cities but that these changes were in many ways the continuation, variation, or acceleration of change which were already in progress before the new religion was born. Unfortunately, the nature of the evidence makes it very difficult to see if this pattern was repeated in other areas of the Caliphate.

The cities of Iraq

Like Bilad al-Sham, ancient Iraq was a land well endowed with cities. Some of these were major political centres, notably the great capital at Ctesiphon, which the Arabs called al-Madaxin (the cities) because it seemed to have so many different parts to it. Many others were smaller provincial towns which have left little trace in the archaeological record, in no little part due to the fact that they were built of mud brick. Scientific investigation of these sites has been almost entirely confined to field surveys. This can be very useful in suggesting the overall areas of settlement in certain periods, but cannot give us any idea of the use made of inherited street plans or building types. The early Arab geographers give almost lyrical descriptions of the prosperity of small towns like Dayr al-{AqÖl and Fam al-Silh with their mosques and palm trees clustered on the banks of canals. Many of these towns were not, by Mesopotamian standards, ancient settlements at all but had developed during the great expansion of agriculture in the area that had occurred during the Sasanian period. The characteristic urban settlement of the Sasanian period was the small market town rather than the great metropolis.

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[12] Tsafrir and Foerster, "Urbanism at Scythopolis," 139.

A typical town of the area was Nahrawan,[13] where the road to the Iranian plateau crossed the canal of that name. Ibn Rustah, at the beginning of the tenth century, describes arriving at Nahrawan, "through which a canal flows," after travelling for four leagues from Baghdad through continuous palm groves and cultivated fields. "On the west bank (of the canal) are suqs, a congregational mosque and water wheels (nawafiir) which irrigate its fields. There is also a congregational mosque on the east side and around the mosque are caravansarais (khanat) for pilgrims passing through the town."[14] The town is also said to have housed a large Jewish community. Field survey suggests that the west bank settlement was already in decline by the tenth century, and by the time Muqaddasi was writing in the late tenth century the east bank mosque was the only one still in use. By the eleventh century, the site was effectively deserted.

In Sasanian times, Uskaf Bani Junayd[15] was the largest town in the Diyala river basin after the capital, al-Madaxin itself, covering about four square kilometres. It continued to be inhabited in the early Islamic period and, unusually for the small towns of the area, boasted an Umayyad-period palace, presumably built for the Banu Junayd lords who gave their name to the Arab town. At the same time a mosque was built over abandoned Sasanian constructions. This early Islamic prosperity did not last: surface survey suggests that by the tenth century the settlement only covered about twenty hectares, a twentieth of its greatest extent in the Sasanian period. And this settlement, at the heart of the old city, must have been surrounded by mounds of rubble. At the end of the eleventh century a little minaret was added to the mosque and the rooms of the palace were divided by rough partitions to house occupants of much lower status. After that the ancient settlement was entirely abandoned.

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[13] Robert Adams, The Land Behind Baghdad: a History of Settlement on the Diyala Plains (Chicago, 1965), 91–92.

[14] Ibn Rustah, al-A{laq al-nafısa, ed. Michaël Jan de Goeje (Leiden, 1892), 163.

[15] Adams, The Land Behind Baghdad, 95–96.

Ctesiphon (Ar. al-Madaxin) was indeed a number of cities.[16] Ardashir I had founded a roughly circular city officially called Weh-Ardashir. This seems to have remained the centre of government and the winter residence of the Sasanian Shahs until the middle of the fifth century when the Tigris shifted its course and divided the city in two. It was probably after this that a new Ctesiphon was developed to the south and east of the round city and it was here that the Sasanians, probably in the sixth century, created the great arched reception hall, still known today as the Ivan-i Kisra (Iwan or portico of Chosroes). The Sasanian palace astonished early Muslim builders and has survived, at least in part, to the present day. Parts of the city continued to be inhabited after the Muslim conquest. However, it lost its political role with the foundation of the Muslim new towns of Kufa and Basra: this transition is given symbolic form as the gates of Ctesiphon are said to have been removed to Kufa. The establishment of Baghdad must have been a further blow. At the end of the ninth century it was still a prosperous market town with two congregational mosques and a sqÖ[17] but it was probably abandoned during the eleventh. Excavation on the site has been patchy and it is difficult to assess the extent to which Sasanian structures were reused and adapted in the Muslim period.

The inherited towns of Iraq suffered from the establishment of new Muslim cities. Kufa and Basra attracted settlers away from the old towns and the development of the megalopolis of Baghdad sucked commerce and ambitious inhabitants away from the old centres. But it was above all the decline in the irrigation systems from the ninth century onwards which destroyed the prosperity and vitality of the towns.[18] By end of the eleventh century, virtually none of the towns the Muslim conquerors had inherited from the Sasanians still existed as urban settlements.

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[16] For an overview of the history of the city with full bibliography, J. Kroger, s.v. "Ctesiphon," in *Encyclopaedia Iranica*. Also s.v. "Ayvan-e Kesra," which gives a sketch plan of the site.

[17] Ibn Rustah, al-A{laq, 186.

[18] David Waines, "The Third-century Internal Crisis of the {Abbasids," *Journal of the Economic and Social History of the Orient* 20 (1978): 282–303; Hugh Kennedy, "The Decline and Fall of the First Muslim Empire," *Der Islam* 81 (2004): 3–30.

Cities of Iran

As in the cases of Syria and Iraq, our understanding of the way in which the Muslims used and developed the cities they inherited is constrained by the nature of the archaeological evidence. Despite recent work in Merv[19] and Samarqand,[20] and some earlier soundings and surveys in Fars in Istakhr and Gur/Firuzabad, there is not a city in greater Iran, which has been explored sufficiently to give us an overview of change through this period. We have not, for example, been able to recover the detailed plan of a major urban mosque from the pre-Seljuk period[21] or to see how new religious buildings fitted into the existing urban fabric.

In some areas, the pre-Islamic cities were replaced by newly founded centres. The clearest example of this comes from Fars in Southwest Iran where the Islamic new town of Shiraz supplanted the ancient urban centres. The site of Shiraz itself seems to have shifted from the hill-top fortress now known as Qasr-i Abu Nasr to the nearby site of modern Shiraz in the plains.[22] This process of what might be termed *decastellamento*, the move from the small, fortified site to the larger, open position may be typical of other Iranian cities. Other Farsi towns survived as small centres and Gur/Firuzabad became an important political capital again in the tenth century. In the province of Kirman to the east, the Sasanian and early Islamic capital at Sirjan had been replaced by Kirman city by the eleventh century.

In some of the provincial capitals of Fars (Istakhr, Arrajan, Bishapur, Gur/Firuzabad, and Darabjird) there is archaeological evidence for the

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[19] Georgina Hermann, *Monuments of Merv* (London, 1999).

[20] Frantz Grenet, "De la Samarkand antique a la Samarkand islamique: continuités et ruptures," *Colloque International de Archéolgie Islamique*, 1993 (Cairo, 1998), 387–402.

[21] The only partial exceptions are the Tarik-khana at Damghan of the eighth or ninth century and the mosque at Naxin, probably of the tenth. Neither of these, however, was a major city nor is it clear how the mosques fitted in to the contemporary urban context. On the early mosques of Iran see Barbara Finster, *Frühe Iranische Moscheen* (Berlin, 1994).

[22] On Sasanian and early Islamic Shiraz, Donald Whitcomb, *Before the Roses and Nightingales: Excavations at Qasr-i Abu Nasr, Old Shiraz* (New York, 1985).

establishment of early Islamic settlements alongside the existing Sasanian cities, contingent extensions.[23] At Istakhr the early Islamic city was a walled enclosure some 400m square, with a mosque and a bazaar in the centre. At Bishapur, part of the early Islamic settlement lay in the gardens to the west of the Sasanian monumental city but evidence also suggests that some of the formal architecture of this Sasanian royal site was adapted to be used as mosques. In the round city of Gur, the early Islamic settlement seems to have occupied a segment of the original enclosure. In the case of the five provincial capitals of Fars, the written and archaeological evidence demonstrate continued occupation, and perhaps expansion, in Sasanian and early Islamic times, followed by decay and desertion from the eleventh century on.

In Khurasan the cities which had been important in the pre-Islamic period continued to be centres of population and political power down to the Mongol invasions. Rayy, Nishapur, Merv, Balkh, Bukhara, and Samarqand all throve on their Sasanian sites, though, as we shall see, they changed in other ways. In Khwarazm, Kath remained the provincial capital and on the steppe frontier to the southeast of the Caspian, Jurjan remained a city of importance.

Continuity of site did not mean continuity of urban topography. Throughout the region we see Sasanian cities expanding far beyond their ancient fortified nuclei and developing new suburbs, suburbs which sometimes came to replace the old city as centres of power and high status dwelling.

Probably the clearest example of this is the city of Nishapur.[24] The city that the Arab conquerors found consisted of an ovoid citadel or *quhandiz* on one side of a rectanctular *shahristan* or inner city. These were both surrounded by mud-brick ramparts which can be clearly distinguished in aerial photography. There is no evidence of an extensive *rabad* or outer city beyond these limits. Bulliet calculates the area of the city to have been approximately 17.6 hectares and, using a density of between one and two hundred people per hectare, suggests a population of between 1,760 and 3,520: this was, as he remarks, "scarcely more than a garrison for protecting the trade route through Khurasan."[25]

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[23] See Donald Whitcomb, "Trade and Tradition in Medieval Southern Iran" (Unpublished Ph.D. thesis, University of Chicago, 1979). I am very grateful to Professor Whitcomb for having provided me with a copy of this. On urbanism at Bishapur, see R. Ghirshman, *Fouilles de Châpour: Bîchâpour I* (Paris, 1971), 21–36; on Arrajan, Heinz Gaube, *Die Südpersische Provinz Arragan: Küh-Gılüyeh von der Arabischen Eroberung bis zur Safawidenzeit* (Vienna, 1973); on Darabjird, Peter Morgan, "Some Remarks on a Preliminary Survey in Eastern Fars," *Iran* 41 (2003): 323–338.

[24] See Richard Bulliet, "Medieval Nishapur: a topographic and demographic reconstruction," *Studia Iranica* 5 (1976): 67–89.

During the nine-month siege of the city by the troops of Abd Allah ibn {Amir at the time of the first Muslim conquests a mosque was built outside the walls of the city and after it was taken, another mosque was built on the site of the chief fire temple, a symbolic appropriation of the chief religious site. In the three centuries between the Arab conquest and the descriptions given by the geographers, al-Istakhri and Ibn Hawqal, the city expanded enormously. A large new mosque, known as Jami{ al-{atiq or the Old Mosque, of which traces can still be identified, was constructed to the south of the city. A new commercial quarter was developed immediately to the west of the old city. This is described in the Arabic sources as a murabba{a and it would seem to have taken the form of a crossroads with markets along each of the four streets which led from it; this seems to have been an early example of the charsū (chahar sū, or four markets) which was to be characteristic of later Iranian towns. By Ibn Hawqal's time the markets seem to have stretched for about two kilometres from east to west.

On the other sides of the market from the old city, the Muslim authorities constructed a Dar al-imara or government house at an unknown date in the first two Islamic centuries. It is noteworthy that the new centre of government was not in the old quhandiz fortress but in an apparently unwalled site some two kilometres away. In the early ninth century, under the rule of the Tahirids, Nishapur became the capital of the entire province of Khurasan and an entirely new official quarter, the Shadyakh was constructed some further to the west.

By the late tenth century, when the city reached its maximum extent, it was probably about six kilometres across. Bulliet estimates a built up area of roughly 1,680 hectares. This would give a population of up to 336,000 but allowing for open spaces and low densities in some areas, he is inclined to suggest a population of between 110,000 and 220,000.[26]

Many of the same trends can be seen in the history of Merv. Merv was a major city, the principal Sasanian outpost on the northeast frontier of the Empire and the seat of the marzban who was responsible for the defence of the area. As at Nishapur, the ancient city comprised a roughly oval citadel (known here as the Erk Kale or Citadel Castle), which was situated on one edge of a sub-rectangular *shahristan* nowadays called Gyaur Kale (Castle of the Unbelievers). Despite the similarities of form, everything at Merv was on a vastly greater scale than Nishapur. The citadel alone is about 20 hectares, larger than both *quhandiz* and *shahristan* of Nishapur combined. The rectangular city is about two kilometres square. This would give an area of around 400 hectares and, using Bulliet's multipliers, between 40,000 and 80,000 inhabitants, though it is not clear that the whole area within the walls was ever built up, still less clear that it was built up at the time of the Muslim conquest in 650.

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[25] Bulliet, "Medieval Nishapur," 87.

[26] Bulliet, "Medieval Nishapur," 88.

As at Nishapur, the first centuries of Muslim rule of Merv saw the expansion of the city beyond the walls of the Sasanian site. A whole new quarter with mosques and markets grew up to the west of the old walled enclosure along the banks of the Majan canal. It was here that Abu Muslim built his great new *dar al-imara* after he took control of the city in the name of the Abbasids in 747. As at Nishapur again, this extension remained unwalled throughout the early Islamic period and was only fortified during the reign of the Seljuk Malik Shah (1072–92). Meanwhile, the ancient citadel was neglected and gradually fell into complete disuse and much of the rectangular Gyaur Kale was used for industrial purposes (steel making) or was simply abandoned.

In Samarqand the process was different. Here the old *quhandiz* was abandoned but the mound on which it stood became the site of the new mosque and when Abu Muslim built a new *dar al-imara* in Samarqand, he chose to construct it high on the flanks of the ancient citadel. New commercial quarters grew up outside the ramparts of the old city.

Merv is one of the rare sites where we can find something of Sasanian domestic architecture and this is important because in the old Gyaur Kale, the Sasanian city, an area of housing has been uncovered which shows what might be thought of as a traditional Islamic street, narrow and winding and bordered by small courtyard houses, the same general plan, in fact, that could be found in Iranian cities right down to the twentieth century. The Sasanian houses seem to have been the last built on the site and we cannot see how, if at all, the coming of the Muslims affected the built environment they had inherited.

The pattern of urban development from the comparatively small Sasanian core to the much more extensive early Islamic city is a common feature of Iranian urban history. Archaeology plays its part in uncovering these trends but literary evidence often points in the same direction.[27] On the basis of his analysis of textual evidence, Richard Bulliet has argued that, "the ninth century witnessed the most rapid growth of cities in Iranian history."[28] Without exception, these were inherited cities, expanded far beyond their ancient cores: there were virtually no Islamic new towns in the Iranian lands of the caliphate.

Explanations for this phenomenon vary. Watson has suggested that improved agricultural techniques and new crops allowed the development of a market- orientated agriculture which in turn permitted the development of very large cities.[29] This view has been criticized by Bulliet who argues that the importance of these changes was marginal at best.[30] He argues that the key factor is conversion to Islam which encouraged, even forced, converts to leave their rural communities, where the old beliefs and social ties still ruled, and move into the Muslim environment of the city. This is an attractive hypothesis but it may underestimate the importance of state structures. The early Islamic state made regular cash payments to a large number of people, mostly in the military: it created, in fact, a very numerous salariat. This was a market no enterprising tradesman or would-be cook and bottle-washer could afford to neglect. Merv, for example, was where the military campaigns against the rich cities of Transoxania were organized in the eighth century, it was here that the soldiers were paid and it was here that they sold their shares of the booty in the markets: no wonder immigrants from all over Khurasan flocked to the newly expanding market areas to cash in. On a larger or smaller scale, this pattern must have been repeated all over the Islamic East.

It can also be argued that the political and military elites moved into cities after the Muslim conquest. The admittedly scanty evidence suggests that great Iranian families of the Sasanian period lived in rural castles and palaces and that the major fire temples were in rural locations, often remote from urban centres: the Sasanian kings were crowned in Ctesiphon, but the religious part of their inauguration took place in Shiz (Masjid-i Sulayman) in the Zagros mountains, far to the north-east. Apart from Ctesiphon and Bishapur, there is little evidence for elite residences within the walls of Sasanian towns.

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[27] Richard Bulliet, *Islam: the View from the Edge* (New York, 1994), 73–75.
[28] Bulliet, *Islam*, 77.
[29] Michael Watson, *Agricultural innovation in the early Islamic world* (Cambridge, 1983), 132–136.
[30] Bulliet, *Islam*, 67–70.

Al-Andalus and the Muslim West[31]

In Roman times, the Iberian peninsula boasted a significant number of cities, some of them among the most important in the entire empire. Many of these sites came under Muslim rule in the years following the initial conquest of 711. Of the major provincial capitals, Braga (Gallaecia) was never really settled by the Muslims and Tarragona (Tarrconensis) was in a frontier zone and seems to have been mostly deserted in the early Islamic period. Toledo (Carthaginensis), Mérida (Lusitania) and Seville (Baetica) all became significant Muslim centres. In addition, Zaragoza, a Roman city, which had not been as important in classical times, became the centre of Muslim power in the Ebro valley and Córdoba, again a second rank city in the Roman hierarchy became the capital of the whole of al-Andalus.

The extent to which the Roman cities of the peninsula had retained their urban aspect through the troubles of the fifth century and more than two hundred years of Visigothic rule is not clear. There is almost no evidence for Visigothic building within cities, either ecclesiastical or secular, and in many sites it is difficult to find any traces of occupation during this period. While many Muslim cities occupied the sites of their ancient predecessors and sheltered within the remains of the late Roman walls, it is only in Zaragoza and the small Andalusian city of Ecija that we can find traces of the survival of the regular street plans of the classical period, although at Zaragoza, this apparent continuity masked major changes in the physical structure of the city in late antiquity.[32] While the Umayyad capital at Damascus preserved the outlines of classical planning, these seem to have been entirely lost in the Umayyad capital of Córdoba. This disappearance of urban plan and fabric may be evidence for a real hiatus in urban life in the fifth and sixth centuries.

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[31] For late antique cities in the Iberian peninsula see Michael Kulikowski, *Late Roman Spain and Its Cities* (Baltimore and London, 2004). On early Islamic cities in the peninsula and Morocco, Vincente Salvatierra Cuenca, "The Origins of al-Andalus," in *The Archaeology of Iberia*, ed. Margarita Diaz-Andreu and Simon Keay (London, 1997), 263–278; Patrice Cressier and Mercedes Garcia-Arenal, eds., *Genèse de la ville islamique en al-Andalus et au Maghreb occidental* (Madrid, 1998). For a more general introduction to urbanism in al-Andalus, Basilio Pavón, *Ciudades Hispanomusulmanas* (Madrid, 1992).

[32] See Kulikowski, *Late Roman Cities*, 244–249.

The story of Córdoba is especially revealing in this respect.[33] The ancient city had bordered the northern bank of the Guadalquivir river at the end of the Roman bridge. At the end of the third century, a large palatial complex, known to the twentieth-century excavators as the Cercadilla, was constructed.[34] This probably served as the palace of the provincial governor and the local administrative centre. Some of the decorative materials were spolia from the now disused theatre and it is possible that some of the old city intra-muros fell into ruin at this time and the remaining population clustered in the southern area close to the banks of the river. Here a large church of San Vicente was constructed at the bridgehead as well as a later palace for the governor. It was this complex which became the centre of Muslim power when the governor al-Hurr b. {Abd al-Rahman al-Thaqafi established the city as his capital in the city in 716 and constructed a new palace to the west of the existing urban centre. Al-Samh b. Malik al-Khawlani, governor between 719 and 721 undertook a major programme of repairs, restoring the Roman bridge, which seems to have been in ruins, and sections of the Roman walls. He also established cemeteries and two *musallas* (prayer places) in the suburbs. It was probably during the rule of Yüsuf al-Fihri (748–56) that the Christians were deprived of the main church of San Vicente which was converted into a mosque. The earliest sections of the present building of the Great Mosque date from 786 when the first Umayyad Amir, {Abd al-Rahman I, demolished the existing structure and used the materials to construct a purpose built mosque.[35] From this time on the Christians and Jews were relegated to churches and synagogues in the suburbs and the old city was completely Islamized. In the tenth century, the population seems to have increased very considerably and new suburbs were constructed on a large scale, especially to the west of the city. As in many eastern examples, these new suburbs remained unfortified. The drift to the west culminated in the foundation of the new palace city of Madinat al-Zahra in the mid-tenth century, some five kilometres away.

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[33] For Córdoba see Manuel Acién Almansa and Antonio Vallejo Triano, "Urbanismo y Estado islámico: de *Corduba* a *Qurtuba-Madinat al-Zahara*," in Cressier and Garcia-Arenal, eds., *Genèse* 107–136.

[34] For the Cercadilla and its effect on the city, Kulikowski, *Late Roman Spain*, 114–120.

[35] For a recent account of the mosque with further bibliographic references, Marianne Barrucand and Achim Bednorz, *Moorish Architecture in Andalusia* (Cologne, 1992), 39–46; on the use of classical and Visigothic spolia, Patrice Cressier, "Les chapiteaux de la Grande Mosquée de Cordoue," *Madrider Mitteilungen* 25 (1994): 257–313.

The antique legacy of the city of Toledo within the medieval fortifications has been obliterated beyond recall. In Seville we can only find a few traces; it has been suggested that there was a forum on the site of the Plaza San Salvador and that site of the church itself was a Christian basilica, then the first mosque of the city, traces of which can still be seen, until it became a Christian church once more. Mérida was one of the great Roman cities of Spain and its magnificent ruins still testify to its antique grandeur. By the time of the Muslim conquest its main claim to fame was probably the shrine of Santa Eulalia, whose cult brought pilgrims thronging to the city.[36] It was perhaps because of this communal identity that the city is said to have put up a prolonged resistance to the invaders. After the conquest it seems as if the local elites soon converted to Islam and that city life continued within the old Roman walls. Traffic across the Roman bridge, which still survives, brought trade to the city. Some time around middle of the ninth century, the shrine of Santa Eulalia was abandoned and the relics removed and this seems to mark the end of Christianity as the dominant religion in the city. The Amir {Abd al-Rahman II was determined to impose central control over the *muwallad* (native Muslim) aristocracy of the city and in 855 he ordered the construction of a citadel by the river on the site of a *xenodochium* built in Visigothic times to house pilgrims.[37] In this castle he based a garrison of troops sent from Córdoba. It also contained a cistern, which became the main water supply of the town when the Roman aqueducts fell into disuse. When the Méridans continued to be restive, Muhammad I ordered the demolition of the old city wall and the city, thus exposed, began to decline and never became one of the great cities of al-Andalus. When the caliphate of Córdoba split up in the early eleventh century, it was not Mérida but the Islamic new town of Badajoz which became the capital of the Taifa kingdom and which controlled the area.

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[36] On late antique Mérida, see Kulikowski, *Late Roman Cities*, 91–92, 290–293.

[37] Barrucand and Bednorz, *Moorish Architecture*, 27.

Morocco was much less urbanized than al-Andalus at the time of the arrival of the Muslims. With the exception of the northern coastal cities of Tangier and Ceuta, the country had been abandoned by the Roman administration in 285. Despite this, urban life continued in Volubilis, the best-preserved ancient city in the area.[38] In the late sixth century, the perimeter wall was shortened and much of the old monumental centre was left outside but some of the domestic quarters of the city were still lived in. The Muslims seem to have adopted the city as a base in the area and there is some numismatic evidence that there was an Abbasid garrison in second half of the eighth century. The first of the Idrisid rulers took it as his capital and the city seems to have expanded beyond the late antique walls and a new quarter with a bathhouse emerged. No trace of any mosque has yet been found and tradition says that Idris (d. 789) chose to be buried outside the city. The role of Volublis/Walila as capital of the first Muslim state in Morocco was brought to an end with the foundation of Fez and the inherited city was soon deserted for a new one.

The governance of the inherited city

The question of how far the Muslim conquests affected the social structure of the cities they inherited is a difficult one to answer. Clearly there was in many cases a new elite, a ruling class drawn from the dominant Arab/Muslim community. People who had previously been distinguished and respected citizens would have found their properties confiscated while they themselves were forced to pay the shameful poll-tax or even became slaves. The story of the Hamdani family of Isfahan may be typical. The first member of the family we know of was a landowner (*dehqan*) called Ajlan who had property in the rural area around the city, which consisted of two small urban nuclei, one called YahÖdiya and another called Jayy. When the Arab armies came to the area, he was taken prisoner and transported to the Muslim metropolis of Kufa in Iraq. Here he converted to Islam. He had two sons born in Kufa but when they grew up they returned to Isfahan and reclaimed their father's lands. They did not become country squires as he had done, but moved into the developing city where one of them became an authority on Islamic law and tradition, which is how we come to know about them.[39]

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[38] See Aomar Akerraz, "Recherches sur les niveaux islamiques de Volubilis," in *Genèse*, ed. Cressier and Garcia-Arenal, 295–304 and Ahmed Siraj, "Vie et mort d' une cité islamique," in the same volume, 285–294.

It is impossible to know how far the experience of Ajlan and his family was typical and, in more general times, how much continuity there was between urban elites in the period before and after the Muslim conquests. We can see the example of the family of Sarjun/Sergius in Damascus who served the early Umayyads as financial officials and whose history we know a little about because the last recorded member of the family was the great theologian, St John of Damascus.

At an institutional level, the cities the Muslims inherited had little to pass on. Neither the Byzantine nor the Sasanian world had a tradition of civic autonomy at the time of the Islamic conquests. In the first two and a half centuries of the Common Era the cities of the Roman Near East had enjoyed a high degree of local self-government, choosing their own councils, collecting their own taxes, and minting their own copper coinage. From the crisis of the third century, these structures disappeared: real power in the late antique city was exercised by the governor appointed by the imperial authorities, taxes were collected by the imperial bureaucracy, and the copper coinage disappeared. The abolition of the temple cults on which so much civic patriotism had been focused simply accelerated the process and though the Christian bishop was a leading citizen and the cults of the local saints could provide a focus for local patriotism, they did not enjoy the institutional status of the vanished town councils.[40] In the Iranian world, any lingering traditions of civic government brought in by the Macedonian colonists of Alexander's army were long since extinct. There might be rich and influential local citizens, but there were no institutional structures through which they could articulate their power. In this sphere the coming of Islamic rule simply continued late antique practice. It is not until the tenth and eleventh centuries that we find civic leaders ruling towns and then only in certain areas, northern Syria, and al-Andalus for example, where the other political structures were weak. In these areas the qadi sometimes emerged as a real representative of local interests but, in contrast to the Italian cities of the same period, there never developed any political theory or institutional structures to sustain this fragile autonomy.

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[39] Bulliet, Islam, 78–79.

[40] For the effects of different power structures in two late antique cities, Hugh Kennedy, "Gerasa and Scythopolis: Power and Patronage in the Byzantine Cities of Bilad al-Sham," Bulletin d'Études Orientales 52 (2000): 199–204.

Conclusions

The idea that the Arab armies burst in on and destroyed the static and unchanging world of antiquity is very misleading. The Muslim conquerors of the seventh and eighth century came to rule over rapidly changing societies. This picture of change is as true of the cities of these areas as it is true of any other aspect of life. In the ex-Roman areas, the classical cities whose ruins we visit and admire and whose image still represents a certain sort of perfect urbanism, had changed almost out of recognition: it was the narrow winding streets and churches, large and small, that the Muslims inherited, not the fora, colonnaded streets, and monumental buildings. The fate of these inherited towns varied enormously, from expansion and renewed vigour in the cases of Aleppo, Merv, or Córdoba, to virtual extinction in Caesarea, Istakhr, or Volubilis. Some cities were destroyed by the development of Islamic new towns nearby which sucked their vitality and drew away their inhabitants: Ctesiphon/al-Madaxin could not survive the building of Baghdad, nor could Istakhr thrive in the shadow of Shiraz. In many cases the fate of cities was decided by political decisions: those cities that became centres of government and Arab settlement developed and prospered. This was not just because they became official cities where the bureaucrats and military lived but because in the early Islamic state, the government and its functionaries were the most important generators of economic activity. Courts of caliphs and governors alike spent money on buildings and fine textiles, ceramics and metal work. The soldiers and bureaucrats went into the suqs to buy the necessities of everyday life and such luxuries as they could afford. Merchants and craftsmen flocked to provide goods and services and the government town expanded into a business and commercial centre. The inherited cities formed an essential foundation to the urbanism of the early Muslim world but the ways the Muslims used this inheritance varied enormously from place to place.

FOUNDED CITIES OF THE ARAB WORLD FROM THE SEVENTH TO THE ELEVENTH CENTURIES

Sylvie Denoix

The subject of founded cities has application to the fairly extended period within which cities of major significance were created. As such, the present contribution deals not with any specific age but with social phenomena arising at moments of history that may be far distant from one another and may exhibit a variety of facets. Depending on the precise time they were created, these settlements are reflections of one or another dynamic (the Muslim conquest, for example, or the accession of a new dynasty) and are peopled by one or another type of society. Herein lie, already, initial elements of differentiation.

Since the topic of founded cities concerns the initial moment only, not the development of these cities down the centuries, we shall in each case limit consideration to a study of the original age or of successive foundations on the same site (the latter case permitting a study of these phenomena over a particular period of time)—even though these cities do, like other cities, develop from the point of view of population, functions, spatial organization, and so on. The first questions, therefore, are to establish what the founders' urban project was and what appearance the city bore at that time. A further point is that the accession of a dynasty was often the occasion for the foundation of cities designed to act as capitals. The subsequent progress of the dynasty in question will obviously be crucial for the expansion of these particular cities.

Moreover, even if part of the monuments and the street network date from the original period of the cities under study, there is no question of searching for traces of hypothetical origins in these; it is not our purpose, therefore, to study the medinas and ancient quarters as they have come down to us.

There were, throughout history, so many cities founded by the Arabs that it would be an illusory exercise to try to make an exhaustive list, still more to attempt to consider them all. The aim here will simply be to bring out the different types of foundation, and, also, to provide a few short accounts concerning certain of these foundations—those that have, perhaps, most caught the imagination of later writers.

Thus, cities that turned out to have no future—like the city-camp of Jabiyya, the Umayyad city of {Anjar, or the city-fortress of Qal{at Bani Hammad—left less impression on people's minds than Kufa, Basra, or Baghdad.

We know the expansion of Islam took effect within highly urbanized lands, and that a certain number of cities there (Antioch, Aleppo, Damascus, Alexandria, and so on) were inherited from previous civilizations. In the earliest times, the conquerors—coming to these places with their mounts and their camels, and being organized into tribes unaccustomed to urban life—preferred other types of settlement, city-camps, which were more suited to their present social organization than the former cities in which they settled. Nevertheless as a sign that their first choice was not a mark of mistrust, they even chose one of these, Damascus, as the capital for their first dynasty. At the time of the Conquest, under the caliphate of {Umar b. al-Khattab, Muslims had as supreme guide a man who remained in Arabia, and who issued orders regarding both small practical details and crucial decisions (the site of a provincial capital, for instance) through letters conveyed by mounts to troop commanders; nor had the Arabs yet assimilated the cultural characteristics of the civilizations they conquered. In the first decades they established themselves, therefore, in new settlements more adapted to most of the combatants' way of life and more in accord with the expectations of the Medinan caliph. As for the first caliphs outside Arabia, the Umayyads, they opted for local continuity by choosing Damascus as their capital. Even so, they built small mansions for themselves in the Syrian Desert; domains where they lived with their attendants in their own way, hunting and enjoying worldly pleasures at a certain distance from the populations they governed. These foundations are not cities and will not, accordingly, be considered here.

Subsequently, Muslims both populated cities in existence before their arrival and founded urban centres of greater or lesser importance. It was often the accession of a new dynasty that provided the opportunity for these new foundations.

As with any subject of study, our knowledge of these cities is dependent on available documentation. For most of the cities in question, there are no contemporary texts for the initial era. Neither the foundations of the period of Muslim conquest nor those subsequent to it had any direct witnesses supplying accounts of facts and descriptions of places. We are, therefore, virtually always obliged to work through the mediation of later sources. Thus, the first account of the foundation of Baghdad dates from 278/891—more than one century, that is, after the events described. We also have available early writings for which the manuscripts are lost, but which we can read as handed down by subsequent authors. For instance, taking Baghdad once more, we have Ibn Sarabiyun, Hilal al-Sabi, and Ahmad b. Abi Tahir Tayfur, who were quoted by Khatib al-Baghdadi (see F. Micheau, infra). For Basra we have {Umar b. Shabba al-Madaxini, Saji, and Ibn {Arabi. And we have knowledge of Fatimid Qahira thanks to Ibn Tuwayr, who was quoted by the fourteenth–fifteenth century writers Ibn al-Furat and al-Maqrizi,[1] Qalqashandi, and Ibn Taghri Birdi. Ibn Tuwayr, it should be noted, is similarly not a witness to the foundation of Qahira, since he is writing at the end of the period of the Fatimid caliphs and the beginning of the Ayyubid dynasty. In view of this, archaeology is an especially precious tool for our understanding of the phenomenon of founded cities where excavations have taken place involving these high periods.

Not only are sources not always available from direct witnesses. Over and above this, founded cities—mythical because original, and, by virtue of this, exerting a special force on the imagination—have been liable to give rise to particular representations. Such cities are often said to have originated with a saint or, sometimes, with a conqueror. In all cases, the myth is there to glorify the initial period. Something of the baraka from this period then falls in turn on the later inhabitants and the sources, even those written centuries later, contain the echo of these representations.

1. Cities founded in the period of Conquest and the urban creations attendant on these

The cities founded in the period of the Muslim Conquest were city-camps (misr, plural amsar) set up by a commander and his troops on strategic sites at the crossing of routes, thus, allowing control of a whole region. The first of these (al-Jabiyya in Syria, Basra and Kufa in Iraq, and Fustat in Egypt) were erected under the first two caliphs, that is, at the very outset of Islam, a period when it was felt necessary to keep a link with Arabia. "No river [bahr] between you and me!" wrote {Umar b. al-Khattab, with general application.[2] The sites chosen were, therefore, at points of contact between the old world of the Arabs and the new conquered lands.

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[1] The parts of Ibn Tuwayr's text quoted by Maqrizi have been published by Ayman Fuxad Sayyid.

A common process is evident in these establishments. The conquerors set out an encampment on a carefully selected site. However, with the outcome of the war still uncertain, there was no guarantee the camp would become a city. As such, it was impossible to initiate any ceremonial for foundation; those who were there contented themselves with a camp serving as a base for the mounts and for the combined tribes while the Conquest went on. Then, with the battles won and the region made secure, they established themselves more permanently on the site where they had first settled provisionally. This process explains the lack of any ritual for cities born in the Conquest period. It is rather a question of an encampment for tribes at war; one which then became permanent once victory was felt to be assured and a lengthier settlement became possible: allotting plots of land (generic term khitta, plural khitat) on a final basis (this model of equipment is the takhtit, or ikhtitat), building in sustainable material, and equipping the site with an institutional infrastructure that provided the territory with some buildings of a political and cultural nature, i.e., the governorate headquarters (dar al-imara) and the mosque. Areas not allotted (fada at Fustat, sahara at Kufa) were reserved.

These urban establishments give rise to the following question: do the particular means of social organization entail the land being occupied in particular ways? One section of the Arabs (and even of the converts of non-Arab origin, the mawlas) making up the population of these camp-cities—notably those of highest status, like certain Yemenis, or like the Qurayshis, some of them formerly Companions of the Prophet—were former city-dwellers. A case in point is the élite of Fustat, people like {Amr b. al-{As, {Uqba b. Nafi{, Kharija b. Hudhafa (all Qurayshis), or Maslama b. Mukhallad (a Yemeni previously settled in Medina). Another case is the élite of Kufa, those such as Talha, Zubayr, Usama, the Prophet's son-in-law, {Amr b. Harith

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[2] For the case of Kufa, see Baladhuri, Kitab futuh al-buldan (Beirut: Maktabat al-Hilal, 1973), 270.

Khuzaxi, Sa{d, Abu Musa Ash{ari, and so on. These city-dwellers, thus, developed urban establishments. In contrast, members of tribes not urbanized before the Conquest (the greater part of the combatants) were not city-dwellers but Yemenis or northern Arabs coming, in tribes, from the badiyya, whether they had been sedentary there or not. This population established itself in encampments on grants of land allotted to them tribe by tribe, whereas the aristocracy among the conquerors received individual grants for urban occupation. This dual system of allotment wherein grants were, in some misrs, called, respectively, khittas and dars (for Fustat) or qati{a (for Kufa) had previously been instituted by the Prophet himself in Medina.[3] As for the social group of mawlas, indigenous non-Arabs, it found protection alongside the Arabs in a relationship of patronage; such people were, for the most part, rural dwellers who became urbanized by settling in misrs on lands granted to their "masters," and espousing the tribal rivalries of these. In the long run, members of tribes adopted the urban model of the camp-cities élite, and became urbanized accordingly.

Basra

The building of a new city raises the issue of an earlier permanent population, and of the urban influence of older centres. Basra was erected on the remains of a Persian site in Lower Mesopotamia, a site the Arabs named al-Khurayba ("the small ruin"). Even so, it may be regarded as a new creation, in so far as little remained of the previous establishment when the Arabs settled on the site. As for influences, might Qaryat al-Faw,[4] an Arabian village situated around 680 kilometres to the south of present-day Riyadh, have been one of the models for Basra?

Events unfolded according to a classic pattern. In 14/635 the conquerors set up an encampment. In 17/638, three years after this initial settlement, under the caliphate of {Umar b. al-Khattab, the military commander {Utba b. Ghazwan chose this location as a permanent site, to serve as the base for a further advance of the Conquest towards Fars,

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[3] "The Prophet himself in Medina . . . granted the khittas for the different tribes and the dars for individuals." Hathloul, Al-Madina 'l-islamiyya (Riyadh, n.d.), 54.

[4] Abdul-Rahman Attayib al-Ansariy, "Qaryat dhat kahl: al-Fau," in Sciences Sociales et Phénomènes Urbains dans le Monde Arabe, ed. M. Naciri and A. Raymond (Casablanca: Fondation du roi Abdul-Aziz Al Saoud et les sciences humaines, 1994), 13–22.

Khurasan, and Sijistan. In due course the spoils from these territories reached Basra, and the new city-dwellers had the means to set in place the elements of a high-grade urban infrastructure.

Various types of building material correspond to different stages of the settlement: simple twined reeds, of the kind found on the banks of the Euphrates, for a provisional dwelling; constructions of unfired brick, as a sign of a slightly more permanent settlement; finally, in 50/670, under the governorate of Ziyad b. Abi Sufyan, fired bricks. It was at this point that the urban centre was set in place, with the provision of such things as the governorate headquarters, the mosque with the Muslim Treasury, the bayt al-mal, and a river port on the Euphrates. The centre included services like canalizations of water. As with other camp-cities, we are dealing here with a settlement of conquerors on the offensive, having no need of defensive walls.[5] The classic institutions are there, too: a governorate (the governor fulfilling the function of imam), a police force, and so on. For the tribes the city was divided into "fifths" (khums, plural akhmas), each of the five branches (Ahl al-{Aliya, Tamim, Bakr b. Wa}il, {Abd al-Qays, and Azd) having its territory, on which settled the allies, the converts, the mawali, etc. This kind of land occupation endured for quite some time. Thus, the first rampart of Basra, dating from the Abbasid period, embraced the extensive area of the city occupied by the tribes and their mounts. The second—that of 517/1123—would take account of a genuinely urban fabric, and would be built "two kilometres within the old one destroyed around the end of the 5th/11th century."[6]

It was close to Basra that there took place one of the seminal events of Muslim history: the celebrated Battle of the Camel (Jumada II 36/November–December 656), where {A}isha, Talha, and Zubayr opposed {Ali following the assassination of the third caliph, {Uthman. This event was important for Basra, for those supporting the two sides (the governor, {Uthman b. Hunayf, and the chief of police, Hukaym b. Jabala, favouring {Ali on one side, and Hurqus b. Zubayr al-Sa{di, a Companion, favouring {A}isha, Talha, and Zubayr, on the other) took stands regarding the symbolic positions (direction for prayer), and this gave rise to conflict. As such, the Arab imagination returns to the

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[5] Basra was indeed to remain without a surrounding defensive wall for around a century and a half. A wall, with a ditch alongside, was built in 155/771–2, during the difficult period of the stabilization of Abbasid power.

[6] Charles Pellat, s.v. "Basra," in Encyclopédie de l'Islam, 2nd ed. (Leiden: Brill; Paris: Maisonneuve, 1975), 1:1118.

Basra of the initial century as one of the first scenes where original history unfolded.

Kufa

Kufa, contemporary with Basra, was founded on an arm of the Euphrates in 17/638, apparently on a virgin site by the conqueror Sa{d b. Abi Waqqas. Is it practicable, in the absence of contemporary sources, to attempt a reconstitution of the first settlement? Tabari—following the same procedure as for establishing a hadith, i.e., by providing a chain of transmission stretching back to the age in question—provides a suggested description of the original Kufa; and a number of scholars, including Massignon and, more recently, Hichem Djaït, have ventured an interpretation.

How are we to view these later texts? Apparently an exchange of letters led the Caliph to propose a stable settlement for the army and to provide it with an urban standard. Sources note a letter from {Umar to Sa{d, saying: "Establish a place of settlement [dar al-hijra] for the Bedouins that are with you."[7] Further, "he commanded that the manahij[8] should be of forty cubits; that passing them broadwise of thirty cubits; that between the two of twenty cubits. The streets [al-aziqqa] should be of seven cubits. Without this there is nothing. The parcels of land [al-qataxi{] of sixty cubits."[9] The impression is thus given of a hierarchical, planned road network, conceived by the Caliph, then brought into being before lands were allotted.

Tabari also tells us that the first thing to be sited and built at Kufa was the mosque (wa awwal shay' khutta [khutita] wa buniya hina {azamu {ala 'l-binax al-masjid). This, however, somewhat contradicts what he had said previously, whereby, quite clearly, the streets and the parcels of land were worked out before any building began. Such a paradoxical presentation indicates a pre-conceived text, and this is confirmed by the version of Baladhuri, who says, plainly: "They assigned the plots [in Kufa]; the people divided the places among themselves; the tribes settled in their establishments and its [Kufa's] mosque was built, this in the year 17." (fa-ikhtattaha wa aqta{a al-nas al-manazil, wa anzala al-qaba'il manazilihim wa bana masjidaha wa dhalika fi sana sab{at {ashar.)[10]

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[7] Tabari, 1:2360, quoted by Fred Donner, *The Early Islamic Conquests* (Princeton: University Press, 1981), 227.

[8] Louis Massignon supposes this to mean "alignment of tents." See his "Explication du plan de Kûfa," in *Mélanges Maspéro* (Cairo: IFAO, 1935–40), 3:345.

[9] Abi Ja{far Muhammad b. Jarir Tabari, *Tarikh al-rusul wa 'l-muluk*, ed. Ibrahim Muhammad Abi 'l-Fadl (Dar al-Ma{arif), 4:44.

More precisely, Ya{qubi[11] relates how the settlement of the conquerors took two forms: collective land grants (khitta, plural khitat) for the tribes, and other, individual grants (dar, plural adur, or qati{a, plural -at) for chiefs like Usama b. Zayd or Jubayd b. Mut{im, sited around the mosque. Fred Donner[12] supplies a list of these. The tribes had cemeteries (jabbana) on their allotted lands, areas without buildings, which also served for assemblies. Massignon[13] enumerates these.

Baladhuri's account has a meandering structure, and one can understand the difficulty encountered by his readers. Having described the splitting up into grants of land and the building of the mosque in 17, he returns to {Umar's celebrated instruction as to the choice of site ("no river between us"); then comes the order in which grants are allotted: wa wala al-ikhtitat li 'l-nas ("then followed the allotting of grants of land to the people"—not to the tribes). Any mention of building is subsequent to this, under Ziyad, i.e., in 50/670. To reconcile the traditions—the account of Sayf transmitted by Tabari—we may say that there was at Kufa planning and allotment of plots, followed by buildings; all of this taking place over the course of the year 17.

The final outcome of these operations was a central area (midan) with the following: the governorate headquarters; the mosque (jami{); the palace (qasr) excavated by Muhammad Ali Mustafa;[14] some suqs; the individual land grants (dars) of the "aristocracy"—those, for example, of {Amr b. Hurayth, Walid b. {Uqba, Mukhtar, Khalid b. Urfuta, and Abu Musa (mapped, for the Umayyad period, by Hichem Djaït);[15] some suqs. Manahij fanned out from this central area and served the areas designated for the grants of land allotted to the tribes (the Thaqif, the Hamdan, the Asad, the Nakha, the Kinda, the Azd, the Muzayna, and so on),[16] with their mosques (masjids) and their cemeteries (jabbanas). At the outlet of the road going north was the Dar al-Rizq, where the booty was stored. Hichem Djaït has suggested a cartographic representation of this, more ordered than Massignon's.[17] How far was this urban model an original one, and how far was it subject to the influence of pre-existing cities in the region, like Hira, the capital of the Lakhmids?

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[10] Baladhuri, Kitab futuh al-buldan, 270.

[11] Abu 'l-Abbas Ahmad Ya{qubi, Kitab al-buldan (Leiden, 1892), 310.

[12] Donner, Early Islamic Conquests, 228.

[13] Massignon, "Explication," 347–348.

[14] Muhammad Ali Mustafa, "Preliminary Report on the Excavations in Kufa during the Third Season," Sumer 19 (1963).

[15] Hichem Djaït, Al-Kûfa. Naissance de la ville islamique (Paris: Maisonneuve et Larose, 1986), 302.

[16] Donner, Early Islamic Conquests, 229.

In the Arab imagination, Kufa is not simply one of the urban creations of the period, haloed with the prestige of the Conquest. It is also the place where the Alid dispute sprung up—and, also, the place linked to the dispute involving the discontented mawali, those non-Arabs converted to Islam and expecting, thereafter, a position on a par with that of their former masters. Thus, along with Abu Muslim, they proclaimed Abu 'l-Abbas caliph in 749. Quite apart from the famous school of grammar, which was of some significance given the Arabs' passion for their language (the first Arab book to be published was the Kitab of Sibawayh, a book of Arabic grammar), Kufa was in evidence in various intellectual fields: calligraphy (Kufic, the script of the first Qurans, was born there), prose, with the collections of the khutbas of {Ali, poetry, and so on.[18]

Fustat

As with the other amsar, Fustat witnessed no actual foundation; rather an initial, unformalized settlement, then, later, a decision that here should be the capital of the province of Muslim Egypt.

The facts are well known. In 640, the Arab army, on its way to conquer the western part of the world under the command of its leader {Amr b. al-{As, set up an initial encampment at the foot of a Byzantine bastion, Egyptian Babylon, whose Coptic name the Arabs understood as the "Stronghold of Wax," Qasr al-Sham{. The site, around twenty kilometres to the south of the apex of the Nile Delta, is a strategic one; the key point dividing Upper and Lower Egypt. The army, organized by tribes, settled in a vast encampment covering 750 hectares. Once this bastion had been taken, a section of the troops left to conquer Alexandria, the capital of Byzantine Egypt, while the rest occupied the land already under conquest.

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[17] Djaït, Al-Kûfa, 302; Massignon, "Explication," 360.

[18] Massignon, "Explication," 343–344.

We can understand the process thanks to a legend. The conquerors set up their encampment at the foot of a small Byzantine fortress called Babylon, conquered it, then left to wage war at Alexandria. As they were about to leave, the commander, {Amr, discovered that a female pigeon had settled on the top part of his tent (called fustat in Arabic—the legend is thus specifically concerned to establish an Arabic etymology for the toponym, which actually comes from the Greek fossaton, meaning ditch). He refrained from decamping, so as not to disturb it, and, when he returned victorious and Fustat became the first Muslim capital of Egypt, he forthwith took as his plot the site where his tent was still in place. Through this small story we see how the allocation, the division of grants of land between the combatants, was only carried out, in the amsar, subsequent to the conquest of the province in question. The initial settlement was merely provisional so long as the outcome of the fighting was unknown. Once the Arabs were masters of the region, they could organize themselves and allot properties on a final basis.

Following the victory, the decision was made by Caliph {Umar not to set the capital of the Egyptian province too far off; and, Alexandria being situated beyond the western arm of the Nile, he chose Fustat. This was now a matter of final settlement, and of the "foundation" of the new capital, albeit with no real ritual, since people were already there. It was precisely at the time each tribe received a plot (khitta, plural khitat), whether at the place where they were encamped at the time of the siege or after the tribe and its mounts had moved out (see the tribal displacements mapped by W. Kubiak).[19]

{Amr and his companions settled in the centre of the site, on lands allotted specifically to individuals: the dar, plural adur.[20] These former inhabitants of cities built very swiftly, their dwellings also being designated dar (but with the plural form dur)—an indication, long overlooked, that this homonymy of the term dar embracing two entities, one regarding land, the other regarding buildings. These dwellings were sometimes of more than one storey, on the model of local, and also perhaps Yemeni, habitations, but inquiry was nonetheless made of the Caliph whether such elevation was permissible. The first necessary infrastructure was also set in place: a mosque (the Jami{ {Amr); a small bath, the Hammam al-Far; some streets (the best known, running alongside the mosque, was the Street of the Lanterns—Zuqaq al-Qanadil). Here, then, was an initial urban centre in the camp-cities of Fustat. It was very quickly realized that some city-dwellers had been overlooked—such as Wardan, the Persian freedman of {Amr b. al-{As—who had a right in principle to their urban grants, and a second urban core was established around a suq (Suq Wardan), a little further to the north. In Fustat, therefore, as in the other amsar, there was a dual system of land occupation corresponding to two juxtaposed types of social organization. On the one hand, there was an urban occupation comprising "public" buildings,[21] a street network and individual grants of land, allotted to the élite: former city-dwellers in Arabia, mawlas of various origins and converted Copts, all of whom built their houses on their apportioned lots. On the other hand, there was an extensive occupation comprising collective grants of land allotted to the tribes. This enormous area remained a vast encampment for a while. Then a section of these troops left Fustat to continue the conquest further west, and those who remained became urbanized by joining the centres (around Zuqaq al-Qanadil and Suq Wardan), which were becoming larger and more dense.

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[19] Wladyslaw Kubiak, Al-Fustat. Its Foundation and Early Urban Development (Cairo: American University of Cairo Press, 1987), 176.

[20] On this sense of the term dar, see Sylvie Denoix, "Note sur un des sens du terme dâr," Annales Islamologiques 25 (Cairo: IFAO, 1991): 285–288. For Fustat specifically, see Sylvie Denoix, Décrire le Caire. Fustât-Misr d'après Ibn Duqmâq et Maqrîzî, Etudes Urbaines, 3 (Cairo: IFAO, 1992), 73–80.

The political events of the empire had their repercussion for the urban organization of Fustat. The Abbasids, when they acceded in 750, did not wish Fustat to remain the capital of the province of Egypt; while not destroying it, they created an urban centre to the north of the first organized site, where, in accordance with the proven system of land grants, they allotted plots to the members of their army. The new settlement, designated as al-{Askar ("the army"), was endowed with the customary facilities: governorate headquarters and mosque. Then, in 868, the governor Ahmad b. Tulun seceded, founded his own dynasty (which lasted to the extent of one descendant) and created his urban centre, on the same principle of a central area for the aristocracy with the prince's residence (a sumptuous palace with a garden that included pavilions and a menagerie) and the mosque, then an outer area comprising grants allotted to the army contingents and hydraulic facilities (an aqueduct). The grants were called, in this case, al-qataxi{ (singular qati{a), and gave their name to the site. The vast scale of the mosque, still to be observed in the urban fabric of present-day Cairo, and its minaret with external spiral stairway, were inspired by the mosque of Samarrax. The secession, however, was displeasing to the central power, and al-Qataxi{ was razed, except for the mosque and aqueduct, in 905.

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[21] Two fifteenth-century writers, Maqrizi and Qalqashandi, relate that the first appearance of the dar al-imara in Fustat dates from the Abbasid period. This is noted by Kubiak, Al-Fustat, 129. "There was no special residence for the seat of government until the {Abbasid period, when, for the first time, dar al-imara was built at al-{Askar. Before this . . . each governor resided in his private house."

2. Cities founded in later centuries

Following the period of Conquest, with the caliphate no longer centred at Medina, there was a change in the strategies whereby Muslim armies were implanted. They could be sited further from the capital (at Qayrawan, leading the conquest further west, or, in Iraq, at Wasit, to assert the imperial presence in the face of Alid unrest; or, by way of contrast, in Syria, for a local urbanization or for semi-urban domains under the Marwanids: al-Ramla (around 714), {Anjar and Jabal Says (711–15), Rusafat al-Sham (723), Qasr al-Hayr al-Sharqi (728), {Amman (724–43), and Mshatta (743).[22] On the morphological level, we find sometimes elements of infrastructure (citadel, ramparts), sometimes a type of urban organization (a segregation of the princely city vis-à-vis the city of common mortals), which distinguishes these places from the foundations of the first age. Later, new foundations—Abbasid Baghdad and Samarrax, Fatimid Qahira, Idrisid Fez, and so on—were often undertaken in accordance with a dynastic project.

Qayrawan

In 50/670, so legend has it, the Muslim commander {Uqba b. Nafi{ took the bold step of settling his caravan (al-qayrawan) in central Ifriqiya (the ancient Byzacium). The year 50 was already late in the chronology of the Conquest. Initially, two other caravans settled in the region, but it was {Uqba's encampment which, in 62/682, became Dar al-Hijra (the place of settlement of the muhajirin, those who had left Arabia).[23] Al-Qayrawan was chosen as capital of the Ifriqiya province of the Umayyad empire, rivalling Carthage; rivalty presented by the legend of how {Uqba tamed the snakes that had invaded the site, just as the Bishop of Carthage, St Cyprian, had asserted his power over the savage beasts.

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[22] I take this list from Donald Whitcomb, "Amsar in Syria? Syrian Cities after the Conquest," *Aram* 6, no. 1–2 (1994): 13–33.

Governors (wali, plural wulat) came there from Damascus to establish themselves and, notwithstanding the disturbances caused by the Khariji Berbers, Qayrawan came to assume the role of provincial capital and economic and religious centre. When first founded, Qayrawan was a misr, a city-camp, with an urbanized centre comprising a few brick buildings, such as the great mosque, founded in 50/670, the governorate headquarters, and the dwellings of a few inhabitants. In the beginning, at least, part of the site was occupied by a more or less provisional encampment where the conquerors settled with their mounts. At its foundation, "Qayrawan was conceived as a great city destined to bring together all the Arabs of Ifriqiya."[24] This coming together did not in all cases mean a permanent abode, and the Arabs in question were the conquerors, a section of whom continued their westward march.

Qayrawan was numbered among the cities having sufficient prestige to attract princes or caliphs, though these preferred to set themselves somewhat apart. The closeness of these princely centres did, nonetheless, play its part in developing commercial and craft activity in Qayrawan.

Al-{Abbasiyya was founded in 184/800, about five kilometres to the southeast of Qayrawan, by the emir of Ifriqiya, Ibrahim b. al-Aghlab. There was a palace (in which Charlemagne's ambassadors came to bring their gifts for Harun al-Rashid), a hippodrome, a mint (dar al-darb) where gold dinars and silver dirhams were struck, official workshops for weaving (tiraz), a mosque in the Mesopotamian style,[25] places for commercial transaction, baths, and hydraulic installations. The city was, thus, endowed with the necessary infrastructure for fulfilling all the functions of a capital. When it lost this role, however, with the foundation of Raqqada by Ibrahim II, al-{Abbasiyya fell to the level of an insignificant small town. Raqqada, similarly, found its fate following that of the Aghlabid dynasty. The Fatimists' propagandist {Ubayd Allah, who had paved the way for the accession of their first caliph, abandoned Raqqada when he had al-Mahdiyya built.

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[23] Mondher Sakly, "Kairouan," in Grandes villes méditerranéennes du monde musulman médiéval, ed. J.-C. Garcin, in conjunction with J. L. Aranaud and S. Denoix (Rome: Ecole française de Rome, 2000), 58.

[24] Ibid., 61.

[25] Ibid., 81.

Sabra 'l-Mansuriyya, eponymous with the Fatimid caliph al-Mansur (reigned 334/945–336/948), was sited less than two kilometres to the south of Qayrawan; it comprised palatine complexes set amid gardens. This Fatimid city was enclosed within walls pierced by gates, but the commerce and craftwork were at Qayrawan, and, as Sakly notes,[26] it initially lacked a mosque. Here, as elsewhere, political events had their effect on urban development and the city would undoubtedly have witnessed a more significant development, if the Fatimids had not left to settle in Egypt (361/972) and to take as their capital the city of al-Qahira that they had founded in 358/969. As far as capitals were concerned, the future of the dynasty in question was obviously a crucial factor. After the Fatimid princes had left for Egypt, Sabra 'l-Mansuriyya did not immediately fall into decline; with a view to saving it, Badis the Zirid ordered that the commerce and craft sited at Qayrawan should be transferred there. In fact, the Fatimids' departure did not simply reduce Sabra to insignificance; it also spelled decline for Qayrawan, well before the Hilali invasions. If, indeed, Qayrawan had remained a capital—a status it lost under the Almohads in favour of Tunis—it is conceivable there would have been an expansion, and that the urban fabric would have stretched unbroken from Sabra to Qayrawan, with the latter losing its status of princely city and melting into the general agglomeration, as was the case with Fustat-Qahira—instead of which, historians speak of the contraction (ikhtisar) of Qayrawan. Thus, after the Hilali invasion, ramparts were built there enclosing a smaller area. Without in any way underestimating the effects of these Bedouins surging into the Maghreb, it might be hypothesized that the Fatimids' departure for Egypt profoundly affected Qayrawan, which had already found itself lessened before the Hilalis arrived. After their invasion, it was felt necessary to be sheltered by walls; and, since new ones had to be built, then the city could as well be enclosed in accordance with its true dimensions which, after the departure of the Fatimids and the transfer of craftwork to Sabra, were far more limited.

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[26] Ibid., 81.

If some foundations—such as Qayrawan, which had the status of capital or a neighbour of capitals from its beginnings up to its decline at the end of the fourth/tenth century—became great cities, others did not fare so well, either failing to rise above the level of mere small towns, or becoming extinguished once their founder had left them, as was the case with the princely cities of al-{Abbasiyya or Raqqada (264/877), even though the surface area of these new cities might have been considerable (around a hundred hectares for Sabra 'l-Mansuriyya, and still greater, apparently, for Raqqada).[27]

Wasit

Wasit, a foundation sited in Lower Iraq half-way between Kufa and Basra (whence, according to one tradition, its name "The Mid-Point") on the west bank of the main arm of the Tigris was the work of the Umayyad governor of Iraq, al-Hajjaj (75/694–95/713). There was already a city (Kaskar) on the East bank, and soon the two joined to form a single entity, simply called Wasit thereafter.

This city, founded after the Conquest, in 83/702 or 84/703, was not a misr. There was no huge encampment at Wasit, only a garrison; at the beginning, it was a question simply of lodging the Syrian troops occupying Iraq. Its construction took around three years and was exceedingly costly. The buildings constructed there—governorate headquarters and mosque—were designed to portray the Umayyads as political and religious rulers in Iraq. It suited their purpose of making a show of their power in an Iraq largely conquered from the Alids. The governor resided there until 97/715, and coinage was struck there up to the end of the Umayyad period.

Even if it was not the seat of a dynasty, the foundation was in effect a political project. Its impact was sufficient for the palace of al-Hajjaj, square in design and topped by a green dome, to be copied by al-Mansur when he built his own palace in Baghdad. The mosque joined to the governor's palace served, likewise, as the model for the caliphal foundation of the eighth century.

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[27] Ibid., 61.

Baghdad

It was the second Abbasid caliph al-Mansur (reigned 136/754–158/775)—the Abbasids had previously been installed at Kufa—who had Baghdad built on the west bank of the Tigris, on a site where buildings already existed, in particular, numerous Christian monasteries. The construction of the Abbasid capital began in 145/762—twelve years, that is, after the beginnings of the dynasty—and was effectively an imperial political project.

More than for any other city, sources describing Baghdad need to be read with caution. What are we to make of the description of the round city? And of the dimensions provided (a circumference of between 4,000 and 20,000 "black cubits")? Numerous writers (Duri, Le Stange, Donne, Massignon, Herzfeld, Susa, Lassner, and so on) have attempted reconstitutions. Beyond the shape and the precise dimensions of the new princely city, what we know is that the city's spatial organization had been conceived in advance. We are dealing with an agglomeration gigantic right from the start, its heart a city girdled with a wall circular in form and pierced by four monumental gates: Bab Basra to the southwest, Bab Kufa to the southeast, Bab al-Khurasan to the northeast, and Bab al-Sham to the northwest. From these, four avenues fanned out, arched thoroughfares leading to an open central square with the palace and mosque. Al-Mansur's palace was constructed on the model of the Umayyad palace at Wasit, with a green ceramic dome, and it was enclosed by a gate named the "golden gate." Northwest of the square were the guards and the dwelling of their commander, and the chief of police. Around the square were the residences of the Caliph's children, the treasury, the administrations for post, land tax (*kharaj*), seal and war, the kitchens, and so on. Other "utilities" were sited in the city, such as the prison between Bab Kufa and Bab Basra. The wall was a piece of sophisticated defensive work. There was a preliminary wall with towers; there was an outer ditch, and the four monumental gates were each equipped with several iron doors. To achieve this surrounding structure, special bricks were manufactured, of one cubit in length. Channels were dug, as wells serving the round city and the suburbs from the water of the Tigris or Euphrates, and this allowed sumptuous gardens to be cultivated. Ya{qubi[28] gives the names of the streets: “Street of the Police,” “Street of the Women,” “Street of the Water Carriers,” “Street of the Muezzins,” and so on.

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[28] Ya{qubi, *Kitab al-buldan*, 240 et seq.

The whole programme is there: a perfect form, the power at the centre, the effective manifestation of Islam in the mosque adjacent to the palace of the prince-imams, great axes leading to gates opening out on to the four corners of the empire. The scale of the works was likewise imperial. The sources enumerate the experts from among the different professions (Ya{qubi gives the mythical figure of 10,000 workmen), including astronomers.

From the beginning Baghdad stretched beyond the round city: four suburbs, with their markets and baths, were created at the start, with an urbanist to work out their development. As in the amsar of the first times, the occupation rested on a principle of allocating land grants (qati{a), individual for Arabs or mawlas, collective for the army, within or outside the walls. Ya{qubi provides a list of these.[29] It does not exclude individual properties, for traders for instance.

From the outset the population was multi-confessional: Zoroastrians (majusi, whence our word “mage”), Jews, and Nestorian Christians had numerous establishments in the city to which they came from all parts of the Muslim world. It is known that they played a crucial part in the extensive translation of Greek learning into Arabic, via Syriac. As for Muslims, these, coming as they did from throughout the empire, were ethnically diverse. The Abbasid political project was, nonetheless, to unify the culture of their subjects by means of the Arabic language, whether they were speakers of Persian, of a Turkic language (like the Turkomans), or of any other language.

The round city was simply an initial foundation. Thereafter palatine agglomerations acted as focal points and as the centre for new urban quarters. In 157/773, again on the west bank of the Tigris, al-Mansur constructed a palace outside the round city; this gave rise to the quarter of al-Karkh. Then, for his son and heir al-Mahdi, he built another still larger palatine complex on the East bank, and this gave rise to the Rusafa quarter. From this time on, the city saw extensive development on the East bank, with the Shammasiyya and Mukharrim quarters.

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[29] Ibid., 243–254.

From 221/836 to 279/889, the Abbasid caliphs, completely overshadowed by their viziers, sought to escape these by founding a palatine city 60 kilometres north of Baghdad: Samarrax When they returned, they settled for good on the East bank, where, on the same principle as before, palaces acted as foci around which quarters subsequently formed. It was no longer, though, a question of caliphal foundations. The Barmakid viziers had in fact been taking more and more power. One of them, Ga{far, built the Qasr al-Ga{fari to the south of al-Mukharrim, and, from 279/891, Caliph al-Mu{tadid took residence there. To the north of this palace, al-Mu{tadid built the Qasr Firdaws, and, to the south, the Qasr al-Taj, which became the residence of the caliphs thereafter.

Baghdad was, thus, at once a city where resided the Abbasid princes, the court and the army—the last made up largely of Turks from central Asia—and a great popular city possessing an infrastructure for trade, institutions, worship, and the transmission of knowledge. It was a popular capital where economic prosperity and a high intellectual level went hand in hand, and where the presence of an army (formed by strangers, moreover) was liable to lead to conflict with a rich, educated population. This problem, among others, induced the caliphs to search for another capital from 220/834–5 on.

Samarrax

It was a custom of the Abbasid caliphs to go hunting on the East bank of the Tigris, 125 kilometres north of Baghdad. A first attempt at urban foundation, on the model of the round city, had been undertaken there under Harun al-Rashid in 180/796, but had led to nothing.[30] In 221/836, Caliph Mu{asim (d. 227/842) founded his new caliphal city over a pre-Islamic settlement; specifically, over a monastery.

Excavations of the city, of which 35 hectares remained in 1924,[31] and a reading of later sources (chiefly Ya{qubi's *Buldan*) have revealed, or made us aware of, a number of palaces, hippodromes, mosques and markets, a long avenue of 3.5 kilometres, and a river port with wharves along the Tigris. According to these sources, the army had obtained grants allocated according to ethnicity: to the East of the avenue for the Turks, and to the west, on the bank of the Tigris, for those "coming from the West"—the Maghariba, probably from Egypt. It was under al-Mu{tasim's successor, al-Wathiq, that Samarrax ceased to be a provisional camp and became a true city, with numerous avenues, an economic infrastructure (various markets, especially for slaves), an administrative infrastructure (headquarters for land tax [diwan al-kharaj al-a{zam], police headquarters [majlis al-shurta], prison), and numerous palaces with lands set aside for hunting, stables for the caliph's stud-farm, and hippodromes of a considerable size (more than ten kilometres long). The residence of Caliph al-Mutawakkil, the Qasr al-Haruni, at one point lodged Turkish units.[32] Between 235/849 and 237/851, a new mosque was built, with its famous minaret with spiral staircase around the central frame, from which Ibn Tulun drew inspiration for his building in Cairo.

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[30] Alastair Northedge, "Samarrax," in *Encyclopédie de l'Islam*, 2nd ed. (Leiden: Brill, 1995), 1074.

[31] E. Herzfeld, *Ausgrabungen von Samarra. I. Der Wandschmuck der Bauten von Samarra und seine Ornamentik* (Berlin, 1923). See also Northedge, "Samarrax"

This urban dynamism came at a price, and the caliphs' unheard of expenditure, especially that of al-Mutawakkil, was a burden on the treasury. On the other hand, the caliphs' isolation among the army corps actually made them more vulnerable to military revolts, which might extend to sacks of the palatine city. It is why 279/892 the caliphs returned to Baghdad.

Qahira

Qahira, like Baghdad, was a caliphal dynastic foundation. In 969, the Shi{ite Fatimid caliphs, until then established in Ifriqiya, sent their army, commanded by Jawhar the Sicilian, to conquer Egypt. The purpose of this (never realized) was to maintain their thrust eastwards as far as the Baghdad of the Sunni caliphs. Once the conquest had been achieved, Jawhar's mission was to found a city on the pattern of the Fatimid capital of that time, Sabra 'l-Mansuriyya. He chose a site around four kilometres north of Fustat, at a reasonable distance from the unhealthy edges of the Nile, on the east bank of a channel dug out by the Roman emperor Trajan that connected the Nile to the Red Sea.

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[32] Northedge, "Samarrax" 1075.

As at Fustat, writers have handed down a legend giving a crucial role to a bird. In the absence of the Caliph, still back in Ifriqiya, the city's ritual founding was entrusted to astronomers practising a kind of divination—not, it should be said, a typically Muslim ritual—to establish the ideal moment for the foundation to take place. They observed the stars from a special spot. Small bells were attached to ropes, which were held by posts surrounding the city. These bells, so those directing the operation envisaged, were to be rung the instant the stars declared themselves favourable. Unfortunately, a bird of ill omen, a crow, perched on the ropes and set the process off: the bells tinkled, and the work was set in motion. It so happened that the warlike planet Mars, or al-Qahir (whence the name given to the foundation), was then at its zenith. The astronomers predicted that Qahira, the Martial one, would end in war, conquered by a dynasty coming from the world of the Turks.

What is the myth telling us here? On the one hand that a ritual foundation took place and that, in the absence of the Caliph, the heavenly powers were invoked and matters were taken from the hands of those empowered to make the decision. Was the prince's absence perceived as being so prejudicial? On the other hand, that the first step was to demarcate the city: the works in question were not, initially, the erection of any building like a mosque or palace, or the laying out of streets, as the Romans had done in their own foundations, or the division into parcels of land as the Arabs had done in theirs. The very first act was, with a degree of ceremony, to separate the caliphal city from the rest of the country. What we see, then, is that the chief characteristic of Fatimid princely cities was realized more fully at Qahira than anywhere else. That characteristic is their splendid isolation (brought about by distancing the caliphal city from the popular city, and by means of a fortified surrounding wall protecting the city from all intrusion); for, wherever they had been, the Fatimids had never been original inhabitants, and they saw their power from an élitist viewpoint. In their Ifriqiyan foundations, al-Mahdiyya and Sabra 'l-Mansuriyya, as now at al-Qahira, the city was reserved for princes and for the princely court and army. There, too, was found what was necessary for courtly life.

The first element was the wall, which set apart these sacred princes from their subjects. Protocol made them unreachable, excepting only processions organized with great pomp outside the caliphal city so that the common herd could wonder at this élite and venerate it. On these rare occasions (for example, at the festival marking the breaking of the

Channel dike), the caliph, his vizier and the court would leave Qahira according to a perfectly forethought ceremony.[33] The other crucial element of these foundations was the palace. At Qahira there were two large complexes, sited on either side of a pre-Islamic roadway now named Bayn al-Qasrayn ("Between the two palaces"). The palatine complex to the east was reserved for the caliph and his close relatives, while the one to the west, giving on to a great garden, Bustan Kafur, was allocated to the caliph's successor who would be designated in advance. Another building was a mosque that was slightly less central than the palaces: the al-Azhar mosque. As in the other capitals of this dynasty, there was a distribution of land plots (hara, plural -at) to the ethnic groups that made up the army: Berbers, Daylamis (from south of the Caspian Sea), Turks, Sudanese, and so on.

Later, the wall was rebuilt and other mosques were erected: within the walls, al-Aqmar and al-Hakim (which was beyond the walls when originally built, but was brought inside by the new wall development); outside the walls, al-Salih Talaxi{, to the south of the south wall, and al-Guyushi on the mountain, the Muqattam, to the southeast. If the Fatimid palaces have vanished, destroyed by the Sunni Ayyubid princes who succeeded them, the mosques, by contrast, are still there today, as is the wall and the layout of a number of streets that still give form to the quarter.

Fez

Fez is one of the cities shaped by the political events of a country and of the succession of dynasties. In 789, Idris b. {Abd Allah, eponymous founder of the Idrisids, created an initial urban centre where Berber tribes settled. In 809, Idris II welcomed five hundred Qayrawani horsemen for whom he established a new city, al-Alya, on the other bank of the river. In 818, some Andalusis, driven from the suburbs of Cordoba by the Umayyad caliph al-Hakam, settled in the first city. The best known mosques of Fez are those of the Qayrawanis (al-Qarawiyyin) and the Cordobans, but they were not the first. They were preceded by those of the descendants of the Prophet, the shurafax, and of the shaykhs, al-ashyakh. That said, the al-Qarawiyyin madrasa was one of the oldest and most prestigious of all centres for the teaching of the religious sciences of Islam.

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[33] See Sanders, Ritual, Politics and the City in Fatimid Cairo (Cairo: State University of New York Press, 1994).

Each entity had its wall (the Qayrawanis and Cordobans were often in conflict) and its mosques, and each struck its coinage.[34] The two cities were not to be joined into one, until the Almoravids built in 1070 a single surrounding wall with numerous gates. This wall was to be destroyed by the Almohad caliph in 1146, then rebuilt in 1212. They built, in 1204, also the city's first citadel (*qasaba*). Finally, in 1276, the Marinids founded a "new Fez" (*Fas al-Jdid*), or "white city" (*madinat al-Baydax*). The city remained capital up to 1549, at which date the Sa{dis took Marrakesh as their capital.

We have here a special kind of urban model: one whereby the city became organized very early on around a number of centres, and where we find a specific element of urban infrastructure, the citadel. This would occur again in a good number of cities in this intermediate period, during which a military aristocracy, whose members were often strangers, held power. This is the urban model Jean-Claude Garcin[35] has called "the horsemen's city," where, in the East, the citadel meets not only "the political necessity of isolating the Turkish horsemen from the indigenous masses" but would also seem to reflect the influence of Iranian cities, "through which the Turkish régimes passed before winning the Muslim countries of the Mediterranean." In most cases this did not mean the foundation of a new city containing this urban infrastructural element, but rather the construction of a citadel within an already existing city; such was the case in Damascus in 1076, in Aleppo in the middle of the following century, and in Cairo, under Saladin, in 1176. The equivalent configuration occurred at Fez: from the rise of the Berber dynasties on, the citadels became part of the urban landscape.

Given the way successive dynasties have left their mark there, it is easy to understand how, in the Maghrebi imagination, "Fez is an emblematic city whose history merges with that of the country and of the Idrisid dynasty . . . Fez embodies a strong Sharifi ideology . . . As the focus of Idrisid Sharifism, and of its diaspora that gave legitimacy to regional Sharifisms, Fez has effectively contributed to a spiritual unification of Morocco."[36]

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[34] On the particularity of the double foundation, and some reflections on the cities of the old Maghreb, see Halima Ferhat, "Remarques sur l'histoire des villes et la fragilité du tissu urbain avant le xv^{e} siècle," in Naciri and Raymond, *Sciences sociales et phénomènes urbains*, 97–103.

[35] Jean-Claude Garcin, "Le Caire et l'évolution urbaine des pays musulmans," *Annales islamologiques* 25 (1991): 289–304.

Conclusion

The founded cities of the Arab-Muslim world correspond to various types, whether in terms of urban pattern or population, according to the periods in which they were created. Those of the period of Conquest, the *amsar*, allowed tribes of diverse origin, and potentially in conflict with one another, to live together; and they accorded shelter both to city-dweller and non-city-dweller, the latter being obliged to adapt to a new way of life. This form of population conditioned the ways in which the land was occupied and the physiognomy of these camp-cities at the initial period; excepting an urban core, or a number of urban cores, with "public utilities": governorate headquarters and mosque, even a bath, the first suqs of the Muslim world, and the dwellings of "notables." While the foundation ritual accorded to most new cities might be lacking (for reasons stated above), these centres were developed with what Hichem Djaït terms an "urbanizing intention,"[37] stemming, in the first instance, from the central power in Medina.

The urbanizing intention was clearly present in all those founded cities where the central power remained in evidence. These cities were an effective reflection of particular projects: at the outset, with the camp-cities, to house the conquering army and to give expression to the existence of a centralized administration bound to Islam; in the Umayyad period, to articulate the power and splendour of the princes, something already discernible in Wasit. The will of the central powers is still more in evidence in the great caliphal or dynastic foundations of later periods. If astronomers presided at the beginnings of foundations, when they were ritualized, urbanists became a necessity for these cities—notably for Baghdad, which had been conceptualized beforehand.

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[36] Halima Ferhat, "Fès," in Garcin, Arnaud, and Denoix, *Grandes villes méditerranéennes*, 232.

[37] Djaït, *Al-Kûfa*, 89.

Clearly, then, the founded cities considered here reflect a political project. Muslims conquered the world and settled it; or else dynasties wished to manifest their pre-eminence through material signs, and urban foundations were a means of demonstrating their lustre. These cities also made their impact on the minds of contemporaries or those who came after: on those who lived in them, or visited them, even on those whose sole acquaintance with them was from a description read in books. They impressed people, too, because part of the civilizational capital of Arab-Muslim culture had been put to use there.

The camp-cities of the Conquest period clearly made a considerable impression on the Classical Arab imagination. As such, references in sources from the Abbasid or Mamluk periods sometimes reflect major difficulty in viewing these cities retrospectively. Ibn Duqmaq, for instance, an Egyptian writing at the beginning of the fifteenth century, describes the city of Fustat without making proper distinction between what is applicable to his own age and what belongs to the age of Conquest; there is complete fusion with this matrix period.[38] In keeping with such scholarly irrationality, these sources transmit some wondrous legends. We have already seen those relating to the first beginnings of Fustat, Qahira, and Qayrawan. Quite apart from the pleasure of reading such delightful texts, and the chance of gaining some insight into the way their authors' minds work, these writings do sometimes afford hints that more rational texts fail to bring to light. And, if founded cities have, as a class, furnished a framework for fabulous stories, it is the city of Baghdad that has most gripped the Arab imagination. It has been the subject of books describing its wonders (such as the *Kitab fada'il Baghdad al-{raq* , by the Persian Yazjard b. Mihmandar), and its most sumptuous period, that of Caliph Harun al-Rashid, is the setting for a large part of the stories in the *Thousand and One Nights*. The protagonists of the *Nights* move in the streets and markets of the city and in the sumptuous palaces created on the banks of the Tigris.

The affective, even emotional relationship the inhabitants had with their city, or that the Arabs had with the founded cities, can also be grasped in terms of *lieux de mémoire*. One of the great collective passions of the Arabs concerns the Arabic language and knowledge of it; and it is the cities that have witnessed the development of the great literary disciplines. At Basra it is told how (Bedouin language being deemed the purest) Arab grammarians went on to the *mirbad*, at the time of the fair where Arab Bedouins were trading, in order to record the way they expressed themselves. Thus, from 750 to 847, "the nerve centre of literary life is Iraq, especially the cities of Basra, Kufa and Baghdad."[39] Moreover, the existence of a capital with princes who esteemed literature, poetry, and learning and played the part of patrons, as at Baghdad, where the Caliph opened a "House of Wisdom," could not but reinforce these *lieux de mémoire* that the founded cities represented.

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[38] Denoix, *Décrire le Caire*.

Additional bibliography

The modest scale of this article precludes the provision of any complete bibliography for each of the cities considered. The reader is therefore referred to the bibliographies set out in the following works:

For Qayrawan, Baghdad, Fustat, Cairo, and Fez, the reader may consult the bibliographies assembled respectively by Mondher Sakly, Françoise Micheau, Ayman Fuxad Sayyid, and Roland-Pierre Gayraud, Jean-Claude Garcin, and Halima Ferhat in *Grandes villes méditerranéennes du monde musulman médiéval*, ed. J.-C. Garcin, in conjunction with J. L. Arnaud and S. Denoix (Rome: École française de Rome, 2000).

In addition:

For Baghdad, see K. {Awwad and A. {Abd al-Hamid, *A Bibliography of Baghdad* (Baghdad, 1962).
For Basra, see Charles Pellat, "Basra," in *L'Encyclopédie de l'Islam*, 2nd ed. (Leiden: Brill; Paris: Maisonneuve, 1975), 1:1117–19.
For Kufa, see Hichem Djaït, *Al-Kûfa. Naissance de la ville islamique* (Paris: Maisonneuve et Larose, 1986).
For Samarrax, see Alastair Northedge, s.v. "Samarrax," in *Encyclopédie de l'Islam*, 2nd edition (Leiden: Brill, 1995).

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[39] Katia Zakharia, *Histoire de la littérature arabe* (2003), 27.

PART TWO

REGIONAL ASPECTS

THE OTTOMAN CITIES OF THE BALKANS

Pierre Pinon

The city of which we are speaking here is a formation consisting of morphological structures and urban fabrics. It is the city, on the one hand, of the general organization of quarters, major road layouts and urban facilities; and, on the other, that of residential fabrics, of secondary layouts and parcel divisions, and of facilities within quarters. We shall, in the first place, describe these structures and fabrics, but we shall, of course, also try to understand them in relation to ethnic, economic, social, and judicial phenomena. Our objective is, however, less to explain than to reveal. It is in not at all evident that a society produces its urban spaces from a clear consciousness of its own structures as applied to space. It does so in a confused manner and has, above all, to adapt its own needs and conceptions to the city it has inherited. A more modest procedure would be to observe in what fashion spatial structures, in this case urban morphologies, are able to bring to light phenomena that then become more or less easily explicable. In this way the study of urban forms in the Ottoman world may, with the help of other procedures, contribute towards a definition of what the Ottoman city is, and towards distinguishing certain areas within the Ottoman Empire; distinguishing, for instance, between "central provinces" and Balkan and Arab ones, as is currently done.

A problem of definition always arises, moreover, in attributing the name "city" to a historical or geographical entity. Can there be one kind of city only, in a period extending over several centuries? Is that the case for the Ottoman city from the end of the fifteenth century to the beginning of the twentieth? Could it be true for an area covering several natural regions which has lived through different pasts? Is that the case with the Balkan city?[1] In any case, the very notion of city—with the exception of new cities founded and evolving in a unique historical context over a certain period—stands in opposition to a definition that would enclose it within a narrow chronological period. If we wish to speak of a "purely" Ottoman city, we shall need to restrict ourselves to cities founded *ex nihilo*, from the end of the fifteenth century onwards, and this will immediately exclude Bursa, Edirne, and Istanbul: three capitals constructed within Graeco-Roman cities. The long period is visibly evident in the urban form; each physical state is merely the heir of a preceding one and has been adapted to new requirements. Rather than speaking of Ottoman cities, we should speak of "Ottomanized" cities, since the Ottoman Empire contained cities with pasts as diverse as Graeco-Roman, Byzantine, Arab, and Seljuq.

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[1] See the illuminating reflections on the matter by G. Veinstein, "La ville ottomane: les facteurs d'unité," in *La ciudad islámica. Ponencias y communicaciones* (Zaragoza, 1991), 65–92, and "La ville ottomane," in *Sciences sociales et phénomènes urbains dans le monde arabe*, ed. M. Naciri and A. Raymond (Casablanca, 1997), 105–114.

Ottoman Cities

Traditionally, a division is made between Anatolian and Balkan cities, and between Arab cities of the Mashriq and the Maghreb—that is, if they are not all thrown together into an "eastern" whole.[2] Appearances do indeed plead for such a fusion (some would say confusion): "anarchic layout," an inextricable network of narrow, twisting streets (often cul-de-sacs), the existence of central bazaars, and the dominance of mosque minarets in the landscape. Such a picture may border on caricature (in the past a slightly contemptuous one), but is it totally false? Only a thorough analysis of structures and fabrics would be able to affirm it; and such an analysis is often difficult to undertake because old city plans (preceding the transformations of the twentieth century) and precise ones are lacking; or at least they are rarely accessible. A true study of urban fabrics is only possible through the use of cadastral plans; they alone reveal the parcel divisions which provide a truly intimate picture, which allow us to read the traces of earlier structures, to decrypt the land divisions, and to discover the ways houses were implanted. These cadastral plans have, however, appeared only in recent times (at the end of the nineteenth century or in the twentieth) and it is difficult to gain access to them, unless one visits the land registries of all the cities and is given authorization to take a copy.

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[2] On the notion of the "eastern city," see E. Wirth, "Die orientalische Stadt. Ein Überblick auf grund jüngerer Forschungen zur materiellen Kultur," *Saeculum* (1975): 45–94; idem *Die orientalische Stadt im islamischen Vorderasien und Nordafrika* (Mainz, 2000). Anatolian and Balkan cities are not specifically dealt with in these studies.

As a working hypothesis, we shall suppose that the terrain of Ottoman cities—the definitions and distinctions involved—may be deciphered through one of these cities' elements, namely the urban house; given that the latter is far better known than the city itself. Easy to recognize (even if many have disappeared some decades since), to study and to classify by type, the Ottoman house of the eighteenth and nineteenth centuries has for some fifty years been the subject of a multitude of monographs and syntheses,[3] from Bosnia to Turkey, by way of Serbia,[4] Bulgaria,[5] or Macedonia.[6] A look at the plans and photographs (leaving aside comments sometimes inspired by nationalism) is sufficient to reveal the astonishing unity in the aspect and distribution of Ottoman houses, outside the Arab provinces and Southeast Turkey. The distribution of Ottoman houses with hayat or sofa[7] reveals that the division is not the one we might in principle expect: namely, that between Turko-Balkan and Arab worlds. During the eighteenth and nineteenth centuries (our knowledge of houses before this is poor), the Balkans did not as a whole have the Ottoman house with all its characteristics—part of Albania partially escaped the influence[8] which was still fainter in Wallachia.[9] Moreover, not all houses in Turkey are Ottoman, in the sense of being organized around a hayat or sofa, (despite statements aimed at giving them a "Turkish" character).[10] For instance, old houses in Cappadocia and the oldest houses in Kayseri (fifteenth–seventeenth centuries) are distributed according to an inner courtyard and an iwan

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[3] See especially A. Arel, *Osmanli konut geleneginde tarihsel sorunlar* (Izmir, 1982), and D. Kuban, *The Turkish Hayat House* (Istanbul, 1995).

[4] See, for instance, J. Krunic, *Kuca i varosi u oblasti Stare Raske* (Belgrade, 1994).

[5] See, for instance, B. Georgieva, I. Ivanchev, and L. Peneva, *The Old Bulgarian House. Interior, Architecture, Design and Furnishings* (Sofia, 1980) [in Bulgarian], and B. Lory, *Le sort de l'héritage ottoman en Bulgarie: l'exemple des villes bulgares* (Paris, 1985).

[6] D. Gabrijan, *Makedonska Kuca* (Ljubljana, 1957), and, more recently, the monographs published in Athens by Melissa Editions for Northern Greece.

[7] For a more precise definition of hayat and sofa, see A. Borie and P. Pinon, *La maison turque*, supplement to no. 94 of the *Bulletin d'Informations Architecturales*, 1985.

[8] If the houses of Skodër are visibly Ottoman with their çardak (a variant of the hayat), those of Tirana are arranged around a closed divana, while those of Kruja, Berat, and especially those of Gjirokastër have a çardak apartment set on a tower according to an original plan.

[9] The çardak is frequently present, and there is even a house with sofa in Bucharest (Melik house built in 1760).

[10] It should be noted nevertheless that, in these marginal areas of the Balkans or Turkey, the exterior aspect (overhanging roofs, corbelling), the interior decor (cupboards called dolap), and the arrangement of rooms (oda), are strongly influenced by Ottoman domestic architecture.

(*eyvan*), and those of Konya by a *mabeyn* (enclosed iwan). The houses of Upper Mesopotamia (Diyarbakir, Mardin, Urfa) have inner courtyards, *iwan* and *qa{a*. The houses of Antioch have a courtyard and a *qa{a* and are in fact very similar to those of Northern Syria, i.e. following the Mamluk tradition. As for the houses of the Black Sea or the Anatolian East, these may be of the Caucasian type (Erzurum). Hence, the eastern front of the classic Ottoman house (with the exception of some *konaks* of Ottoman notables) halts at a wavy line going from Antalya to Tokat, by way of Mugla, Afyon, Ankara, and Amasya;[11] though Ottoman influence is not, it should be said, absent from Northern Syria[12] or Lebanon,[13] particularly at the end of the nineteenth century or the beginning of the twentieth.

Is this border (obviously not watertight, since there are overlapping areas where several types co-exist), which demarcates an area of distribution of the Ottoman house covering the Balkans (Bosnia, Bulgaria, Macedonia, Thessaly, with the beautiful Ottoman houses of Sarajevo, Plovdiv, Ohrid, Kastoria, or Ambelakia) and Northeast Anatolia (Bursa, Safranbolu, Amasya, Tokat, Kütahya, Afyon, or Kula), equally valid in the urban field? If this is the case,[14] then the Balkans, with regard to the forms of cities, will be a mere sub-group of a group also including Northwest Anatolia. Providing a name for this group is not easy. It excludes not only the Arab provinces, but also Cappadocia, the Caucasian regions, and Upper Mesopotamia. We may call it "Turko-Balkan," with the qualification that Christians are predominant in the Balkans, while Turks are, obviously, numerous in Southeast Turkey. We have, then, to be satisfied with this dividing line between, on the one hand, a world that is "Turko-Balkan" (for want of a better term), and, on the other, an "Arabo-Ottoman" world.[15] Hence, in respect of architectural typologies and urban morphologies, the Ottoman Empire needs to be divided into two major parts and not three. It is perhaps not immaterial to note that the "Arabo-Ottoman" part (again, for want of a better term) of Turkey is the one where Seljuq architecture is present (from Divrigi to Mardin, by way of Konya and Kayseri), and especially where the Byzantine substratum was early covered over by the Arab and Seljuq conquests. By contrast, the "Turko-Balkan" part (from the ancient Bithynia to Serbia) is the one where Byzantine dominance persisted the longest. The existence of "Arabo-Seljuq" and Byzantine bases would appear to lie at the origin of this clean division with regard to architecture and the Ottoman city.

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[11] See Borie and Pinon, *La maison turque*.

[12] See J.-Cl. David, "Nouvelles architectures domestiques à Alep au XIX^{e} siècle: expressions locales d'un phénomène régional?" in *La maison beyrouthine aux trois arches. Une architecture bourgeoise du Levant*, ed. M. F. Davie (Beirut, 2003), 217–243.

[13] See Kfouri, "La maison à hall central au Liban: origines, influences, identités," in Davie, *La maison beyrouthine*, 33–55.

[14] This has long been our hypothesis. See P. Pinon, "Essai de définition morphologique de la ville ottomane des XVIII^{e}–XIX^{e} siècles," in *La culture urbaine des Balkans, 3, La ville des Balkans depuis la fin du Moyen Age jusqu'au début du XX^{e} siècle*, Académie Serbe des Sciences et des Arts, Institut des Études Balkaniques (Paris–Belgrade) (Belgrade, 1989; 1991), 147–155.

[15] On "Arab-Ottoman" cities, see A. Raymond, *Grandes villes arabes à l'époque ottomane* (Paris, 1985).

The "Ottomanization" of Balkan cities

When the Ottomans took power in Northwest Anatolia, and when they conquered the Balkans and Constantinople, cities were numerous; they barely needed to found new ones. As such, we should speak of Ottomanized rather than of Ottoman cities in the strict sense—at least with regard to urban forms, which are partly inherited and rarely reconstructed.

The Ottoman city of the Balkans is more often than not simply an adaptation of the Byzantine city; and this led, over the centuries, to transformations or extensions of some importance. Thus, to speak of Ottoman Balkan cities means, on the one hand, attempting to identify the potentially diverse origins of Balkan cities prior to the Turkish conquest, and, on the other, describing and interpreting developments from the conquest up to the beginning of the twentieth century.

We shall regard the Ottoman Balkans as a very extended region stretching from Bosnia to Thrace, and from Peloponnesia to Wallachia; and we shall then examine this region's urban development from the fifteenth century up to the beginning of the twentieth.

What precisely is "Ottomanization"? We shall make a distinction between the large cities (which are subject to transformation) and the small ones (which are subject to extension). With the exception of Constantinople and Salonica, there were no very large cities in the Balkans prior to the conquest. In the case of Salonica, which had preserved its ancient road layout structure, Ottomanization consisted in converting numerous churches into mosques (even the mausoleum of Galerius), the installation of neighbourhood facilities (such as hamams) and, especially, the development of a Turkish upper quarter which, up to the nineteenth century, was to be distinct from the remainder of the city not only by virtue of its "eastern" plan, but by the vivid colouring (reserved for Muslims, throughout the Empire) that characterized its houses, as opposed to the grey of "minorities" (Greeks and, here, especially Jews). In Constantinople,[16] a city already very much depopulated and in ruin, urbanization was progressively achieved through populations deported from all over the Empire, without the land walls ever being completely reached. Here practically all the churches (beginning with Hagia Sophia) were successively appropriated and transformed into mosques (after having served, temporarily, as residence for the relatives of Sultan Mehmed II). There was, however, no architectural modification except for the *mihrab* and the minaret. The nucleus of the future Great Bazaar was rapidly set in place near the Seraglio (Eski Saray). The conqueror's mosque was constructed on the site of the Holy Apostles. At the end of the fifteenth century, a new geography was defined by the setting in place of mosques (*vakif* concession) with their *medrese* and their dervish monastery (*zaviye*), and also of the new quarters they brought in their wake (the establishments of merchants and craftsmen around the Bazaar, and of soldiers close by the walls or the sea). These quarters would appear to have taken the form of villages more or less detached from each other. The first cadastral plans (established in the second half of the nineteenth century on account of the great fires)[17] show, prior to reconstruction involving the European form of land division, a structure made up of one or two main streets (matrices) bordered by a narrow, deep parcel division whose origin, model, and date of establishment all remain unknown.[18] At the end of the sixteenth century, all the great imperial külliye (monumental complexes, including mosque, medrese, hamam, and perhaps imaret and hospital)—Süleymaniye, Beyazit, Fiehzade, Selimiye—were in place on the crest of the Istanbul Peninsula.

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[16] See S. Yerasimos, "Istanbul ottomana," in "Istanbul, Costantinopoli, Bisanzio," *Rassegna* 72 (1997): 25–36.

[17] See P. Pinon and S. Yerasimos, "Relevés après incendie et plans d'assurances: les précurseurs du cadastre stambouliote," in "Urban Morphogenesis. Maps and Cadastral Plans," *Environmental Design* 1–2 (1996): 112–229; P. Pinon, "Topographie des lotissements et transformations urbaines d'Istanbul dans la seconde moitié du XIX^{e} siècle," in *Histoire économique et sociale de l'Empire ottoman et de la Turquie (1326–1960)*, Collection Turcica, vol. 8 (Louvain and Paris, 1995), 687–703; idem, "Trasformazioni urbane tra il XVIII^{e} il XIX secolo," *Rassegna* 72: 52–58.

[18] This is the type of urban fabric we called G in our "Essai de typologie des tissus urbains des villes ottomanes d'Anatolie et des Balkans," in *7 Centuries of Ottoman Architecture, "A Supra-National Heritage"* (Istanbul: Turkish Chamber of Architects, YAYIN, 2000), 185–186. However, we do not know whether these are urban fabrics established by the Ottomans after the conquest, or if they correspond to fabrics more specifically

From the fifteenth–sixteenth centuries onwards (or in the seventeenth and eighteenth centuries, depending on the regions involved), cities were considerably developed and extended beyond their walls; new quarters (varosh) appeared around their mosques[19] (or around their monasteries, as in Wallachia). At the same time, markets were created close by the Byzantine walls, as the specification of a quarter for trade was fundamental to the Ottoman city and to the Muslim city generally.[20] This configuration, consisting of a Byzantine fortress, a bazaar (or çarsi) and residential quarters, was developed in Bursa and was then reproduced in Edirne, Athens, Jannina, and Shkodër (Albania).[21] The market, surrounded by caravanserais (han), is omnipresent in Ottoman Balkan cities, from Sarajevo to Plodiv, from Skopje to Jannina, and exists under various names derived from "çarsi" (carsija in Bosnia or Macedonia) and from "bazaar" (pazar in Albania). Albania and Kosovo, for instance, still have numerous bazaars,[22] in Gjirokastër, Elbasan, Pec, and Gjakove, perhaps including a bedesten (or bezistan, meaning an enclosed market), as in Shkodër, Berat, Skup, Prizren, or Pristina. This çarsi is generally composed of a regular and dense network of alleys lined with wooden shops. More rarely, as in Kruja, it is linear, constituting the backbone of the city.

After the manner of Anatolia, the Balkans became mostly covered with religious monuments (mosques in every quarter) or civil monuments (such as the imaret of Kavala). In the new quarters or in the old ones, due to the phenomenon of architectural renewal, the Ottoman house took its place along the streets, especially in the eighteenth and nineteenth centuries, creating an urban landscape that would later be designated

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used by minorities in their quarters, since, in the current state of research, they are found only in Greek, Armenian, or Jewish quarters.

[19] On Albania, for instance, see E. Riza, "Aperçu sur l'urbanistique de la ville albanaise (XII^{e}–XX^{e} siècle)," Monumentet 17 (1977): 47–73.

[20] On the structures of the Ottoman city, see M. Cerasi, La città del Levante. Civiltà urbana e architettura sotto gli Ottomani nei secoli XVIII–XIX (Milan, 1986).

[21] It is likewise found in Anatolia, at Afyon, Kütahya, and Tokat.

[22] See E. Riza, "Les ensembles des marchés et leur restauration," Monumentet 15–16 (1978): 117–38; S. Shkodra, La ville albanaise au cours de la Renaissance nationale, 1813–1912 (Tirana, 1988).

as typically "Turkish" (the "old Turkish quarters" of the tourist guides). From Ohrid to Plovdiv, from Verria (in Greece) to Tetovo, and as far as Bucharest, roads lined with houses with corbelling (*çikma* in Turkish) and overhanging roofs are closely similar, with only slight differences of detail, even though the structures of the urban fabrics may differ; and they are also similar to those in Bursa, Tokat, or Kütahya.

Ottoman urban fabrics of Balkan cities

Ottoman cities, as they appear in the most ancient plans known to us, dating, with the exception of Cairo (thanks to the plan drawn up by surveyors in Bonaparte's expedition), back to the mid-nineteenth century, appear at first sight to be a mere sub-group of a hugely extensive group that comprises Arab, Persian, or even North Indian cities. Without surrendering to commonplace or caricature, we may say that the Ottoman city is organized around a great mosque which is close to the market and the caravanserais, and that it is made up of a residential urban fabric almost without hierarchy, with a small number of "matrix" streets in irregular layout and alignment, and with numerous cul-de-sacs.[23] Without entering the debate on the role of cul-de-sacs in designating "eastern" urban fabrics (there are, as we know, numerous cul-de-sacs in medieval Mediterranean cities which were never Muslim, as in Sardinia, at Sassari),[24] we believe that cul-de-sacs in "eastern" cities are structural, whereas in medieval western cities (where they are also found), they are circumstantial, that is, simply answering to particular situations. Moreover, in the latter they do not exist when they can be avoided, whereas in "eastern" cities they are a major constituent of the very genesis of ordinary urban fabrics. In the case of Istanbul, in fact, sixteenth-century texts distinguish between main streets, streets leading to quarters, and functional streets within the quarters.[25] Some of these latter ones may, of course, be cul-de-sacs.

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[23] We shall return in more detail to this problem, which we have already tackled in our "Essai de typologie."

[24] Cul-de-sacs may even be numerous in medieval western cities, as in Alsace, for example. See Fr. Himly, *Atlas des villes médiévales d'Alsace* (Strasbourg, 1970).

[25] Yerasimos, "Istanbul ottomana," 28.

To resolve the problem fully we should use cadastral plans, or at least ancient plans representing land parcelling.[26] However, the lack of this type of plan for the Balkans (with rare exceptions like Sarajevo) makes such a procedure impossible in the current state of research. In any case, studies of urban fabrics are (outside Greece) extremely rare. Those published on urban morphology limit themselves to exploiting plans where only streets and buildings are shown. Hence, it is impossible in most cases to know either the form of parcels (geometry, proportions), or the general network of parcel organization (known as "generating lines" and their "figures").[27] In the majority of Ottoman or, more generally, "eastern" cities, and even in the most apparently complex plans, these generating lines frequently form regular figures which stand in characteristic opposition to the irregular network of public roads.

The most easily identifiable category of urban fabrics is that of cities founded in ancient times and having an orthogonal plan. Salonica is the best-known example; here, as in several cities of Northern Syria (Damascus, Aleppo, Latakia, Antioch),[28] the Hellenistic network is, despite some variations in the detail, particularly well preserved in lower quarters (Greek and Jewish). In Salonica, where (as in most colonial Hellenistic cities), the block module is 150m by 100m,[29] the size of parcels (around 50 m in depth) was sufficient to take Ottoman houses aligned along the streets with their gardens at the back (as was the case with subsequent buildings in the twentieth century, after the 1917 fire).[30] The other, less evident, example is that of Edirne (Adrianople, Adrianopolis) where the ancient network of orthogonal roads remained in place in the Greek quarter of the citadel (Kaleiçi) until the 1905 fire; we can reconstitute this through analysis of the plan drawn up by Colonel

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[26] In the case of Turkey, an exceptional document exists: namely, the plan of Suphi Bey (1862).

[27] See Pinon, "Essai de définition morphologique"; idem, "La transición desde la ciudad antigua a la ciudad medieval. Permanencia y transformación de los tejidos urbanos en el Mediterráneo oriental," in *La ciudad medieval: de la casa al tejido urbano*, ed. J. Passini (Cuenca, 2001), 179–213.

[28] Traces of the ancient orthogonal network are still clearly visible, if less well preserved, in other Ottoman cities, especially in Turkey at Urfa, Izmir, and Bursa. See P. Pinon, "Survivances et transformations dans la topographie d'Antioche après l'Antiquité," forthcoming among proceedings of a colloquium entitled *Antioche de Syrie. Histoire, images et traces de la ville antique* (Lyon, 2001).

[29] See M. Vickers, "Hellenistic Thessaloniki," *Journal of Hellenic Studies* 92 (1972).

[30] See A. Yerolympos, *The Replanning of Thessaloniki after the Fire of 1917* (Thessaloniki, 1995).

Osmont in 1854.[31] Thus, in the cases of Salonica and Edirne, it is the ancient plan that reveals the general network of the urban fabric. The development of this fabric was effected through adaptations (variations in the road system through private space encroaching on public space), through the laying out of new roads, and by re-dividing the parcels. The case of Constantinople remains hypothetical; here the ancient and Byzantine plans were probably preserved in a certain number of road systems as they still appear in the 1882 plan (published by E. K. Ayverdi). The present topography was extensively modified by land division after fires in the second half of the nineteenth century. The phenomenon is discernible in the quarters of Süleymaniye, Koca Mustafa Pasa and the valley of the old Lixus,[32] where perfectly straight, perpendicular or parallel streets reveal the layout of large late Roman avenues (the city of Constantine and Theodosius) and sometimes even fragments of ancient orthogonal road networks.

The first morphological characteristic of Ottoman cities following the creation of the Empire is the absence of a wall. The *pax ottomana* liberated cities from this constraint. The consequences of this opening were numerous. City plans were no longer conditioned by an imposed frontier that limited extension and implied that the layout of main streets had to pass through the gates. In the open city the plan was developed with more freedom. This does, however, not mean that constraints ceased to exist: the orography remained, which meant there were slopes to skirt around; the hydrography remained, which meant there were rivers to go alongside or to cross by bridges (another obligatory kind of passage). Even so, this limitation of the physical constraints allowed the road network to assume more easily a functional distribution spreading outwards from a desired centrality: that of the great mosque (or the main church) and of the merchants' and craftsmen's quarter. Paradoxically, the form of the Ottoman city which was often presented as anarchic (a feature it shared with all "eastern" cities) accords well with its own functionality, setting an extremely dense commercial centre against a distended residential periphery.

Once liberated from its limits, it was also liberated from contiguity that was neither obligatory nor desired. If the Turks brought an original dimension to the city, it was that of a link with nature.[33] There was no house without a garden. The ideal—for house, kösk, or palace—was that of the detached building. Even mosques and monastery churches were isolated within enclosures. Houses might often be aligned with the street on one of their sides,[34] which was not in fact the front through which one entered (direct entrances giving on to the street appeared only at the end of the nineteenth century); but there was always a front courtyard-garden and a garden to the side or back. Terracing was generally confined to central quarters, to a few main streets. The Ottoman urban habitat (in the Balkans and Northwest Anatolia) was generally dispersed, which is something rare in the history of cities before the appearance of modern suburbs. The open city allowed the Ottomans to develop garden cities, from Sarajevo to Batak or Koprivstica (in Bulgaria), from Verria or Trikala (in Greece) to Bucharest, in large and small cities alike.

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[31] Architectural Archives, Vincennes. See A. Yerolympos, *Urban Transformations in the Balkans (1820–1920): Aspects of Balkans Town Planning and the Remaking of Thessaloniki* (Thessaloniki, 1996), 78–82.

[32] See Pinon, "Transición."

The road network of Ottoman cities, like that of all "eastern" cities, was only weakly hierarchical. It was limited to main streets (or "matrix" streets) and to roads (alleys or cul-de-sacs) for local use; there was hardly anything between the two. This gave the first European travellers an impression of chaos—one which, in reality, merely entailed misperception of an order different from their own (an apparent disorder concealing order). In any case, the "matrix" streets, while they might provide a number of major arteries, were not in any deep sense crucial to the urban fabric. Once past the first sets of houses, there was a different system of distribution. It was the configuration of parcelling that dictated an assemblage threaded through by alleys. If the road layout in the residential quarters might be considered irregular, the parcelling was generally regular.[35]

Moreover, these "matrix" roads are rare: they amount to four or five in the large cities, one or two in the small ones. In some cases there may be just the one, as in Kruja or Verria, where a trading street threads its way within a dispersed habitat.

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[33] See Cerasi, *La città del Levante*, 223–241.

[34] With the apparent exception of Bucharest, where houses are often isolated in their parcels (the 1846 Borroczin plan).

[35] See Pinon, "Transición," 182–186.

The most frequent "matrix" system is that of a "fan," whereby a space is distributed from a central, or obligatory, point towards the urban margins, these matrices then being continued by roads.

Generally the bazaar was adjacent to the citadel (hisar); this pairing frequently constitutes the centre of the fan, as in Edirne, Skodër,[36] and Skopje[37] (where the centre is reinforced by the presence of a bridge over the Duna or the Vardar), in Novi Pazar or in Pec.[38] This bridge alone could result in the formation of a junction, as on the left bank of the Marica in Plovdiv;[39] this is indeed a universal physical feature in the history of urban forms (specifically, in other places besides the Ottoman world, beginning from urban gates). The junction allows the directing of branch roads to the ends of a single street (as in Verria, where an old wall still remained), or the distribution of an isthmus site as in Kastoria (here too there was an old gate). The feature may become more complex, with two fans, one starting from the fortress-bazaar pairing, and another providing a transverse link, as in Jannina. When the bazaar or the citadel do not back on to a hill or a river, the fan may spread through 180 degrees to form the fully radiating system that we find around the episcopate and bazaar in Kozani (in Greece), around the central fortress in Plovdiv (right bank), or in Sofia. Because the road network is highly centralized, direct links between quarters which have a degree of autonomy are rare.

These quarters are internally served by local roads; the rationale of their layouts is impossible to grasp without knowledge of the parcelling. In fact, the formation of large irregular blocks is perhaps related to the previous existence of enclosures or "quarters" of parcels now beyond analysis. The system of cul-de-sacs is easier to explain, since it is certainly not specific to the Balkans. Cul-de-sacs are of three types, which are found throughout the Ottoman Empire, including the Arab provinces:

- direct short cul-de-sacs serving houses set at a secondary depth behind the houses lining a street; mostly from "matrix" streets, as in Skodër (Perash quarter), Sarajevo, or Skopje;

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[36] 1923 plan according to E. Riza.
[37] 1914 plan according to Mikailovitch (1929).
[38] See Krunic, Kuca i varosi u oblasti.
[39] 1891 plan by J. Schnitter.

– longer cul-de-sacs with recesses to provide access to the heart of large blocks, as, again, in Skodër and Skopje, and in Plovdiv, Kozani,[40] Trikala[41] or Sofia;[42]
– cul-de-sacs serving peripheral dead-end quarters, as in Skodër (Tepe quarter), Sarajevo, Jannina,[43] Kozani (at the feet of the hills) or Trikala. Cul-de-sacs are found in all the quarters of Skopje, in the Turkish, Greek, or Slav quarters. However they can be rare, as in Verria.[44]

The series of "matrix" streets, streets for local use and cul-de-sacs often forms a highly ramified system, branching out like a tree: concentrated at the centre and distended at the periphery (Kozani, Plovdiv, Sofia) thanks to the absence of a wall, which allows a progressive extension on to the rural framework (roads, parcels).

The outline of the blocks is by no means easily explained. The block has no internal structure specific to it. Its form results from the layout of streets for local use, streets whose rationale generally eludes us. In some cases it may be presumed that local streets and alleys follow the layout of rural roads. This is especially noticeable in peripheral quarters where we can compare urban and rural fabrics and observe that they are similar in structure.[45] These blocks are frequently quadrangular. However, most Ottoman blocks, large or small, have an irregular polygon form. We may imagine that these blocks were created from properties that were progressively divided—built first at their centre, then progressively divided into lots, the central parcels being accessed by fairly long cul-de-sacs served by peripheral streets (on the edge of the initial properties), these latter then joining the "matrix" streets as they could. As such, the outlines of blocks will be those of the original large properties. Increasing density will have been the factor leading to the division into parcels and to the new road layouts.

These observations may be synthesized by reference to the example of Sarajevo.

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[40] Nineteenth-century plan reconstituted by S. Avgerinou-Kolonia.

[41] According to F. Tsapala-Bardouli.

[42] The 1878 plan.

[43] According to N. Rogoti-Kyrioupoulou.

[44] According to N. Kaloghirou.

[45] Demonstration of this may be made in the case of some Ottoman cities, such as Ayvalik on the Aegean coast of Turkey. See Pinon, "Transición," 177–179.

Sarajevo

Bosna-Saray is the only city of the Balkans to have been founded by the Ottomans, and it is also one of the rare cities for which we possess a detailed plan[46] representing the parcelling. Thus, we have here a privileged example from which we can attempt to develop a synthesis of the morphology of Balkan cities. The Turks took possession of the place in 1428–1429 and settled there in 1435–1436.

With the exception of the citadel quarter (Vratnik quarter), which was the initial site of the saray of Ishak Beg, the city, mainly developed in the sixteenth–seventeenth centuries on the two banks of the Miljacka, was an open one. It was a green city: "The city is full of gardens," wrote the traveller M. Quiclet, who passed through in 1658.[47] "Few houses do not have their own garden, and they are all filled with fruit trees."

The road network converged towards the çarsi, fanning out towards the North and the East (palace quarter) and on the left bank (starting from the Carevi bridge), and using a more orthogonal system towards the Northwest (a "matrix" street parallel with the river, and perpendicular streets).

The carsija was set alongside the first caravanserai (the present Kolobara han), successively linked to other caravanserais, baths, and the mosque of Hüsrev Beg (1530).[48] It was arranged around the crossing point of two main streets (Saraci and Bascarsija) and was the site of two bezistans (the Brusa Bezistan founded by Rustem Pasha (1551) and that of Hüsrev Beg (in the form of an arasta).

The 1882 plan allows a close analysis of the urban fabric. Cul-de-sacs are few in the northern quarters, which were perhaps not developed before the eighteenth century. They are essentially of the first and third types defined earlier. We especially find short cul-de-sacs on the northern bank of the Cemalusa ulica in order to provide access to the large blocks that line it. In the Kovaci quarter, several long cul-de-sacs give on to the large "matrix" street that crosses the northern quarters (in a continuation of the Bascarsija). This allowed the division of large parcels into small strips (courtyard, house garden) having the regularity of divided lots.

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[46] Austrian cadastral plan by L. Tautcher, A. Krezevic, and J. Matasic (Vienna, 1882).

[47] Voyage à Constantinople par terre (Paris, 1664).

[48] For the history of Sarajevo and its monuments, see R. Pelletier, Sarajevo et sa région (Paris, 1934).

The Palace quarter provides an example of the regularity of parcel division to be noted in numerous "eastern" cities, even though it is cut diagonally by the street leading from the carsija to the Visegrad tower. The Elava quarter, for its part, shows how the urban fabric became set within the rural structure (still a universal phenomenon); the alleys, on an almost orthogonal network, follow the layout of the limits of the original parcelled blocs.

Hence, by the end of the fifteenth and sixteenth centuries, the urban structure and the fabric have been set in place to form one of the finest preserved images of the Ottoman urban landscape in the Balkans.

Understanding the unity of Ottoman cities

Despite some variants, the picture of the "eastern" city drawn by E. Wirth is applicable in part to the Ottoman city of the Balkans, Anatolia, and the Mashriq. Certainly the Turko-Balkan city is a good deal less dense[49] (especially on its periphery); and the urban landscape, dominated by overhanging roofs and corbelling, and by numerous openings to the streets, has a very different aspect. But the structures and urban fabrics seem essentially similar. How are we to explain this unity?

Certainly, research should be directed and reflection developed on the basis of the relation of the house to the parcel and to the street. In the Ottoman city—and in the Balkans less than elsewhere—houses are not always aligned with the streets; or else they are aligned by a side other than the main façade (at least before the end of the nineteenth century, the penultimate phase in the westernization of the Ottoman house).[50] They are terraced only in a few main streets (in which case the façade necessarily gives on to the street directly accessed from the entrance); or, at a later date, in the wake of the same phenomenon of westernization. In the "eastern" city, and hence in the Balkan city, alignment and terracing are secondary, whereas they constitute the very basis of the form of "western" cities.

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[49] Denser central quarters are, of course, found in the Balkans (Plovdic), but above all in Turkey (Istanbul—the Fener or Kumkapi quarters before the fires of the second half of the nineteenth century—Bursa, Afyon, or Kütahya).

[50] The final phase being the adoption of the apartment block, as seen in the Galata quarter from the end of the nineteenth century. The central sofa nonetheless remained for a while longer.

If terracing is absent or fails to play a fundamental role, this is because it is secondary with respect to the conception of the house. Terracing does not define the nucleus of the house with a courtyard or the house surrounded by a garden. In "Arab-Ottoman" houses with a central courtyard, the connection with terracing is the way in which the ends of the rooms surround the courtyard, which is itself always geometrically regular. In the "Turko-Balkan" world, this role is assumed by the garden, or else by the independence of the ground floor, which is adapted to the form of the parcel, vis-à-vis the first floor, which is always geometrically regular, too. In both cases, the system of cul-de-sacs, structural and not circumstantial (as in the West), also diminishes the role of alignment.

The parallelism between houses with courtyards and houses "with a garden" is not in fact fortuitous. In the beginning (fifteenth-sixteenth centuries), Ottoman houses were probably houses with courtyards (at least in Istanbul); then, progressively, the courtyard was transformed into a garden, isolating the dwelling, but without the conception of the house as enclosed unit coming into question in its relation to alignment and terracing. No doubt it is this pre-eminence, in "eastern" cities,[51] of house against roadway that explains the particular conception and configuration of the urban fabrics in question.

In the specific case of "Turko-Balkan" cities, the infrastructures (road system and parcels) appear to have remained eastern up to the end of the nineteenth century, despite a westernization that began, in the eighteenth century at least, with the multiplication of windows giving on to the street, then with main façades giving directly on to the street. This would have facilitated the passage to the western city with its terraced alignment.

These reflections confirm that the Ottoman city (or at least the "Turko-Balkan" one) is situated, geographically of course, but also historically, between East and West.[52]

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[51] Nothing indicates in fact that this system is specifically Islamic or even Eastern, since we find one of a similar kind in the Theatre quarter in Delos, and this is Hellenistic.

[52] See P. Pinon, "Les tissus urbains ottomans entre Orient et Occident," in Proceedings of the 2nd International Meeting on Modern Ottoman Studies and the Turkish Republic (Leiden, 1989), 15–45.

IRANIAN CITIES

Heinz Gaube

1. Introduction

1.1. The Setting

In 1960, L. Lockart republished his book Persian Cities (first published in 1939: Famous Cities of Iran), a meagre description of twenty-three Iranian cities, which did not contribute at all to an understanding of Iranian urbanism. Even so we still are far away from understanding all the rules that underlay the development of Iranian cities. In 1979, I tried to approach the problem on the base of fieldwork and broad investigations into literary sources (Gaube 1979). Due to the political changes in Iran, I was not able to widen my horizon. Thus, in this chapter I shall trace the development and shape of the traditional Iranian city, i.e., the city as it was before the 1920/30s when drastic changes reshaped the appearance of Iranian cities as well as all the cities in the Near East. After an introduction which deals with the geographic and hydrologic preconditions as well as with the development of urbanism in Iran two characteristic cities will be presented and analysed, exposing, due to location and history, different methodological approaches. I shall start in the west with Isfahan where different stages of development can be isolated, and an original planning concept, that of the round Iranian city, can be detected. The main emphasis will be put on the pre-Safavid period, since Safavid Isfahan will be dealt with in another chapter of this book. Then I shall go to the east, to Herat in present day Afghanistan. This city represents the Eastern Iranian type of city. My approach is not descriptive, but methodological. In presenting these two cities I want to show, how fieldwork and bookwork can come together.

Iran is a country of deserts and barren, high mountains. In only a few places one finds contiguous settlements covering wide areas. The country is part of the Eurasian mountain belt which runs from the Iberian Peninsula, through the Alps, the Balkans, the Carpathians, the Taurus and Pontus, and the Iranian highland rims of the Elburz and Zagros. Iran is also part of the arid belt of the Old World which stretches from the Sahara in the west across the Arabian Peninsula and the Iranian plateau to the deserts of Central Asia in the east. These two belts which traverse the Old World intersect in Iran. Thus, mountains and deserts are the two elements that determine the appearance of Iran. Mosaic-like, they intermingle, forming continuously varied combinations.

The bulk of the Iranian population lives in numerous oases of different sizes and in settlements scattered along the foothills of the high mountain chains. By far the greatest part of the settlements with more then 100.000 inhabitants is located either near the foothills of the Iranian highland rims of the Elburz and Zagros or in intermountain basins. Almost all large cities are located in regions not favoured with sufficient annual precipitation. Thus these cities could only come into being and grow where the water supply was assured from sources other than rainfall. Some of them take their water from rivers. The most significant example of this group of cities is Isfahan, which owes its enormous growth potential to the water reserves of the ZÊyandah-RÖd. Most Iranian cities, such as those cities south of the Elburz and east of the Zagros, depend, however, on ground water, which is brought from the foothills of the mountains by way of qanÊs.

The qanÊ is a subterranean aqueduct. It collects groundwater in the alluvial fans at the foot of high mountains and carries it, following the descent of the terrain, to settlements and fields. This art of creating artificial springs by water tunnels originated most probably around 1000 B.C. or some time later in the Iranian and Armenian highlands. It led to a radical change in the settlements pattern by opening to man new areas hitherto unpopulated and can be considered the base of Iranian urbanism. The introduction of the qanÊcreated one of the bases on which the first world empire in history, the Achaemenid state, could be built. The establishment of a network of overland roads, with posts for the army for communication, administration, control, and trade, was only possible after the introduction of the qanÊ

1.2. Origins

As its most apparent feature, the city has been walled in almost all civilizations and periods of history. This was considered necessary in order to protect the houses and businesses within the city, as well as its riches. The city not only provides protection, it is the seat of government, the centre of intellectual and religious life, the locus of economic activities, and the dwelling place of a population engaged in these urban functions. As a consequence, in addition to the wall, a "real" city had a temple, originally the seat of religious and political leadership. Later a differentiation took place, and as a new feature, the citadel, seat of the political leadership, was introduced. Crafts and trade were concentrated in special areas (Mumford 1966; Weber 1958).

On the Iranian plateau and the neighbouring areas to the east and northeast urbanization started much later than in Mesopotamia. Whereas in Mesopotamia since the late fourth millennium B.C., cities characterized by walls, temples, and other monumental buildings as well as special areas for trade and crafts developed, in Iran and neighbouring areas to the east and the northeast "proto-urban" settlements developed in the Bronze Age, i.e. before ca. 2000 B.C. These "proto-urban" settlements had monumental buildings and some special areas for certain crafts but missed other characteristics of the city. Settlements of this type were excavated between Fars, Kirmania, Sistan, and southern Turkestan (Tosi 1977). This statement, of course, is based on the archaeological evidence, which is far from complete or representative. In the future, archaeological fieldwork may reveal characteristics of settlements in Iran and the neighbouring areas we cannot think of today.

At the end of the second/beginning of the first millennium B.C., Medes and Persians emigrated from the north into present-day Iran. From this period on we can speak of Iranian cities in the proper meaning of the word. The earliest representations of these cities are only shown schematically on Assyrian reliefs. However, by drawing upon Herodotus' (I, 96–99) description of Agbatana, the Hamadan of today, which was the capital of the Median state, the first Iranian state, we can get an idea of the essential elements of the Median city. Herodotus writes: "...the Medes...dwelled in scattered villages...." King Deioces (ca. 727–675 B.C.) "required them to build a single great city now called Agbatana, the walls of which are of great size and strength, rising in circles one within the other. The plan of the place is that each wall should out-top one beyond it by the battlement. The nature of the ground, which is a gentle hill, favours this arrangement in some degree, but it was mainly affected by art. The number of the circles is seven, the royal palace and the treasuries standing within the last."

Herodotus describes Agbatana as a round city. An Assyrian relief from the eighth century B.C. where the Median city of Kishesim is depicted conforms to the urban principles described by Herodotus. Here we see a sequence of walls rising one above the other and we may assume the highest wall to be the wall of the palace. This location of the palace and/or the temple at the highest point of the settlement seems to have been one of the characteristics of early Iranian cities.

Alexander the Great's victory over the Achaemenides diffused Greek ideas as far as India. The numerous cities he and his successors founded in Iran and neighbouring areas followed the western Hippodamean grid pattern. A variation of this plan is the plan of some cities in the eastern and northeastern Iranian hemisphere, e.g. Herat and Bukhara, where, dominating a grid, a central cross of two intersecting main streets determines the plan. The origin of this schema is not clear yet. It might be a variation of the Hippodamaen schema. It might be of Indian origin or influenced by Chinese principles of planning. Alexander's successors, the Seleucides, were followed by the Iranian Parthians, who preferred to build round cities. A good example of this change is the city of Marv in Turkestan. It was founded by Alexander, destroyed 293 B.C., and rebuilt as a Hippodamean city by Antiochos I (280–261 B.C.). In the Parthian period this settlement was surrounded by a wall roughly round in shape (Gangler–Gaube 2003, 36). The most impressive example of a round Parthian city, however, is Hatra in northwestern Iraq (Andrae 1908).

The first Sasanian city founded by Sasanian Ardashir I (226–240 A.D.), Ardashir-Khurra (FirÖzÊbÊd, near Shiraz), has a perfectly round shape (figure 1). The site is unexcavated. In its centre are remains of a temple-like structure. Similar DÊrÊb, not far away from Ardashir-Khurra, unexcavated like the latter. Here, the perfectly circular wall encircles two large rock formations. On one of these are the ruins of a castle. Most likely there was a temple on the other.

Ardashir's son, ShÊpÖr I (240–271 A.D.), built his capital BishÊpÖr northwest of Ardashir-Khurra. After his spectacular victories over the Romans, many Roman prisoners of war were brought to Iran. They were employed in the building of BishÊpÖr. They left their imprint, as the Hippodamean plan of the city indicates (figure 2). They also exerted a strong influence on the decorative arts in ShÊpÖr's time. In his capital, mosaics were recovered which resemble those of the same period from Antioch, and the style of rock relief changed in ShÊpÖr's time from the flat, graphic Parthian style, which still can be seen at the reliefs of Ardashir, to a more plastic and narrative style in the period of ShÊpÖr.

In summary, in pre-Islamic Iran different plans were used to lay out cities: the round plan, the grid or Hippodamaen plan, and, as a variation of the latter, the Eastern Iranian plan. In addition to these principles, which we can detect in the present plan of some of the cities of Iran, a large number of cities was destroyed and rebuilt many times that we only can determine planning activities of later periods.

2. Isfahan

2.1. The development up to the eighth century: YahÖdiyya, Jayy, and Kh sÖin Ê

Isfahan situated at an elevation of ca. 1.500 metres, is a city surrounded by deserts and semi-deserts. The essential precondition for agriculture and urban growth in such a situation is a sufficient water supply. This is provided for the city and its hinterland by the ZÊyandah-RÖd which has the most abundant water flow of all the rivers of the land-locked Iranian interior.

Although Isfahan is actually favoured by nature, it did not become, by itself alone, a centre towering over other Iranian cities. Its location almost midway between the two great emporia of Damascus and Aleppo in the west and Samarqand and Bukhara in the east, made it a centre for the exchange of goods and ideas from the east and west of the Islamic world, and its central position in Iran predestined it to become the capital of the empire under two mighty Dynasties, the Seljuqs (1037–1157) and the Safavids (1502–1736). These two functions, the one as emporium, the other as capital, manifested themselves in the bazaar and in the courtly buildings which gave Isfahan the reputation of an oriental Versailles.

Since no archaeological work of a larger extent has been done in Isfahan, we can only speculate about the location and shape of Gabae/Aspadana, the Achaemenide predecessor of the later Isfahan. In the post-Achaemenid centuries, this place is mentioned in literary sources under the name of AspahÊn (Marquart 1921, 27–30). Also, the abbreviation ASP for AspahÊn appears on Sasanian coins from the fourth century onward (Göbl 1968, Tab. XVI).

The first to provide us with information, which enables us to form an idea of how Isfahan developed up to the tenth century A.D., are Arab geographers and historians who wrote at the time and later. According to these sources, the Muslim Arabs conquered the region around Isfahan in the middle of the seventh century A.D. They encountered two cities, YahÖdiyya ("the Jewish city") and Jayy. YahÖdiyya is the ancestor of present-day Isfahan, while only a few ruins, a debris mound, and a medieval bridge over the Zāyandah-Rūd, about eight kilometres south-east from the centre of present-day Isfahan, bear witness of ancient Jayy. The most reliable source, the local historian Abū Nuʿaim (early eleventh century) attributes the founding of Jayy to the Sasanian kings Pīrūz (459–486 A.D.) and Khosrū (532–579 A.D.). We learn from the same author that Sasanian Jayy was not continuously inhabited but served as a fortified refuge for the inhabitants of the neighbouring unfortified settlements (Abū Nuʿaim, 15). Inside the city walls Khosrū had constructed some buildings. Ibn Rustah (161), an Arab geographer who wrote around 903, mentions an old citadel in Jayy. According to another Arab author, Ibn an-Nadim (240), who wrote around 987, some old Pahlavi manuscripts were found in Jayy. This would suggest that we should think of Sasanian Jayy not only as a fortified refuge but also as an administrative centre of its hinterland.

After the Muslim conquest of Iran, the Arabs built their first Friday Mosque in the region of Isfahan at Jayy (Māfarrūkhī, 42). The decision to build the mosque in Jayy rather than in Yahūdiyya was governed by rational and strategic reasons. Due to its fortification and the open spaces enclosed within the wall, Jayy was most fitted to serve the Arabs as a military camp.

Shortly after 767 the seat of the governor was transferred from fortified Jayy to Khūshinān, a village situated between Jayy and Yahūdiyya. Here the governor Ayyūb b. Ziyād erected a palace and opposite to it a Friday Mosque on the bank of the Nahr Fursān, a canal which can no longer be precisely located (Abū Nuʿaim, 16). In addition to these two structures, Ayyūb ordered the construction of a large bazaar on the outskirts of Kushinān facing in the direction of Yahūdiyya. Along with this government-sponsored programme, extensive private buildings were constructed. Soon the houses of Kushinān became contiguous with those of Yahūdiyya (Abū Nuʿaim, 16). Having grown together with Yahūdiyya, Khūshinān was forced to compete with this city. Some cities founded by the Muslims under similar conditions succeeded in becoming the new centre of a larger agglomeration; Khūshinān did not. Yahūdiyya was at this period already so filled with pulsating life that eventually it absorbed Khūshinān. As early as 773 this process was so advanced that a new Friday Mosque, the third in the region of Isfahan, was built in Yahūdiyya on the location of the present day Friday Mosque of Isfahan (Abū Nuʿaim, 17).

The transfer of the centre of activity in the area of Isfahan from Jayy/KhÖshinÊn to YahÖdiyya is confirmed by numismatic evidence. There are coins struck between 695 and 746 with the mintmark of Jayy, whereas all later coins bear the mintmark of Isfahan (Walker 1956, LXf.). The Arab geographers of the tenth century describe Jayy simply as a small village in the region of Isfahan and do not mention KhÖshinÊn at all. They describe YahÖdiyya, however, as the most important place of the region of Isfahan. They describe its madina (the circumvallated inner city), with the Friday Mosque in the centre of the bustling bazaar, which was visited daily by large crowds of people with wares from kingdoms far and near (Le Strange 1966, 202–207).

2.2. The development up to the sixteenth century

2.2.1. The Friday Mosque and the old maidÊn

Our discussion of the development of Isfahan up to the eighth century had to be of a general nature. However, from the time that the urban centre was transferred to YahÖdiyya, that is, to the centre of the present-day old city of Isfahan, information becomes richer. In addition to the literary sources, we now have as further important evidence the basic shape of the city's plan, and, to a lesser degree, some buildings.

A geographical analysis of the main features of the city's plan reveals that in Isfahan three ground plans have been used, characterized by different orientations of their main axes (figure 3). They reflect each of the three important periods of the growth of the city. Within the oldest of these ground patterns, which is characterized by streets running from southwest to northeast and from southeast to northwest, are to be found both the Friday Mosque and the old maidÊn (the large square southeast of the Friday Mosque). These streets originate in a centre, the Great Mosque and the old maidÊn, and run radial to gates. Adjacent is the area of the earliest Islamic building period which stretches out to the southwest, south, and northwest of the Friday Mosque.

As already mentioned, the construction of the Friday Mosque was begun in 773. Of this building, and of the structure rebuilt in the tenth century, nothing remains above ground. Almost all of the halls surrounding the courtyard of the mosque now were built in the first half of the twelfth century. At that time, following extensive fire damage, an almost entirely new mosque had to be built. In the course of this construction work the hall-mosque of the Arab style was transformed into a four-IwÊ structure, which since then has been the typical style of the Iranian mosque.

The old *maidÊ* (figure 4) is the other important element in the layout of medieval Isfahan. Today, this square is built over with simple workshops and warehouses, but its original shape can be reconstructed. It was surrounded by mosques, madrasas, palaces, an elaborate bazaar, and a royal music pavilion. Most of these buildings could still be seen in the seventeenth century, albeit in ruinous condition (Chardin 1711, 146). A *maidÊ* was originally a horse-race course and polo field. The word *maidÊ* is of Iranian origin and has a Persian synonym in *asprÏs* (Herzfeld 1968, 22f.). In the compound form, *maidÊ asfris* (=*asprÏs*) the old *maidÊ* of Isfahan is mentioned in medieval Arabic sources (YÊ qut IV, 713). *MaidÊs* were located on the outskirts of many Iranian and Iraqi cities. That *maidÊs* were the ideal sites for markets too is obvious, since horse races or polo games did not take place every day.

Up to the eighth century, the old *maidÊ* of Isfahan was located at the edge of the settlement. Thus, there is no reason not to date its origin back into pre-Islamic times. As a consequence of the construction activities in KhÖshinÊn, the *maidÊ* was no longer at the outskirts of YahÖdiyya but in the centre of the new urban unit formed by YahÖdiyya and KhÖshinÊn (figure 5). Then, in the course of extensive building activities that took place in the eleventh century in all these areas, which are characterized by the second street scheme (figure 3), the old *maidÊ* became definitely and for a long time to follow the undisputed centre of the city. Engelbert Kaempfer, a German traveller who visited Isfahan in 1684, stresses the central position of the old *maidÊ* in describing it as: *forum antiquum in media urbe veteri*.

In the eleventh century at the latest, when Isfahan was the capital of the mighty SeljÖq empire, the old *maidÊs* original functions as a sports and commercial site were supplemented by a third function brought about by its central location: it became the religious and administrative centre of the city. The old *maidÊ* remained as the centre of the city until the sixteenth century. Then, the new *maidÊ* was built which was modelled after the old *maidÊ*. The new *maid Ê* became the administrative centre of the city and attracted much of the trade, especially in highly valued goods. The old *maidÊ* continued to exist, however, as the second centre of Isfahan. Today it is still evident that the main axes of intra-urban communication of the pre-motorized age converge from the periphery of the city on the magnet of the old *maidÊ*.

2.2.2. The main axes of intra-urban communication

These main axes of intra-urban communication were those of the Middle Ages. In the tenth century wall the most important of the city gates were situated along these axes. A putative location of some of these gates can be dared (figure 6). More details cannot be produced. This must not surprise us at all since already in the seventeenth century the medieval city gates no longer had any function. The city had grown beyond the medieval walls, and the Safavids did not defend their empire at the gates of their capital but at its extreme borders, be they Central Asia, western Iraq, or Eastern Anatolia. Anyhow, there is no question that pre-Islamic and early Islamic Isfahan had a polygonal to round shape. The four main axes of old Isfahan were still, at the beginning of this century, lined for long stretches with shops and workshops, forming the bazaar of the city. That they are of high antiquity is shown by the fact that, on account of the sediment collected over the centuries, they run two and more metres above the level of the courtyards on both sides of them. Along these great roads linear bazaars had already been built by the tenth century (NÊsir-i Khusrau, 122). Those in the north and northwest are still partly preserved. The street running from the west gate in a northeastern direction became, after 1600, part of the main bazaar axis. Another bazaar was located toward the east of the old *maidÊn*. At the northeastern corner of the old *maidÊn* are the vestiges of another bazaar, which can be clearly distinguished on a 1924 map and on old aerial photographs (lithographed map of Isfahan compiled for RizÊ-KhÊn in 1302/1924; Schmidt 1940, pl. 27). We may consider it to be the old *qaisariyyah* “le vieux marché imperial” of which Chardin (146) speaks in the seventeenth century. There is no recognizable street leading from the old *maidÊn* toward the southeast. Literary sources allow us to conclude that here, in the Islamic new city, stood a number of religious buildings (especially madrasas) and large mansions with gardens (MÊfarrukhi, 83; YÊqut, I, 677). Such extensive usage of the southeastern parts of the city did not necessitate a main axis between the citadel and the old *maidÊn* in the Middle Ages. Through the determination of the main lines of intra urban communication and their intersection point, the old *maidÊn*, all those parts of the medieval city, which formed its skeleton, are isolated.

The change of the political conditions in Iran after the decline of the Saljuq empire in the middle of the twelfth century deprived Isfahan of its function as capital city. In 1244 the city was captured by the Mongols, and the year 1387 marks the definitive end of an almost 800-year-long period of prosperity for Isfahan in Islamic times. In this year, Timur conquered the city and ordered his soldiers to sack it. Many of the inhabitants were killed on that occasion. In 1414 a second sacking took place, and in 1474 Isfahan was reported to have only about 50.000 inhabitants.

2.3. The development up to 1700

2.3.1. ShÊh {AbbÊs I: MaidÊn-i ShÊh

During the rise of the Safavid state in the beginning of the sixteenth century, first attempts to rebuilt Isfahan were undertaken by the first two shÊhs of this dynasty, IsmÊ{il (1502–1524) and TahmÊsp (1524–1576). These two rulers integrated their buildings into the medieval plan of Isfahan. Their main concern was the reconstruction and the embellishment of the area around the old maidÊn. Here they had erected no fewer than five buildings. In addition to these they built two mosques, one madrasa, and one hammÊm along the street going from the old maidÊn in a southwestern direction (Gaube 1979, 82f.).

In the winter of 1597 ShÊh {AbbÊs I, shÊh of Iran since 1587, decided to transfer his capital from Qazvin in northwestern Iran to Isfahan. This decision brought Isfahan in the course of only a few years to the highest point of its development and made it a capital of intercontinental importance, where envoys and merchants from Europe met those from the Far East.

In a very short period of time {AbbÊs and his advisors had laid out the basic concept of how to rebuild and enlarge the city. Their plans directed the development of Isfahan along new paths and are comparable in their extent only with the foundation of the early Islamic city of Isfahan in the eighth century. Unlike the sultans who had earlier ruled from Isfahan, and who had sometimes lived in the old city, {AbbÊs decided not to live in the old city at all. He built his court on the southwestern edge of the city of those days. In this he followed trends known already in the Saljuq period, that is, to built royal compounds near the river (MÊfarrukhi, 53–56). {AbbÊs went further, however, and created a new religious and economic centre at the fringe of the sixteenth-century city. He thus forced further development of Isfahan into new directions.

The nucleus of {AbbÊs' planning was once again a maidÊn, since this was the ideal layout to unify the most important functions of a city as the administrative, religious, intellectual, and economic centre. However, what had been developed at the old maidÊ in the course of centuries was now recreated in a planned way. Behind the arcades running around the maidÊ there were, in the east, west, and south, bazaar lanes with shops and workshops. The northern edge of the square was lined with coffee houses whose upper floors were used as hostels and brothels (Chardin 1711, 43–50; de Bruin 1714, 147f.; Olearius 1656, 554–558; Tavernier 1679, I, 442–447).

In four places, in the middle of the south and north sides and on the east and west sides, slightly off the centre towards the south, showy portals break the continuity of the facades. The portal on the south side leads into the ShÊh Mosque, the "new" Friday Mosque, as it was called in the time of the Safavids. At the east side of the maidÊ is the portal of another mosque, the LutfallÊh Mosque.

2.3.2. The palace complex

Facing the LutfallÊh Mosque, at the west side of the maidÊ, stands the {Ali QÊpu, the "High Gate," the reception palace of {AbbÊs I and his successors. In the seventeenth century the {Ali QÊpu was the entrance to the wide palace area which was adjacent to the maidÊ on the west. It extended westward as far as the ChahÊr-BÊgh boulevard. In this palace area there were harem buildings, the private living quarter of the royal family, and pavilions in large parks as well as kitchens, storage sheds, chicken houses, and workshops which {AbbÊs and his successors had built.

West and south of the royal palace area on both sides of the ChahÊr-BÊgh and at the river as well there were mansions of the courtiers, whom {AbbÊs I had ordered to build in that location. The ChahÊr-BÊgh, which crosses the governmental district, leads to one of the most beautiful bridges in the world, the {Ali-Vardi-KhÊn Bridge. Its builder, {Ali Vardi KhÊn, was one of the closest associates of ShÊh {AbbÊs I. Beyond this bridge, the ChahÊr-BÊgh led to an enormous royal country residence, the HazÊr Jarib. Around 1700 ShÊh SultÊn Husain, the last ruling Safavid, built to the west of HazÊr Jarib another large palace garden complex, Farah-¹ bÊd. Both of these complexes have since disappeared (Beaudouin 1933, 1–47).

{AbbÊs I ordered the building of the settlement of New Julfah, also to the south of the ZÊyandah Rud. Here he settled Armenians from Julfah, and other parts of Armenia. {AbbÊs transferred these people for both strategic and economic reasons. He wanted to create a belt of burned earth in the northwest of his empire in order to protect it against the Ottomans. However, {AbbÊs was also conscious of the industriousness and mercantile skills of the Armenians and he wanted them to contribute to the economic vitality of the city.

2.3.3. The bazaar north of the new maidÊn

The bazaar north of the new maidÊn is located to the south of the area where the pre-Safavid and the Safavid city impinge on each other (for details cf: Gaube-Wirth 1978). The monumental portal of this bazaar looks very much like the portal of the ShÊh Mosque opposite it at the south end of the maidÊn. Through the portal one enters a two-storied bazaar lane, the qaisariyya. This was the royal monopoly market in which, in the seventeenth century, fine fabrics were sold. In the middle of this lane there is a high dome. Underneath the dome to the right is the royal mint, while to the left one enters the shÊh's caravanserai. This largest caravanserai of the city had a total of 140 rooms. At the end of the seventeenth century cloth merchants from Tabriz, Qazvin, Ardabil, and India used the ground floor rooms. On the upper floor jewellers, goldsmiths, and engravers had their shops and workshops. North of the shÊh's caravanserai there was a similar caravanserai now in even worse condition than the first. The area east of these caravanserais is divided into squares by a system of bazaar lanes, which intersect under high domes, the chahÊr-sus. Although a great deal of rebuilding and restoration had taken place since Safavid times, we can still detect the master plan of the time of {AbbÊs I. The original plan for the bazaar included two parallel lanes running north and south which intersected with three running east and west. North of this bazaar which, as a whole, was called qaisariyya in the seventeenth century, there was a hospital, and next to it a caravanserai, which {AbbÊs I had founded with the purpose of providing funds for the hospital. Both structures have since disappeared. Further to the north, an emir of {AbbÊs I, JÊrchi-BÊshi, built a mosque and a caravanserai. They are built following the orientation of the second street scheme, which goes back to the early Middle Ages. The plan originating from the new maidÊn and the older pattern interfere with each other in this area and create a bi-polarity old-new maidÊn.

The layout of the streets and lanes in and around the new maidÊn characterizes the third of the older street patterns, the Safavid. We find it in the southeastern sector of the city, in the area that we know was destroyed in pre-Safavid times, as well as west of the old maidÊn, an area with the same fate. At the intersection, north of the buildings of JÊrchi-BÊshi, is the contact point between the fields of gravity of the old and the new maidÊ. The new maid Êwas not able to achieve such prominence that it became the sole urban centre of Isfahan. This was due, above all, to the fact that the highly venerated old Friday Mosque continued to be, in spite of the new Friday Mosque on the new maidÊ, the most important mosque of the city, attracting crowds of people to the area of the old maidÊ. It is fortunate that this decisive transfer of gravity did not occur, because this bi-polarity between the old and the new maidÊ led to an organically stable amalgamation of the Safavid new city with the pre-Safavid old city.

3. Herat an Eastern Iranian City

3.1. Nineteenth century Herat

Herat (figure 7) is the westernmost large city of Afghanistan. It is situated in a fertile river oasis and surrounded by a multitude of villages. Due to its geographical position, the city was a gateway to India. Alexander the Great had passed through it, as had the trade between India, Central Asia, and the Near East up to very recent times. Although Herat's history is a succession of ups and downs, the city never had to share the fate of many other Iranian cities, that is, to suffer, on the one hand, a partial depopulation or, on the other, to be razed to the ground never to be inhabited again.

As there are good and reliable descriptions of Herat in the nineteenth century and the beginning of the twentieth, we can easily form an idea of what the city looked like about a hundred years ago. There are even some old maps, the most informative of which is the one by a German officer, Oskar von Niedermayer (1924), who led a small military expedition to Afghanistan in 1916/17. From Niedermayer's map we can see that the city was nearly square in plan, measuring 1.500 metres from east to west and 1.600 metres from north to south and was oriented to the cardinal points of the compass. It was surrounded by a wall in front of which a wide and deep moat ran around the city. There were five gates in the wall, one in the middle of the west-, south-, and east-side and two in the north-side. Four streets led from the west-, the south-, the east-, and from the western gate in the north-side and met in the centre of the city under a domed structure, the chahÊsu. They were

12 to 15 feet wide and formed the bazaar of the city. Caravanserais were situated near the chahār-su and south of it. To provide drinking water for the bazaar and the adjacent sections of the city there were, in several places of the city, huge reservoirs covered by high domes.

The qalʿah, or citadel, was located in the western part of the northern section of the city adjacent to the city wall. Here was a modest palace. In times of peace the governor of Herat resided not in the qalʿah but in a palace in the city itself next to the Great Mosque. Near the palace were large stables, a state workshop, a granary, and barracks. In the northeastern quarter of the old city, the Great Mosque was and is located. In the second half of the fifteenth century the mosque was completely rebuilt and at this time acquired the basic features of its present shape.

The residential quarters cover most of the area of the old city. The access to these residential quarters is provided by the four main streets, the bazaar; off these main streets branch secondary streets, which cross the quarters roughly in the north–south and east–west directions. To say that the plan of these streets was originally based upon a grid pattern does not appear to me an unfounded interpretation. Inside the residential quarters there are many religious buildings, mosques, ziyārāts (shrines). Without exception the greater mosques are almost all situated on the fringe of the quarters. The ziyārāts are real or presumed tombs of saints where one prays in the hope of having one's wishes come true. They are found in great quantity inside and outside the old city. In the Risālah-yi Mazārāt-i Harāt, a book published in 1892, almost 300 ziyārāts are listed and described. I know of no other city that could boast of such a high number of shrines.

3.2. Early medieval Herat

On examining the literary sources on the topography of Herat, we find that the features described above are not only valid for the nineteenth century, but are essential characteristics of the early medieval city as well. The most comprehensive description of the city in the tenth century is found in the books of two Arab geographers, those of Istakhri (around 951, 149–151) and Ibn Hawqal (around 977, 366). The following picture of Herat in the tenth century may be drawn from these sources.

A wall, constructed like all the other buildings from mud brick, enclosed the city. Its circumference was about four kilometres. In front of the wall was a moat. Through four gates in the middle of each wall four high roads left the city. The gates faced the cardinal points of the compass. Beginning at each gate a bazaar led into the centre of the city. The citadel was placed inside the city walls and had four gates, which were oriented in the same manner as the city gates and bore the same name. The location of the Great Mosque certainly did not change. At the turn of the century the administrative complex, the governor's palace, stables, granary, and state workshops lay at the qibla of the Great Mosque. The medieval authors tell us that there was a prison adjacent to the Great Mosque. Prisons, as a rule, were not erected at random but were generally located where the ruler and his soldiers resided.

3.3. The Plan according to fifteenth century sources

The fifteenth century sources, especially IzfizÊri, who in 1492 wrote a history of Herat, indicate that the form of the inner city of Herat has much remained the same since the tenth century.

IsfizÊri begins his history of Herat with a geographical introduction, on the basis of which the following picture of Herat may be sketched (IzfizÊri, 77–79). The circumference of the city walls was 7.300 Herati feet. The distance between the opposite gates was 1.900 feet, which proves that the city had a square plan. A moat surrounded the wall. In the middle of the north-, west-, south-, and the east-sides of the wall as well as the northeast there were gates. From the four gates in the middle of each side, bazaars ran to the chahÊsu in the centre of the city. The bazaar in the north was built of baked bricks. Thus we may presume that the other bazaars were built of mud bricks.

In each of the bazaars were caravanserais. The Great Mosque was located between the east and the northeast gates. IsfizÊri reports that in pre-Timurid times the Kart King Mu{izz al-Din (1330–1370) surrounded the city with an additional outer wall measuring about six kilometres square. Timur, who had destroyed this wall, did not rebuild it because he considered it impossible to defend.

The evidence presented so far is quite sufficient to draw the following conclusions: both the plan of the inner city of Herat and the locations of the most important buildings—the bazaar, the Great Mosque, the administrative buildings, and the citadel—have undergone only minor changes at most since the tenth century. This permanence distinguishes Herat from other cities of the Irano-Iraqi architectural region, where the location of the central sections of the cities' extension were considerably changed through the centuries. The square plan according to which Herat was built has not been found in the plan of cities of the same size west of the two inner Iranian deserts, but we find it in other cities of the Eastern Iranian cultural sphere inside present day Iran and as far as Bukhara.

3.4. Examples of Eastern Iranian cities

3.4.1. Bam

The two most famous cities of pre-Islamic Sasanian Iran, FiruzÊbÊd (Ardashir-Khurra), the capital founded by Ardashir I (224–241) and BishÊpur, the capital founded by Ardashir's son ShÊpur I (241–272), have very different and very distinct plans. FiruzÊbÊd (Ghirshman 1962, 123) is a round city, and BishÊpur (Ghirshman 1962, 138) is a rectangular city with a grid pattern of regular intra urban streets. The Sasanian round city has its immediate predecessor in the "Parthian" round city of Hatra (Andrae 1908) in present day Iraq, which in turn has its predecessor in round cities of the Ancient Near East. The planning concept of BishÊpur originates in the fact that this city was built by Roman prisoners of war. It is a foreign concept, which in post-Sasanian times was not repeated in western Iran. But the concept of the round city survived into post-Sasanian times. The most famous example is the round city of Baghdad, built by the caliph al-Mansur (754–775; Creswell 1958, 161–182). The original plans of Isfahan and its twin city Jayy were also round or roundish (Gaube 1979, 67–72).

But if we turn to eastern Iran, we encounter different principles in city planning. The Iranian province east of FÊrs is KirmÊn, and in the very east of this province, on the road, which circles south around the Lut desert to SistÊn, the small city of Bam (figure 8) is located. In the Middle Ages Bam was famous for its textile industry. It was a rich and flourishing city. The inner city, the madina, dominated a famous citadel. A wall with four gates protected the madina. The four gates were orientated towards the points of the compass. A rabad lay outside the madina, and palm groves lined the whole settlement (Gaube 1979, 112).

In the thirties of the twentieth century the old city of Bam was given up. The inhabitants moved to the new city south of the old city, and the old city became a kind of museum city. In the plan of the present circumvallated old city a rather regular network of streets, orientated north-south and east-west, becomes apparent, and different stages of growth can be isolated. The original madina had a square shape, the citadel lying in the north within the city wall. Later the city was extended to the east, and very late a second extension was added in the northwest. Thus, medieval Bam had a square shape, a citadel at the edge of the madina and four gates, which most probably were in the middle of each side and were connected by a regular system of streets. Bam seems to be the most western example of what we call "Eastern Iranian Cities."

3.4.2. Zaranj

As the example of Bam showed, east of the inner Iranian deserts we find cities that follow a planning concept similar to the plan of BishÊpur. Originally Bam had a square form and a regular system of intra-urban streets, which ran parallel to the city walls. This is surprising, and, since western influences can be excluded, it needs an explanation. One of the most famous cities of Eastern Iran is Zaranj, the old capital of SistÊn, located east of Bam near the modern border between Iran and Afghanistan on Afghani territory. The name SistÊn is derived from SijistÊn or SakastÊn, the land of Sakas, a Central Asian people, who immigrated into this region from Central Asia in the first century B.C. Under the Sasanians Zaranj was an important city, and in the ninth and tenth centuries it was the capital of the ÑaffÊrids (861–1003) who in their heydays controlled almost all of Iran. In 1383 Zaranj was destroyed by Timur and never revived.

An aerial photo (Fischer 1974, 2, figure 72) of Zaranj shows the outline of a city which consists of two parts, a square with the remains of a citadel in one of its corners and a slightly irregular rectangle added to the one side of this square. The square part must be the madina. This madina had according to Ibn Hauqal and al-Istakhri, who give the best description of Zaranj in the tenth century (Gaube 1991, 208–210), five iron gates. On the side facing the direction of Fars (west) were two gates, the "new" gate and the "old" gate. The remaining three gates were facing the other three points of the compass. This allows only one interpretation: the madina of Zaranj had originally four gates facing the four points of the compass. This madina was extended to the south by a rabad, and, before the tenth century, the entire city was circumvallated.

3.4.4. The Origin of the plan of Eastern Iranian cities

How did this particular plan of the inner cities of Herat, Bam, and Zaranj develop and where should we search for its roots? One thinks immediately of Greco-Roman cities. Influenced by this prototype, cities and city-like settlements were founded in the areas west of Iran in the early Islamic period, e.g. Anjar in Lebanon and Aqaba in Jordan. Each of these two settlements had a rectangular shape and main arteries originating from gates in the middle of each of the four walls which intersected in the middle of the settlement forming a cross (a survey in: Wirth 2000, 39–44).

In Iran Islamic foundations of this type are unknown. There, however, we encounter small rural settlements with square or rectangular shape, the so-called qal{a settlements. Their similarity with the inner city of Herat, however, is limited to some formal aspects. Because of their much smaller size and different organizational set-up, they can only be compared with settlements of the same type in Central Asia. Qal{a-villages of high antiquity are known in this region (e.g. Nerasik 1966). Whereas in Iran there is almost no similarity between the qal{a villages and the cities, in Central Asia we encounter city plans with formal similarities with qal{a villages and structural similarities with Herat. This, for example, is valid for the plan of the Seleucid inner city of Parthian Marw (Pugachenkowa 1958, 42). On the one hand it is related to the Parthian qal{a settlement of Tobrak-Kala (Pugachenkova 1965, 43) by insulae, a clearly defined axis, and a citadel at the edge of the city. On the other hand, Marw is related to Herat by the square city wall orientated according to the cardinal points of the compass, four overland roads, leaving the city through four gates in the middle of each side, and a citadel, located at the northern edge of the city inside the city walls. West of the old inner city of Marw, a similar, but less regular city arose in the Middle Ages (Pugachenkova 1958, 191). It also had two clearly defined axes and a citadel in the northeastern corner inside the city wall.

Pre-Islamic and medieval Marw must be seen as a city representing the same type of city as Herat. Thus there seems to be ample reason to speak of an eastern Iranian-Central Asian city type which stretches from the southern fringes of the Iranian Lut desert, east of the Lut and the Kawir to the cities of Central Asia, of which Marw and Bukhara are excellent examples. The question we have to ask now is, does the plan of inner cities like those of Bam, Zaranj, and Herat originate from Central Asia or from somewhere else? Herat represents this type of city in its purest form, and Herat is geographically located between two areas of possible origin of this type of city: India to the southeast and Central Asia and/or China to the northeast.

A possible Indian influence cannot be excluded, since close cultural contacts between India and Iran existed since very old times and reached a pinnacle in the Sasanian period. And, in fact, a search through ancient Indian literature, which is rich in treaties on architecture and urbanism, is rewarding. In the Manasara (Acharya 1934), an architectural manual which most scholars date back to the first century B.C., we find the following principles on city planning:

> The ideal Indian city is orientated in the direction of the cardinal points of the compass. Each city is surrounded by a wall, inside of which a citadel is located. Outside the wall there is a moat. Generally there are four city gates, one in the middle of each of the four sides. Inside the walls and adjacent to them, wide streets circle the city. In addition there are two broad streets, which connect the opposite gates of the city. They cross each other in the centre of the city, where there is a temple or a hall for the inhabitants to congregate. Thus the city is divided into four quarters each of which is again further divided by lanes. Along the two main streets which cross in the centre there are houses, on the ground floors of which are shops. The rest of the city consists of living quarters. (Shukla 1938, 1: 247–248).

The plan of Herat follows the principles of city planning laid down in this book in seven of its eight characteristic features. Thus, there is a probability that Herat was laid out according to a plan that originated in India, crossed Afghanistan, and reached Central Asia. But this is only one probability. The direction of influence could have been opposite, too: from Central Asia and/or China to Eastern Iran.

A very voluminous, recently published study conveys a comprehensive survey of the origins and formal development of the Chinese city and the philosophical as well as religious roots of Chinese city planning. In the introduction to his book the author emphasizes: “It is certainly no surprise to find the ‘archaic’ world concept of the well-organized cosmic order as the archetypical model of settlement and the whole oikoumene, the world inhabited by sedentary societies. In China this was expressed and formulated in the pattern of the ‘Magic Square,’ which is also well known as the mandala of Buddhism. This is the ninefold square, called in Chinese jingtianzhi = the well-field system of the holy field of nine squares. This ‘Magic Square’ was used by the legendary culture hero, Yü the Great, the founder of the first (the Xia) dynasty, as an ideal frame for dividing China into nine provinces. It is also used by the Duke of Zhou as the pattern for the layout of the sacred capital of the Zhou dynasty at the end of the second millennium B.C. Up until the twentieth century it was used as the layout for the so-called 'holy field' where the emperor, as the 'first farmer' of his people, ploughed the first furrows at the beginning of spring each year..." (Schinz 1996, 9).

All over the more than four hundred pages of his book the author tries to superimpose the concept of the "Magic Square" on Chinese cities of different periods and different parts of China. I must admit I lack the ability to follow many of his verbal and graphical arguments. But one fact becomes evident, the concept of the Eastern Iranian city, as it was exposed above, and the concept of the Chinese city, have only two things in common: the geometrical division of the city space and the geometrical outline of the city walls. The main feature of the inner organization of the Eastern Iranian city, the division into four equivalent quadrants, formed by crossing main streets in the centre, is not existent in the Chinese city. The same is true for the citadel which is the characteristic feature of the Eastern Iranian city but which is missing in the Chinese city.

To conclude: there are three possibilities to explain the typical form and inner organization of the Eastern Iranian city: 1. Independent, autochthon development in the region; 2. Indian influence; 3. Chinese influence. Chinese influence can be excluded to a very high degree. With a certain degree of probability Indian influence is to be considered. But is it not also possible that this type of city developed in Khurasan, Bactria, Transoxania? Despite the fact that an autochthonous development in the region cannot be proven with a very high degree of probability, it cannot be excluded either. To organize a newly founded city according to geometrical principles is self-evident. This is proven for cities of the Ancient Near East as well as for cities of Ancient Egypt. And the Greeks did the same in their newly founded cities. Thus, geometrical regularity cannot be used as a mean to construct developmental dependence. We have to look at organizational elements beyond a geometrical regularity. In our case these elements are the two shop-lined main streets, which cross in the centre of the city, the gates in the middle of each side of a (as a rule) square city and the citadel. At the moment the question whether we have to look at the Eastern Iranian city as the product of an autochthonous development or as a city type which developed under Indian influences cannot be answered in a satisfactory way. There are at least two problems to be solved before an answer can be given. The first is a precise dating of the quoted text from the Manasara. If this text is old, and that means older than the first century B.C., then an influence from Eastern Iran/Central Asia on Indian city planning, which must be considered too, becomes less probable and the opposite influence becomes more probable. The second would be precise archaeological soundings in a city like Herat. If these soundings could prove that the plan of Herat, as we can analyze and reconstruct it at the present time for the early Middle Ages, is more or less the plan of the Herat of the time before Alexander the Great, that means the plan of the Achaemenid city of Aria (old Persian: Haraiva), which is present day Herat, then we would have a sound proof for an autochthonous development.

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INDIAN CITIES

Marc Gaborieau

This paper is devoted to a general presentation of the Islamic cities of India. This term "India" is here taken in the historical sense of the whole of the Indian subcontinent or South Asia, which has been divided after 1947 into seven political units (Schimmel 1980; Gaborieau 1986, 7–8). Only three of them, situated in the margins of the subcontinent, are now ruled by Muslims, namely Pakistan, Bangladesh, and the Maldives; the heartland, with India and Nepal, is ruled by an overwhelming Hindu majority, while Buddhists govern Sri Lanka and Bhutan. The ever-increasing proportion of Muslims to the total population of the subcontinent is now around 29%. The total Muslim population in 2001 reached about 400 hundred million people; each of the three biggest countries sheltering about one third of it: the Muslims, thus, make up 97% of the population in Pakistan, 90% in Bangladesh, and 13% in India. In the small countries one finds 7.5% in Sri Lanka, 3% in Nepal and Bhutan, but 100% in Maldives. Muslims are now politically marginal in the subcontinent; but this was not the case during the six centuries—to which this paper is mainly devoted—which preceded the advent of the British.

I will proceed in the following way. After a presentation of the historical context and a few general considerations, I will survey the various types of towns found in Muslim India and finally analyze the main research themes which have dealt with the subject.

1. Historical context: six centuries of Muslim hegemony

This marginalization of Islam was brought about by the British conquest at the end of the eighteenth century, and even more by the Partition of the subcontinent in 1947. But one must keep in mind that Muslim dynasties had been hegemonic for six centuries before that time. After the first inroads of Muslim merchants and conquerors on the Western coast between the seventh and the tenth century, the Turkish dynasty of the Ghaznavids, based in what is now Afghanistan, established in the eleventh and twelfth centuries a firm stronghold on the Indian soil, in the Indus basin—roughly speaking in the territory now covered by Pakistan—with its southern capital Lahore. The next decisive step was the conquest of Delhi, in the Ganges basin, at the end of the twelfth century: it opened the way for the rapid takeover of the whole of the subcontinent in a little more than a century and the establishment of a Muslim hegemony exercised by Turkish and Afghan dynasties which was to last up to the advent of the British. During this period India was an integral part of the dâr al-islâm; far from being marginal in the Muslim world, it had an important demographic, economic, and cultural weight, which increased after the destruction of Baghdad by the Mongols.

This paper is devoted mainly to these six centuries of Muslim hegemony in India, since very little is known of the urban history of Muslim India before the foundation of the Delhi Sultanate in the beginning of the thirteenth century. This long tormented period can be divided into four stages: the dream of a unified Indian Muslim empire never became a reality except perhaps briefly under the Mughal emperor Aurangzeb in the second half of the seventeenth century; the two attempts at political unification—with the Delhi Sultanate and the Mughal empire respectively—were each followed by a period of disintegration.

The first unsuccessful attempt at unifying India was made by the Delhi Sultanate from the beginning of the thirteenth to the second half of the fourteenth century (Gaborieau 1995a; Jackson 1999); it resulted at best in "a collection of sub-kingdoms" both Hindu and Muslim (Jackson 1999, 87) whose allegiance to the centre was shaky; they often rebelled.

A series of such rebellions from 1338 on brought the end of this political construction about and started a second period of independent regional sultanates which was to last up to the middle of the sixteenth century (Gaborieau 1995a, 2002a). The initiative came from the Eastern province of Bengal, in the Ganges Delta, which became independent in 1338. Then the governor of the Deccan, the Southern plateau, founded the Bahmanid Sultanate which was later to be divided into five different kingdoms: Bidar, Berar, Ahmadnagar, Bijapur, and Golconda; to the South of the latter two sultanates flourished the powerful Hindu kingdom of Vijayanagar (1336–1565). On the Western coast the provinces of Khandesh, Gujarat, and Sind became also independent. The inner land of Northern India was divided between Malwa on the west of

Delhi, Jaunpur on the east, and finally Delhi itself which was by then only one of the twelve regional sultanates into which Muslim India was divided; after the pale Sayyid dynasty it was ruled by the powerful Afghan dynasty of the Lodis who shifted the capital to Agra in 1505. The sack of Delhi by Timur in 1398 may conveniently be considered as marking the end of the disintegration of the Delhi Sultanate. This age of provincial sultanates should not be considered as a period of decadence, but as an era of growth and competition, both economic and cultural, which resulted in the development of new urban centres with an increased artistic production.

The second and more successful attempt at political unification was brought about by the Mughals in the sixteenth century (Richards 1993; Gaborieau 2002b). They had to assert themselves successively against two powerful Afghan dynasties in the north (the Lodis and the Surs) and to reckon with the Portuguese presence on the sea. The first two representatives of this new central Asian dynasty—Babur who conquered Delhi first in 1526 and his son Humayun who was long exiled in Persia by the Sur dynasty—had a limited impact on India. It is only with Akbar (1556–1605) that a new imperial construction was started with an effort to build a centralized state and to bring the whole of the subcontinent under its authority. This work, continued by his son Jahangir (1605–1627) and his grandson Shah Jahan (1628–1658), the builder of the Taj Mahal, culminated in the long campaigns of Aurangzeb (1658–1707) in the Deccan, which brought under the Mughal sway the last autonomous sultanates of Bijapur and Golconda, but failed to annex the territory south of it and to check the rising power of the Hindu Marathas who were instrumental in the fall of the empire. The degree of centralization of the Mughal empire is a debated question: the classical view—brought forth and popularized by the Aligarh school—of a centralized fiscal despotism (Ali 1966; Habib 1999) has been recently questioned (Alam and Suhbrahmanyam 1994 and 1998, 12–16): it remains that the economic prosperity and the building activities of the dynasty contributed considerably to the shaping of an Indian urban landscape which is still visible.

At the death of Aurangzeb in 1707, the disintegration of the empire had already started and in less than three decades the centralized administration had collapsed to give way to autonomous provincial units (Alam 1986). They could be governed either by the families of former Muslim province governors who styled themselves as nawabs—i.e. nawwâb, an intensive form of nâxib, meaning representative (of the emperor). Such was the case in Central and Eastern India with the principalities of Awadh, Bengal, Carnatic, and Hyderabad, to which may be added a variety of kingdoms created by Afghan adventurers (Gommans 1995) scattered over Northern and Western India like Rampur, Farrukhabad, Tonk, and Bhopal. These new principalities could be also be ruled by non Muslims, as was mostly the case in Western India with the Marathas in the South, the Jats west of Delhi and the Sikhs in what is now Pakistan. During these decades—which may be called the Nawwabi period—these principalities, although politically autonomous, maintained a formal allegiance to the puppet Mughal emperor who was confined in his Red Fort palace of Delhi. The British East India Company which had taken its first hold in India by supplanting the Nawab of Begal was theoretically at first a vassal of the emperor and maintained this fiction up to the Mutiny of 1857 when Queen Victoria replaced the Mughals as Empress of India. This last phase of Muslim domination—comparable to the earlier period of provincial sultanates—should not be mistaken for an era of decadence (Alam and Suhbrahmanyam 1998, 55–68): it witnessed considerable economic development; the competition between the new political formations, endowed with substantial financial means, stimulated building activities and artistic creativity which continued for a long time after the British established their domination on the subcontinent between 1765 and 1818.

This British period was in a way a prolongation of the Mughal and Nawwabi periods: many towns continued to prosper. Such was the case of Lahore and Karachi, now the two great towns of Pakistan, and of Dacca (Ahmed 1991), now the capital of Bangladesh. In India one could cite the example of Mughal provincial capitals like Patna and Allahabad, or of a Nawwabi town like Lucknow. But the most interesting case is Delhi, a Muslim capital since the end of the twelfth century, which was again chosen by the British to become the site of a new gigantic imperial capital, New Delhi, inaugurated in 1931: striding over the ruins of several of the former seven juxtaposed Muslim capitals, it was contiguous to the Mughal capital of Shahjahanabad, from then on styled as Old Delhi. The British also originated at least four types of new towns. The first one consisted of the capitals of their three "presidencies" (main administrative subdivisions): Bombay, Madras, and Calcutta, the latter being also the imperial capital from 1765 and 1931: they were at the same time administrative towns, ports and commercial cum industrial cities, and quickly evolved into megalopolises. They became the biggest agglomerations of the subcontinent with Karachi (which was the capital of Pakistan from 1947 to 1959) and Dhaka (present capital of Bangladesh). The second category was that of "junctions," new commercial and industrial towns which sprang up at the crossing of important railway lines, like Kanpur in Northern India in the middle Ganges valley. Thirdly, there were "cantonments," i.e. garrisons towns which evolved into full fledged cities, like Rawalpindi which still shelters the headquarters of the Pakistan army and was the capital of Pakistan between 1959 and 1969, before the creation of the new town of Islamabad nearby. Finally the famous "Hills stations," situated in lower mountain areas, where the higher British officials spent the hot summer months; we may cite as examples Darjeeling, Nainital, and the most famous of them, Simla (Spate 1957, 192–193) in the Himalayas.

Independence and Partition in 1947 did not fundamentally alter the urban pattern, except for the spectacular development of the main towns of the newly created Pakistan: Karachi in the Western wing (now Pakistan proper) and Dacca (Ahmed 1991) in the Eastern wing (independent Bangladesh since 1971). A curiosity of these two new countries was the creation of purely artificial capital towns built on an orthogonal geometrical pattern: Islamabad and the administrative new section of Dhaka. In the whole of the subcontinent, although many towns like Delhi (Dupont et al. 2000) and the other megalopolises reached a spectacular size, the population remained mainly rural; in the most urbanized country of the subcontinent, India, the proportion of the urban population to the total population grew only from 18% to about 30% since independence.

2. General considerations

During the period of Muslim hegemony which ended in the second half of the eighteenth century India was already densely populated: the current estimation is between 100 and 150 million people for the Mughal period (Moosvi 1987, 393–406). Muslims however remained always in a minority and were conscious of being in a minority, but they left no figures: at the time of the first enumeration, the British census of 1872–1874, they made up a little less than 20% of the total population. It may be surmised that during the Mughal period their proportion was around 15% (against 29% nowadays).

They made, however, a great impact on urban life. As a whole, a greater proportion of Muslims than Hindus is urbanized: 27% against 18%, according to the Indian census of 1961; this statement should not hide the fact that the majority of Indian Muslims are—and presumably have long been—rural. The foundation of the Delhi Sultanate stimulated urban growth and the development of a large urban population. Although no statistics are available, reports of foreign travellers puts the population of the great Mughal towns at several hundred thousands for each of them; on the basis of such reports and of fiscal documents, the school of historians of Aligarh Muslim University has estimated that the proportion of the urban population (Hindus and Muslims confounded) was around 15% (Moosvi 1987, 305). These guesses are the only reasoned ones available; their credibility will be examined in the fourth part of this paper.

In popular conceptions, reflected in modern vernacular languages like Hindi, the urban phenomenon is linked with Islam. Words designating villages (gâûn) and lower administrative subdivisions (pargana) are local Indian ones, while those for subordinate administrative headquarters (qasba), commercial areas (bâzâr), and bigger towns (shahar) are all borrowed from Persian and Arabic; it is only in the twentieth century that the Hindus, in an effort to de-Islamize the language, have replaced current words like shahar by learned Sanskrit ones like nagar to mean "town." However, this does not mean that the Indian civilization ignored urbanization before the advent of Islam. On the contrary, when Muslims reached India, there had already existed a several thousand years old tradition of town building—probably linked with the Mesopotamian civilization: the present town of Patna in Bihar is on the site of Pataliputra, the capital of the Buddhist emperor Ashoka of the third century B.C., described by Greek travellers: there existed a learned theory of town planning in the Sanskrit tradition, the principle of which can still be seen underlying medieval towns in Nepal and in South India. One question to be raised in this paper will be that of how much pre-existing Hindu models influenced the development of urban life in the Muslim period.

Most of what has been written about Islamic towns in Muslim India relied on accounts of foreign travellers or on descriptions and studies of the colonial period. The primary Indo-Persian sources are far from having been properly tapped (see however Naqvi 1968 and 1972), except in special cases like Delhi, which has been studied both extensively over time (Frykenberg 1986; Spear 1994) and more specifically for the Mughal period (Blake 1991) and the Deccan city of Firozabad (Eaton and Michell 1990).

The state of the research on Indian Muslim cities is not very advanced (Gaborieau 1989). While there are older (Marshall 1922; Brown 1956) and more recent (Asher 1991; Koch 1991) synthetic works on architecture, only inadequate preliminary surveys exist for urban studies, and they are not exclusively devoted to the period of Muslim hegemony (e.g. Ballhatchet and Harrrison 1980; Banga 1992). Scholars have been more interested in the trees than in the forest, i.e. more in the individual monuments than in the town (Asher 2000, 121). Discipline-wise, the studies of towns were done mainly by art historians and general historians; urban geography took long to start (see the remarks of Spate 1957, 191–196); urban anthropology made its way only recently (Kumar 1988). And very few cities have been thoroughly studied all over the Muslim period: the multiplication in recent years of studies on Delhi through ages (Frykenberg 1986; Blake 1991; Gupta 1981; Spear 1994; Dupont et al. 2000) is an exception. Therefore, we do not have at hand a corpus of scholarly works substantial enough to provide a ground for generalizations: I can only provide a survey of the present state of research, tentative statements on the main features of the Indian Muslim towns, and an inventory of the current themes of research as well as of the unsolved and of the neglected questions. In the absence of synthetic works, the bibliography is very dispersed and cannot be exhaustively quoted in this short essay: I will only mention the main reference works and the publications dealing with the examples I quote.

3. Types of towns

A well grounded typology being impossible for the time being, I will only list the four main descriptive categories used by scholars in order to give a glimpse of the various types of towns encountered: capitals, lower level administrative towns, commercial towns, pilgrimage towns. It should be clear that these are not discrete categories, each town having several functions: I have classified them according to the most important function which presided on the development of a given city.

3.1. Capital towns

The best-known and best-studied cities of Muslim India are those who have been used by sultans, emperors, and nawabs to govern their dominions.

Many of them go back to the period of the sultanates which was a great era of town building. The most famous of them is Delhi which was successively the siege of a united Sultanate and, after Timur's invasion, of the local Sayyid and Lodi dynasties, before being finally reconstructed as a Mughal capital in the middle of the seventeenth century, as we shall see presently. Each of the dynasties built a new city by the side of the preceding one, so that Delhi presents, on the remains of an obscure Hindu town, no less then seven juxtaposed Islamic cities, all in deserted ruins except for the Mughal capital of Shajahanabad (Sharma 1964; Frykenberg 1986; Spear 1994). This chain-abandonment of cities raises the question—discussed in the next part of this paper—of how far Islamic cities of India were permanent settlements or only temporary camps. Similarly, the first great Sultanate of the Deccan, that of the Bahmanis, built three successive capitals (Michell 1993) in different locations: Gulbarga, Firozabad (Eaton and Michell 1990), and Bidar (Yazdani 1947).

The twelve provincial sultanates which emerged from the Delhi Sultanate and from the Bahmanis (see historical sketch above) had each its inherited or newly founded capital. The best known of them are the following ones: the first Portuguese travellers have left a vivid description of Gaur, the capital of Bengal in the east (Bouchon and Thomaz 1988; see also Eaton 1993); in the west Ahmedabad, founded as the capital of Gujarat Sultanate, and also an important commercial centre, remained prosperous to this day through the Mughal empire and the colonial period (Gillion 1968; Markovits 1995); in the Deccan, Golconda, now in ruins but once famous for her diamonds, has been amply described by the European travellers, while Bijapur is known for her Sufis (Eaton 1978); Agra, founded in the middle of the fifteenth century by the Lodi dynasty of Delhi, became famous when Akbar turned it a century later into one of the capitals of the Mughal empire (Gupta 1986).

The Mughals who often lived in camps (Gaborieau 1995b) built also several capitals in a variety of locations to suit political, strategic, or religious motivations. In the second half of the sixteenth century, Akbar left Delhi and elected as his first capital Agra, which he extended and embellished. For ideological reasons, i.e., for the legitimation of his dynasty through the Chishtiyya Sufi order, he built around the tomb of the saint Salîm Chishtî the short-lived Fatehpur Sikri (Koch 1991, 56–60; Petruccioli 1988). At the end of his reign, to suit his campaigns in Kashmir and Afghanistan, he moved north and built a last—still well preserved—capital in Lahore on the site of the previous Ghaznavid town (Khan 1993). It was left to Shâhjahân (1628–1658) to build from 1638 the greatest and entirely planned Mughal capital of Shahjahanabad, which was then styled New Delhi, but became Old Delhi when the British built their own New Delhi (Blake 1991; Ehlers and Krafft 1993; Koch in this volume).

The emergence of new regional states in the eighteenth century was also the occasion to develop or to create new royal and administrative towns which may be labelled as nawwabi capitals. Two have remained famous outside India: the city of Hyderabad in the Deccan, once a suburb of Golconda, which was developed by the Nizams, a Sunni dynasty which managed to survive as princely state throughout the British period (Mackenzie Shah in this volume); Lucknow, new capital of a Shia principality in the middle Ganges valley, where Iranian influence was preponderant (Cole 1989; Graff 1997). Murshidabad in Bengal, once the prosperous seat of another Shia dynasty, has now sunken into oblivion. Arcot, headquarter of a Sunni principality in Tamilnad, on the Southeastern coast of India is still remembered. But more famous still now are the capitals of the new Afghan states of Western India like Farrukhabad (Gommans 1995, 128–131), Rampur, and Bhopal.

3.2. Lower administrative towns

Between the capital and the village there was a chain of administrative centres which in the Mughal period—which formalized older classifications—comprised three levels (Trivedi 1998, chap. I). First, headquarters of the provinces (*sûba*), which sheltered a miniature replica of the central government with the governor (*sûba-dâr*) or viceroy (*nawwâb*) as representative of the emperor. At the middle level were *sarkars*, intermediary subdivisions, which we may call districts. They were systematized by Akbar on the basis of former attempts. At the lowest level stood, since the beginning of the Delhi Sultanate, the *parganas*, a kind of county, consisting of a collections of villages under the smallest administrative town called *qasba*.

To my knowledge there is no specific study of the towns of the first level. Dacca (Dhaka in the new spelling), now the capital of Bangladesh, which was created as a province headquarter by the Mughals in the beginning of the seventeenth century, may be chosen as an example: in this new city, in addition to the governing nobility, the Mughals attracted merchants and scholars and developed their own architectural style quite different from the previous regional architecture of Bengal (Karim 1964; Eaton 1993, 149–167). Most provincial capitals, like Patna, were, however, older towns.

The middle and lowest levels are treated here together; for no specificity seems to be assigned to sarkâr headquarters which, like pargana headquarters, are small towns. Curiously enough scholarly attention has been drawn mainly to this last level of the qasba, which remained well into the Mughal and British periods the focus of administrative, commercial, and cultural life in the countryside; the Muslims were usually in a majority in these small towns, while they were in a minority in the surrounding rural areas (Richards 1993, 194–196). Historians have been interested first in the administrative setup; for instance Batala in the Panjab, which was founded in 1465, had a population estimated between 15,000 and 18,000 in the beginning of the eighteenth century; each religious community had its own demarcated area with distinct quarters for each caste and occupational group; there were the offices of the revenue officials and of the judge (qâdî) appointed by the provincial authorities; artisan production and commerce enriched the town, which was also the favourite residence of Muslim scholars and Sufis (Grewal 1975). Studies of other towns have underlined the economic importance of these small towns (Bayly 1980 and 1983) as well as their cultural and religious importance which increased from the second half of the seventeenth century when grants to judges and scholars became hereditary (Alam 1986, 110–117).

The history of the qasbas of Northern India has been pursued through the nineteenth century (Pandey 1984), and even up to the end of the twentieth century. A Franco-Indian team headed by Gérard Fussman of the Collège de France has produced what may be considered the most thorough study of an Indian Muslim city, which includes detailed computerized mapping (Sharma 1999; Fussman et al. 2003). This qasba is Chanderi, founded during the Delhi Sultanate and once the secondary capital of the provincial sultanate of Malwa. During the Mughal period, it was the headquarter of a sarkâr; its importance diminished during the British period and in 1901 its population had sunk to 4,000 souls. But it grew again after the independence, reaching about 20,000 at the end of the twentieth century. Its prosperity was mainly based on the hand weaving of silk muslin saris that were considered as the finest in India, even above those of Benares. This not yet fully published collective study covers the history, the economy, and the social anthropology of this town. One third of the population is Muslim, comprising a majority of 2/3 low status artisans, mainly weavers, and a minority of 1/3 elite. Around 12% of the population consists of merchants belonging to the Jain religion (an ascetic sect derived from Hinduism) who nearly monopolize the trade of the town, including a large part of the financing and commercialization of the silk saris. The rest of the population is Hindu belonging to 38 different castes, the two most numerous being the Brahmins (11%) who work as priests, teachers, white-collar employees, or traders, and the untouchable Kolis who are weavers. Of special interest in this study is the detailed computerized mapping of the social groups, showing clearly, as we shall see later, the location of each religious community, and of each caste or group of castes of comparable status within each community—for Muslims have also castes (Gaborieau 1993).

3.3. Commercial towns and ports

There is no single type of commercial town in India. Many inland cities which had also a political role were mainly known for their commercial importance: Multan in Pakistan which tapped into Afghan trade; Patna in Northern India was at the start of Himalayan networks; Burhanpur mediated the trade between Northern India and the Deccan. Let us remember that pilgrimage towns like Benares had also a large commercial importance (Couté and Léger 1989).

The types of coastal towns varied from area to area. Well known from the time of early Muslim travellers are the ports of the western province of Gujarat; first Cambay (Kânbaya) where a colony of Muslim merchants was patronized by Hindu governors before the town was conquered and administered by the Muslims at the end of the thirteenth century; because of silting, it was gradually replaced by Surat which became in the sixteenth and seventeenth centuries the main Muslim port of the Western coast from which pilgrims would embark for Mecca. Ports of the southwestern coast of Kerala where Muslims have always been the subjects of Hindu rulers present another type where the community of Muslim merchants, settled in a separate part of the town, had acquired a sort of monopoly of the maritime trade, as was the case, for instance, in Calicut (Bouchon 1988) and Cannanore. Muslims also developed their own commercial towns in Tamilnad, along the Coromandel Coast of Southeastern India (Bayly 1989, 77–86), the most famous of them being Kayalpattinam; they are almost exclusively Muslim and are richly endowed by the rich Maraikâyyar merchants, each quarter having its own mosque and its network of women's lanes running behind the houses. Because of the difficulty in finding deep waters in the ever moving Ganges-Brahmaputra delta, a new port developed in Eastern Bengal across the Bay of Bengal along the coast of the Burmese province of Arakan when, in 1666, the Mughal definitively wrested Chittagong from the Arakanese kings (Eaton 1993, 234–238) and turned it into the most important strategic and commercial port of the area. It remained this way throughout the British period and in independent Bangladesh.

3.4. Religious and scholarly towns

This is a residual category, for there is no great Indian Muslim town known mainly as a pilgrimage centre. However, a few cities of modest size are mainly known through the tombs of famous saints who attract crowds of pilgrims. Two of them are particularly famous. The oldest one, mentioned since the end of the thirteenth century, is Bahraich where Ghâzî Miyân was buried who, according to his legend, was killed while fighting a holy war against the Hindus; he is venerated by hundreds of thousands of pilgrims who address him to obtain rain for agriculture and to cure diseases like leprosy and sterility (Gaborieau 1996). From the reign of the Mughal emperor Akbar in the second half of the sixteenth century, Ajmer, which shelters the tomb of Mu{în ad-Dîn Chishtî, became the most frequented place of pilgrimage for the whole of Muslim India and a town grew around the tomb. It should not be forgotten that the ephemeral Mughal capital of Fatehpur Sikri was build by Akbar around a place of pilgrimage, namely, the tomb of Salîm Chishtî by whose intercession the emperor got a son to perpetuate his dynasty. Other places which are renowned for their political and economical importance are also important pilgrimage towns: such is the case in India with Delhi which houses, in particular, the greatest Chishtî saint, Nizâm al-Dîn Awliyâ (d. 1325), with Gulbarga in the Deccan which houses the shrine of the famous Chishtî Gesu Darâz (m. 1422), with Multan in Pakistan as the seat of the Suhrawardiyya order, and with Gaur and Pandua in Bengal (Eaton 1993, 176–177). Important Hindu holy towns are also important for Muslims: for instance, Benares where a quarter of the population consists of Muslims (mainly weavers of silk saris). This town has been the subject of the only monograph of urban anthropology devoted to a Muslim population (Kumar 1988; Couté and Léger 1989).

Another type of religious towns is that built by religious sects for the shelter of their own members in isolation from the rest of the Muslim community. The "utopian madînas" built by the millenarist sect of the Mahdawîs in the fifteenth and sixteenth century were the first known examples; but they have been destroyed by persecution (Maclean 2000, 241). Similar modern ventures were, however, started by the sect of the Ahmadiyya in the twentieth century: the first one in Qadian (Qâdiyân), now in India, as the first headquarter of the sect which had to be abandoned at the time of partition (Spate 1957, 189–192); a new headquarter was built in Rabwah in Pakistan, near Lahore. Similarly, the politico-religious party of Maududi has constructed its own community town, first in Pathankot (now in India) and, after partition, near Lahore.

Starting in the second half of the nineteenth century, another development of the colonial period was the growth of scholarly towns which sprang up around Muslim universities: the most striking examples are Deoband for the traditionalists and Aligarh for the modernists; in the latter, the attraction of the University has led to the growth of the Muslim population which is now about half of the 400,000 total population, quite an unusual proportion in India. Similarly, the foundation of a Muslim nationalist university in the Delhi suburb of Okhla has led to the growth of a town that is mainly Muslim.

4. Research themes

After this survey, let us analyze the main themes of research which have appeared in the publications concerning Islamic cities of India and point out unsolved questions and gaps in them in order to indicate further avenues of research.

4.1. Towns or camps?

Let us dispose first of a controversy considering the ephemeral character of the Islamic cities in India. On the basis of remarks made by some Europeans travellers, which compared the Mughal capitals to military camps, undue generalizations were made regarding the ephemeral character of the towns constructed by the Muslims. It is true that the Mughal capitals had in their layout something of the military camp (Gaborieau 1995b); and it cannot be denied either that, in the case where the emperor had left, part of the nobility and its retainers who followed him deserted, thereby, the capital diminishing its population drastically. But variation in the size of the population does not necessarily mean abandonment. Actually, few cities have been completely deserted: in the Deccan, only Firozabad and Bidar were completely emptied of their population, but this is due to the dismemberment of the Bahmani Sultanate and the rise of the capitals of the new smaller states, like Golconda and Bijapur, who grew out of it; Golconda—a formidable hill fortress but ill provided with water—was definitely abandoned in favour of Hyderabad only after the Mughal conquest of 1687 when it had lost its strategic utility; in the north, it is only in Bengal that Gaur and Pandua were deserted in favour of the Mughal Dacca and of the post-Mughal Murshidabad. Of the four Mughal capitals, only Fatehpur Sikri was abandoned and for the reason that the town was in many ways atypical: it was situated out of the way, with no sufficient water, while other Mughal capitals were on the bank of rivers. It was also a folly of Akbar built on a pilgrimage place at the time of a mystical crisis, but could never fulfill any real administrative and commercial function; once the emperor deserted it, it became an empty shell. By contrast Agra, Delhi, and Lahore, built on the site of former Sultanate towns, prospered to this day. Delhi contains seven juxtaposed cities, six out which are now deserted: but the site was never really abandoned, each dynasty constructing a newly planned town by the side of the former ones; even when it ceased to be a capital and was superseded by Agra and Lahore in most of the sixteenth and the early seventeenth century, it never ceased to be an important centre for the economic, religious, and cultural life. Finally, most of the Islamic cities of India were permanent: such was the case of inherited cities like Multan, Lahore, or Patna, but also of newly founded towns like Ahmedabad, Ajmer, or Dhaka.

4.2. Rate of urbanization

The main question discussed by the historians of the Aligarh school—projecting into the past the question of the colonial censuses—was that of the rate of urbanization: on the basis of the reports of the Western travellers and of fiscal documents, the school of historians of

Aligarh Muslim University has estimated that the proportion of the urban population (Hindus and Muslims confounded) was around 15% (Moosvi 1987, 305; Habib 1999, 83–85). These guesses, the only reasoned ones available, may, however, have been inflated for ideological reasons (Islam 1991). For the Aligarh school it is axiomatic that Muslim conquest accelerated the rate of urbanization, that the towns had an economic role comparable to (or even greater than) contemporary European cities, and that the British period was a time of massive de-urbanization. In fact, there is no ground to substantiate such ups and downs. Considering that the census registered a growth of the urban population from 9.3 in 1881 to 16.1 in 1951, it would be more reasonable to estimate that the population of the towns in the Mughal period did not exceed 10%.

4.3. *Administration*

Another common theme of political and administrative history is the question of urban government. Indian historians have emphasized the fact that Muslim India compares very badly with Europe where towns became enfranchised early on. On the contrary, Indian towns had no political autonomy: they were directly under the authority of the king who was locally represented by a kind of police officer called by the Indian name of *kotwâl*: he had a police force at his disposal; he enforced law and order and public morality, controlling prostitution and the sale of intoxicants; he carried out the commands of the king and spied on his behalf; carrying out the orders of the *qâdî*, he supervised prisons, had death sentences executed, and pilloried miscreants (Sarkar 1920, 93–97; Qureshi 1966, 203–206; Singh 1985; Bosworth 1986; Gaborieau 1995b, 31–32; Trivedi 1998, 187–188). He combined in a way the duties of the police officer and of the classical *muhtasib*. It is only in 1659 that Aurangzeb revived this orthodox office, but, according to the reports of travellers, the real power in the towns continued to vest in the *kotwâls*.

The town was traditionally divided into largely self-contained quarters or *muhallas*, each inhabited by specific religious, ethnic, or caste groups. To reach the individual families of these groups, the *kotwâl* had to go through the appointed head of each of these quarters which was recognized as their representatives (Qureshi 1966, 205–206). How this mediation worked is not known.

4.4. Lay out and planning

Except for a few entirely planned cities like Firozabad in the Deccan or Fatehpur Sikri and Shajahanabad in the north, towns usually grew slowly, as in the case of Agra or Lahore. It is, therefore, often difficult to find a coherent pattern. This difficulty is compounded by the presence of mental images which do not correspond to reality: for instance, a representation of Lahore on a route map as a symmetrical town with the fort in the middle may correspond to the ideal model of the army camp, but is very far from the actual Mughal town where the fort is in the northern corner near the wall and the former bed of the river (Naqvi 1968, plate facing cover page; Gaborieau 1995b, 26, 29). Such an eccentricity of the fortress is found not only in Shajahanabad and Agra, but also in Sultanate towns like Ahmedabad (Markovits 1995). For the Deccan, Firozabad betrays a similar eccentricity towards the river (Michell 1993). But it is too early to offer generalizations on Islamic town planning in India. However, Attilio Petruccioli, in a bold essay entitled "Ad quadratum...," has attempted to put forward some common features of Deccani Muslim towns, notably the orthogonal intersection of the main thoroughfares, pointing to an ideal division of the town into the quarters, like in the ideal image of paradise (Petruccioli 1993). The research of Susan Gole on Indian maps and plans is of a great help in the understanding of the layout of the towns (Gole 1989).

4.5. Urban texture, social hierarchy, and spatial segregation

Related to town planning is the question of the distribution of the social groups in the towns. Since most of the buildings have disappeared, and since the descriptions of the original sources are not precise on this point, it is difficult to reconstruct the urban texture, especially as far as the lower classes are concerned: it is impossible to know, for instance, how the artisans lived and worked—even in the not so remote Mughal period. Historical anthropology can be made only tentatively by extrapolation from contemporary observations and from colonial descriptions.

Three features should be noticed. First, the basic urban texture was made less of homogeneous lines of houses than of juxtaposition of estates of the rich nobles, replicas in miniatures of the emperor's palace, each with an army of retainers, servants, and artisans (Blake 1991); the common people lived, as they could, in mud houses between the mansions of the noble (Gaborieau 1995b, 25–26), so that, according to the French seventeenth century traveller François Bernier, Shahjahanabad looked like "several villages joined together (...) and like an army camp rather better and more comfortably placed than in the countryside" (Bernier 1981, 184–185). In addition, there were bazaars, and most probably reserved areas for unclean artisans, since in the Mughal period at least one normative text enjoins the kotwâl to allocate "separate quarters in the town for noisome and despised trades like those of butchers, corpse-washers and sweepers" (Bosworth 1986, 280; see also Qureshi 1966, 206).

Second, there was clearly a hierarchy with a higher town near the royal palace where the house of the high class people, of the nobility, was located, and of a lower town to which the lower classes were relegated in the opposite part of the city: this is noted episodically in the sources; an attempt has been made to elaborate on this question from a map of Shajahanabad dating from the first half of the nineteenth century (Malik 1993).

Finally, people were spatially segregated according to religious communities, ethnical origins, and castes. Such segregation is mentioned repeatedly in the sources, but we lack sufficiently detailed data to reconstruct social maps. A glimpse at traditional towns like Chanderi may, however, help to imagine the past (Sharma 1999, detailed colour map on p. 123): the three religious communities (Muslims, Hindus, and Jains) live in distinct areas; for the Hindus and the Muslims, who are socially differentiated, higher caste people live in areas distinct from the lower castes. Weavers are regrouped in special areas where again Hindus and Muslims artisans have clearly distinct quarters. The same remarks can also be made about Benares, and especially the quarters reserved for the Hindu and Muslim artisans (Kumar 1988, 63–82; Couté and Léger, 11–38).

4.6. Interior and exterior: the limits of the town

A town cannot be defined only by itself, but must be seen in relation to its exterior. The historiography of the Aligarh school has mainly considered the socio-economic relations to the rural countryside (which of course are very important), but has bypassed the more critical questions of the contribution the immediate surroundings of suburbs, markets, and shrines made to the definition of the town from strategic, ritual, and cultural points of view.

Physically the limits of the town were marked by defensive walls usually reinforced by moats, as in the case of Bijapur. The most impressive remaining ones are perhaps those of Bidar which have been preserved with all their gates as they stood in the middle of the sixteenth century, after the latest improvements were introduced to resist gun fire (Yazdani 1947). It is known that part of the socio-economic life of the town was prolonged beyond the walls with densely populated suburbs which contained warehouses and markets (Naqvi 1986, 148).

The religious and cultural life also extended beyond the walls in whose proximity often the tombs of saints and kings were found: visiting these tombs was part of the socio-cultural life. To take again the example of Shajahanabad, the eighteenth and nineteenth century literature insists on the importance of these visits in which women and men equally partook, particularly on Thursday nights and Fridays and on the festivals for the saints. For there were many places to visit outside new Delhi, in particular two sites which had been much beautified by the later Mughals: first, the complex of Qutb al-Dîn Bakhtiyâr Kâkî (d. c. 1235), the patron saint of Delhi, in Mehrauli, near the oldest Muslim town, and the famous Qutb Minâr in the Southwest; then, in the Southeast, the area around the tomb of Nizam al-Dîn Awliyâ (d. 1325) which, to this day, remains the most lively centre for the religious and cultural life of Delhi Muslims and contains also important Mughal tombs; the most important funeral complex, which contains also the oldest Mughal monuments in Delhi, is the monumental complex built over the remains of emperor Humayun (d. 1556); situated in the middle of a Mughal garden, it could also be used as a country residence by the imperial family (Asher 1991, 43–47). These "sorties" outside the walls were the routine of the Muslim life in Indian cities. An anthropologist has even made the case that for Benares regular outings in the morning or on festive days are still an integral part of life for both Hindus and Muslims (Kumar 1988, 83–110).

But there is another religious and juridical aspect which has been seldom mentioned (Gaborieau 1995b, 30–31). The walls are not only a physical defensive limit; they have also a religious significance in canonical Islam for community prayers. The regular Friday prayer is conducted in the cathedral mosque which is located inside the wall, usually, in the higher part of the town near the ruler's palace; exceptional prayers, like the prayers at the end of the month of fasting and of the sacrifice, as well as the prayer for rain in time of drought, have to be performed outside the walls, in a place called in Arabic *musallâ*, but known in India by its Persian equivalent {îd-gâh. Such an external prayer-ground is a regular feature of Indian Islamic towns from the time of the Delhi Sultanate down to the present day; it usually consists of an open ground large enough to accommodate thousands of men; the direction of the qibla is marked only by a wall in the west with a mihrâb but can also be a more elaborate structure (Asher 1991, index under {Idgah). Shajahanabad had such an {îd-gâh (Asher 1991, 202, 235). There the emperor would go, riding on an elephant and accompanied by the highest nobles and even, in the first half of the nineteenth century, by the British residents, to attend the festival prayers (Gaborieau 1995b, 30–31). These festivals had, of course, also a political significance, since they marked the days at which the allegiance to the emperor would be renewed.

Finally, we may ask whether this canonical limit, marked by the distinction of two kinds of prayers, is not also a religious limit separating pure and impure activities. I raise this question in comparison with the Hindu towns where a religious and magical external limit must be kept outside of which the houses of the untouchable castes lie. Based on the existing evidence, it is difficult to come to a definite conclusion (Gaborieau 1995b, 31–32); but is seems that, according to the only scholar who raised the question in connection with Shahjahanabad (Naqvi 1986, 147–148), impure professions were indeed pushed towards the periphery of the cities, but not located outside the walls, still inside, where one could find wine-shops and slaughter houses; there does not seem to have been a well defined magico-religious line dividing the interior and the exterior, as was the case for the Hindus. More research is, therefore, still needed to arrive at a satisfactory definition of the limits of the town.

4.7. Imported and local models: Hindus and Muslims

Finally, we have to deal with the speculations about the models Muslims used to build their cities in India. Most of what has been written is based on the assumption that there are two distinct cultural Muslim and Hindu traditions clearly identifiable through classical texts written in Persian and Sanskrit respectively.

Based on this assumption, we have on one side the scholars who argue that Indian Muslims employed Persian architects and town planners and that some of their towns were built according to Iranian models which owe nothing to the Indian context. Such is the case for instance, according to George Michell, of the Deccan city of Firuzabad, the square plan of which resembles that of Herat: it “can be understood only within the Persian context” (Michell 1993, 190).

For some other cities, however, Hindu models have been invoked. According to Stephen Blake, Shajahanabad—the plan of which resembles an ark where the real centre is the emperor’s palace in the northeastern corner—consciously reproduces a Hindu model which owes nothing to Iranian inspiration (Blake 1991; see comments in Gaborieau 1995b, 32–34).

But for most of the other cities, like Bidar with its circular plan, it is difficult to make such a clear-cut pronouncement. And it is usually agreed (Michell 1993; Petruccioli 1993) that there was much synthesizing of the two traditions. I would add that tracing the origins of the various elements in each case would be difficult, for, contrary to recent ideological constructions of the fundamentalists, be they Hindu or Muslims, the two traditions are not as opposed as is usually conceived: the analogies they establish, for instance, in the domain of the social and spatial hierarchy, often render it difficult to trace the exact origin of a given feature. Take, for instance, the assumption that the traditional Hindu town as well as the Muslim one is based on the centrality of the king’s palace flanked by the most important religious buildings; these central structures marked also the higher part of the town inhabited by the higher classes, while lower classes are relegated to the other part of the town, or even outside of it.

Conclusion

This brief survey has underlined both the immensity of the domain which Islamic cities of India represent and the paucity of studies. Almost everything remains to be done. We may notice that the researches have been concentrated on a few towns which were mainly capitals, Delhi having the pride of place. Perhaps the greatest amount of scholarship has been devoted to Fatehpur Sikri, an abandoned and atypical city, which has fascinated the historians because of its connection with Akbar’s politico-religious ideology. But it is not sure that this peculiar case enlightens us much concerning Indian Muslim urban history. Detailed studies—still awaited—of other Mughal capitals like Agra and Lahore would probably be more rewarding. Small towns have also selectively attracted research. Middle level towns have been much neglected and more research should be done on them. Curiously enough, small towns or qasbas have often been better studied than bigger cities.

Concerning themes of research, more studies would be needed on the administration of the town, on the town texture, and the distribution of communities and castes; and more generally, studies on the religious considerations which contributed to define the interior structure of the town as well as its external limits. To accomplish this, an urban anthropology of Muslim India would have to be developed.

Finally, against the present trend of religious antagonism, it is necessary to insist on the analogies between Hindu and Muslim traditions; it is only through these analogies that one can understand how the adherents of the two religions could live in the same towns which were often jointly constructed and developed. Let us cite, at the end of this paper, the example of Lahore: built by Akbar and Jahangir, it has kept the typical layout of the Mughal capital; for more than half a century, until 1849, it was the capital of a Sikh kingdom; at the end of the British period, the majority of the population consisted of Hindus who had to leave at the time of Partition. It is only after 1947 that Lahore became almost entirely Muslim, with the only exception of a small group of former Hindu untouchables, mainly sweepers who had converted to Christianity and were still treated as untouchable by the Muslims.

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THE OTTOMAN TOWN (FIFTEENTH–EIGHTEENTH CENTURIES)

Gilles Veinstein

In the present state of our knowledge, dealing with the Ottoman town consists primarily in pondering the very notion of "Ottoman town," not only in terms of contents, but also of application: is there a unique type of town characteristic of the Ottoman Empire as a whole that could naturally be stamped as "Ottoman town", or are there sufficiently marked differences between towns that would justify a distinction between different types throughout the empire?[1] Which type would it then be most suitable to select as the Ottoman town and what would be the most appropriate geographical location for it?

There is apparently one generally accepted answer to this question to which most researchers tend to rally, at least implicitly: there exists a spontaneously established distinction between, on the one hand, Mashreq and Maghreb towns, whose kinship goes without saying and which are not Ottoman towns but "Arabic towns in the Ottoman era"—to use André Raymond's words—and, on the other hand, the towns of "central" (relative to the capital) or better yet "nuclear," provinces of the empire, which are the real Ottoman towns. In other words, the dividing line places Arabic provinces on one side, Anatolia and Rumelia (Asia Minor and the Balkans) on the other. This means that the discrimination is based on ethno-cultural grounds and that it opposes the cities of the Arabs to those of the Turks. This can only suit nationalists on both sides who, to this day, have picked up and developed the theme without moderation. One must add that scholars more or less external to these ideological preoccupations naturally tend to embrace and reinforce this distinction insofar as it corresponds to a similar division in academics that opposes Arabic and Turkish specialists and, more precisely, specialists of the Ottoman Empire: the empire purportedly had two kinds of towns, those pertaining to Arabic Studies and those pertaining to Turcology…

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[1] Cf. G. Veinstein, "La ville ottomane: les facteurs d'unité," in La Ciudad Islamica, Institucion Fernando el catolico (Saragossa, 1991).

It is precisely this "evidence" that we must question first through an *a priori* reasoning consisting in reviewing the various factors that may have influenced urban processes in the Ottoman Empire.

Beforehand, one must note a fact that raises a number of reflections: all these towns belong to one and the same empire. True, this empire, built "on three continents," according to the accepted way of saying, stretches far enough latitudinally and longitudinally to offer great variety in natural conditions, and marked differences in climate and available construction material cannot but affect housing. There is a clear distinction between zones of stone architecture—Syria, southeastern Anatolia, and the Kayseri region—and zones of wooden architecture. Wood was the main material when in good supply, as in the traditional houses of Istanbul and the *yalı* of the Bosporus, and when in short supply was used only for building the framework, which was then filled in with miscellaneous material.

At the same time, the sultans of Istanbul were not first in bringing political unity to these disparate regions: these had all been part of the Roman and Byzantine empires whose heritage at the time of the Ottomans' arrival was more or less recent and vivacious in some regions or, on the contrary, buried under subsequent strata. In any case, the effect of this common filiation on the urban landscape of the Ottoman era is very concrete, not only because of the, sometimes spectacular, presence of antique and Byzantine monuments in most of these towns, but also because of subsisting traces in the topography of Roman road patterns (which have survived to this day). What is a well-known phenomenon in many Western towns, notably in northern Italy, attested as well in several cities of the Mashreq, thanks to Sauvaget's work, is also found in Salonica, Nicaea, or Rhodes or, as P. Pinon demonstrated, in Izmir, in the ancient Turkish quarter around the agora or, to a lesser extent, in Bursa, in the citadel quarter.[2]

As for the Ottoman period itself, the towns of the empire share, as a whole, the fact that they belong to the same period, thereby generally partaking in technical and socio-economical developments whose impact extends far beyond the boundaries of the Ottoman world. In our opinion, Wirth's work on the development of urban economic centres in the Muslim area gives a good example of those general phenomena linked to a specific period. The perfecting of these centres, marked by the adjunction of caravansaries with internal courts that had so far been placed near city gates, started in the late fourteenth and early fifteenth centuries and culminated in the highest achievements and most elaborate monumental buildings of the period between the sixteenth and nineteenth centuries. This was not, however, restricted to the Ottoman area; it also spread to the Safavid area and other states, albeit in rudimentary or altered forms.[3]

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[2] Cf., among others, J. Sauvaget, "Le plan antique de Damas," *Syria* 26 no. 3–4 (1949): 314–358; G. Mansuelli, *Urbanistica e architettura della Cisalpina romana* (Brussels, 1971); P. Pinon, "Les tissus urbains ottomans entre Orient et Occident," in *Proceedings of the 2nd International Meeting on Modern Ottoman Studies and the Turkish Republic, Leiden, April 21–26, 1987*, ed. E. Van Donzel (Leiden, 1989), 17.

Ottoman towns also experienced specific conditions connected to their integration into the empire. Contrary to long-standing and tenacious prejudices about the Ottoman regime, these conditions were far from unfavourable to urban growth as a whole, though one must concede that they benefited specific towns unevenly, depending on these towns' position in the political-administrative, strategic, and economic system of the empire. In any case, integration into this immense and powerful structure was *a priori* propitious to prosperity: first, it brought relative order and security both inside the empire and in its relationships with its neighbours, a situation which generally favoured communications and economic activity. Of course, the *pax ottomanica* was sometimes disrupted: banditry was never entirely curbed and frontiers (which fluctuated over time) were always more exposed to troubles. Second, starting with the late sixteenth century, central authorities loosened their grip, even if they sometimes were efficaciously taken over, on a reduced scale, by local governments.

The empire simultaneously gave birth to a very large domestic production and consumption market relatively unified in legislative, fiscal, administrative, monetary, and linguistic terms and, in addition, stimulated by developing relations with the West as well as by the regular exchanges with the rest of the Eastern world—this aspect of Ottoman trade is still the least known and has long been underestimated.

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[3] Cf. E. Wirth, "Zum Problem des Bazars (*suq, çar[*). Versuch einer Begriffbestimmung und Theorie der traditionellen Wirtschaftszentrums der orientalisch-islamischen Stadt," *Der Islam* 1974: 203–260, 1975: 6–46; id., "Die orientalische Stadt. Ein Überblick aufgrund jüngerer Forschungen zur materiellen Kultur," *Saeculum*, 1975: 45–94. Cf. also X. de Planhol, "Sur la genèse du Bazar," in *Régions, villes et aménagement. Mélanges jubilaires offerts à Jacqueline Beaujeu-Garnier* (Paris, 1987), 445–474.

A factor of urban growth, this commercial dynamism particularly fostered the extension of urban trade centres, and in most of them, the reinforcement of typical infrastructures, bazaars, *bedestens*, markets, *hans*.[4]

As recent works following those of Inalcik demonstrate, the Ottoman authorities evinced more interest and complacence than has been said toward the interplay of economic forces they were facing (as indicated by commercial treaties concluded at all epochs, facilities granted to big merchants with regard to the constraints inherent to the guild system, and the involvement of numerous dignitaries with business). However, the Istanbul sultans' interest was larger in scope: they were openly interested in the city and developed a proactive urban policy that was implemented in various ways and at different levels: granted deportation (*sürgün*) was undertaken in response to political considerations (aiming to prevent the formation of centres of resistance, particularly in newly conquered territories), it was also a clear response to the authorities' concern for the settlement or resettlement of certain towns and for revitalizing their economic activity by providing them with necessary manpower and technical skills.[5] Mehmed II's initiatives in revitalizing Istanbul in the morrow of the conquest are well known: Muslim, Christian, or Jewish elements from various parts of Anatolia and Rumelia, the Greek islands, and the Crimea were forcibly resettled with a new status in the neighbourhoods and houses of ancient Byzantium.[6] The conqueror's successors also endowed their capital with all sorts of craftsmen and artists brought back from their military campaigns. This was particularly true of Selim I who took much from Mamluk and Persian cities. It is true that, in the cases where these measures applied to townsmen and not to country people, they did not lead to an overall increase, but to a redistribution of the urban population toward privileged areas. In any case, they contributed to a certain standardization of production throughout the empire, particularly in art. Though of a different nature, the Sultans' reception of the Jews expulsed from Spain, Portugal or Italy and later, of *conversos*, their successors—whether it be the expression of a certain tolerance or of consummate pragmatism—lead this time to similar results in numerous towns scattered in various parts of the empire, starting with Salonica, Istanbul, and Safed. For that matter, the empire always remained open to all types of refugees, who—and this is particularly true of those that people in the West called renegades—played a role in its technical and scientific evolution, whose fruits benefited the towns.

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[4] Cf. S. Faroqhi, *Towns and Townsmen of Ottoman Anatolia: Trade, Crafts and Food Production in an Urban Setting, 1520–1650* (Cambridge, 1984), 23–48. M. Cezar, *Typical Commercial Buildings of the Ottoman Classical Period and the Ottoman Construction System* (Istanbul, 1983).

[5] Cf. particularly Ö.-L. Barkan, "Osmanlı imparatorlukunda bir Iskan ve Kolonizasyon metodu olarak sürgünler," [Deportation used as a settlement method in the Ottoman Empire] *Istanbul Üniversitesi Iktisat Fakültesi Mecmuası* 6, nos. 1–4 (1949–1950): 524–569. N. Beldiceanu, *Recherche sur la ville ottomane au XV^e siècle. Étude et Actes* (Paris, 1973), 36–44.

[6] Cf. H. Inalcik, "The Policy of Mehmed II toward the Greek Population of Istanbul and the Byzantine Buildings in the City," *Dumbarton Oaks Papers* 23/24 (Washington, 1969), 231–249.

The authorities' direct interest in architectural, and, more generally, urban matters was clearly manifest in the institution, in the early sixteenth century at least, of a corps of palace architects (*mi{mâr-i hâssa*),[7] which, toward 1535, comprised twelve architects, one carpenter and one tile roofer (*kiremetchi*).[8] It was headed by a chief architect (*mi{mâr bashı*). This position was held by the great architect Sinan from 1539 to 1588 with the magnificence that we know. This powerful figure who enjoyed a position close to the sovereign did not limit his competence to the palace or even the capital since he controlled all great civil, military and religious construction work financed by the sovereign and his entourage. For long-distance orders, he merely drew a sketch that a member of the corps executed at the place in question. This explains the incredibly high number and ubiquity of the works attributed to Sinan.[9] Starting with the early seventeenth century, architects were placed by the central government as local representatives of the *mi{mâr bashı* in a great number of Ottoman towns. They had at their levels the same competence in city planning as their senior in the capital, that is, they controlled all the guilds related to the building trade. It appears that in a good number of places, the local architect had to give prior agreement to all construction projects, and he sometimes happened to distribute available construction material among skilled craftsmen. While the initial role of the *muhtasib* was gradually reduced and he was turned into a subordinate tax collector who sometimes farmed his office, the local architect became invested with his urbanistic competence.

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[7] Cf. S. Turan, "Osmanlı Te‘kilatında Hassa mimarları," [Official Architects in the Ottoman Organization] *A.U.D.T.C.F. Tarih Ara‘tırmaları Dergisi* 1, no. 1 (1963): 157–202.

[8] Cf. Ö. L. Barkan, "H. 933–934 (M. 1527–1528) Mali yılına ait bir bütçe örneki," [Budget sample for fiscal year 1527–1528] *Istanbul Üniversitesi Iktisat Fakültesi Mecmuası* 15, no. 1–4 (1953–1954): 329.

[9] Cf. A. Kuran, "Suleyman The Magnificent's Architectural Patronage," in *Soliman le Magnifique et son temps*, ed. G. Veinstein, Rencontres de l'École du Louvre (Paris, 1992), 217–223.

It was clearly the case for the chief architect in the capital. He was responsible for implementing the sultan's urban regulations and, in most cases, probably inspired them.

This abundant corpus, elaborated between the mid-sixteenth century and the Tanzimat era, is known to us—at least concerning Istanbul and to some extent Mecca—thanks to the numerous documents published by Ahmed Refik and Osman Nuri, and more recently synthesized by S. Yerasimos.[10] The latter emphasizes the documents' definitely "customary" character, inspired by the State's concern for public utility as opposed to the principles of the *shari{a* that were geared toward protecting private interests. Here we can observe the Ottoman administration's same determination to regulate all aspects of urban matters minutely as in so many other domains: height zoning, front features (canopy roofs and corbels were theoretically banned), prescribed and proscribed materials, prohibited areas, etc.

A good number of these principles admittedly correspond to openly expressed security concerns: wood and housing developments were proscribed for fear of fire hazards; neighbourhoods were protected from aggressions by gates; illegal and marginal constructions and *hans* sheltering singles were banned for fear of clandestine immigration; building against the external side of ramparts was forbidden (in cities liable to be besieged, this ban aimed to avoid facilitating the besieger's task, as in Algiers or sixteenth-century towns on the Croatian border), but other motivations were put forward concerning eighteenth century Istanbul, namely that the city walls must be used as a firebreak; traffic around gates and ladders must not be blocked; lastly, it was recommended not to give a bad impression to foreign ambassadors arriving to Istanbul.[11]

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[10] Osman Nuri, *Mecelle-i Umur-i Belediye* [City Code] (Istanbul, 1922); A. Refik, *On altıncı asırda Istanbul hayatı, 1553–1591* [Life in Istanbul in the sixteenth century] (Istanbul, 1935); id., *Hicri onbirinci asırda Istanbul hayatı, 1000–1010* (Istanbul, 1931); id., *Hicri onbirinci asırda Istanbul hayatı, 1100–1200* (Istanbul, 1930); id., *Hicri onucuncu asırda Istanbul hayatı, 1200–1255* (Istanbul, 1932); S. Yerasimos, "La réglementation urbaine ottomane (XVI^{e}–XIX^{e} siècles)," in *The 2nd International Meeting*…, op. cit.: 1–14.

In another study, Yerasimos states that the repetition of the same bans across the centuries is evidence of their total inefficacy. He ascribes this situation to the protection of private interests by the qadis, who gave priority to the shari{a over the sultan's regulations. If this is so, reality must have resembled more what was proscribed than what the sultan and his architects advocated.[12]

This is true at least of "informal," private, architecture and more generally, of what is sometimes called "micro-urbanism" or "infill."

On the other hand, only through official architecture could the sovereign successfully leave his mark and the mi{mâr bashı put his principles into practice. Instituting pious endowments helped finance the projects, but also determined what types of construction must be undertaken: religious and charitable buildings, utilities, which were built not as separate elements but jointed to each other to form "complexes" (külliye), and which exerted a structuring effect on entire sections of the urban fabric. The Ottoman sultans and their families were great founders of urban waqf, whose number increased in the sixteenth century when the State's wealth was at its highest, and the tradition was maintained afterwards when the women of the dynasty, mothers and wives of the sovereigns, were particularly active in this area in the seventeenth and eighteenth centuries.[13] High dignitaries and provincial governors followed the lead. In these conditions, the waqf played a decisive role not only in ornamentation but also in the improvement of services and the development of Ottoman towns. Entire areas could be remodelled according to a general plan following the construction of a large-scale foundation. This can be illustrated by examples both from the Mashreq and the Balkans, namely, the foundations by two Damascene governors, Sinan and Murad Pasha, in the late sixteenth-century, and those of Gazi Husrev Bey, governor of Sarajevo in the early sixteenth century.[14]

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[11] Decree of May 2–June 7, 1722, published by O. Nuri, op. cit.: 1089, quoted in Yerasimos, art. cit.: 7. On the ban on building around city walls, both inside and outside, see Ba‘bakanlık Arívi, Istanbul, Muhimme Defteri 3, no. 82.

[12] S. Yerasimos, "À propos des réformes urbaines des Tanzimat," in Villes ottomanes à la fin de l'Empire, ed. P. Dumont and F. Georgeon (Paris, 1992), 17–32.

[13] Cf. L. P. Pierce, The Imperial Harem, Women and Sovereignty in the Ottoman Empire (Oxford, 1993), 198–218.

[14] Cf. B. Djurdjev, s.v. "Bosna," Encyclopédie de l'islam, 2nd ed., 1:1301–1305. A. Handzim̦ "O formiranju nekih gradskih naselja u Bosni v XVI stoljecu," Prilozi za orijentalnu

Whether they were due to objective conditions or to a more or less determined and efficient action on the part of central authorities, the factors favouring urban growth that we have just reviewed had an overall impact, but there is no doubt that they unevenly benefited specific regions and towns. In this respect, Istanbul was certainly privileged, being both the main centre of attraction for all the empire's commercial exchanges and the primary object of imperial solicitude in terms of settlement, supplies, facilities, development, and beautification. This explains why historic Middle-Eastern metropolises (Cairo, Aleppo, Damascus) rank far behind Istanbul in the classification of the empire's main cities. Stunted by their proximity to the capital, Anatolia and Rumelia only had medium-sized towns at best—Bursa, Salonica, and Edirne.[15] We have also seen that the urban regulations that we know of concern the capital almost exclusively and we do not have a very clear vision of how they were implemented in other places. As for the influence exerted by the *mi{mâr bashı*'s architectural models in the Arabic provinces of the empire, A. Raymond's survey shows how limited it was quantitatively and chronologically: he only noted down some fifteen monuments in the Ottoman style, among which nine date back to the sixteenth century, three to the seventeenth, and three to the eighteenth. Besides, the two sole monuments of the Maghreb, the New Mosque in Algiers and the Sidi Mehrez Mosque in Tunis, are more recent (dating from 1660 and 1686 respectively) and they express the will of their local sponsors to affirm their ties with the Porte symbolically, and not the control of Istanbul's official architects.[16] These remarks suggest that aside from all other considerations, the greater or lesser distance from the capital was per se a factor of differentiation among Ottoman towns, but it is not possible at this point to evaluate its significance exactly.

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filologiju 25 ([1975] Sarajevo, 1977): 133–169; in German: "Ein Aspekt der Entstehungs Geschichte Osmanischer Städte im Bosnien des 16 Jahrhunderts," *Südost-Forschungen* 37 (1978): 41–49; J.-P. Pascual, *Damas à la fin du XVI*^{e} *siècle d'après trois actes de waqf ottomans*, vol. 1 (Damascus, 1983).

[15] Cf. Ö. L. Barkan, "Essai sur les données statistiques des registres de recensement dans l'Empire ottoman," *Journal of Economic and Social History of the Orient* 1 (1958): 9–36.

[16] A. Raymond, "L'architecture dans les pays arabes à l'époque ottomane," in *Histoire de l'Empire Ottoman*, ed. R. Mantran (Paris, 1989), 684–688.

Moreover, we have last to consider a factor of unity between the towns of the empire that many would agree is decisive, to wit, Muslim towns, or at least towns under Muslim domination (many of them, and this does not solely apply to the Balkans, had large minorities, or perhaps even non-Muslim majorities). Scholars who adhere to G. E. Von Grunebaum's and G. and W. Marçais' view that, as a doctrine, juridical system, and more generally as a culture, Islam determines a specific city model which they call "Muslim town," will tend to liken the Ottoman town to the Muslim town ("Eastern" or "Levantine" town, in the words of historians of the Balkans) and will not *a fortiori* distinguish among Ottoman towns. And yet, we do note divergences between the Hanafite, Malakite, and Shafeite schools of jurisprudence that shared the empire's regions and cut off the Mashreq both from central provinces and the Maghreb, but it is nevertheless true that these differences had little effect on the towns aside from well-known divergences in the styles of mosques and minarets. Of more significance are perhaps the variations in antiquity and the conditions of Islamization in the regions: we are definitely dealing here with a contrast between Arabic and central provinces. On the one hand, there are regions where Islamization took place several centuries before Ottoman domination and is interconnected with the Arabic language and culture. In the central provinces one must distinguish between central and eastern Anatolia, where Islamization, though much more recent than in the Arabic provinces, took place before the Ottomans' arrival and developed in a culture strongly influenced by Persia; lastly, northern and western Anatolia and the Balkans, where Islam was brought by the Ottomans themselves, in a form descending from Anatolian Islam and therefore, marked by Persian culture.

These different situations engender obvious divergences, at least in architectural styles and terminology, though not necessarily in the reality the latter denotes: the terms *bazar*, used for the commercial centre and *bedesten* (corrupted form of *bazzistan*), used to designate the covered market where precious goods were traded and well looked after, are commonly used in the empire's towns. But differences in naming definitely separate Arabic from central provinces: in central provinces, the *han*'s or *kervansaray*'s, which were simultaneously warehouses, inns for travellers and merchants, and centres for specialized wholesale trade, are not designated with the synonyms used currently in Arabic provinces (*qaysariyya*, *funduq*, *wakala*, or *ukala*). Central provinces only use the term dükkan to designate shops, to the exclusion of hanut; streets and parts of specialized streets lined with shops are called there charshı and not suq. The matter is purely linguistic, for all these terms designate the same commercial entities.

If we attempt now to recapitulate the common features shared by all Ottoman towns, as well as the slight differences that we occasionally pointed out, we are inclined to postulate that these towns are certainly closely related (to wit the above urban economic centre) but, as we saw, some disparity is also possible, in terminology and architectural style, for instance. But if we want better to evaluate the impact of partly identical and partly different conditions on the basic particulars of the respective urban fabrics, we must leave the speculative level and move on to concrete comparisons of the data: drawing of the general plan, plot plan, built-up surface, circulation area; but also the spatial distribution of functions and of the population according to wealth or ethno-religious identity (most towns showed diversity in that respect, which brought the Mashreq closer to central provinces than to the Maghreb).

This type of exercise naturally entails that specialists of the different areas engage in a dialogue above the academic division between Arabic and Ottoman specialists mentioned above, but also, that the research on both sides be done at the same pace and in similar directions. To our view, this has been insufficiently done, at least until recently. Whether or not cities of the Arabic and central provinces are fundamentally different, it is clear that they have been studied rather differently by different people. This disparity must and can be corrected: if only by the very fact that all the cities in question belong to the same period and the same political-administrative structure, the conditions for their study, both fieldwork and archival research, are by and large analogous. In this respect, the Maghreb is at a relative disadvantage compared to the rest of the empire, since the Istanbul bureaucracy never undertook census registers in the area, which is also the case for other Arab countries (Egypt, Hedjaz, part of Iraq). Furthermore, there are apparently fewer surviving qadi registers there.

Fieldwork is more advanced in Arabic provinces, thanks notably to the "French school" (a fact not unrelated to the colonial situation, of course), but recourse to Ottoman archives is infrequent, either because they were lacking (as the Ottomans did not take the census in Cairo, Algiers, Tunis, Baghdad, Mecca, and Medina) or because they were not accessible, at least at the start: hence the care with which these scholars assessed the population level of a given town and its evolution on the basis of concrete "urban signs" (built-up surface, types of habitat, number of *hammams*, variation in the surface of *khutba* mosques, movement of tanneries) when they adapted the methods elaborated by Torrès Balbas, the historian of Medieval Spain's Muslim towns. This inevitably paved the way to most concrete investigations.[17]

On the contrary, monographs on traditional towns (before nineteenth-century reforms)[18] are legion in the Turkish field, but tend to be more "bookish," to be overwhelmed by the overabundance of Turkish archival material, to conform to what has been called "document fetishism" (Halil Berktay), and ignore the treatment of questions, particularly those related to urbanism. In the best of cases, when they do not fall within the province of local scholarship (with both its merits and limitations), they are contributions to institutional and social history rather than studies on urbanism proper (Beldiceanu, Inalcik, Mantran, Todorov, Ergenç, Gerber, Faroqhi). It seems even that historians of Arabic towns, notably A. Raymond, A. Rafeq, and A. Abdel-Nour, took the lead again in the exploitation of qadi registers: which is not to say that these sources have not been the subject of pioneering works in Turcology in a long time (Inalcik, Barkan, Jennings, Todorov, Ergenç, Özdemir, Faroqhi, Gerber), but, to our view, their authors and others later on did not clearly care to study these materials in the framework of the town's spatial structures and the distribution of its population.

For all that, there is no need to exaggerate and the gap between the two approaches tends to be reduced: during the last decades, there have been sufficiently numerous and serious studies on the concrete aspects of the town in central provinces to allow us to begin to draw comparisons with Arabic towns on these points (urban habitat,[19] physical structures,[20] facilities,[21] urban fabric).[22]

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[17] Cf. L. Torrès Balbas, "Extension y demografia de las ciudades hispano-musulmanas," *Studia Islamica* 3 (1955). A. Lezine, *Deux villes d'Ifriqiya* (Paris, 1971). A. Raymond, "Signes urbains et étude de la population des grandes villes arabes à l'époque ottomane," *Bulletin d'Études Orientales* 27 (1974).

[18] Reforms of urban institutions in the Tanzimat era and the general context of the second half of the nineteenth century changed the conditions in Ottoman city planning: we are not considering this period in which the unity of the Ottoman city acquired new characteristics, nor the literature on the subject, especially recent: cf. the handlist provided in the work referenced above, edited by P. Dumont and F. Georgeon.

In a synthesis of the first results of research on the urban fabric, P. Pinon[23] concludes that the real division does not obtain between cities of the Arabic and central provinces, but that the dividing line crosses Anatolia, approximately linking Izmir with Erzurum, or more precisely, Antalya with Erzurum. Thus, it contrasts the Balkans and northwestern Anatolia on the one hand with southeastern Anatolia on the other, the latter being joined to the "Arabic," i.e., Near Eastern and Maghrebine, side, this rapprochement having no ethnic or nationalistic connotation. This split is verified by the habitat. The Balkans and northwestern Anatolia are the seat of the so-called "Turkish" house (also called by certain authors "Ottoman," "Bulgarian," or even "Byzantine"): it is a house with a hayat or sofa, i.e., a central hall lined with rooms; the house is two-storied, with a solid podium, made of wood or of a wooden supporting frame filled in with mixed materials, covered with a sloping overhanging roof, with projecting corbels, and painted in bright or soft colours. Lastly, it is extrovert, with numerous windows and sometimes the door opening onto the street. Specimens of this type have survived in Afyon, Bursa, Kula, Birgi, Tokat, Ankara, as well as in Istanbul, Edirne, Plovdiv, Melnik, Kastoria, Ambelakia, and Sarajevo. However, one must keep in mind that these houses do not antedate the eighteenth and nineteenth centuries and have already undergone Western influence. The more ancient Ottoman house is not well known. It was apparently more introvert, and in this, was closer to the "Arabic" house, which has a central court (qa{a) and is dominant in Aleppo as well as in Anatolian towns, south of the dividing line defined above: Diyarbekir, Urfa, Mardin, or Kayseri.

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[19] Cf. Balcı, Eski Istanbul evleri ve Bogaziçi yalıları [Old Houses of Istanbul and Residences of the Bosporus] (Istanbul, 1975); R. Osnan, Edirne evleri ve konakları [Houses and Palaces in Edirne], ed. A. S. Ünver (Istanbul, 1976); N. Araz, "Eski Bursa evleri," [Bursa's Old Houses] Sanat Dunyamız 4, no. 10 (1977): 6–21; B. Çetinor, "Eski Ankara evleri," [Ankara's Old Houses] Ilgi 8, no. 27 (1979): 7–13; A. Arel, Osmanlı konut gelenel inde tarihsel sorunlar [Historical Questions on the Traditional Ottoman Habitat] (Izmir, 1982); S. H. Eldem, Turk evi Plan Tipleri [Layout Types of the Turkish House] (Istanbul, 1954); id., Türk evi. Osmanlı Dönemi [The Turkish House: Ottoman Period], vol. 1 (Istanbul, 1984). S. Faroqhi, Men of Modest Substance: House Owners and House Properties in Seventeenth-Century Ankara and Kayseri (Cambridge, 1987); A. Borie and P. Pinon, "La maison turque," Bulletin d'Information Architecturale, suppl. to no. 94 (1958); id., "La maison ottomane: une centralité inachevée?" Les Cahiers de la recherche architecturale, no. 20–21 (1988); id., "Maisons ottomanes à Bursa," in L'Habitat tradtionnel dans les pays musulmans. Actes du colloque tenu à Aix-en-Provence en 1984, III (Paris, 1991); P. Pinon, "Le voyage d'Orient de l'architecte Jean-Nicolas Huyot (1817–1820) et la découverte de la maison ottomane," Turcica 26 (1994): 211–240.

[20] Cf. notably G. Tankut, "The Spatial Distribution of Urban Activities in the Ottoman City," TA 3, 211: 245–265; id., Nauplia-Anabolu-Napoli di Romania: A Structural Analysis (Ankara, 1978).

[21] Cf. notably C. Orhonlu, Osmanlı Imparatorlulunda "ehircilik ve Ula'ım üzerine Aratırmalar [Studies on City Planning and Communications in the Ottoman Empire], ed. S. Ozbaran (Izmir, 1984); K. Ceçen, Istanbul'da Osmanlı Devrinde Su Tesisleri [Water supply Installations in the Ottoman Period] (Istanbul, 1979).

[22] S. Aktüre, "17, Yüzyıl baİndan 19, Yuzy ıl ortasına kadarki dönemde Anadolu Osmanlı 'ehrinde 'ehirsel yapının deki'me süreci," [The Transformation Process of the Urban Structure of the Ottoman Town between the early seventeenth and the mid-nineteenth Centuries] Mimar Fakültesi Dergisi 1, no. 1 (1975): 101–128; id., 19, Yuzyıl sonunda anadolu kenti mekansal yapı çözümlesi [The Dissolution of the Spatial Structure of the Anatolian Town at the End of the Nineteenth Century] (Ankara, 1978); M. Cerasi, "Il tessuto residenziale della città ottomana (secc. XVII–XIX)," Storia della città 31–32 (1985): 105–122.

[23] "Les tissus urbains ottomans…," art. cit.

P. Pinon also observes that the works attributed to the mi{mâr bashı Sinan are rare, not only in Arabic provinces, as already noted, but also south of the same line (only a few monuments can be found in Konya, Kayseri, Payas, and Diyarbekir).

Lastly, the cleavage applies to the layout and morphology of the town (in the sense used by P. H. Panerai) in a way not unrelated to the differentiation in the habitat, which, as we have said, increased over time. Unlike Western, even medieval, towns, all Ottoman towns undoubtedly share common features, such as less continuous circulation zones geometrically and topologically and more irregular plots which emerged over time as private housing and concerns, undoubtedly encouraged by Islamic law, encroached upon public land. However, while the morphology of the towns of southeastern Anatolia is very similar to that of the cities in the Mashreq and Maghreb, as far as it is possible to generalize (the layout of Kayseri, Konya, Urfa, and Diyarbekir closely resembles that of Aleppo and Mosul, for instance), there are perceptible differences in the Balkans and northwestern Anatolia: easy-to-locate continuous great axes serving the centre and prolonged by main roads (these axes are more numerous than in "Arabic" towns); straighter and longer dead-end streets; less densely settled habitat (the houses are inside gardens and share only one wall with their outer limits), but, and this is yet another difference, this scattered type of housing was partially connected to the street by façades.

P. Pinon then concludes that there did exist an original urban type, halfway, so to speak, between the "Arabic" and "Western" towns. If this analysis is confirmed by future studies and comparisons, then the term "Ottoman town" will be legitimately used to refer to this type of town.

PART THREE

CASE STUDIES

BAGHDAD IN THE ABBASID ERA: A COSMOPOLITAN AND MULTI-CONFESSIONAL CAPITAL

Françoise Micheau

The history of Baghdad divides itself into three phases: first, the prestigious capital of the Abbasid caliphs from the time of its foundation in 145/762 by al-Mansur up to its conquest by Mongol armies in 656/1258; then, for centuries, a simple provincial metropolis; and finally, since 1921, the capital of the kingdom of Iraq, whose dramatic reality assails us with daily images of devastation. Here we are interested only in the first of these periods.[1]

Nothing, however, remains of the capital of the Abbasid caliphs, since monuments and urban fabric have, with a few exceptions, disappeared. Fires, floods, destruction, wars, invasions and, more simply, the wear of centuries have erased all trace of caliphal edifices, which were often in unfired brick. Thus, Baghdad has become a capital with no "site of memory." Numerous specific studies touching on the city's monuments have accompanied campaigns of architectural survey and restoration.[2] From these we see that the oldest monumental remains date back to the sixth/twelfth-seventh/thirteenth centuries, and are extremely scarce. The most important is the Mustansiriyya madrasa founded in 630/1232. It was abandoned in the seventeenth century and very crudely restored in 1945 and 1960. Today it houses a museum. We may add four isolated minarets, the Qasr {Abbasi, built perhaps by the caliph al-Nasir (575/1180–622/1225), two doors of the Mustazhir wall (Bab al-Wastani and Bab al-Talism), and lastly a few tombs. We hardly ever think of the number and magnificence of the palaces, mosques, and princely houses of the medieval city.

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[1] On the history of Baghdad in the Abbasid era, see especially G. Le Strange, *Baghdad during the Abbasid Caliphate* (Oxford, 1900; new edition London and Dublin, 1972); *The Encyclopaedia of Islam*, new edition, vol. 1, s.v. "Baë dad"; special issue of the journal *Arabica* 9 (1962); special issue of Al-Mawrid 8, no. 4 (1979) [in Arabic]; F. Micheau, "Bagdad," in *Grandes villes méditerranéennes du monde musulman médiéval*, ed. J.-Cl. Garcin (Rome, 2000), 87–112.

[2] V. Strija and J. Khalil, "The Islamic Architecture of Baghdad. The Results of a Joint Italian-Iraqi Survey," *Annali Instituto Universitario Orientale*, 1987, suppl. no. 52; M.-O. Rousset, *L'archéologie islamique en Iraq. Bilan et perspectives* (Damascus, 1992).

Even the toponymy and layouts of streets have not preserved the memory of ancient times. The layout of the wall built in 488/1095 by al-Mustazhir alone remained just as it was from the end of the fifth/eleventh century to 1870, when it was destroyed apart from the two gates mentioned earlier.

Moreover, the plans of Abbasid Baghdad are mere reconstructions based on the data provided by ancient Arab geographers. They are highly hypothetical, all the more so in that the waterway of the Tigris and the urban space have undergone major transformation over the centuries. The relevant pioneer work, which remains a reference point to this day, is that of Le Strange. However, Le Strange did not himself regard his plans, established by period and by quarter, as definitive: "My plans of mediaeval Baghdad are, to a certain extent, tentative."[3] Since the 1950s, Iraqi scholars have conducted important work on the city's history and topography. They have enriched the Orientalist's[4] data, supplied further detail, and sometimes corrected it.

Though some repairs were made during recent excavation work, there was no attempt at an archaeological dig. Moreover, the investigations still possible at the beginning of this century, when the greater part of the site was covered with agricultural or wasteland, are no longer possible on account of the progress of urbanization.

Hence, our knowledge of Abbasid Baghdad is based solely on written sources. These are, fortunately, numerous, and have been extensively used by modern historians. The three most important descriptions of the Baghdad of the Abbasid period are by al-Ya{qubi, Ibn Sarabiyun, and al-Khatib al-Baghdadi. The first of these authors opens his Kitab al-buldan, written in 278/891, with his famous account of the foundation of the "Round City" and the precisely established list of all concessions and their beneficiaries.[5] Ibn Sarabiyun (or Ibn Serapion) provides, for the beginning of the fourth/tenth century, an accurate description of the channels in Baghdad; this has been the starting point for all attempts at reconstituting the urban topography.[6] As for al-Khatib al-Baghdadi (d. 463/1071), he introduces his biographical dictionary, entitled *Taʾrikh Baghdad*, with a valuable description of the city, which takes the form of a collection of traditions derived from previous authors rather than being a testimony to the city of the fifth/eleventh century.[7] Texts by other important geographers of the Abbasid period, such as Ibn Hawqal and al-Muqadassi, are notably less rich.[8] By contrast, the description of Baghdad by Ibn ʿAqil (d. 513/1119) provides precious information about the city after the Seljuq conquest.[9] The testimonies of subsequent geographers and travellers such as Ibn Jubayr, who passed by the city in 581/1185, Yaqut, who, in 623/1226, wrote his "geographical dictionary," or Ibn Battuta, who stayed in the city in the eighth/fourteenth century, above all attest to the city's decline from its times of splendour; but they do also provide complementary indications that are sometimes useful.

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[3] Le Strange, Baghdad, p. xi. See pp. 352–356 for an explanation of the method followed.

[4] Especially A. Susa and M. Jawad, Dalil mufassal li kharitat Baghdad (Baghdad, 1958); S. al-{Ali, Baghdad Madinat al-Salam: Al-janib al-gharbi, 2 vols. (Baghdad, 1985); and a number of contributions in Al-Mawrid journal.

[5] Al-Ya{qubi, Kitab al-buldan, Bibliotheca Geographorum Arabicorum 7, ed. M. J. Goeje (Leiden, 1892), 237–254; trans. G. Wiet, Les pays, Publications of the Institut Français d'Archéologie Orientale. Textes et traductions d'auteurs orientaux, 1 (Cairo, 1937), 9–43.

The historical works are, obviously, very numerous. They supply a large number of topographical references, and they provide especially the possibility of writing an institutional and social history of the city. Without making any pretence at being exhaustive, we may list here some of the most important: the *Annals* (*Taʾrikh al-rusul wa ʾl-muluk*) of Tabari (d. 310/923); the *Meadows of Gold* (*Muruj al-dhahab*) by Masʿudi (d. 345/956); the *Experiences of Nations* (*Kitab tajarib al-umam*) by Miskawayh (d. 421/1030); and the *Muntazam* of Ibn al-Jawzi (d. 597/1200). The *Memoirs* of the courtier al-Suli (d. 335/946) also provide rich indications. As for biographical dictionaries, or *tabaqat*—including the *Taʾrikh Baghdad* by al-Khatib al-Baghdadi, already mentioned with regard to its introduction—these supply material for major social investigation that has yet to be realized.[10]

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[6] G. Le Strange, ed. and trans., "Description of Mesopotamia and Baghdad, written about the year 900 A.D. by Ibn Serapion," *Journal of the Royal Asiatic Society*, 1895: 1–76, 255–315.

[7] The purely topographical part was edited and translated by G. Salmon, *L'introduction topographique à l'histoire de Bagdâdh* (Paris, 1904), and by J. Lassner, *The Topography of Baghdad in the early Middle Ages* (Detroit, 1970), 43–118.

[8] Ibn Hawqal, *Kitab al-Masalik wa 'l-mamalik*, Bibliotheca Geographorum Arabicorum 2, ed. J. H. Kramers (Leiden, 1938), 164–65; trans. G. Wiet, *Configuration de la terre* (Paris and Beirut, 1964), 233–234; al-Muqaddasi, *Kitab Ahsan al-Taqsim*, Bibliotheca Geographorum Arabicorum 3, ed. M. J. de Groeje (Leiden, 1877), 119–121; eng. trans. B. A. Collins and M. H. al-Tai, *The Best Divisions for Knowledge of the Regions* (Reading, England, 1994), 108–110.

[9] Description preserved in the *Manaqib Baghdad*, a work attributed to Ibn al-Jawzi, trans. G. Makdisi, "The Topography of eleventh-century Bagdad: Materials and Notes," *Arabica* 6 (1959): 185–195.

The history of Baghdad overlaps broadly with that of the caliphal dynasty; according to Le Strange, "the history of the city is that of the Abbasid Caliphate." This statement was echoed by Lassner: "(The) pattern of growth was determined by the character of the city as the administrative center of the realm."[11] In fact, the times of urban splendour coincide with those of caliphal flourishing.

The Abbasids, a new dynasty claiming to be from the family of al-{Abbas, uncle of the Prophet Muhammad, signalled their decisive break with the preceding dynasty, that of the Umayyads who had derived their strength from Syria and taken Damascus as their capital, by looking towards Mesopotamia and beyond this, towards Iran. By founding a new capital in Baghdad, following some very temporary choices of other sites in Lower Iraq, Caliph al-Mansur not only established the base of what was to become one of the world's most prestigious cities but also gave the history of the countries of Islam a new orientation: from this point on, the centre of the caliphal empire was far from the Mediterranean regions; fixed rather in the East, close to Persia, with its wealth and goods, both material and cultural, in men, soldiers and scholars.

The descriptive sources, especially that of Ya{qubi, cannot too highly praise the "Round City" founded in 145/762 by Caliph al-Mansur: in the centre of a huge esplanade, with no other buildings, rose a palace topped by an immense green dome. Alongside it was the great mosque. Houses reserved for the élite of government employees and officers were pushed out to the perimeter. Four streets crossed this ring of building and were closed off by four gates: those of Basra, Kufa, Khurasan, and Syria. This monumental complex, with its moat, walls, and fortified gates, must, when seen from the outside, have aroused fear and respect. The circular form, probably derived from earlier Mesopotamian models, is noteworthy for its symbolic significance: the seat of the new dynasty was set in the centre of a circle opening via four gates on to the area of domination: to the south, the shores of the Arab-Persian Gulf and the Indian Ocean; to the east, the Iranian plateaux and the steppes of central Asia; to the north and the west, Upper Mesopotamia, Anatolia, and Syria. The geographer Ya{qubi quotes a seemingly prophetic speech by al-Mansur about the central role of Baghdad:

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[10] Vanessa Van Renterghem, in December 2004, defended her thesis prepared under my direction and devoted to the Baghdadi élite during the first Seljuq century (forthcoming, Paris, les Indes Sarantes, 2009). Thorough research into biographical dictionaries has allowed her to establish an extensive database of more than 2,000 personages.

[11] Le Strange, *Baghdad*, 301; Lassner, *Topography of Baghdad*, 177.

> Here will arrive and drop anchor ships coming over the Tigris from Wasit, Basra, Ubulla, Ahwaz, Fars, Oman, Yamama, Bahrain, and neighbouring regions. Here will arrive merchandise that will be transported along the Tigris, coming from Mosul, Diyar Rabi{a, Azerbaijan, and Armenia. Here, too, will arrive goods transported by ships on the Euphrates, coming from Diyar Mudar, Raqqa, Syria, the [Syrian] marches, Egypt, and from the Maghreb. This city will also be on the populated routes from Djibal, Isfahan, and the provinces of Khurasan. Praise be to God who reserved this capital for me and left it unknown to all my predecessors![12]

This city was the heart of the world, but it was also the heir of past civilizations. According to a tradition specifically recorded by al-Tabari and by al-Khatib, al-Mansur is said to have ordered the demolition of the palace of Khusraw in Ctesiphon in order to use its material for the construction of the "Round City." This account, though improbable, reflects the will of the new caliphs to gather the heritage of the Sassanids and call the inhabitants of this lost empire to allegiance.

The "Round City" of al-Mansur has aroused the keen interest of historians, no doubt on account of its original architecture. However, in the absence of any remains, historians have failed to agree either on its dimensions (estimated at 2 to 3 kilometres in diameter), or on its exact siting, or on its precise arrangement. They tend to see the original city only in terms of this monumental complex, which was, in reality, no more than a kind of "palace city," a palatial complex, "the Caliph's personal domain, comprising the area, his residence, and the governmental machinery."[13] However, al-Mansur conceived a real city, giving land concessions (qati{at) to the members of his military and civil entourage. The description of Ya{qubi shows a willed urbanism, with vast public spaces set aside in each quarter:

> For each head of sector [rub{, that is, one of the four sectors around the "Round City"] was fixed the area of land to give to each man and his

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[12] Al-Ya{qubi, Kitab al-buldan, 237–238; Wiet, Les pays, 10. This text provides an authentic description of the major channels of communication converging on Baghdad at the time al-Ya{qubi was writing.

[13] Lassner, Topography of Baghdad, 144.

> followers, and the space that should be set aside for shops and markets in each suburb (rabad). They were ordered [to allot] spacious locations for shops, so that each suburb would have a general market with trades of every kind; to provide for avenues (sikak), streets (durub), passages (nafidha), and other ways in each suburb [a space] equivalent to that of the houses; to name each street after the officer or famous person living in it, or else after the city [of origin] of the inhabitants; to give avenues (shawari{) a width of 50 black cubits [around 50 metres] and streets (durub) a width of 16 cubits [around 8 metres]; to build in every suburb markets, streets and mosques sufficient for all the people in the neighbourhood (nahiya) and the quarter (mahalla).[14]

These concessions lay at the origin of vast quarters on the west bank, of which al-Karkh, to the south of the "Round City," was by far the most important and the most populated.

Following the foundation of the "Round City" and its neighbouring quarters on the west bank of the Tigris, the city developed and was structured on the basis of successive palatine constructions. In fact, the civil war between al-Amin and al-Maxmun, the sons of Harun al-Rashid, marked by several months of fighting in the Abbasid capital in 198/814, resulted in serious devastation. The "Round City," already abandoned by the caliphs as a place of residence, fell into final ruin, and this space found itself incorporated into the urban fabric.

Following the reign of al-Mansur, two other foundations contributed to the expansion of the urban space. First of all, the palace of al-Khuld, built in 157/773 to the north of the "Round City," along the Tigris. Then a large complex designed for his heir al-Mahdi, comprising a palace and a mosque and situated on the east bank of the Tigris. This palace was at the origin of the Rusafa quarter, and even of the development of the city on the east bank, with the quarters of al-Shammasiyya to the north and Mukharrim to the south.

During the second civil war in 251/856, Caliph al-Musta{in encircled the city with an enclosure comprising, on its east bank, three quarters (al-Rusafa, al-Shammasiyya and Mukharrim, from Bab al-Shammasiyya to Suq al-Thalathax); it continued on the west bank from Qati{at Umm Ja{far to the Humayd palace. This wall is often presented on plans as a durable element of the urban topography, but all indications are that it swiftly disappeared, since it was mentioned neither in the descriptions of Arab geographers nor by chroniclers of work undertaken by al-Mu{tadid.

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[14] Al-Ya{qubi, Kitab al-buldan, 242; Wiet, Les pays, 18–19.

Following their return from Sammara', in the last years of the third/ninth century, the Abbasid caliphs settled once more on the east bank, but more to the south, where, thanks to enlargements, adjunctions and reconstructions, they formed an important compound comprising three main palaces:

- The Ja{fari, or Ma'muni, or Hasani palace. These various denominations are justified by the history of the place: the palace was built originally by the Barmakid vizier Ja{far to the south of the Mukharrim quarter. Then it was inherited by al-Maxmun, who embellished it and gave it to his vizier Hasan. Al-Mu{tadid resided in it from 279/891, having first considerably enlarged it.
- The Firdaws palace, built by al-Mu{tadid, upstream from the Hasani palace.
- The Taj palace, founded by al-Mu{tadid, downstream from the Hasani palace. It was completed by his son al-Muqtafi (289/901–295/907) and enlarged by al-Muqtadir. It became the main caliphal residence, and it was linked, by an underground passage, to the Thurayya palace, or palace of Pleiades.

These prestigious constructions were not the only ones. Inside the caliphal enclosure were numerous palaces, pavilions rather, such as the Shajara palace (the palace of the Tree) which owed its name to the silver tree in its centre, or the Jawsaq palace, with its famous basin with tin facing. They were surrounded by luxurious gardens, polo grounds, and racecourses even an area for hunting and a zoological park. Among all the suggestive descriptions offered by Arab sources, we shall retain the following:

> Al-Qahir possessed, in one of the palace courtyards, a small garden planted with orange trees, which he imported from India via Basra and Oman. The branches of his trees were intertwined and heavy with red and yellow fruits, shining like stars, on a ground of exotic plants, balsamine and flowers. There were gathered, in this place, turtledoves, doves, blackbirds, parrots, and other birds from every country. In this magnificent garden, al-Qahir liked to drink and gather his courtiers. Al-Radi, on succeeding him to power, shared the same predilection for this garden and, like al-Qahir, made it his usual place for his feasts and gatherings.[15]

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[15] Al-Mas{udi, Muruj al-dhahab, ed. and trans. C. Barbier de Meynard and J. Pavet de Courteille, Les prairies d'or (Paris, 1816–77), 8:336–337.

The configuration of palaces, and their interior organization and ornamentation, remain unknown. However, the famous account of the Greek embassy received in 305/917 by the vizier Ibn al-Furat and by Caliph al-Muqtadir, in the Taj palace, describes a succession of open-air courtyards with dark passageways giving on to vast audience halls where took place sumptuous and complex ceremonials.[16]

Palaces, belvederes, and gardens made up the Dar al-Khilafa, where the sovereign lived surrounded by his court and guards, far from people and bustle. This reserved space, often designated in sources by the word *harim*, was enclosed within a wall whose exact date of construction is unknown to us. A "Grand Avenue," named al-Shari{ al-A{zam, led from Bab al-Shammasiyya, in the north of the city, to the suq al-Thalatha' in the south; from there it went on to Bab al-{Amma (the "Gate of the People"), which was the main entrance to the Dar al-Khilafa. This road was used by ambassadors, prestigious prisoners, by caliphs for their solemn entrances and exits, and by official processions of emirs and high officials.

In the second half of the third/ninth century, the Buyids brought their own distinctive mark to palatine urbanism. In 350/962, Mu{izz al-Dawla built a huge complex near Bab al-Shammasiyya, partially rebuilt by {Adud al-Dawla; and Bahax al-Dawla, having confiscated the palace of the chamberlain Mu'nis, situated in the suq al-Thalathax, transformed it into a sumptuous residence that was adopted by the Seljuq sultans and took the name of Dar al-Mamlaka (or Dar al-Saltana). Caliph al-Nasir, however, had this symbol of sultanic tutelage destroyed in 587/1191. The precise, detailed history of the emiral and sultanic palaces remains shrouded in obscurity.

With the protection of the princes, the élite built sumptuous residences. Let us cite some examples: the palace of the emir Humayd (governor of Iraq during the reign of al-Maxmun), built on the banks of the Tigris river and immortalized by the poet {Ali ibn Jabala; the palace of al-Tahir (the famous general of al-Maxmun), which was, during the third/ninth century, the residence of the chief of police, and subsequently a mausoleum for more than one caliph; the palace of Faraj (a slave of Hamduna, concubine of Harun al-Rashid), described as one of the most beautiful of the Shammasiyya quarter; the palace of Ibn

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[16] Al-Khatib al-Baghdadi, trans. J. Lassner, *Topography of Baghdad*, 86–99. See J. Sourdel-Thomine, "L'art de Bagdad," *Arabica* 9 (1962): 449–465.

Muqla (vizier to Caliph al-Muqtadir), whose construction cost 200,000 dinars and which was endowed with a huge garden of 3 hectares.

Palaces moved according to vicissitudes of the power of caliphs, viziers, emirs, and sultans, doubling and multiplying like the sovereignty itself, making way for other constructions when their masters left them. On the ruins of the palace of al-Khuld, for instance, {Adud al-Dawla had built the famous hospital that bore his name. To take another example, the site of the "Round City," destroyed during the civil war between al-Amin and al Maxmun, was covered, from the fourth/tenth century, by the urban fabric. In contrast to other cities, Baghdad did not, despite the importance of the Dar al-Khilafa quarter, have a fixed seat of power occupied by successive sovereigns. It was a city with multiple nuclei which projected itself from its original centre, the "Round City," by the creation and enlargement of palaces within an urban landscape in constant transformation.

Ibn Khaldun, with his usual perspicacity, perceived this complex morphology—a characteristic, in his eyes, of imperial capitals:

> Then, when the town has been built and is all finished, as the builder saw fit and as the climatic and geographical conditions required, the life of the dynasty is the life of the town. If the dynasty is of short duration, life in the town will stop at the end of the dynasty. Its civilization will recede, and the town will fall into ruins. On the other hand, if the dynasty is of long duration and lasts a long time, new constructions will always go up in the town, the number of large mansions will increase, and the walls of the town will extend farther and farther. Eventually, the layout of the town will cover a wide area, and the town will extend so far and so wide as to be (almost) beyond measurement. This happened in Baghdad and similar (cities).
>
> The Khatîb mentioned in his *History* that in the time of al-Maxmûn, the number of public baths in Baghdad reached 65,000. (Baghdad) included over forty of the adjacent neighbouring towns and cities. It was not just one town surrounded by one wall. Its population was much too large for that. The same was the case with al-Qayrawân, Córdoba and al-Mahdîyah in Islamic times. It is the case with Egypt and Cairo at this time, so we are told.[17]

The mention by Ibn Khaldun of forty towns and cities (*mudun wa amsar*) poses a much-discussed problem: was this immense capital divided into quarters? At its foundation the city was divided into *rabad*, a term usually translated by suburb, given that the built spaces were situated outside the "Round City." It is not even debatable that, later on, the city was constituted of units—streets and quarters—often assembling a population of the same geographical origin, same confession, and same professional activity. The distinction in the landscape between rich and poor sectors was well marked, as underlined by Ibn {Aqil: "Some roads were the exclusive residence places of persons of dignity: Darb al-Za{faran in the Karkh used to be inhabited, not by craftsmen, but rather by the merchants of dry-goods and perfumes; Darb Sulayman, in the Rusafa used to be exclusively for qadis, shuhud-notaries and elegant merchants."[18]

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[17] Ibn Khaldun, *The Muqaddimah: An Introduction to History*, trans. Fr. Rosenthal (London, 1958), 2:235–236.

On a larger scale, the opposition between the two banks is highly marked: the east bank gathered, around the palaces, the sumptuous residences of great courtiers, high government employees and emirs, while the west bank seems to have been more popular and animated, with a large Shi{ite population. Generally, chroniclers use the expression "inhabitants of the two banks" to signify that the whole population is concerned. The passage from one bank to another was ensured by two or three pontoon bridges (depending on the period in question); built constructions were impossible on account of the river's frequent flooding. These bridges were important public spaces. Exposed along these much-frequented passages were the bodies of famous people who had been executed.

It is hard, in contrast, to know if the city of Baghdad in the third/ninth-fourth/tenth centuries was divided into quarters properly speaking. In fact, it is important to distinguish between, on the one hand, the quarter as a physical unit, possibly a social one (without any fixed boundaries or precise sub-divisions), and, on the other, the quarter as an autonomous administrative entity. A number of factors—the mention of shaykhs of quarters, the clear differentiation in certain texts between the city of Baghdad as such (the city of al-Mansur and its immediate surroundings) and the other built zones (particularly al-Karkh), the existence of several great mosques—argue in favour of a division of the agglomeration into a number of clearly distinct entities.

At the end of the fourth/tenth century, in fact, six great mosques, or jami{, which should be distinguished from simple mosques or oratories (masjid), numbering 30,000 on the west bank and 15,000 on the east bank according to al-Ya{qubi—gathered the Muslim community for Friday prayer. There were four on the west bank and two on the east bank:

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[18] Makdisi, "Topography," 195.

- Al-Mansur mosque, in the old “Round City,” rebuilt by Harun al-Rashid in 192–193/808–809 and enlarged by al-Mu{tadid in 280/893.
- The mosque of the Umm Ja{far quarter; this small mosque was enlarged in 379/989 to become a jami{.
- The Harbiyya mosque, situated in the north of al-Karkh, was, in 383/993, accorded the status of jami{ by Caliph al-Qadir.
- The Baratha mosque in the southwest of al-Karkh; this high place of Shi{ism was destroyed on the order of al-Muqtadir, then rebuilt and enlarged in 328/939 by the grand emir Bajkam; Caliph al-Muttaq solemnly inaugurated it to mark the return of the Sunna to this holy place.
- The mosque of the Rusafa quarter, built by al-Mahdi in 159/775.
- The mosque of Dar al-Khilafa, often called jami{ al-Qasr, was built by al-Muktafi in 289/901.

The existence of a number of great mosques is, no doubt, the religious expression of urban gigantism: the cultural needs of several hundreds of thousands of adult male Muslims made necessary this derogation to the usual rule respected, i.e., that there should be one great mosque per city. In Baghdad, however, as in other places, the multiplication of great mosques may also be explained by urban compartmentalization within autonomous quarters.

From the fifth/eleventh century on, the source testimonies become explicit. Ibn {Aqil states clearly: “I will not describe to you what you might find hard to believe. I will simply give you a description of my own quarter, which is but one of ten, each the size of a Syrian town, namely Bab al-Taq.”[19] The nine other quarters are: Suq al-Silah, Mukharrim, Suq al-Dabba, Nahr Mu{alla, Dar al-Khilafa, Bab al-Maratib, Bab al-Azaj, and al-Maxmuniyya on the east bank; and, on the west bank, one quarter only, that of al-Karkh.[20] According to the Andalusi traveller Ibn Jubayr, who stayed in Baghdad for a time in 581/1185, the city then comprised "seventeen quarters (mahalla) each forming an isolated city." The question is whether this is (as Lassner states) a phenomenon of differentiated urban growth characteristic of the caliphal capital, or whether it is rather (as Cahen suggests) a new development. In this case, the united city would have been divided from the Seljuq period on, being progressively replaced by a group of semi-autonomous quarters separated by ravaged land, waste land and gardens. Hence, the social differentiation would have been accentuated.[21]

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[19] Makdisi, “Topography,” 185.

[20] According to Makdisi, “Topography,” 196.

In any case, the city gradually declined as the caliphs' power was reduced by the emirs, and as political troubles and popular revolts multiplied. Even though new constructions were still enriching the urban landscape in the Seljuq period, even though economic activity carried on, especially in the very active Karkh quarter, Ibn Jubayr describes a largely devastated city. The invasions of Hulagu in 656/1258, and of Tamerlain in 803/1401 were a fatal blow to the city. In 841/1437, al-Maqrizi writes: "Baghdad is in ruin; there are no more mosques, believers, call to prayer or market. Most of the palm trees have dried up; most of the channels are blocked. It can no longer be called a city."[22] Even if the pride of this Egyptian intellectual in his own city of Cairo, then in full expansion, spurred him on to exaggerate somewhat, his testimony shows clearly enough the irremediable decline of the caliphal capital, which had become a mere provincial metropolis. In fact, the city was successively under the domination of the Ilkhanids (up to 740/1339), the Jalaxirids (up to 813/1410), the Turkomans (up to 914/1507), and the Ottomans in 941/1534, following several decades of conflict with the Persians for possession of the city. The traveller Tavernier who visited Baghdad in 1652 gave the extremely low number of 15,000 inhabitants.

Let us return to the Abbasid period in order to underline, like all medieval authors, the gigantic dimensions of the capital in the third/ninth-fourth/tenth centuries. In reality, the numbers they provide spring more from a perception of the city's exceptional character than from exact measurements. The tone is given by an amusing passage by al-Tanukhi in the compendium of literary anecdotes written by this qadi in the fourth/tenth century:

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[21] See Lassner, "Municipal Entities and Mosques," in Topography of Baghdad, 178–183 (see also pp. 176–177); and Cl. Cahen, "Bagdad au temps de ses derniers califes," Arabica 9 (1962): 295.

[22] Quoted by J. Aubin, "Tamerlan à Bagdad," Arabica 9 (1962): 308.

> In the year 360/970–1 in the house of the Qadi Abu 'l-Hasan Muhammed b. Salih b. {Ali al-Hashimi b. Umm Shaiban we were discussing the vastness of Baghdad and the number of its inhabitants in the days of Muqtadir [a caliph who reigned from 295/908 to 320/932], as well as its buildings, streets, lanes, the size of the place, and the multitudinous classes of the inhabitants.
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> [After the author has mentioned a work by Bayazajard, estimating the numbers of hammams in Baghdad at ten thousand and the number of sacks of wheat, barley and other foodstuffs necessary for the daily provisioning of the city at between thirty and forty thousand, and another participant has mentioned the work of Ahmad ibn al-Tayyib on the same subject, the qadi Abu 'l-Hasan takes up the tale:]
>
> That is indeed an enormous amount, of whose truth I have no knowledge; still I have witnessed facts therein in connection wherewith the statements of Yazdajird and Ahmad b. Tayyib are not improbable, though we have not counted so as to be able to attest their accuracy. Only, a short time ago, in the year 345/956–7 when Muhammed b. Ahmad known as Turrah, farmed Baduraya, he took great pains with its cultivation. Once we made a calculation of the number of jaribs of lettuce sown there this year, and computed roughly how much lettuce was brought into Baghdad from Kalwadha, Qutrabull and other places in the neighbourhood. It came to two thousand jaribs. Now we found that on every jarib six sorts were sown, and that of each sort so many roots were plucked—this I do not remember. On each jarib then there were so many roots. The average price of lettuce at the time was twenty stalks for a dirhem. The average amount earned by a jarib, produce and price being both considered, was 350 dirhems, valued at twenty-five dinars. Two thousand jaribs then gave fifty thousand dinars. All of this was consumed in Baghdad. What then must be the size of a city wherein in one season of the year one sort of vegetable was consumed to the value of fifty thousand dinars![23]

With the aim of showing the extraordinary extension of the Abbasid capital, al-Khatib al-Baghdadi recorded several traditions in a chapter entitled "The Length and Width of the Two Sides of Baghdad, the Total Area, and the Number of Mosques and Bathhouses."[24] One piece of this data is often cited by modern historians: an area of 43,750 jaribs in the third/ninth century, 16,750 of which were in the eastern part and 27,000 in the western part. Equivalence problems, irritating and insoluble at once, render uncertain the interpretation of the number of

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[23] Trans. D. S. Margoliouth, *The Table-Talk of a Mesopotamian Judge*, Royal Asiatic Society, Oriental Translation Fund, new series, vol. 28 (London, 1922), 69–70.

[24] Lassner, *Topography of Baghdad*, 107–110.

43,750 *jaribs* (between 5,000 and 7,000 hectares).[25] It has nevertheless been used to calculate the number of inhabitants. However, trying to estimate the size of the population from the area of the city is a method filled with pitfalls, since it supposes knowledge of the area but also of the density of the population. Despite this, several modern historians have made the venture. Hence, Lassner proposes 40 inhabitants per hectare by dividing by 5 the known density of Constantinople (200 inhabitants per hectare in the fifth century)—Baghdad being far less densely populated because of the surface occupied by gardens and palaces. Having estimated the area of the city at 7,000 hectares, he arrives at the result of 280,000 inhabitants.[26]

In this chapter on city dimensions, al-Khatib al-Baghdadi, as is his habit, adds several traditions indicating the number of mosques, the number of bathhouses, but also the quantity of soap and oil necessary for the population during festivals. According to one of these traditions, going back to Muhammad ibn Yahya al-Suli (d. 335/946), the city had 60,000 public bathhouses, each served by five servants (a bath attendant, a steward, a swapper, a stoker, and a water carrier); i.e., a staff of 300,000 people. For each *hammam* there were five mosques, each corresponding to at least five people. Thus, the number of mosques was 300,000 and that of the population one million and a half. These exorbitant numbers have, it seems to me, no specific meaning, resulting from a form of arithmetical emphasis designed to show the abnormally populated character of the "megapole." The medieval authors appear to have a worrying facility to multiply a number by ten so as better to mark the size: hence the number of 3,000 mosques, already approximate, but likely enough if compared to the 785 mosques of Fez[27] and 684 mosques of Aleppo,[28] was subjected to this phenomenon of arithmetical emphasis by jumping from 30,000 to 300,000.

The Iraqi historian Duri starts from a far less elevated number, that of 1,500 *hammams* given by Hilal al-Sabi for the end of the fourth/tenth century, and from the indication given by the same author according to which each bathhouse services 200 houses; he estimated that each house had an average of five people, thereby reaching the number of one and a half million inhabitants in Baghdad at the time of its greatest extension.[29]

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[25] 5,000 hectares according to Le Strange, *Baghdad*, 324–326; 5,900 according to A. A. Duri, "Baedad," *Encyclopaedia of Islam*, 1; 7,000 according to Lassner, *Topography of Baghdad*, 157–158.

[26] Lassner, *Topography of Baghdad*, 159–160.

[27] Survey undertaken during the reign of the Almohad caliph al-Nasir (595/1199–610/1213) and quoted in al-Jaznaxi, *Zahrat al-As*, trans. into French by A. Bel, *La fleur de myrthe* (Algiers, 1923), 81–82.

[28] According to the geographer Ibn Shaddad, quoted in A.-M. Eddé, *La principauté ayyoubide d'Alep* (579/1183–658/1260) (Stuttgart, 1999), 559, n. 675.

It is impossible to set a figure between these two extremes, ranging between 300,000 and a million and a half inhabitants. However, Baghdad at the time of the Abbasids was certainly a heavily populated city; Constantinople alone, during the same period, was able to compete with it.

Baghdad was a new creation (even if some Aramaean establishments did exist before the foundation of the caliphate), and, as such, the population was originally exogenous. The list of concessions and their beneficiaries shows the different sectors to have been inhabited, simultaneously, by civilians and soldiers, mostly Arabs and Persians. Apart from the elite—Abbasid family, descendants from companions of the Prophet, courtiers, government employees, military leaders—the city of al-Mansur was mostly populated by craftsmen and workers (to the number of a hundred thousand according to al-Ya{qubi), by merchants and, above all, soldiers. These were gathered according to their city or region of origin: Kufa, Yamama, Fars, Kirman, Khurasan, Khwarizm, Bukhara, Marw, Balkh, Kabul, Sughd, Isbijab, Khuttal, Jurjan, Farghana. Note the preponderant place occupied by Iran in this enumeration.[30] It seems, then, that the make-up of the Baghdadi population stems from the voluntary occupation of non-indigenous elements and hardly at all from the population of neighbouring villages and rural zones.

Thereafter the population increased due to natural growth and immigration. Biographical dictionaries, especially the *Tarikh Baghdad*, provide material for a study of the origin of scholars and men of religion who settled in Baghdad, attracted by the material and cultural possibilities the caliphal capital offered. Such a study, though, remains to be realized. Even so, some work on matters of detail permits us to underline the characteristics of this emigration. In the second/eighth–third/ninth centuries, Baghdad was the great pole towards which a number of scholars and men of letters were drawn.[31] The majority came from the cities of Lower Mesopotamia, notably Basra and Kufa, and from Upper Mesopotamia, Syria and Egypt, but above all from various regions of Iran. In the following centuries, the movement continues, with the same characteristics, even though, with the division of the Abbasid Empire, regional dynasties were formed whose capitals sought to compete with Baghdad.[32]

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[29] Duri, "Baghdad."

[30] S. al-{Ali has sketched out the ethnic and social groups present in early Baghdad: "The Foundation of Baghdad," in *The Islamic City*, ed. A. H. Hourani and S. M. Stern (Oxford, 1970), 87–103. See also *Baghdad Madinat al-Salam*, cited above.

The force of attraction of the Abbasid capital seems to have been extremely great, even though limited to the Arab and Persian Near East. However, the voluntary migrations that characterize an élite free to move, and attracted by the conditions offered by the capital, were minor in comparison to imposed migrations: those of craftsmen recruited by the caliphal power to enhance the prestige of the capital; those of slaves of various origins—black, Slav, Turkish, Berber—who contributed greatly to cross-breeding within the population, through the manumission of slaves and employment of concubines; and finally, and above all, those of soldiers, bought or captured in large numbers on the borders of central Asia to form the essential numbers of the army following the reform of Caliph al-Mu{tasim (218/833–227/842).

Consequently, Baghdad became a cosmopolitan city, if by this term is meant the co-existence, within one urban agglomeration, of multiple populations with various ethnic origins and cultural traditions. Three groups dominated: Arabs, Persians, and Turks. However, cosmopolitanism in Baghdad was not accompanied by multi-lingualisim, even though other languages were in private or liturgical use. Arabic imposed itself as a spoken language and as a language of culture—an indication that the Abbasid caliphs' project to integrate multiple populations within one political and cultural whole had been successful. Nevertheless, the importance of Persians, especially in the administration, is reflected in Baghdadi life by the dissemination of traditions of Iranian origin: literary traditions, which were opposed by pure Arabs in the movement known as shu{ubiyya, and popular traditions, such as the Iranian New Year holiday (the Nauruz), which was one of the big festivals in Baghdad, celebrated in June around bonfires.

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[31] See the maps showing the division of men of learning established by F. Micheau in "L'intermédiaire arabe?" in *Eléments d'histoire des sciences*, ed. M. Serres (Paris, 1989), 158–159; in the second/eighth–third/ninth centuries, 25 men of learning, out of the 26 in these two centuries, lived in Baghdad.

[32] Hence, according to the same study, Baghdad in the fifth/tenth–sixth/eleventh centuries had 16 scholars, whereas there were 18 in the Muslim West, 10 in various cities of the Arab Near East, and 12 in the Iranian metropolises. In the seventh/twelfth–eighth/thirteenth centuries, these numbers were, respectively, 3 (for Baghdad), 14, 18, and 12.

For their part, the Turks, having become preponderant in the army, brought a new distinctive mark to Baghdad society. The appearance of these hardened, rough soldiers in the reign of al-Mu{tasim led to troubles that spurred the caliphs to leave Baghdad for a time and to settle in a new capital, Samarra', built further to the north, on the banks of the Tigris. After the caliphs' return to Baghdad, in the final years of the third/ninth century, the Turkish contingents and their leaders, the emirs (amir, plural umarax), played an ever more important role in political life, progressively eclipsing the viziers. The history of Baghdad in the fourth/tenth century is dominated by fights between the military factions.

Baghdad in the Abbasid period was a cosmopolitan city but also a multi-confessional one, where Muslims, Christians, Jews and Zoroastrians lived together.

The Nestorian Christian community was particularly numerous, active and well organized.[33] It was partially of local origin, having been enlarged by the arrival of Christians attracted by the riches and advantages of the capital. The Catholicos Timothy, who had campaigned with the inhabitants of Baghdad during his election in 780, left his residence in Ctesiphon for the caliphal city. The Nestorian patriarch was an eminent personage with access to court and formed part of the city's notables. Thus, the courtier al-Suli noted in his journal the death of the Catholicos Ibrahim as one of the events marking the year 325/936–7. Jacobites and Melchites were likewise present, but did not have the same importance.

Christians owned some twenty churches and monasteries, among which were Dayr Durta and Dayr al-Kibab on the west bank, Dayr Darmalis, Dayr Samalu, and, above all, the celebrated Dayr al-Rum, built during the reign of al-Mahdi, which became the Catholicos' burial place in the Shammasiyya quarter on the east bank. These monasteries were places of sociability and leisure, and were visited by Muslims as well as Christians, as is confirmed by the descriptions of the *Kitab al-Diyarat*, composed by al-Shabushti at the end of the fourth/tenth century:

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[33] See the studies by J.-M. Fiey, especially Chrétiens syriaques sous les Abbassides surtout à Bagdad (749–1258) (Louvain, 1980) [C.S.C.O., 420 Subsidia, 49]; M. Allard, "Les chrétiens à Bagdad," Arabica 9 (1962): 375–388; Al-Abb Butrus Haddad, Kana'is Bagdad wa diyaratuha (Baghdad, 1994).

> This monastery is located on the most elevated point in Baghdad, to the east, near the house built by Ahmad ibn Buwayh the Daylami, near the Gate of al-Shammasiyya. Its situation is excellent. It is a most agreeable monastery, with numerous trees and gardens. Near the place, there is a marsh and reeds. This monastery is large and is inhabited by monks, priests and ascetics. It is one of those places we visit for leisure, and where we go to drink and to take walks.
>
> The festivals of Christians in Baghdad are divided between the various well known monasteries. Among these festivals are those of the [four] Sundays of Lent...the fourth is that of the Darmalis monastery, and the festival of this monastery is the most beautiful. The Christians of Baghdad gather there, and they are followed by all those who enjoy entertainment and leisure. People spend days there and go there at night, except during the festivals.[34]

Like the Christians, Jews, numerous in Mesopotamia before the Arab conquest, came into Baghdad. The Exilarchs settled at the caliphal court, and the major scholars of the two great Talmudic schools of Sura and Pumbedita resided permanently in these, probably from the third/ninth century on. Baghdad attracted, at that time, students and scholars from Egypt, the Maghreb, Spain, Italy, and the Byzantine empire. If the power of Jewish financiers in economic life was overestimated at the time, it is certain that the two great families, the Banu Natira and Banu Harun, sometimes allies and at other times rivals, dominated the community, and a number of their members were bankers to caliphs and viziers.[35]

Zoroastrians, that is, adepts of the dualistic religion of Ancient Persia, are less known but were undoubtedly present. There was a street named *darb al-Majus*, meaning street of the Zoroastrians. In the sixth/twelfth century, the *nisba* al-Majusi was borne by Muslim traditionalists simply because they lived in that place. It is believed that originally Persians gathered there and maintained their cult.[36] Al-Suli reports how, in 332/943, rich Jewish and Zoroastrian merchants left the capital because of the insecurity that reigned there.[37]

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[34] Trans. G. Troupeau, "Les couvents chrétiens dans la littérature arabe," *La Nouvelle revue du Caire* 1 (1975): 265–279, quoted in A.-M. Eddé, F. Micheau, and Chr. Picard, *Communautés chrétiennes en pays d'Islam du début du VII^e siècle au milieu du XI^e siècle* (Paris, 1997), 204.

[35] G. Vajda, "Le milieu juif à Bagdad," *Arabica* 9 (1962): 389–393; and, especially, D. S. Sassoon, *A History of the Jews in Baghdad* (Letchworth, 1949).

Finally, Muslims, though assuredly forming the majority, were nevertheless not a united community. On the contrary, at a time when Islam was seeing its reference texts, dogma and rites, law and practices, being developed, the Abbasid capital crystallized the currents then being affirmed. Without going into the various aspects of the history of Muslim thought, which would be beyond our purpose here, mention should be made of two of these groups that particularly marked social life in the Abbasid capital.

The Shi{ites were numerous on the west bank. They seem to have gathered a number of supporters from among the popular circles in these quarters, and—considering the role they played in riots—to have provided an ideological framework for their social demands. The domination, from 334/945, of the great Buyid emirs, who were Twelver Shi{ites, naturally favoured Shi{ite practices, particularly the celebration of Ashura'. This official commemoration of the death of Husayn in Kerbela, a day of great mourning for Shi{ites, was turned into a festival by the Sunnis, who dressed up in new clothes and organized banquets.[38]

Another well organized group, and very visible in the urban history, was that of the Hanbalis. We know that Ibn Hanbal had, in the years 820–850 (he died in 241/855), imposed a rigorous conception of Islam based on resort solely to the Quran and the Tradition of the Prophet as opposed to movements giving a larger place for rational reflection and openness to other cultures. The Hanbalis, thus, played a crucial role in the fight against Mu{tazilism, imposed on the *qadis* as official doctrine by Caliph al-Maxmun in 212/827, and they made a major contribution to its condemnation by Caliph al-Mutawakkil at the beginning of the latter's reign in 234/848. They then enjoyed the support of the caliphs who saw in them valuable defenders of caliphal doctrine. In everyday life, they frequently intervened as preachers, often esteemed by the humble people, but also as defenders of values and ideas, opposed to any form of innovation.

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[36] On the meaning of *majus*, see the article entitled "Ma ¡ us," in the *Encyclopaedia of Islam*. I have taken the attestation and explanation of the *nisba* al-Majusi provided in the dictionary of Sam{ani (d. 562/1166), *Al-Ansab* (Hyderabad, 1981), 12:99.

[37] Al-Suli, *Kitab al-Awraq*, trans. M. Canard (Algiers, 1946), 2:88.

[38] According to A. Mez, *The Renaissance of Islam* (London, 1937), 69.

> In this year 323/934–5, the activity of the Hanbalis became great and their influence was reinforced. They forcibly entered the dwellings of military leaders and humble people, and, if they found wine, they scattered it; if they found a singer, they beat her and broke the instruments. They intervened in the operations of sale and purchase; they also intervened when men walked in the company of women and young people. The moment they saw them, they asked them who the person was that was accompanying them, and, if the information was withheld, they beat them and took them to the Chief of Police, testifying to their immorality.[39]

We have an exceptional testimony about the Hanbali group during the Seljuq period: Ibn al-Bannax, a Baghdad notable, lived on the east bank of the Tigris, and kept a journal about his daily activities and observations, not, no doubt, designed for publication. This teacher, a traditionist and Hanbali jurist, had two teaching circles, one at the great mosque of the palace, the other at the great mosque of al-Mansur. He was also private tutor to the family of the rich merchant Ibn Jarada. The family ceremonies, marriages and indeed funerals, the arrival of merchant convoys, even the return of the pilgrimage caravan, were privileged moments when bonds were created and expressed between eminent Hanbalis, merchants, and the learned.[40]

Baghdad, with its extensive buildings, substantial population, and the co-existence of highly diverse ethnic, social, and religious groups, also appears as a fragile city, regularly devastated by disasters and riots.

Urban risks such as accidents, floods, and fires were particularly important, and chroniclers do not fail to mention these dramatic events. Here are some examples:

> The pontoon bridges ensuring the obviously vital passage between the two banks of the Tigris were fragile. In 282/895, the structures supporting the roadway gave way under the weight of those crossing. More than a thousand perished in the Tigris. A similar accident took place in 330/942, when masses gathered to attend the Caliph's departure.[41]

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[39] Ibn al-Athir, al-Kamil fi 'l-taxrikh, 8:307.

[40] Ed and trans. from a fragment preserved (with respect to the year 460/1068–9) by G. Makdisi, "Autograph Diary of an eleventh-century Historian of Baghdad," Bulletin of the School of Oriental and African Studies 18 (1956): 9–31, 239–260, and 19 (1957): 13–48, 281–303, 426–443.

[41] Al-Mas{udi, Muruj, 8:170; and al-Suli, Kitab al-Awraq, 2:50.

Even more serious was the flooding of the Tigris, which regularly devastated the more exposed quarters. At periods of high water, the Tigris rises up to 34.60 metres, so that the presumed site of the "Round City," at 35 metres, was in constant danger of being submerged. The Karkh quarter, situated on an elongated hillock between 36 and 44 metres, was not always spared, and high waters could be devastating, as in 270/883, when 7,000 houses were destroyed by the torrents.[42] The east bank, for its part, was relatively protected by earth levees amounting to or exceeding 36 metres. This no doubt underlay the extension of the city on the left bank. The risks of floods were nonetheless real and made necessary the regular maintenance of the dikes.[43]

Equally devastating were fires, which could result from an incident or from riots. To take one example from a long series, in 362/972 trouble broke out, and al-Karkh was set on fire; 17,000 people died, and 300 shops, numerous houses, and 33 mosques were destroyed by the fire.[44]

Urban fragility was also economic. Feeding such a large population implied vast supply networks. Baghdad drained the agricultural surplus and the fiscal revenues of the whole of Sawad. Indeed, development of the city, as that of all the ancient cities of Mesopotamia, would not have been possible without the presence of this rich hinterland. However, ensuring a regular supply seems to have become more and more difficult. The necessary but fragile equilibrium between the city and the territory that feeds it must have been broken in the fourth/tenth century. Shortages and epidemics, rare before 320/932, became frequent after that date. Chroniclers mention grain crises in 323/934, 324/935, 329/940, 330/941, 331/942, 332/943, 334/945, 336/947, 337/948, etc., and these often led to crowd movements and scenes of looting.

Insecurity seems to have been endemic because of the presence of numerous marginalized groups. The {ayyarun, poor people carrying on small trades, or vagabonds without fixed employment, were first mentioned during the civil war between al-Amin and al-Maxmun. Subsequently they become a major topic in the Baghdad chronicles of the third/ninth-fourth/tenth centuries. These trouble-makers, also called fityan or shuttar, emerge from the shadows in periods of relaxation by the authority and of public riots; then they commit multiple acts of vandalism and looting. The ethnic dimension (bond with the futuwwa) and the social significance (crime or revolt of the destitute) of the unrest they caused have been the object of contradictory assessment. At times they had such power that they took the place of the urban authority and exerted pressure on the rich population; hence in 421/1030–425/1033, al-Burjumi, a particularly powerful leader of the {ayyarun, succeeded in defying the authorities and imposing his own rule. At other times, these marginalized people were taken up by the state, which incorporated them into the police or used them as a combat force.[45]

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[42] Al-Tabari, 3:2, 105.

[43] E. de Vaumas, "Introduction géographique à l'étude de Bagdad," Arabica 9 (1962): 243–244.

[44] Ibn al-Athir, al-Kamil, 8:462.

From a reading of the chronicles, the history of Baghdad seems full of popular revolts whose demands were, at once, religious, political and social: riots led by the Hanbalis, conflicts between Shi{ite and Sunni, revolts against the rich, anxiety in the face of the Byzantine re-conquest, displeasure at the exactions of government employees, hostility towards the military, protest from soldiers because of delays in their pay.[46] Baghdad suffered greatly from this constant insecurity and from the popular outbursts. Insecurity seems to have been particularly serious in the first half of the fourth/tenth century, to the extent that, on several occasions, a number of rich inhabitants left the city to seek refuge elsewhere, while others closed the gates to their streets and merchants organized night watches. In the years 323/934–328/940 alone, we may note the following from the Memoirs of the courtier al-Suli:

– popular protest against a rise in the price of bread;
– mutiny of the Turkish regiments demanding their pay;
– a huge fire in the Karkh quarter;
– a fresh riot because of the high prices of supplies, resulting in a confrontation between people and army;

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[45] On the {ayyarun, see Cl. Cahen, "Mouvements populaires et autonomismes urbains dans l'Asie musulmane au Moyen Age," Arabica 6 (1958), especially 34–44 and 47–52; S. Sabari, Mouvements populaires à Bagdad à l'époque abasside. IX^e–X^e siècles (Paris, 1981), 77–100; A. Cheikh Moussa, "L'historien et la littérature arabe médiévale," in "L'œuvre de Claude Cahen. Lectures critiques," Arabica 43 (1996): 152–188.

[46] Sabari, Mouvements populaires. See also the lists established by M. Canard for the fourth/tenth century in "Baghdad au IV^e siècle de l'Hégire (X^e siècle de l'ère chrétienne)," Arabica 9 (1962): 283–285; by H. Laoust, "Les agitations religieuses à Baghdad aux IV^e et V^e siècles de l'Hégire," in Islamic Civilisation, 950–1150, ed. D. S. Richards (Oxford, 1973), 169–185; and by E. G. Heilman, Popular Protest in Medieval Baghdad. 295–334/908–946 (Princeton, 1978).

- protests led by the Hanbalis against the celebration of the Iranian festival of Mahya;
- scandal aroused by the arrest of a Jewish banker;
- a number of armed attacks by thieves subsequently condemned to death;
- violent flooding of the Tigris;
- unrest stirred up by the protests of Daylami soldiers.

Maintenance of order required that the authorities should supply the city, prevent a rise in the price of bread, and resort constantly to force, but also watch over people's welfare. There were few riots in the reign of the Buyid emir Mu{izz al-Dawla, because, on becoming master of the city in 334/945, he brought prosperity, managing to have bread sold at one dirham per 20 pounds. He also introduced new shows, wrestling championships in public squares, swimming competitions in the Tigris, or races.

> One of the amazing things which occurred in the time of Mu{izz al-Dawla was the inauguration of racing and wrestling. This came about because Mu{zz al-Dawla was in need of runners whom he could appoint as couriers to traverse the distance between him and his brother Rukn al-Dawla at Rayy. They traveled that long distance in a short time.
>
> Mu{izz al-Dawla would offer prizes to those who excelled in the races, consequently, the ahdath of Baghdad and the poor were attracted to this and became preoccupied with it giving their sons over to racing. As a result, there developed two main runners for Mu{izz al-Dawla. One was known as Mar{ush, the other as Fadl; each could run over thirty parsangs in a day, from sunrise to sunset, retracing the distance between {Ukbara and Baghdad. Along every mile of the road there were people urging on these two. They became the Imams in running, and the sport took its name from them. The people developed two factions around them.[47] [These two factions took the form of solidarities between quarters and confessional solidarities (Shi{ite and Sunni).]

Beyond these tumultuous realities, Baghdad incarnated for the inhabitants of the dar al-islam the dream of a single caliph gathering all Muslims within a single umma. Even though the Abbasids never truly realized the unity of the Muslim world, this did not prevent their capital from becoming, in the collective imagination, the centre of the world:

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[47] Ibn al-Jawzi, Muntazam, trans. in, The Buwayhid Dynasty in Iraq. 334 H./945 to 403 H./1012: Shaping Institutions for the Future, ed. J. J. Donohue (Leiden and Boston, 2003), 343–344.

> If I start with Iraq [writes al-Yaʿqubi at the beginning of his *Book of Countries*], it is simply because it is the centre of this world, the core of this earth. I mention, in the first place, Baghdad, because it is the heart of Iraq, the most important city, which has no equal in the East or West of the earth, either in its vastness, or in its importance, prosperity, abundance in water, or in its healthful climate. It is inhabited by the most diverse people, whether from the city or the country; it is the destination of those emigrating from all countries, far and near; from all parts, numerous are those who have preferred it to their own nation. All the peoples of the world have a quarter in it, a centre of dealing and trade. This is why there is, united in it, that which does not exist in any city of the world.[48]

Al-Khatib, who introduces his *Taʾrikh Baghdad* with a long description of the city, takes up the same themes when writing in the fifth/eleventh century, at a time when Baghdad could no longer claim, politically, economically, or culturally, to play the same role as it had done two centuries before:

> In the entire world, there has not been a city which could compare with Baghdad in size and splendour, or in the number of scholars and great personalities. The distinction of the notables and general populace serves to distinguish Baghdad from the other cities, as does the vastness of its districts, the extent of its borders, and the great number of residences and palaces. Consider, the numerous roads, thoroughfares, and localities, the markets and streets, the lanes, mosques and bathhouses, and the high roads and shops—all of these distinguish the city from all others, as does the pure air, the sweet water, and the cool shade. There is no place which is as temperate in summer and winter, and as salubrious in spring and autumn. The very great population also distinguishes it from all other cities.[49]

These representations set Baghdad as a unique city, placed at the centre of the universe, as a city-world that recapitulates all the qualities and riches of other cities. They are less the result of analysed realities than symbolic in nature, especially after the weakening of caliphal power.[50] They are powerful nonetheless, and have remained, up to our present day, strongly present in the imagination of Arabs, expressing as they do nostalgia for a prestigious past and symbolizing as they do the dream of a unified Muslim umma. If Baghdad is, in the stone, a city “without memory,” it remains, for Arabs, “a place of memory.”

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[48] Al-Yaʿqubi, *Kitab al-buldan*, 233–234; Wiet, *Les pays*, 4.

[49] Al-Khatib al-Baghdadi, 108–109.

[50] On the symbolic representation of "mégapole," such as city-worlds in the Arab sources, see F. Micheau in collaboration with P. Guichard, "Les sources pour les mégapoles orientales," in *Mégapoles méditerranéennes*, under the direction of Cl. Nicolet, R. Ilbert, and J.-Ch. Depaule (Paris and Rome, 2000), 685–704.

MARINID FEZ: ZENITH AND SIGNS OF DECLINE

Halima Ferhat

Situated in the plain of the Sais, at the intersection of the major axes linking the different regions of the country, Fez was for centuries the capital of Morocco. The city was, it is true, lacking in a navigable waterway, but the Almohads had created a dockyard on the river at the place known as al-Habbalat, three kilometres to the east, and for a time small boats ensured a link with the Atlantic. The project of the Marinid Abu {Inan was more ambitious but failed to last; nevertheless, two large vessels were built in this spot. It was the Maghrawa princes (end of the ninth to the middle of the twelfth centuries), so maligned by the chroniclers, who contrived to endow the town founded by their Idrisid enemies with its resolute city character. Fez kept its privileged status under the Almoravids and the Almohads whose official capital was Marrakesh. But the Marinid period was indisputably the most brilliant and the most fertile; and many monuments still bear the mark of this dynasty.

We have a relative abundance of information about this period which saw, at one and the same time, the city's zenith and the appearance of signs of stagnation, even decline. Historians, travellers, theologians, poets, and other scholars have left descriptions of the Marinid capital that have the advantage of supplementing one another. Leo Africanus, chronologically the last of these, devotes sixty-two pages to his adopted home, and it is hard to call Fez to mind without falling into a paraphrase of this trenchant, precise description; his book was published in Venice in 1550. Fez was, however, already undermined from within and threatened by the Sa{adis.[1]

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[1] (J.) Leo Africanus, Description de l'Afrique, trans. E. Epaulard (Paris, 1956), 1:179–241. The information in the Buyutat Fas (Rabat, 1972), a short treatise attributed to Isma{il ibn al-Ahmar, leaves the reader puzzled. Are we dealing with notes designed to serve as the outline of a work perhaps never completed? The loose style and the anachronisms give the impression that the author (or authors) has dipped undiscerningly into some scattered and sometimes contradictory sources. See Buyutat Fas (attributed to I. Ibn al-Ahmar).

The present city has preserved its medieval configuration, even though the ramparts and the gates have undergone several transformations. The number of gates has increased or decreased throughout the city's history. Some have been walled up, others—like Bab al-Kanisa, mentioned by al-Bakri, which became Bab al-Khukha—have changed their names.[2]

All the relevant writers, vying in their superlatives, have paid homage to this city known to be endowed with such exceptional advantages. "There is no city," declares the fascinated author of *Zahrat al-as*, "no country, that does not have representatives in Fez. They engage in trade, live there, and are active there. Traders, along with craftsmen, have come there from every region, and every kind of commercial dealing is gathered there."[3] The mystic Ibn {Abbad, a man not easy to please, notes the capital's intellectual role: "Fez is the mother of the various parts of the Maghreb... it is from her that order and corruption alike spread to the other cities."[4] Ibn al-Khatib, well known for his Andalusi chauvinism, sings the praises of this splendid city without stint. Finally, Leo Africanus who had visited so many countries concluded: "Nowhere, either in all of Africa, or in Asia, or in Italy, have I seen a market where so many kinds of goods are to be found. It is impossible to set a value on it all."

Fez was closely bound up with the Mediterranean and its chief ports, such as Sabta and Badis, over the Sahara, and Bilad al-Soudan, via Sijilmassa. The relentless hostility of the Marinids towards Tlemcen is partly to be explained by the wish to lay hands on those gold routes over which so much ink has been spilled.

In the Middle Ages, Fez was an indisputably opulent city, known for its dynamism and for the sophistication of its inhabitants. The buildings were well constructed, beautiful, and elegant. It produced, manufactured and sold a large variety of goods and took in others which it then redistributed; its trade was particularly prosperous. Its province supplied it with grains, fruit and men. The village of Bhalil provisioned it with firewood and coal; the Banu Yazgha supplied it with cedarwood that was extensively used for building; the villages of Madchar Shatibi and Dimnat al-Baqul sent the salt used by the tanneries abundantly. Numbers of small centres functioned as simple dependencies and taxes were levied from these to finance the embellishment of the capital. Even Meknes was unable to escape this ascendancy, and the revenues from its olive oil works allowed certain monuments to be erected in the White City.[5]

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[2] H. Berrada, *Fès de Bab en Bab* (Casablanca, 2002). This small guide gives a clear impression of the complex framework of gates and ramparts in Fez.

[3] {Ali al-Gaznai, *Zahrat al-as* (Rabat, 1967), 34; Abu-al-Hasan {Ali El-Djaznai, *La fleur de myrte*, Arabic text, with annotated translation by Alfred Bel (Algiers, 1923). The work centres on the Qarawiyyin mosque, but does not speak of the Marinid New City. See also al-Gaznai, *Zahrat*, 72–73.

[4] N. Nwyia, *Ibn {Abbad de Ronda (1332–1390)* (Beirut, 1961), 150.

Water: chief endowment of Fez, and its ornament

The role of rivers and springs was crucial, and there had been major works of canalization in the city since remote times; basins, tanks, water jets, and fountains (bila, fwara, saqqaya)[6] were regularly noted, and writers reiterated longingly how Fez, with 360 springs, was richer in water than Damascus. Thanks to this water, the streets were regularly washed.[7]

Chroniclers attributed exceptional virtues to the city's water. Lukewarm in winter, it was cool in summer; it facilitated the removal of internal stones and cured certain skin diseases. Wad al-Jawahir (the river of pearls) owed its name to its precious shells and provided large quantities of fish.

Princes and patrons endowed the quarters, the streets, and the monuments with fountains that were not simply designed to provide water, but were also true masterpieces decorated with zallij, those celebrated earthenware squares glazed in iridescent colours. Impressive numbers of structures equipped with running water are attributed to Abu 'l-Hasan: fountains, naturally, but also drinking-troughs, rooms for ablution, basins, tanks in the mosques, etc.[8] The houses of notables had long been supplied with water, and the finest of them had "richly decorated" fountains and tanks used as pools for swimming in the hottest season.[9]

This water was the glory of the new royal city. An innovation of the Marinid kings was the installation of the enormous water-wheels that enabled them to irrigate the palace and the multiple gardens they maintained at such great expense.

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[5] A. Ibn Ghazi, Rawd al-hatun fi akhbar Maknasat al-zaytun (Rabat, 1964). Fez produced olives to the value of 50,000 dinars, almost double the production of Meknes, which reached 35,000. Ibn Ghazi settled permanently in Fez in 856 A.H. (1452 A.D.).

[6] See Dozy, Supplément aux dictionnaires arabes, 1:137, 2:289.

[7] Al-Gaznai, Zahrat, 34. In the time of Leo Africanus the streets in Fez were still being washed (Description, 1:228).

[8] S. A. Ibn Marzuq, Al-Musnad, ed. M. J. Viguera (Algiers, 1981), 417–441.

[9] Leo Africanus, Description, 1:182–183.

Muhammad ibn al-Hajj, inventor of the hugely famous and much described[10] dawlabs (water-wheels) was brought from Granada. The son of a mudejar from Seville, he was expert in the mechanical arts. He installed the great wheel with its numerous buckets and a secret mechanism, along with other norias, such as the one in the Mosarra.

Despite its abundance, the distribution of water among houses was strictly regulated, being controlled, like the upkeep of canalizations, by the muhtasib and by experts. The rich vocabulary in this field has not yet been the subject of study. However, the aspect of the city did change considerably over two centuries: the springs and watercourses were no longer open to the sky; they had now been covered by buildings. The ownership of water was the subject of numerous lawsuits between the city-dwellers and the peasants of the surrounding districts.[11]

Thanks to irrigation, Fez produced an abundance of fruits and vegetables, along with the flowers for which the inhabitants had a fondness. Ibn {Abbad, a stranger in the city, complained of his woeful lodging, "where there were neither trees, nor lights, nor flowers." The Fassis were, it seems, particularly attracted by places where they could walk and go on picnics and rustic outings.

Dynamic minorities

Overpopulated as it was, the city was short of places to live. Moreover, shared dwelling was frequent, and wretched suburbs co-existed with the splendid palaces described by both al-{Umari and Leo Africanus.

The Jewish minority was as powerful as it was old-established, and some of its members exercised important functions at court. They were especially prominent in trade and in the working of precious metals, to the point of stirring up envy. Jewellers, goldsmiths, moneychangers, they were suspected of fraud at times of monetary crisis, and conflicts of interest were sometimes the cause of tragedies.[12]

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[10] Ibn al-Khatib, Al-Ihata fi akhbar Gharnata (Cairo, 1973–79), 2:139–141; Ibn al-Hajj Numayri, Fayd al-{ubab (Rabat, n.d.), 20, 25; Leo Africanus, Description, 1:234–235, attributes the works to a Genoese merchant (?); G. S. Colin, "L'origine de norias de Fès," Hesperis 13 (1933): 156.

[11] M. Mezzine, Fas wa badiatuha. 1549–1637 (Rabat, 1986).

Funduq al-Yahud was one of the oldest places in the city, along with Dar al-Kaytoun, which gave its name to a branch of the Idrisid Sharifs. From al-Bakri on, chroniclers repeated constantly that Fez was the city of the Maghreb where Jews were the most numerous. Ibn al-Khatib noted how "the descendants of Shem and Ham" had settled themselves in Fez and lived there as good neighbours.[13] The influx of Jews expelled from Spain increased this minority's importance. The substantial amount of taxes they paid was a sign at once of their numbers and their wealth.

Relatively little is still known about Christians present in the city. Knights in the service of successive dynasties, captives, diplomats, and renegades do, though, seem to have been numerous. The chroniclers who note the foundation of a Christian quarter in the White City, Rabad Nasara, state that, before this time, they lived within the old city. The word *{ilj* (plural *{uluj*) already seems, in Fez, to have denoted "renegades" or converted Christians.

"Municipal" institutions

We do not have any *hisba* document available that is specifically devoted to the city of Fez at this time. The function was undoubtedly a prestigious one, since the official poet al-Malzouzi was appointed to the post. Leo Africanus is distressed at its degradation and regrets the changes that have set in: "In the past it was entrusted only to men who were competent and of good repute. Nowadays, sovereigns accord it to common, ignorant people."[14]

The *muhtasib* supervised order, cleanliness, and hygiene. He kept a watch on fraud among the traders and supervised the interests and health of the inhabitants; he prevented the occupation of public spaces threatened by the proliferation of *sabats* (covered streets), and so on.

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[12] M. Kably, *Société, pouvoir et religion au Maroc à la fin du Moyen Age* (Paris: Maisonneuve et Larose, 1986), 274.

[13] Ibn al-Khatib, *Mixya al-ikhtyar* (Rabat, 1977), 79; Leo Africanus, *Description*, 1:234.

[14] Leo Africanus, *Description*, 1:207.

One of the most important aspects was the checking of weights and measures. During the rule of the Marinids, standard indications of length were set on the walls of the *muhtasib*'s office, for the supervision of precious fabrics and cloths.[15] The building materials used (wood but also easily inflammable rushes and palms) accounted for the frequency of fires and their disastrous effects. Once fire had broken out, indeed, it was virtually impossible to keep it under control, and *hisba* documents are silent on the measures to be taken in such a case.[16]

There was a health service concerning itself with the presence of lepers. Compelled to reside in lazar-houses, the sick people were a source of constant anxiety to the city-dwellers who on two occasions demanded the removal of these ghettos. Set up close to Bab al-Khukha, then removed to Bab al-Shari{a, they were compelled to move once again, when the inhabitants complained of miasmas and of refuse that might contaminate the water sources.

In the interests of hygiene, it was forbidden to slaughter animals outside the abattoirs (*gurna*), and the transportation of meat was, in principle, strictly controlled by the *muhtasib*. The blood, considered as being taboo, was not to soil passers-by, and in these narrow, perpetually crowded streets, the task cannot have been an easy one.

The White City: Marinid capital

With Fez conquered and its Almohad governors driven out, the Marinid princes began by installing themselves in their enemies' fortress, the Qasba of Flowers. In March 1276, however, they inaugurated the construction sites for the White City whose foundation marked, according to Ibn Khaldun, the distinctive beginning of the new dynasty. This city came to be added to the urban agglomeration made up by the Old Fez which had already comprised two quite distinct cores, one on the side of the Qayrawanis, the other on the side of the Andalusis.[17]

Celebrated by all the chroniclers, this foundation was a true capital, designed to symbolize the glory and power of the new dynasty. We are dealing here not with a simple royal residence or a purely administrative complex.

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[15] A. Bel, *Inscriptions arabes de Fès* (Paris, 1917).

[16] *Dhakhira al-saniyya*, attributed to Ibn Abi Zarx(Rabat, 1972), 73.

[17] R. Le Tourneau, *Fès avant le Protectorat*, new edition (Rabat, 1987), 2:837–842; H. Ferhat, "Fès," in *Les Grandes Villes méditerranéennes du monde musulman médiéval* (Ecole Française de Rome, 2000), 215–232.

This royal city was named al-Madina al-Bayda, the White City, but the population of Fez swiftly gave it another name, Fez-Jdid, which it has preserved.[18] A girdle of ramparts, built first of all to shut it off from the Old Fez which kept its aspect of a twofold city. It contained the palace, along with its multiple, vast dependencies, the principal mosque, barracks, stables, and, finally, a city in the proper sense, with its mosques, its trading centres and other suqs, its residential quarters, and its hammams. The most important state services were transferred there.[19]

A new mint, Dar-Sikka, competed with, or supplanted, the old workshops. Workmen and employees worked and lodged there, as did the goldsmiths, jewellers, lawyers, secretaries, etc. Also to be found there was the Christians' suburb (Rabad al-Nasara) and the Jewish quarter. Christians in the service of the dynasty had, up to that time, been lodged in the old city, along with the Jews. These latter had been transferred following a series of attacks.[20]

The great mosque had every care lavished on it, and seemed designed to rival older places of worship. It was endowed with a valuable minbar, an impressive chandelier with 187 holders, a maqsura, etc.

Ambitious, determined builders that they were, the Marinid kings multiplied their foundations and spent without stint on the adornment of monuments—spurred on, it would seem, by the desire to eclipse the achievements of the Almohads. This competition is well illustrated by the Qarawiyyin mosque. The Marinid qadis, notably Muhammad ibn Abi Sabr Ayyub, carried out work in this place of worship out of which the Almohads had made the principal religious edifice of Fez.[21] The décor of buildings became ever more sumptuous and Marinid architecture found its own distinctive stamp.

The Marinid hammams were very beautiful structures that have never been equalled (though sometimes imitated), even though their scale remained modest. The most beautiful appears to have been the hammam of the royal city. Al-{Umari, quoting Ibn Sa{id, assures us that only the sweating-rooms of Fez were supplied by springs.[22] Those dignitaries who found mixing with others distasteful had hammams in their houses. In contrast to the East, the baths in Fez had no private booths allowing notables to avoid mixing in the common rooms—those frequented by the lower orders so decried by censorious chroniclers ({amma).[23]

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[18] Leo Africanus, Description, 1:232–233.

[19] Ibn Fadl Allah al-{Umari, Masalik al-absar, trans. and annotated Gaudrefoy-Demombynes (Paris, 1927), provides a lengthy description of the White City.

[20] Dhakhira, 96–161.

[21] Al-Gaznai, Zahrat (Rabat, 1967), 45–67; al-Qirtas (Rabat, 1973), 60–66. These writers supply a detailed description of Marinid architectural innovations (new domes, {Anza, a small building in the courtyard to indicate the direction of prayer, etc.). See D. Maslow, Les mosquées de Fès et du Nord du Maroc (Paris, 1937).

The new edifices were equipped with accessories that demonstrated how technical innovations remained important. Putting aside the architectural details involved, we may point out the celebrated clepsydra (al-magana) installed in one of the madrasas of Abu {Inan; a number of other clocks functioned in other religious establishments. To protect believers from the sun, a linen cloth velarium was unfolded, using an ingenious system of ropes, in the courtyard of the Qarawiyyin mosque. In the same courtyard was built a shelter for the vast bell, weighing ten quintals that had been seized at Gibraltar in 1333.

Improved astrolabes, clocks adjusted to the solar year, ingenious hydraulic devices, a model of the city of Gibraltar—there was no inclination that wasn't satisfied with reproductions of what had always existed. Automata often featured among the gifts presented by foreign ambassadors, especially the Genoese. There were frequent exchanges with the Muslim world, headed by Egypt, as also with Genoa, Castille, and Aragon; no delegation would be likely to introduce itself empty-handed.

Situated outside the palatial complex, al-Mosarra was a vast space sited to the northwest of the city; here military parades and other march-pasts took place, along with sports involving horsemanship. There were several pavilions there, including the Golden Tower (al-Dhahab); Abu 'l-Hasan would go there twice a week to attend military manoeuvres and jousts where the best, most skilful knights would face one another.

Zawyia al-Mutwakkilya, created by Abu {Inan, was designed to take in travellers who arrived after the city gates had been closed. According to testimonies, including that of al-Numayri, this edifice was an architectural masterpiece with its gardens and fountains. Unfortunately, not the smallest trace of the monument now survives. The Marinids created or restored numerous gardens, parks, and riyads. The palaces called Rawd al-Ghizlan and Bustan Amina have kept their fame, but a good number of others mentioned in the texts have not yet been identified.

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[22] Al-{Umari, Masalik.

[23] Leo Africanus, Description, 1:189–190.

The Qaysariyya and the hegemony of trade

It was trade, with its various branches, that marked out the history of the city and the mentality of its inhabitants. Specialized markets were already noted in the Idrisid period. The Qaysariyya, an architectural agglomeration extending over a vast area, apparently underwent several transformations before becoming the impressive Marinid market. It was "a small town surrounded by walls," with a complex system of supervision, and it was also a focus of competition and tensions between Muslim and Jewish traders.

The Qaysariyya was given over to luxury articles: silks, jewels, spices, and perfumes, sashes, harnesses for horses, threads for embroidery, European cloths, etc. The description of Leo Africanus, given at a time when the country was in crisis, gives an idea of the wealth of these markets.[24] A good many other places were devoted to less exalted trade, and less care went into their building; the tarbi{as were modest squares sometimes surrounded by galleries and reserved for specific kinds of trade, particularly in textiles.

The funduqs of the city fell into two categories: those serving to lodge merchants and those serving above all for the storage of goods, generally sited close to the city gates. While some funduqs belonged to particular people, the most substantial ones made up part of foundational assets, including the famous wax funduq.

The commercial talents of the Fassis aroused prejudices whose echo is to be found from the twelfth century; the poet al-Bakki became renowned for his satires on their avarice, and Ibn al-Khatib viewed them as pragmatic, self-interested, and bereft of a sense of hospitality.[25] Ibn {Abbad complains of the cruelty of being in exile in this opulent city whose wealthy inhabitants remained indifferent to the loneliness of strangers.[26] The Fassis were recognized as possessing a sharp intelligence, a redoubtable skill in trade, a frantic love of gain, but also knowledge and a piety bordering on the pharisaical.

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[24] Leo Africanus, Description, 1:198–199.

[25] Anon, Kitab al-istibsar (Alexandria, 1958), 182; al-Maqqari, Nafh al-tib, ed. I. {Abbas (Beirut, 1968), 3:324.

[26] Nwyia, Ibn {Abbad, 49.

Wealth advertised itself, and the properties of the city-dwellers extended over a vast district around the city. The division of properties among the great city families was reflected in the topography of Fez, whose streets, riyads, funduqs, hammams and suqs would bear the name in question. The history of the Banu 'l-Hajj, the Slalgi and the Banu Maljum merged with the history of the city.[27]

Private houses were built high, with two, three, or sometimes four storeys. Those of traders and notables were richly decorated with multi-coloured zellijs and contained gardens. The city was, however, overpopulated, and writers were inclined to take little notice of modest dwellings.

Public demonstrations and royal ostentation

The Marinid apparatus and Marinid pomp were expressed through extravagant expenditure. Royal audiences were carefully choreographed, for the sovereign needed to make public advertisement of his power and authority.

The royal cortège displayed a solemnity designed to impress. The finest horses were harnessed with gold and precious stones, and the saddles were embroidered with gold thread. The cortège would advance to the sound of drums and other musical instruments. A profusion of multi-coloured standards would be unfurled, dominated by the white that was the dynasty's distinguishing mark. There are plenty of descriptions of these processions, of which the reception accorded to King Muhammad V of Granada was an example.[28]

The different professional bodies were invited to celebrate these solemn events. Freed from its toil for the occasion, the population would flock to gaze at the sovereign's public appearances—departures and arrivals, receptions of ambassadors—but also to rejoice in the circus games and the displays of equestrian prowess.

The Marinids officialized the celebration of the Mawlid and gave it an unprecedented lustre; nothing was spared to make this anniversary a sumptuous event. There are many descriptions. Ibn Marzuq, author of the *Musnad*, attended several years in a row, and his testimony is supplemented by that of Leo Africanus. There was food abundant in quality and quantity, fruit, delicacies, cakes made from honey and sugar, sumptuous rooms, and illuminations. The night was enlivened by recitation of al-Busayri's poem *Al-Burda*, by contests in singing, and by reading or psalmody of the *mawlidiyyat*.

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[27] Al-Istibsar, 203, 204, 205; Buyutat, 44, 49.

[28] Ibn al-Khatib, Nufadat al-jarab (Cairo, n.d.), 184–185.

The glory of the Prophet was reflected back on to the reigning prince, who distributed his liberalities to the *ahl al-Bayt* (descendants of the Prophet) and other dignitaries. For the city's poor, the festival was a chance to feast abundantly. They were able to take advantage of the leftovers from these gigantic banquets, and they received alms and the unused candles and wax. Soon the Marinids added to the celebration of the Prophet's birth the commemoration of the seventh day, the day of "baptism," if the expression is permissible.

Fez may indeed have been founded by the Idrisids, descendants of the Prophet, but it was the Marinids who arranged and encouraged the installation of the Sharifs and accorded them privileges. The popular veneration for the family of Idris was already noted by the author of *Al-Istibsar* in the Almohad period, but it was the policy of Marinid funding that allowed the formation of a veritable caste.[29]

The organization of the Sharifs into a formal body, jealous of its acquired interests, was swift. The palace sent emissaries to invite authentic Sharifs to come and settle in the city; and the influx of eastern Sharifs attracted by Marinid generosity was a noteworthy feature.[30] Pensions and a variety of privileges were granted them, and these exempted them from the need to earn their livelihoods in any difficult or base professions. A *naqib* (or *mazwar*), from among their number, was charged with watching jealously over their genealogy and with preventing intruders from enjoying the same advantages. Muhammad ibn {Imran al-Juti, an Idrisid from Fez, was the first holder of the title. Thereafter, the Sharifs were no longer subject to the civil jurisdiction but began to have their own jurisdictions.

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[29] Al-Gaznai, *Zahrat*, 29; Kably, *Société, pouvoir et religion*, 219, 99; H. Ferhat, "Chérifisme et enjeux du pouvoir au Maroc," *Oriente Moderno* 18 (1999): 473–483.

[30] H. L. Beck, *L'image de Idris II, ses descendants de Fas et la politique chérifienne des sultans Mérinides* (Leiden, 1989); F. R. Mediano, *Familias de Fez* (SS. XV–XVII) (Madrid, 1995).

The departure of the caravan for Mecca, the rakb, was another moment that allowed the integration of religion with power and with trade. The formation and departure of the rakb was an impressive spectacle. Pilgrims from the different regions were not the only people involved. Ambassadors, princes, and a large number of traders made up part of the caravan, along with envoys of the kings bearing gifts destined for the princes of the East. Subjects could, thus, marvel at the splendour of their sovereigns and the extent of their relations with the legendary eastern lands, especially Egypt and the holy places.

Circus spectacles (a distant echo of Rome) were regularly organized. There were fights between lions and bulls. In spite of precise descriptions, we still cannot locate the Marinid arenas, and their similarity with the present-day corrida remains a matter of speculation. In reality, the lions in these "games" faced the bulls under the direction of tamers protected by kinds of wooden "barrels." The advantage was not always with the king of the forest. Wounded lions were apparently dispatched with arrows.

An unprecedented intellectual activity

Following the downfall of Cordoba and Seville and the decline of Marrakesh, Fez became the principal focus of attraction for élites from every corner.[31] The city was a crossroads where every important Maghrebi personage made a more or less extended stay. Banu Ziyan princes from Tlemcen, Nasrids from Granada, Hafsid princes, but also ambassadors, travellers, mystics, students or straightforward parasites, along with most of the famous personages of the age, made a stay there or else settled permanently. The autobiography of the author of the Muqaddima is a valuable testimony regarding the city's intellectual circles. There is abundant information about these learned circles that gravitated around the princes, especially around Abu 'l-Hasan and Abu {Inan. The Marinid court was a highly open one, and the kings neither were nor could allow themselves to be miserly. The gift was part of the system of government, and the women of the court also took part in this. Before his departure for Granada, Ibn Battuta admitted that the king's mother "sent me some gold pieces that were very useful to me."[32]

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[31] M. Benchekroun, La vie intellectuelle marocaine sous les Mérinides et les Wattasides (Rabat, 1974).

Isma{il ibn al-Ahmar, banished by his cousin, the king of Granada, lived in a gilded exile and consorted with men of letters in court and city alike. A prolix writer, he was one of the dynasty's poets and historiographers. His work provides a valuable testimony of the groups where men of letters were to be found. He acknowledged that the king of Fez took upon himself all the expenses for his marriage with his cousin.[33]

Ibn {Abbad, a talented disciple of Ibn {Ashir of Salé, attracted the attention of the court in spite of his extreme modesty. His commentaries on al-Hikam brought him great success and made a major contribution to the diffusion of Shadhilism. Imam and preacher at the Qarawiyyin, he took part in the official Mawlid ceremonies. His sermons and commentaries were a great literary event. His talents, his love of solitude and his aversion to trifling fashionable questions set him apart from others.

This élite of birth and knowledge animated cultural life. This dynamic group of writers and thinkers knew one another, consorted with one another, esteemed, envied, hated one another. They had unhesitating recourse to the denunciation and petty spite of which Ibn al-Khatib was a victim. Ibn al-Khatib's friend to whom he addressed a letter on the birth of a child was none other than Ibn Khaldun.[34] The brother of Ibn Khaldun, Yahya, was the historiographer of the Banu {Abd al-Wad of Tlemcen, the Marinids' brothers and enemies, and he made a stay in Fez. The accounts of Ibn Battuta which we esteem so highly aroused more suspicion and mocking comment than enthusiasm.

In Fez, too, resided a throng of fine minds come from every corner: from neighbouring tribes like the Fishtala and Makkuda, from other Maghrebi cities like the grammarian Ibn Ajarrum, the Banu 'l-{Azafi princes, from Sabta, but above all from al-Andalus and from Tlemcen.

Besieged on a number of occasions by the Marinid sovereigns, the latter city functioned as a counterpart to Fez, and hostile or friendly exchanges remained as important as they were regular. The élites of Tlemcen moved constantly between the two cities, fleeing prosecution by the prince of one city to seek the protection of his rival.

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[32] Ibn Battuta, Voyages, ed. and trans. C. Defremery and B. Sanguinetti (Paris, 1968), 2:383.

[33] I. Ibn al-Ahmar, Natir al-juman, ed. M. R. Daya (Beirut, 1976); A. L. de Premare, Maghreb et Andalousie au XIV^{e} siècle (Lyon, 1981).

[34] Ibn al-Khatib, Nufadat, 131.

When, in 1282, the Marinids occupied Tlemcen, the city of his birth, Abu {Abd Allah al-Abili chose exile and travelled to the East. When he returned to his homeland, he hastened to leave once more, so as to avoid re-entering the service of Sultan Abu Hammou. He took refuge in Fez, with the Jew Khalluf al-Maghribi, who taught him esoteric sciences (*{ilm ta{alim*). We find him next in Marrakesh, with Ibn al-Banna, then among the Haskoura of the High Atlas with Ibn Taroumit, before finally becoming the pivotal figure in the scholarly circle of Abu 'l-Hasan whom he accompanied on the Tarifa and Tunis expeditions before dying in Fez in 1356.

From Tlemcen, too, came the Banu 'l-Imam brothers, protégés of Abu 'l-Hasan. Brought up in Tunis, they had a violent confrontation with Ibn Taymiyya while staying in the East.[35] Their Banu Marzuq fellow-citizens played a part of prime importance, and it is thanks to one of them that we are so well informed about the exploits of al-Hasan to whom he was very close. From Tlemcen, likewise, was the family of one of the city's most important *qadis*, al-Maqqari.

Emigrants from al-Andalus played a prime part in every sphere, the importance of this minority being explained by the inexorable Christian advance and the internal crises of the Kingdom of Granada.

The madrasas are the monuments that still maintain the glorious memory of the Marinids. There was indeed a madrasa founded by a rich scholar in Sabta, but the institution, with its rich buildings and its teachers paid by the ruling power, was very much a Marinid innovation. Most of the madrasas in Fez were the work of this dynasty whose princes vied with one another in foundations and gifts.[36] Thus, in 1337, at great expense, a lump of marble weighing 143 quintals was imported from Almeria for the basin of the Sahrij Madrasa. The transportation of this block required the most heroic exertions.[37]

Fez prided itself on the considerable number of books to be found there, even if most of the Almohad workshops which produced paper had disappeared. The importing of European products which had now become a necessity gave rise to a series of fatwas.[38] While private libraries were not uncommon, those of the mosques and the madrasas derived from royal or private legacies, and plenty of writers presented copies of their works by means of waqf. Ibn Khaldun bequeathed the Qarawiyyin a manuscript of his monumental historical work.

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[35] Ibn Khaldun, *Le Voyage d'Orient et d'Occident*, ed. A. Cheddadi (Paris, 1980), 54; Ibn Mariam, *Al-Bustan* (Algiers, n.d.), 123–26, 214–19.

[36] M. Manouni, *Waraqat* (Rabat: Publ. Fac. Des Lettres, 1983).

[37] Al-Gaznai, *Zahrat*, 37.

At court and in the city alike, people needed no encouragement to write verses. Most of these poems, though, were the work of paid rhymesters: poetry competitions brought poets together when the opportunity arose. In 1363 (Rabi{ II, 764), a large number vied to celebrate the sword of Idris I which was to be placed in the minaret of the Qarawiyyin and serve as a talisman for the city. If poetry was very often inspired by circumstances, many writings stemmed from hope of a reward in ringing, tested currency. After the manner of the kings, powerful ministers maintained their own courts of extollers,. The generosity, even mad prodigality, of the Banu {Uthman, a dynasty of dignitaries, was appreciated by the courtiers and poets who constantly celebrated their open-handedness. Valuable for the study of the city's history, these works are liable to grate on the nerves of the present-day reader with their overdone homage and panegyric of the powerful.

Ibn Battuta and his editor sought to outdo everyone in their celebration of the glory and merits of king Abu {Inan. Ibn Juzay constantly intersperses his account with praises that border on the toadying. After the reign of Abu 'l-Hasan, that of Abu {Inan is set forth as the reign of justice, equity and order; the prince's talents are praised as beyond the normal: of outstanding valour on the battlefield, he lays the lion low, surpasses every king in the world in every sphere. It is affirmed, too, that "in all these sciences our master holds the first place," and that "his handwriting surpasses in beauty all the decorations of the holy tomb."[39]

The classes of the most famous masters attracted the élites and were often an opportunity to make useful acquaintances and penetrate the circles of power. Princes, sons of dignitaries, but also gifted students, rubbed shoulders there. Social rise was still achieved through knowledge! And yet renowned scholars like {Abd al-{Aziz al-Qarawi ventured to make vehement criticism of the fiscal policy of Abu 'l-Hasan.

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[38] H. Ferhat, "Le livre instrument de savoir et object de commerce," Hespéris-Tamuda 32 (1994): 53–62.

[39] Ibn Battuta, Voyages, 2:369, 372.

Taking over from the Andalusi cities whose heritage it claimed, Fez was a glittering centre where wit and culture were especially esteemed. Everything was discussed there: methods of teaching already threatened with stagnation, Sufi approaches, the morality of the common people ({amma), and also taxation and Sharifism.

The Mawlid, at once an official and a popular festival, was at the centre of a major debate revolving around the value of this "innovation." Was it a good or a bad bid{a?[40]

The supervision of knowledge through the institution of the madrasas did not escape criticism. Abu {Abd Allah al-Maqqari, a disciple of al-Abili and chief judge of Fez, disputed the merits of these official colleges that threatened the dynamism and freedom of masters and students alike and were harmful to learning.[41] Ibn {Abbad, who attacked the avarice and intellectual sloth of his contemporaries, seems to have been alluding to these paid teachers.

The Sufi current which had formerly flourished in the Almohad capital moved to Fez, undergoing changes that attracted to it scholars and even courtiers; despite their creed, the saints did not shun closeness to power. It was at Fez that Ibn Khaldun wrote his treatise on Sufism, the famous Shifa al-saxil.[42] Ibn al-Khatib devoted his Rawdat al-Ta{rif to the same subject.[43]

Thanks to two exceptional testimonies, we are relatively well informed about these circles.[44] The Sufis watched over order, denounced the iniquity of taxes, the maladministration of foundational assets (waqf), and sometimes attacked the prince directly. Some took a specific interest in the world of craftsmen whom they ventured to censure. We may discern in this current a proselytizing spirit. A holy personage fashioned a special prayer (wird) for craftsmen. Ibn al-Hajj devoted the fourth and final volume of his Madkhal to the world of work.[45]

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[40] H. Ferhat, "Le culte du prophète au Maroc au XIII^{e} siècle: organisation du pèlerinage et célébration du Mawlid," in La religion civique à l'époque médiévale et moderne (Ecole Française de Rome, 1995), 89–97, idem, Sabta des origines au XIV^{e} siècle (Rabat, 1993), 454–457.

[41] Kably, Société, pouvoir et religion, 283.

[42] R. Péres, La Voie et la Loi ou le Maître et le Juriste [trans. from Shifa al-saxil] (Paris, 1991).

[43] H. Ferhat, Le soufisme et les zaouyas au Maghreb. Mérite individuel et patrimoine sacré (Casablanca, 2003).

[44] A. Ibn Qanfud, Uns al-faqir (Rabat, 1967); al-Hadrami, Al-Salsal al-adhb (Salé, 1988).

[45] Ibn Qanfud, Uns, 74, 77; Ibn al-Hajj, Al-Madkhal (Beirut, 1972).

Certain Sufis were prepared to act as intermediaries between the rulers and their subjects, at the risk of arousing indignation or provoking the jealousy of their peers. Consorting with princes was, indeed, viewed as especially bad.[46] Abu 'l-Hasan Lijai, a scholar and mystic, devoted his life and his income to works of benevolence, letting nothing stand in the way of his efforts to help the poor and allay conflicts.

Despite his official responsibilities, Ibn {Abbad constantly denounced bad governance, the iniquity of taxes, and the avarice of scholars whose cupidity and opportunism he did not hold back from denouncing: "It is not, it must be said, to struggle against the public misguidance of our poor contemporaries that they have taken on this function [of faqih]. Rather, they have seen in it an excellent means of acquiring the goods of this world."[47] Indeed, such criticisms are not new, but they do reflect a politico-social reality whereby dubious fortunes could be accumulated.

Abu {Abd Allah al-Maqqari, from a rich Tlemcen family that combined knowledge and wealth, and ancestor of the author of Nafh al-tib, was an all-powerful qadi and a prestigious teacher, who did not hold back from criticizing his sovereign.[48]

Al-Abili, a philosopher attracted by the esoteric sciences, denounced the official institution of the madrasas. His interest in Shi{ism made him suspect, but we lack sufficient information to understand his flights, his clandestine behaviour, and the persecutions he endured.

For all the intellectual brio, such essential disciplines as medicine and philosophy began to stagnate; the hospital (or hospitals; maristan) was functioning, but our information remains insufficient. The author of Al-Musnad who entitles a chapter of his work "foundation of maristans" contents himself with noting Abu 'l-Hasan's restoration of a maristan founded by his father.[49] In so far as we can glean the names of physicians attached to the court, it would seem that they were primarily interested in dietary matters and the art of preserving health; the works of Ibn al-Khatib (who was, let us remember, a physician) are testament to this. The Black Death did indeed give rise to a few treatises, but it revealed, above all, the powerlessness of practitioners.

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[46] H. Ferhat, "Saints et Pouvoir au Moyen âge au Maghreb: entre le refus et la tentation," in the collection L'autorité des saints en Méditerranée occidentale (Tunis, 1998).

[47] Nwyia, Ibn {Abbad, 150. Ibn {Abbad became the patron of the shoemakers, and his commentaries on the Hikam still enjoy the same success.

[48] Al-Maqqari, Nafh, 3:203–209.

[49] Ibn Abi Zarx, Al-Anis al-mutrib bi rawd al-qartas (Rabat, 1972).

The absence of philosophy is virtually total. Hunted down by the fuqahax, the discipline had become a dangerous one—the misfortunes of al-Abili are witness to this. Under suspicion of heresy, he was forced more than once to conceal his beliefs.

There was an ambiguous current of learning, involving mathematicians like Ibn al-Banna, astrologer-astronomers like Ibn Qanfud, Sufis, and Jewish scholars like Ibn Makhluf.

Abu Zayd al-Lijai, known for his asceticism and his charitable works, devised a hydraulic astrolabe which Ibn Qanfud, himself an astronomer attracted by Sufism, regarded as an exceptional invention.[50]

A society in decline?

The power and popularity of the Sharifs became a threat to the ruling authority; the revolt of al-Juti illustrates the political emergence of this caste well.[51] From the fifteenth century on, the "discovery" of the tomb of Fez's founder led the city to focus around two places of worship: the Qarawiyyin mosque and the sanctuary of Moulay Idris.

In the fourteenth century, hubus assets were considerable, and royal donations were added to private bequests. They comprised mills, hammams, fountains, public ovens, and funduqs; their income was designed to ensure the upkeeping of mosques, hospitals, and madrasas. Expenditure, however, was no less substantial: the foundation and upkeeping of the madrasas and hospitals and mosques, salaries, illuminations, alms, pensions for the Sharifs, and also misappropriations—all these threatened the patrimony. Forty employees, among them a number of muezzins, supervised the upkeeping and proper working of the Qarawiyyin mosque alone. The squandering of this income, including abuse over lighting, led to the qadi {Abd Allah al-Fishtali refusing to set foot in the great mosque until an end was put to the wasting of public assets in the purchase of wax and oil.[52] Public property fell into disrepair for want of upkeep, and Gaznai was already noting, in a flourishing city, several gates condemned, mechanisms broken down, and places of worship neglected.[53]

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[50] Ibn Qanfud, Uns, 68.

[51] M. Garcia-Arenal, "The Revolution of Fas in 869/1465 and the death of Sultan {Abd al-Haqq al-Marini," BSOAS 41 (1978): 43–66.

[52] Ibn al-Khatib, Al-Ihata, 2, 1:33.

The death of Abu 'l-Hasan coincided with the rise of powerful families. His son Abu {Inan, for all his panache and ambitions, was effectively strangled by his vizier al-Fududi. A number of his successors were deposed or assassinated by these high dignitaries. These grand viziers from the great Marinid tribes, al-Fududi, al-Sadrati, al-Yabani, were followed by the Banu Wattas, who finally supplanted their cousins and seized power for themselves.[54]

The present toponyms of Fez reflect a long history and send an echo of tragic events (rebels hanged or burned), or of the residence of eminent persons; and the cemeteries crystallize this long history.[55] They also preserve the memory of activities or functions that have vanished or are in the process of vanishing. The houses where illustrious personages stayed are still shown: the house of the Banu 'l-Hajj, for instance, where the qadi {Iyad of Sabta once lived, the mosque of Abu Madyan, the present patron saint of Tlemcen, and the house of Ibn {Abbad.

Vanished or vanishing professions, like the tyalun (makers of sieves) and sbitriyyun (shoemakers) have left their names to quarters, funduqs, or mosques.

Disquieting signs were already to be discerned.[56] Abu 'l-Hasan suffered a fearful defeat at the hands of Arab tribes in Ifriqiya and Christians in al-Andalus. His scholars and his army were decimated by the Black Death. He finally died in exile in the High Atlas, having been driven out by his own son, the no less famous Abu {Inan. Disreputably acquired fortunes provoked scandal, and moralists constantly denounced these parvenus who had accumulated wealth by blameworthy means. A class of holy men, in the minority till then, began to assume prominence. These odd devotees concerned themselves less and less with religious practices. Neither the indignation of the orthodox nor the censure of scholars could prevent their success, which was to assert itself over the centuries.

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[53] Al-Gaznai, Zahrat, 80.

[54] Al-{Umari, Masalik, 153 and note 3; Kably, Société, pouvoir et religion, provides a detailed analysis of the rise of powerful personages within the Marinid political system.

[55] One might cite Ibn {Ayshoun Sharrat's Rawd al-{atr al-Anfas, and al-Kattani's Salwat al-Anfas, which focus on the history of the city by reference to its cemeteries.

[56] M. J. Viguera, "Le Maghreb mérinide: un processus de transfèrement," in La signification du bas Moyen Age dans l'histoire et la culture du monde musulman (Edisud, 1976), 309–322.

Fez remained, nevertheless, the acme of refinement. The reception accorded to the Sa{adis by the Fassis speaks eloquently. They regarded these Bedouins who dressed in drapes and furnishing fabrics purloined from fine houses as scandalously boorish. They accused them of strutting around in absurd, gaudy outfits.[57] It was a couple in the service of the Marinids who apparently initiated them in the proper way to behave. This man and this woman taught them, it seems, how to dress, comb their hair, sit, bear arms, prepare food, present it, eat, etc. The opposition of the population of Fez was scathing: confronted with the Sa{adis, they remained nostalgic for the Banu Marin and their Banu Wattas cousins. According to one adage, there was nothing worthwhile outside these two dynasties.[58] Chroniclers ceaselessly exalted the virtues of these builders, who were attentive to the opinion of theologians, benefactors of the city—even if the historical reality was far from corresponding to this idealized vision.

The testimony of Leo Africanus, writing at the end of the rule of the Wattasid branch of the Marinids, is a homage to this city that continued to resist despite the crises shaking the country, despite the recurrent anarchy, and the Iberian peril.[59] The territory contracted, and, despite considerable effort, the gold routes escaped from the control of Fez. A lack of gold was, indeed, already making itself felt, and monetary crises multiplied.

Before concluding, we might mention one curious feature that continued to exist in Fez, this highly devout city, home to the theological sciences. A number of writers note the existence of talismans designed to protect the monuments and the inhabitants. The phobia about figural representation seems not to have bothered the orthodox: there is a figurine representing a bird holding a scorpion's tail in its beak, there are apples to protect against reptiles.[60] Another statuette guards against swallows nesting in the mosques. Copper lions have water flowing from their mouths. There is a clock in the reception room where female figurines leave their cases to mark the hour.[61] Such indications compel us to reconsider certain preconceived ideas.

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[57] Anon, Tarikh al-dawla, ed. A. Benhadda (Rabat, 1994), 28–30.

[58] E. Destaing, "Les Beni Merin et les Beni Wattas (légende marocaine)," in Memorial H. Basset (Paris, 1928), 1202.

[59] Velentim Fernandez, Description de la côte d'Afrique de Ceuta au Sénégal, trans. P. de Cenival and Th. Monod (Paris, 1938); Damiao de Gois, Les Portugais au Maroc de 1495 à 1521 (Rabat: Editions R. Ricard, 1937).

[60] Al-Gaznai, Zahrat, 93; Ibn Abi Zarx, Al-Anis, 5.

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[61] Manouni, *Waraqat*, 269–270.

THE SPATIAL ORGANIZATION OF TUNIS MEDINA AND OTHER ARAB-MUSLIM CITIES IN NORTH AFRICA AND THE NEAR EAST

Roberto Berardi

Many years ago the study of Tunis Medina (see Appendix) became the occasion for me to explore an urban reality for the first time with original instruments conceived entirely with that aim in mind. It was not so much a matter of understanding the space of the medina through the differences, which this collective artefact showed with regard to my historical and practical knowledge of western cities. It was more a matter of trying to understand how a space defined as urban is organized within the historically specific culture that constructed it. I was lead to this condition of *tabula rasa* by the realization that the spatial experience of Tunis Medina awoke in me echoes, impressions of differences, the desire to forge analogies, and a sense of disorientation. These sensations revealed to me, above all, that my formal education had never gone deeply enough to arrive at any real knowledge of the cities I had visited or studied. It was, thus, in a fresh relation with this reality that I would have to construct the appropriate tools needed to explore it.

The history of urban societies never materializes automatically in the physical organization of their cities. Nor have cities belonging to relatively homogeneous cultural areas appeared and developed in the course of time following uniform and easily recognizable patterns. Until the twelfth and thirteenth century the European Middle Ages were a virtually unknown terrain, except in scattered fragments, and it included both the later degradation, or simply evolution, of older urban bodies as well as settlement processes that were engulfed by successive phases of urbanization. So I am not looking for a model or a prototype, but rather the *order* that a given *space*—the space of the defence, of the commercial and production activities, and the religious and social convictions of a given urban culture—has imprinted on all preceding ones, either by absorbing or cancelling them. In the case in question, this culture was just one of the many Arab-Muslim cultures on the shores of the Mediterranean; but it was important for me to be able to give a cogent analysis of *this particular* city.[1]

More recently I have examined the topography of Aleppo and Damascus in the extremely accurate French cadastres,[2] and compared the planimetrical organization of the Syrian capital in 1932 with the topographical survey carried out by Wulzinger and Watzinger in 1912. I have also utilized measured drawings of the Fez suqs and Aleppo by Stefano Bianca, one of Sfax by M. Van Der Meerschen, and one of Kairouan by Paola Jervis and Paolo Donati. This work has led me to develop the hypotheses that I had formulated during my earlier research, and it has enriched the image I had formed of a conscious organization of space along the Mediterranean coast in various Arab countries. Nevertheless, I do not intend to affirm that a *type*, or that just *one* type of Arab-Muslim city exists, nor that all Arab-Muslim cities are alike. The Arab-Muslim world is vast enough, in time and space, to have been both distinct from and confluent with other, earlier urban experiences. The relations of the Arab peoples with ancient Syria and Mesopotamia began before the dawn of written history. The Arabian territories saw the cohabitation of pastoral and nomadic cultures with urban, mercantile, and peasant cultures, with which the nomadic life came to be integrated through trade, travel, and military expeditions.

In *Città, Materia del Tempo* I attempted to trace the extraordinary affinities between these ancient, founding realities—built with much of what we find in the urban and architectonic organization of Tunis Medina, but also of Fez, Kairouan, Sfax, Aleppo, and Damascus—yet without being able to detect a common identity in the material configuration of these different cities.[3] Perhaps it would be more interesting, to follow the trade routes, wars, and cultural transformations that led to the diffusion throughout the ancient world—from Mesopotamia to Crete to Archaic Greece—of certain forms of urban spatial organization, its architectural components, and route patterns. Until the innovations of Hippodamus brought about a revolutionary notion of space with regard to the legacy of the past: it is as if, from that moment, the art of building the city knew a divergence between a Greco-Roman notion of space in the West and the persistence of a Mesopotamian and Persian notion of space in the Near East.

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[1] In this essay I have consulted and referred to my earlier publications: "Lecture d'une ville: La Médina de Tunis," *L'Architecture D'Aujourd'hui*, 1970–1971; "Espace et Ville en Pays d'Islam," in *L'Espace Social de la Ville Arabe*, ed. Dominique Chevallier et al. (Paris, 1979); *Signification du Plan ancien de la Ville Arabe* in *La Ville dans l'Islam*, ed. Abdelwahab Bouhdiba and Dominique Chevallier (Tunis and Paris, 1982); *Città, Materia del Tempo* (Florence, 1995); *Della Città dei Fiorentini* (Florence, 1992); *Capri, Portolano della città* (Florence, 1994); "L'Architettura delle Città nelle Epoche di Formazione dell'Occidente Cristiano e dell'Islam," in *Architetture e Città del Mediterraneo tra Oriente e Occidente*, ed. Alireza Naser Eslami (Genoa, 2002).

[2] See Jean Claude David's work on Aleppo and its cadastral records, especially his essay "La Formation du Tissu de la Ville Arabo-Islamique; apport de l'Etude des Plans cadastraux de la Ville d'Alep," in "Urban Morphogenesis," *Environmental Design* 1–2 (1993).

[3] Yet we can not ignore the fact that many elements of the ancient Sumerian, Akkadian, Babylonian, and Assyrian cities were systematically taken up and applied

We seem to be able to verify this hypothesis through a chronological study of the *type* of dwelling with an internal patio, and all its vicissitudes and variations, from the fourth–third millennium in Uruk, Ur, and Nippur to Assur, Ancient Persia, Susa, and Parthia, on the one hand; and from Archaic Greece (for instance Phylakopi)—where the megaron, already present in prehistoric Anatolia, is combined with an internal courtyard, blind alleys, and the absence of open public spaces—to the houses in Delos, Olinth, Miletus, and Priene, on the other. Here, despite an apparent similarity due to the presence of an internal courtyard, another chapter in the history of urban domestic space begins (a variant now independent of *type*) to be followed by the Italic, and later, Roman *domus*.

I have mentioned both my own work and my sources in order to make explicit my research methodology, which is based on the conviction that, in their physical configuration, cities are *logoi*, that is, they give material form to a *general order* of urban spatial composition.[4] In the case of Tunis Medina the principles and strategies used in its realization, in terms of architectonic and urban space, seem as clear as a set of rules to me. Yet we can neither say whether these rules refer to social ideologies and historical traditions, nor whether they represent the final evolution in terms of a "forever possible" Arab-Muslim and

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to the Arab-Muslim cities in question: apart from the dwelling *type*, in a series of often complex variants with multiple courtyards, devices such as the dog-leg entrance, the blind alley as a form of aggregation around one or more important buildings, and the commercial streets near the gates of the great Assyrian cities are just some examples. In Susa in the Achaemenid period we note, next to the rigid layout of Darius' palace (composed of a summation of courtyard dwellings of varying sizes, store-rooms, and hypostyle halls, like all imperial palaces in the ancient Near East), a less rigid urban spatial organization and a freer experimentation with multiple-courtyard dwellings, both large and small.

[4] This material form conforms to the general order through the variation of its parts, yet with a fundamental respect for the principles governing it.

later Arab-Ottoman space. We can only say that the models of spatial composition for housing, trade, and production seem, in terms of reciprocal inclusion or exclusion, to date back to well before the advent of Islam—or Rome and Ancient Greece even—in the lands of the first Arab Conquest: Egypt, Syria, Iraq, and North Africa.

As already mentioned, in the archaeological survey of Mohenjo-Daro there seem to be patterns of interdependence between mono- or bi-cellular dwellings and larger, more complex building organisms that we could call palaces.[5] These seem to form groups, or units, which are repeatedly proposed. If the architectural models do not correspond to those of the urban experience analysed here, nevertheless, the clusters of larger houses and bi-cellular dwellings and the conception itself of a route network internal to the large built-up areas situated within the major route system cannot be considered foreign to the later spatial organization of Arab-Muslim cities in the Mediterranean.

Just as language—or writing, which is the material imprint of classifying, narrating, evaluating, and computational thought—conserves within itself the ancient roots that link diverse peoples and cultures descending from more or less remote civilizations, so cities—which are the imprint left by urban civilizations on the land—contain within themselves, in built form, the initially unrecognizable memory of all their pasts.

The methodological tool on which I have relied is the measured drawing of the city, in which the cadastral boundaries cease to delimit property and become filled instead with an architectonic organization of space. This in turn is open to interpretations, in which time and custom act as basic variables through the changes they have wrought on the urban organism. All this happens by means of the organization of space, so that an urban society and the history of its city are glimpsed through a limpid transparency, so to speak, or through a hypothesis and inquiry. The measured drawing is not just a complement to the cadastral survey of a city; it is also a visit in which the mental acumen of the draughtsman, the experience acquired through the exploration of a given space and the relationship established with those who live there play a crucial role.

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[5] For Mohenjo-Daro see especially A. Sarcina, "House Patterns at Mohenjo-Daro," Mesopotamia 13–14 (1979). If the Cretan palaces at Knossos, Phaestus, and Mallia seem to be palace-cities due to their functional complexity and the arrangement of the buildings that go to make up the palace complex, then the Sumerian and Akkadian palaces of the third millennium BC reveal a similar conception of architecture: that is, the palace complex as a closed city, and the actual extended city around it as having a different organization, both in terms of scale and layout. In this context, Zimrilin's palace in Mari is a good example. The urban space seems implicit in the general organization of the palace, made up of internal courtyard units linked by labyrinthine corridors, fortified entrances, groups of store-rooms, a series of artisans' workshops, archives, deposits, and sanctuaries. The whole is organized on a grid-like pattern, starting with a series of atrium-s, vestibules, entrance courtyards, and courts of honour that lead to the throne room and sanctuary. Despite their differences, the Caliph's palaces of the Abbasid period and later take up, with variations, this model.

For this reason, not even the measured drawing is an absolute mirror-image of reality, but is rather a text to be deciphered through the discovery of those elements which, when combined on the basis of recognizable laws, produce a set of variables that can be traced back to a general law. The interpretation of a measured drawing only works, if it gives rise to an epistemological system in which all the elements are connected through a relation of coherence and correspondence, linking the smallest detail to the most complex organization, the simplest spatial component to a global sense of urban space. This seemingly theoretical, a priori affirmation is really the result of a practical knowledge on the basis of which we may then come to formulate a theory. The city in the measured drawing thus becomes a corpus of knowledge that can be tapped by many forms of analysis and interpretation.

The purpose of my own measured drawings was to examine the ways in which an urban space is realized; to examine the architecture of the city and the city as the general organization of a space constructed by a society projected through time and change. I do not claim to identify the continuity or discontinuity of a history in these measured drawings, though I may touch upon it or indeed provide its material elements. I have managed to glimpse this history through the spaces I have explored, and the conjunctions and disjunctions I have been able to discern in them.

Tunis Medina: its spatial configuration

In my initial endeavour to understand the nature and modes of composition of the built environment of Tunis Medina I attempted to describe accurately the practical and conceptual foundations that form the compositional basis of all the architecture of this city and perhaps even of most Arab cities in the Mediterranean and Near East (see Appendix).

In the beginning was the *basic element*: the unit, three walls, a floor, and a covering. At the same time the primary system of architectonic organization came into being: an *open space* surrounded by walls, which we might consider the negative of the first and which seems to be the basis of all later architectonic genesis of urban space. In the case of the *dwelling type*—an essential and universal component of all cities—the first two acts are followed by a *reticulated organization* of different kinds of units around an open space. The differentiation of the units establishes the *type*, the *dar* (house but also lineage and family), which is invariable, as opposed to the variables of ownership or inhabitants. This type is able to organize most of the urban space, either by following a double linear sequence or by "gemmation" around a narrow access lane.

The units around a central space can be doubled or combined, or they can form series and clusters. The *skifa* and *driba* take shape; these architectonic elements provide a link between the house and the spaces that can be freely traversed. Moreover, they are ways of controlling who comes into the house from the outside. The courtyard[6] is called the heart of the house (*wust ad-dar*)—since it is the space where all the members of the extended family gather, where guests are received and where internal passageways converge—though it is, nevertheless, external with regard to the *bait*-s[7] (rooms built around this central core) where the life of the various members of the extended family is conducted in private, according to age, status, domestic duties, children's education, and so on. The house (*dar*) is like the embryo of a small village (*douar*), which like the former is the living space shared by family clans.

If the courtyard is lengthened and the units are aligned on the two longer sides, the result is a segment of a suq, terminating in a gate at either end. The end units are always doubled and are laid out at an angle with respect to one another in order to allow for a similar series at different angles. In many cases the suq units are doubled vertically and have a cellar. Their grid-like composition forms a *fondouk* of two or more storeys, with the upper one used as the living quarters. This type of *fondouk* is not very common in Tunisia, though it was once in Sfax, for instance (as described by Mourad Rammah in *Ifriqia*), in Cairo, Damascus, Baghdad, and even Venice and Istanbul.

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[6] The courtyard may have a stone facade in an expressive architectural language, using the motif of the arcade, and sometimes with inlaid work.

[7] In the ancient Semitic languages *bait* meant a temple or a place sacred to a divinity.

The suq segment can generate linear sequences by a summation of the units, and these, too, form a network; the segments intersect, though they remain, nevertheless, closed off by a gate at either end. The different segments correspond to different crafts, or different kinds of merchandise on sale, which were never traditionally in competition. Thus, even a linear series of units is organized on the principle of creating internal, empty spaces that are invisible from the outside and are difficult of access. This reticular system—that is, the creation of a triangular or quadrangular intersection of a series of units, at the centre of which is a courtyard, or the summation of a succession of units in both orthogonal directions—is always generated by the basic act of placing one or more empty spaces at the centre, around which the succession of units is organized. Both house and suq are the result of such an articulation.

When applied to a succession of units this reticular system can create either the entire space of the suqs or a new building: the fondouk, the workshop of a group of artisans (for the manufacture of textiles, leather and copper goods, wickerwork, and so on); or the oukala, a temporary residence for those who have not yet found a house in the city or suburbs. The most articulate expression of this system and of a parallel sequence of simple units is the kaisariyye. In the case of Tunis, from the Ottoman period onwards, it was entirely dedicated to the production of chéchias, the profits from which were collected and administered directly by the sultan or bey.

The kaisariyye[8] is a covered enclosure with gates, in which a portion of the suq network is contained. The sequences of units here either face or back onto one another in parallel fashion. The empty space is limited to the passage of men and merchandise. While the fondouks, madrasas, hammams, midhas, mesjeds, oukalas (and occasionally small groups of houses) are situated in the empty space created by the network of suqs, the kaisariyye is a large, completely self-enclosed building covered by a single vaulted roof, similar to a bazaar and distinct from the rest of the suqs, despite being composed of the same elements. We can compare this with the measured drawing of Fez around the great Qarawiyyin mosque.[9]

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[8] See, for example, Louis Massignon, Les Corps de Métier et la Cité Islamique (Paris, 1920): "The kaisariyye is a closed environment, with sturdy gates and a kind of great hall where imported merchandise and the precious materials of the various guild corporations are kept." See also the accurate description by Gustav von Grunebaum in "Die Islamische Stadt," Saeculum 6, no. 2 (1955).

The Qarawiyyin Mosque is surrounded to the north by dwellings served by interminable blind alleys, which seem to group together the more secluded clusters of larger houses or houses arranged in succession along both sides of an alley, in an inner zone far from the public thoroughfare. This kind of spatial organization of the streets and grouping together of extended families is standard and is also found in Aleppo, Damascus, and throughout the Maghreb, particularly in Tunisia. These very long blind alleys are rare in the Central Medina in Tunis, while they are more frequent in the Bab el Souika suburb. The routes that link the more important streets are often divisible in discrete segments and can be barricaded or closed off in case of rioting unleashed by a *foutouwa*, for instance.[10] In such cases the main routes (from the gateways to the mosque, or from gate to gate) are broken up for defence purposes into sections akin to a series of parallel dwellings served by isolated segments of street networks. Whole areas of the city, thus, become fragmented, closed off and inaccessible.[11] In peaceful times, however, the main routes regain their value as a circulation system within the long rows of houses flanking them.

In Fez, too, the *kaisariyye* of precious materials and jewels, between the mosque and the Moulay Idriss mausoleum, forms a compact building made up of a succession of parallel units dovetailing with the other suqs. In the measured drawing of Fez we see how the segments of a suq can generate a number of pseudo- *foundouks*, as in the *djellaba* and carpet suqs, which form closed organisms around an internal courtyard. In Sfax these formations around a blind alley or a small "square" are common in both suqs that link Bab el Djebli and Bab el Diwan, even though there are proper *foundouks*, too, as in the case of the blacksmiths' suq and others.

A further morphological similarity with the spatial organization of Tunis is the parallel arrangement of two rows of units (see the blacksmiths' and dyers' suqs in Tunis). These units invariably produce a kind of courtyard onto which may face a prayer hall (see the carpenters' and other suqs in Fez). In Tunis, Fez, and Sfax the *fondouks* are situated both within the network of suqs and around their perimeter, as well as near the city gates and outside them. The same goes for Kairouan, where the morphology of the Bab el Tunus environs is an exemplary case. There is also a similar spatial organization in Aleppo and Damascus.[12]

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[9] See Stefano Bianca, *Urban Form in the Arab World* (New York, 2000).

[10] A *foutouwa* is juvenile violence coming from a *zaouia*.

[11] See Stefano Bianca, op. cit.; also Jean Claude David op. cit.

In the measured drawing of Kairouan 30 years ago—a fragment of a city with a long history of devastation, contraction, and transformation—the staples[13] for caravans and their merchandise are concentrated between Bab el Tunus and the citadel, generating outside the city gate a kind of immense "ante-gate," an open space guarded by the troops based in the *kasbah*, or citadel. The gate itself is a market, like Bab el Menara and Bab el Djedid in Tunis, and near the open space of the grain market rises the suburb that encircles the city centre to the west and northwest and faces onto the open space with the *oukalas* for foreigners who cannot spend the night in the city.

According to Paola Jervis[14] the wide route that today crosses Kairouan from Bab el Tunus to Bab el Djelladin (with the cattle market at the far south–southeast end), like a breach in the otherwise compact city, was linked to the specific commercial function of Kairouan: once a place of rest and exchange for nomad and semi-nomad caravans with their cargoes of slaves and textiles, today transformed into a tourist itinerary where rural products (leather, wool, and pulses) are bought and sold. The author also mentions a tanners' suq near Bab el Djelladin and a blacksmiths' suq to the north of the central suqs; outside the walls to the west are brick and pottery kilns, while to the east are the wool-weavers in two staples near the Mosque of the Confraternity. The same segregation of noisy, dirty and dangerous work occurs in all the Islamic cities I have ever explored.

Kairouan and Sfax (more than Tunis, Aleppo, or Damascus) both present this scheme of a centre with a linear morphology, going basically in one direction (northwest, southeast for both). In Sfax this centre is situated between two parallel rows of suqs linked by other, smaller ones, to which may be added a parallel network that includes the mosque and extends to the Bab el Diwan gate, itself like a great *fondouk* from which one enters and leaves the city. In Damascus and Aleppo many of the suqs, arranged in parallel rows, include a hybrid fondouk-suq (between parallel suqs facing one another) with its own gate and completely invisible from the outside. Since the markets concentrated near the Great Mosque in these two cities are covered by a kind of continuous roofing, a space is created in which no one direction prevails and in which the unity of the myriad parts is affirmed by a sense of disorientation, as in a hypostyle hall: for instance, the prayer hall of an important mosque or even the maghzen of an important staple.

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[12] See especially the measured drawing of part of the main street between Bab Qisnareen and the Bimaristan Arghun, published by Stefano Bianca (op. cit.), which I have integrated with the cadastral records from Aleppo.

[13] Staples are authorized places of trade for foreign merchants.

[14] See Paola Jervis, "Kairouan," *Environmental Design* 1–2 (1989).

The morphology of the Tunis suqs is closer to that of Damascus and Aleppo than Kairouan or Sfax, though the extensive network of suqs in Tunis Medina thins out near the Bab el Bahr and Bab el Intjemmi gates[15] (between the kasbah and the Central Medina) in the stretch called Rue de la Kasbah. The stretch called Rue Djamâa el Zitouna, on the other hand, bends back like an elbow with the name of Rue des Selliers and ends at Bab el Menara, which is formed by a market and organized like a great entrance skifa to the city.

After this comparative description—and more especially in the case of Tunis Medina—we need to examine the route connections, other than the more or less accessible and segmented street network of the suqs. In other words, we must enter the city of family clans, the space of women and children, where men only spend the night. This is the vital heart of the city, where its population is renewed and formed together with its religious precepts and the solidarity of its citizens. This city is made up of a dense mosaic of dwellings which are conceived as an enclosure erected around a courtyard providing light, air, and rainwater. In Tunis—but also in Aleppo and Damascus as far as I have been able to observe in the cadastral records—there are three different types of dwelling:

1) Those aligned along a route, which are open to everyone and connected to other similar ones, or to which access is not prohibited. They open onto the street by means of a dog-leg atrium (skifa) that prevents a direct view of the courtyard, where all the activities of family life are carried out: preparing semolina, drying vegetables to be conserved,

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[15] I have used the name given by Robert Brunschvig—in La Berbérie Orientale sous les Hafsides (Paris, 1947)—to the gate that opened onto the medina from the kasbah. I have also based my reconstruction of the original boundaries of Bab el Djedid suburb on the same text.

doing laundry, educating the children, and so on. The courtyard is the largest area in the house and is shared by all the women and children of the household. It is surrounded by three or four rooms (baits), which in their most complete form constitute an upside-down T. The shaft of the T is a kind of living room, while the ends of the crossbar are occupied by beds on trestles. The central part is called a qbou and terminates opposite the entrance in a rectangular niche furnished with chairs and shelves. Next to this niche are the doors to two smaller rooms (maqsouras), which may have a staircase leading to an upper room situated above one side of the crossbar and from which the head of the household can observe the activities in the courtyard, or simply shut himself off to read.

In Tunis this arrangement is frequent, especially in the larger houses of wealthy families. In others the qbou niche is reduced to a small recess in the wall. In Sfax this type is rarer, while in Kairouan it is common, both in the small suburban houses and the larger, more affluent ones. Each house is composed of three or four baits organized in a grid-like pattern around the courtyard.[16] The houses do not have façades looking onto the street, but onto the courtyard, sometimes in smooth stone or coloured marble, often with colonnaded arcades, especially in the fifteenth–seventeenth century dwellings. That which in the West is meant for the admiration of passers-by—the façade—is here reserved for the inhabitants and their guests. The beauty of the house is reserved for the family; only the wooden front door, decorated with rivets, framed by lintels and a carved sandstone arch, suggests the family's status. As far as the layout is concerned, the house follows the same reticular organization as the fondouks, oukalas, the urban fabric and mosque even, in a network of smaller units (baits) around the courtyard. Precisely because it is a family dwelling it can be doubled or tripled, while enclosing its privacy in the protection of an impasse.

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[16] Almost all the residences of the Omayyid and Abbassid Caliphs visibly contain in nuce, in their court apartments, the layout of the family dwelling, with the baits organized on a reticular pattern around a great central hall (or courtyard): Qasr al-Qarrâna, al-Qastal, Qasr al-Mushatta, and the Omayyid palace in the citadel of Amman, where blind alleys (corridors and galleries) and iwans appear in the rigid geometry of the architecture; Qasr al-Khayr al-Chargi, almost a village, with its peristyle dwellings; Ukhaydir, the most complex, where all the elements developed in the early centuries of this civilization are present and where one can imagine the genesis of the T-shaped baits from the amalgamation of an iwan with a part of its own side-wings. The iwan and an incipient form of T-shaped bait were also found in the dwellings excavated by Gabriel Marcel at Fustat.

2) Those which have an entrance on a public route but are set back behind a driba, and look inward to the cluster of houses. The driba opens onto a skifa and this in turn opens onto the courtyard of the dwelling. Apparently these houses are not as old as the ones surrounding them, having perhaps been built on wasteland. They can be as rich and complex as those described below. They may have a service courtyard and are sometimes adjacent to a blind alley.
3) Those which are adjacent to or at the end of a blind alley; they are usually large and are sometimes connected to others by means of passageways from one courtyard to another. They have a service courtyard for lavatories and are sometimes connected directly to a fondouk belonging to the owner. These dwellings turn their back on the public or semi-public routes. They are built in the innermost zones of the street networks and the blind alley only reaches them across a distance or by means of a change of direction (a driba or skifa); that is, in terms of an ever-increasing separation from the public thoroughfare. One might be tempted to think that a blind alley has always represented the original settlement area of an extended family, or a clan with a common ancestry. Robert Bruschvig has demonstrated, however, that from the fourteenth century onwards there were quite strict laws prohibiting anyone owning property next to a blind alley from opening a door onto it.

Thus not even the morphology of the blind alley represents an immutable social and spatial reality, but follows changes in ownership and human relations, introducing variations, however slight, in the conformation of the alley and its use. Nevertheless, the larger, wealthier, and more complex houses are grouped at the end of the blind alley and the law traditionally prohibits the construction of doors near the end of the alley or facing existing ones, unless the oldest property owners agree otherwise. In Cordova, the consent of all the neighbours was traditionally required for the opening of a new door onto the alley, or the closure of the entrance to the alley with a gate.[17]

If we examine the measured drawing of any Arab-Muslim city in North Africa or the Near East, we can see that next to the simple and straight impasses there are others which are fragmented and branch off at various points. These are the offshoots of increasingly narrow lanes whose genesis is sometimes the result of a building that has collapsed. Then, in the course of time, another building rises over the ruins, due to neglect or the material impossibility of removing the rubble. I do not wish to sustain that the genesis of the impasses is this and only this, but simply that I have observed such situations in Tunis. And the reverse, too, in the agglomeration of houses around Fondouk el Henna, bounded by Suq el Blat, Rue du Mufti, and Rue Sidi Ali Azouz: halfway along the present Rue Djamâa Ghourbal a great eighteenth century house must have risen over the ruins of a small mosque, without using the prayer hall, however, which is now open to the sky. This hall was still in ruins when I made the measured drawing. The exit of the lane onto Rue du Mufti, spanned by an arch (sabat), seems to have had a gate at one time, while the exit onto Rue Sidi Ali Azouz at the opposite end no longer shows any such traces. The other lane that traverses this cluster of houses, Rue el Nayer, ends at Suq el Blat with another arch which may have had a gate. Thus, the decision of one or more groups of families or neighbours could turn a relatively permeable space into a completely closed-off zone, protected from whatever might happen in the public thoroughfares, Rue Sidi Ali Azouz and Suq el Blat. A further example is to be found in the neighbourhood block bounded by Rue el Khomsa, Rue de la Medersa Slimania, Suq el Blat, and Rue du Tresor, where a narrow lane that once linked Rue de la Medersa Slimania and Rue du Tresor has been incorporated in the adjacent buildings and, in sections, completely privatized for the use of seventeenth-eighteenth century houses. The presence of large maghzens suggests that there was once a fondouk here.

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[17] See Robert Brunschvig, "Urbanisme Médieval et Droit Musulman," Revue Des Études Islamiques, 1947.

Such ambiguity—and impermanence—of the rights of entry, passage, and use is visibly possible in all the side streets linking what I have called the main routes that seem to cut through the physicality of the urban space, connecting every gate both with a network of suqs and with another gate. This Y or V configuration, which indicates the two-way character of every route, is accompanied by a more or less compact alignment of mesjeds, zaouias, madrasas, hammams, ovens, and small suqs selling foodstuffs.

These main routes are neither defined by their size nor by the conspicuous nature of the buildings lining them. Discretion is the first rule of an urban aesthetics in which what is important is hidden from sight: the Djamâa el Zitouna behind the walls and vaults of the suqs (though the type of merchandise on sale—perfumes, clothes, carpets, and books—signals its presence without revealing it); the mesjeds and zaouias indicated merely by a door frame in the white limestone wall; the red and green door of the hammams and the parti-coloured laundry drying on the roof. The continuous and direct route from one gate to another, or from a gate to a suq, exists, but it is never straight, and is expressed through the smallest signs, which are nevertheless easy recognizable for those who live there. It is the frequency of these signs, together with the help of passers-by and shopkeepers that allows one to get one's bearing and arrive at one's destination.

When we visit a western city what gives us our bearings is not so much the regular network of streets (in which we may easily get lost) as the great architectural monuments that soar above the lower buildings—cathedral spires, medieval towers, elaborately decorated pediments, domes silhouetted against the sky—or the sudden burst of light that heralds a square at the end of a street.

In Tunis, on the other hand, the web of main routes establishes a network of intersections that the more internal, secondary routes develop further. The steep street, ascending or descending, the string of mosques, ablution halls, and inns are the clues this space provides for those who traverse it, together with the query addressed to the passer-by (the best way to get one's bearings in my opinion). The distinct impression of anyone who walks along these lanes is that they are all alike and that they all hide an invisible world behind their walls. Thus the fundamental web-like organization is experienced by everyone who crosses the city. And it is precisely this forgotten, unexpected order that disoriented so many nineteenth century European travellers who considered it irrational and meaningless.

The network is formed, not by streets, but by the intersections of architectural organisms: for instance, the walls of two buildings that are separated by a passage. Within the network itself there may be madrasas or even fondouks, sometimes connected directly to a wealthy residence, as we saw around the Great Mosque in Tunis.

Other signs connote the city gates,[18] for instance: a market outside the city proper, yet within the architecture of the gate, such as Bab el

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[18] See Louis Massignon, "Les Corps de Métiers et la Cité Islamique" (a lecture given at the Collège de France on 4/2/1920) in Revue Des Études Islamiques, 1950: "The city functions merely as an extension of the markets. It is the crystallization of the market, which is transformed into a centre where the various materials bought and sold are crafted by artisans. Indeed, the weavers' workshops, the mills, the dye-works, and the

Menara and the destroyed Bab el Djedid in Tunis; a mosque; the cell of a holy man; a fondouk in the immediate vicinity; an oukala; a citadel. Thus the gate extends its baraka (defensive might, protective energy, but also hospitality) both within and without. The gate is still a gate, but it is also part of the urban apparatus of welcome and selection. It is forbidden to enter armed or in a vehicle; merchants may lodge in the suqs where there are the appropriate oukalas, or in a zaouia linked in some way to their birthplace or religion. The space is thus full of rules and regulations that make it the expression of a particular society in a historically determined moment.[19]

Yet again, the main routes, as indicated in the city plan, can be read, even experienced, in different ways. As we have seen, the open, accessible route can be replaced by a fragmented one, when one or more sabats are barred in order to isolate areas where civil disorder has erupted due to a foutouwa, or where there is a popular uprising against certain political events. The same thing can happen on a smaller scale to the lanes that link one main route to another, thus affecting whole residential areas and the entrances to the impasses. Since this is possible anywhere and everywhere, by closing gates or barricading sabats, the city knows this kind of space too, in which no one route can guarantee a free passage in any direction, in which any section of a street can become a dead-end and the space infinitely fragmented. This is just what happens at night when the gates to each section of the suqs are closed.

What is outside, what is removed, is extraneous to the ever-more restricted community, from the urban community to the tribe, to co-nationals, blood relations, family clan. Yet this "outside" implies an "inside": the system of suqs, a place of exchange between citizens, and between merchants and foreigners, under the watchful eye of the law. The degree of separation varies, and the very same devices that bring it about are also those that lessen or indeed cancel it. Thus the skifa is certainly not made to

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sawmills are naturally situated outside the city gates, as in Fez, for example. I refer you to a Muslim encyclopaedia that gives a detailed account of the craft guilds, since it was compiled by an Ishmaelite sect in the eleventh century. It is entitled {Ikhwân al-safax and it gives a kind of philosophical classification of the different vocations in the Muslim world, according to materials, work-place, working hours, and tools."

[19] Cf. Ibn Jobeir, Voyages (Paris, 1949): "The kadi must place an honest and virtuous man, someone who knows the law, outside every city gate. This man must arbitrate between persons who are in disagreement... He must keep an eye on the fresh hides and meats that are sold outside the city gates."

welcome the outsider, and if it opens onto a *driba* and the *driba* onto a blind alley, then the degree of separation is at its most extreme. Nevertheless, the *skifa* is often next to a room that does not communicate either with the courtyard or the *baits* where the family lives, and so it can be used to receive and welcome the outsider; like the *scrittoio* in European palaces, half-inside, half-outside, situated between the street and the house, and used for staff and clients. The whole urban space thus seems saturated with two possible meanings, which are opposed but not always irreconcilable.

So we are in the presence of a fluid space, yet one which is penetrable only under certain conditions and in certain zones, through degrees or levels of access and vigilance; a negotiable space, yet one without architectural signs, apart from the minaret of the congregational mosque, visible only from the outside, from the hills or roads leading to the city. Within the city everything is internalized; everything is known, though not offered to the gaze, for it is only from the inside that the city reveals itself in recognizable forms to the foreign eye. Yet even this "inside" is broken up and reassembled by temporary prohibitions and familiarity with them, in other words, by the practices and customs of urban social life. The elected form of community life that allows for social selection is indeed "urban": the space for non-citizens is in the suburbs, where they can shake off their established habits and acquire those of a citizen; the space for citizens is in the centre of the city with their crafts and wares. Nomads must remain outside the gates, organizing caravans and contracting the price to pay for their protection on a journey across the deserts.

Exchange is the relational agent that eliminates foreignness. It takes place within the network of units which, as they intersect, can form either a single, penetrable body, or else an impenetrable labyrinth of closed gates. The system of suqs[20] is a permeable space open to the "other," it is a *topos* within which vital communication takes place. Otherwise the city would be an opaque receptacle and have no relation with other human societies.

The system of suqs and *fondouks*, the Great Mosque and madrasas (theological-juridical schools) constitutes a kind of body within the body of the city, often extending between two gates, and represents the space of men, and their vocation as merchants or *savants*. We could call this system the place of accepted practices and of the production of religious knowledge that has immediate social relevance.[21] It is the place of activities that give shape to exchange, of the exercise of crafts and the production of wares. It is the place of social cohesion that manifests itself in the mosque, but also beats out the rhythms of the day with its codes and rules. In every city, in every workshop and staple, or thereabouts, is a guild mosque. In Damascus and Aleppo it was once quite common to find a shrine in the centre of a *fondouk* courtyard.

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[20] The suqs form a kind of internal boundary within the city, in-between the residential areas, represented by the "void" of the streets where trading activities take place.

This intricate web, spun of interlacing segments—suqs, shrines, and madrasas, the Great Mosque hidden behind the workshops, the most important staples concealed behind a door—animated by voices and footsteps, presents itself to a foreigner's perception as an indecipherable labyrinth, an infinite sameness, a space of disorientation, in which the underlying scheme does not surface or manifest itself. This space is all context, uniformity, in which the eloquence of an architectural monument is stifled, our apprehension of it problematic.

The whole city appears as an inexhaustible repetition of itself; a compact, uniform, indivisible spatial whole. This perception of the Arab-Muslim city as a whole or unity that cannot be broken down into its various parts—and in which the juxtaposition of identical parts does not generate serial monotony, but rather the sense of belonging to a single, yet articulate space expressive of a *norm* materialized in its construction—easily takes us back to the Omayyid or Abbassid palaces. Here the *apparent geometry* of clear and distinct elements, and of their distribution, generates the same ambiguous sense of a reality that continually eludes us visually, while never relinquishing the clarity of its *nomos*.

The written account of the foundation of the first cities of Basra and Kûfah is more suggestive of the layout of a palace around its mosque than it is of a topological survey of a thirteenth–sixteenth century medina. Besides, we are unaware of all that has taken shape on the sites we study, and how many transformations the concept itself of built space has undergone from the eighth century to the present. We can only know the immediate, and a few fragments of the remote, past. And we are obliged to compare our categories of judgement with the products of a civilization that flourished in a period in which western civilization was undergoing its most profound crisis of identity. Arab-Muslim civilization has certainly influenced us, is part of us, yet it is still too little known. For this reason I decided many years ago to try and decipher it, knowing full well that I could only do so from within my own culture.

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[21] Cf. Louis Massignon (op. cit.): "It is an absolute certainty that an exchange of knowledge and learning around the mosque—that is, belonging to a specific community of intellectual "providers" and clients, a community that organizes forms of welcome for visiting scholars—has made the university the guild corporation *par excellence*."

When, out of an insatiable curiosity about the origins, or one of the origins, of this space, I reread the Tradizione della fondazione della città di al-Kufâh:[22]

> When it was decided to found the city of al-Kufâh, Sa{d bxabi Waqqas sent for abdul-Hayyag and informed him of the wishes of the Caliph concerning the dimensions of the streets. The main streets (al-mahanix) were to be 40 dzira{ long; their branches 30; the secondary routes 20; finally, the lanes (al-aziqqah) were never to be narrower than 7 dzira{. The blocks were to be 60 dzira{ except for the Banu Dabbah block…
>
> First the boundaries of the mosque were fixed…the measurements were fixed by a man…who from the centre of the square shot an arrow in one direction and another in the opposite direction; the space in-between the two points where the arrows fell was reserved for the mosque; beyond these points anyone could build their dwelling. With the distances thus established, a square was laid out based on the shooting of an arrow…Around the mosque the city of al-Kufâh was laid out. Behind the mosque (fil wadxah min al-sahn) 5 main streets (mahanigx) were laid out; at the front, in the direction of the qibla, facing the midday sun, 4 mahanig' were laid out; 3 mahanig' were laid out on the east side and the same on the west side, placing boundaries everywhere to differentiate them from the land that could be built on. Around the mosque, in separate neighbourhoods, the Muslim peoples settled, divided according to the tribe to which they belonged. To the north: the Sulaym and Thaqif settled in two streets; nearest the mosque, the Hamdan in one street and the Bagitah in another; the Taym al-Lat and the Taqlib in the last of the five streets.

…and I try to determine to what extent an eighth century foundation might be the prelude to the urban spaces I have studied, and what traces of it might remain in the urban fabric, past and present, I seem to see elements that 1300 years have not completely erased. The classification of the streets as main streets, branches, minor branches, and lanes is not casual, but represents a fundamental order planned within a freer serviceability ("beyond these points anyone could build their dwelling"), applying criteria of social and ethnic uniformity, and therefore of relative segregation, within the urban space. The "Muslim peoples" settle on either side of the same street; so we can imagine two parallel rows of houses along the free zone of the street. Tabari's text mentions blocks (or groups of houses?), secondary routes and lanes (it would be interesting to know the original meaning of the terms). The secondary routes seem to develop an intricate network of junctions recognizable in all the cities in question. Do we not glimpse in this description features or aspects of the urban space that has come down to us?[23]

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[22] Tabari, I., Ibn Abbas, quoted in L. Caetani, Annali dell'Islam, IV, Rome, 1949.

In the "Plan de la ville de Tunis dressé par Colin en 1860" Tunis Medina appears in its tripartite form: the Central Medina is enclosed within its own walls, while it is encircled to the south, west, and east by a second circuit of walls, which encompasses the suburbs and is linked to the defensive walls of the kasbah to the west–southwest and west–northwest. The latter opens onto the Central Medina, but not onto the suburbs, through an eastern gate. On the eastern side of the Medina are pools and canals, the outline of Avenue de France and Avenue Bourguiba, perhaps the remains of the shipyard, and the railway station of the Goulette-la Marsa-Gammarth line. In this area there are no city walls; in their place are marshlands and the Lake of Tunis.

Two of the suburbs (rbats), Bab el Djedid and Bab el Souika, do not communicate, except via the marshlands to the east; that is, by leaving the city and entering it again through another gate. They are linked, however, by what I have called the main routes, within the Central Medina, which may be reached via the gates in common to the Central Medina and the suburbs. The latter have their own outer gates, often overlooking the cemeteries, and flanked by fondouks and mesjeds or zaouias. Each suburb has its own mosque, equivalent to the main mosque, Djama el Zitouna: the Sidi Béchir Mosque, the Sidi Mahrez Mosque, and the Saheb Ettabaa Mosque.[24]

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[23] This space is naturally quite different today from the original, since both took a long time to reach completion.

[24] I mention the Sidi Mahrez Mosque as an important peripheral mosque since the development of at least a part of the northern area of the Central Medina (around the Suq el Grana and the Mosque of the Holy Founder, protector and promoter of the integration of the Jewish community) seems to date to the thirteenth century.

None of these three urban agglomerations have squares. Place Halfaouine, in the French survey of 1898, still did not exist in 1860. In its place there was a group of buildings which was later demolished. Place Bab el Souika did not exist either. In the suburb to the south, the empty, level areas served as grain and horse markets. At Bab el Bahr there was a sort of "ante-gate," while the foreign staples were situated beyond this gate, outside the city walls.

In this period Tunis Medina, together with its suburbs, counted 110,000 people and 22,000 families. If its temporal duration, until the advent of the French Protectorate, is that of the Ottoman Empire and traditional time, then the Medina is heir to the metropolis of the ancient world and the pre-industrial era. Or so it seems to me. Vegetable gardens and cemeteries (Muslim, but also Jewish and Christian) are scattered around its walls. Beyond these are orchards and woodlands, especially towards Djebel Houst to the north, and eastwards, along the road to Ariana and Biserta, and the road to Marsa.

In looking at these early plans of Tunis, executed by European topographers,[25] our impression is one of a built mass incised by deep fissures branching out into other, narrower ones. It is as if the original space of the city and suburbs were a solid that the routes had cut through in its weaker parts, while the buildings had been forcibly wedged into this solid rather than into the empty spaces.

In actual fact, Tunis Medina is composed of architectonic modules based on the most standard geometrical pattern: quadrangles open to the sky at the centre, which may be houses, staples, inns, or religious institutions respectively. Even the more important mosques have the same layout, internal articulation, and traditional geometry. And yet their composition in units seems like an intarsio in which topological procedures replace the Euclidean geometry so dear to the West and virtually inherent in its urban identity.

It is still difficult for me to say just what this solid is, within which the elementary geometry of the buildings must adapt itself to unexpected obstacles, bend, recede, advance. The only valid hypothesis seems to be that this solid is time; in other words, the material conditions that different historical periods have imposed upon discrete building initiatives, whether these be new buildings or re-buildings. Of course, sometimes communication networks would have been blocked by rubble that was never removed, while in other cases it would have seemed logical to link branches of blind alleys to which an obsolete division into family nuclei and clans no longer corresponded. Apart from neglect, phenomena such as earthquakes and fires would have created new and unexpected situations. In order to affirm this, however, a diachronic knowledge of the different intersecting and overlapping temporal phases—that is, reliable dating—would be needed.

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[25] That is, before a detailed plan on a scale of 1:250 of all the building groups enclosed within a network of routes, or at least those in the Central Medina, was drawn up under the French Protectorate, and a cadastral plan (in several sheets) on a scale of 1:1500 of the medina and its suburbs.

The excavations at Nippur carried out by Donald E. McCown and Donald P. Hause[26] (relating to the period from the fourth to the second millennium) are a pertinent example of the development and intersection of segments of a city across two millennia, the spatial organization of which has marked affinities with those described above. In the excavations of the residential districts in Ur (third millennium), the route system—with communication routes inside the city and hierarchies of blind alleys—creates an urban space of impressive congruence, just as in Nippur earlier. The dog-leg entrance (*skifa*) is the norm, both in houses and places of worship. Here, too, we find the important houses set back from the street by means of covered passages, and the most important houses, those with two or three courtyards, located deep within the built fabric. A thousand years later the situation is virtually the same.

Whatever the transformations and substitutions of meaning wrought by time, it seems that the tools for remodelling and reorganizing urban space have not changed and have acted as a constant in the *intarsio* design of ancient cities as well as their more recent configurations. Only the acquisition of new models—nineteenth century European to be exact—and the allure of their diversity and novelty have been able to supplant the ancient ones, when traditional customs paled in the face of the imposition of European settlements right next to millenary cities.

In his now classic article[27] Robert Brunswig identified a juridical principle—*finâ* or the free space surrounding or facing a building, which the owner of the building has a special right to use—recurrent in the judgements of the sâfi'iti kadi and, in watered down form, in the fiqh mâlikiti treatises. That is, the demolition of a building occupying part of the street[28] is not obligatory if many years have passed since its construction, if no one has objected to it, or if no one knows why it was built, even though such a building is considered unlawful according to a Hadith of the Prophet. Thus, physical space and juridical space are not defined by the same restrictions. Unwritten law sees, in the empty space, the clash or establishment of rights that make it a space full of potential. The rubble from a house that has collapsed can only be removed with difficulty. There are no municipal services for that purpose, and it is very difficult to establish who should pay the removal costs.

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[26] Donald E. McCown and Donald P. Hause, *Excavations at Nippur*, University of Chicago Oriental Institute Publications, vol. 57 (Chicago, 1967).

[27] See *Urbanisme Médiéval et Droit Musulman*, in op. cit.

The many abandoned ruins in Muslim cities were the natural place to dump all kinds of rubbish. And the legal profession has had to take on the unpleasant consequences. They do not condemn the practice in itself and they do not formally prohibit it. If, in a specific case, an unauthorized use of someone else's property can be identified, by what right can its use be prohibited altogether in agglomerations where there is no public cleaning service?

Many of the blind alleys in Arab-Muslim cities would, thus, seem to be the result of these and similar violations which later became legitimate due to the amount of time that had elapsed between the occupation of a piece of land and its indictment, or indeed the absence of any such indictment. Likewise, the transformation of streets with two exits into blind alleys represents a de facto transformation in the use and control of space, given that the blind alley is considered the common property of those who have a door opening onto it, either with or without their neighbours' consent.

Ownership, property, and neighbourhood are juridical and spatial categories, though it is easy to see how such categories came to be used to refer to social customs, the habits of close-knit groups and the consolidation of agreements or prohibitions that are all expressed spatially.

Certainly, everything that has been said so far is not just about the spatial organization and system of laws and civic obligations that characterize Tunis Medina and other Arab-Muslim cities. Something comparable is to be found in every society in which the slow evolution of property laws leaves the problem of everyday practices temporarily unresolved. In Italy, for instance, in the passage from the early Middle Ages to the fifteenth century, and then from the fifteenth to the eighteenth century, the appropriation of land of uncertain ownership, which was apparently, perhaps even legally, neither public nor private, reduced the number of side streets linking the more important streets, and saw the narrow chiassi (lanes) that separated the houses and isolated the more important properties from the minor, serial buildings swallowed up by the larger palazzi. In Florence, for instance, these are all recognizable, both inside and outside later constructions.

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[28] Such a construction is made possible by the belief in a finâx—a kind of "aura" of availability, impalpable but real, that extends from the space of the house to the immediate vicinity.

Even the legal and civic status of medieval European courtyards, connected to the public street via covered passageways, is similar to that of the blind alleys on the opposite shores of the Mediterranean. A similarity, not a mere imitation of Arab-Muslim urban culture, which was known to Italian merchants through their travels and which had reached its most mature expression when the renascence of the European city was still in its infancy. In the medieval European city, too, there was a physical separation between the world of the family clan and the public world of the merchants; but it was a vertical separation, perhaps deriving from the turreted city, which had not yet completely disappeared. So from the thirteenth century onwards in Europe there was a ground-floor city, which was completely open, and an upper-floor city, which was completely closed.

Another customary practice confirms the particular vision of the organization of built space that we find in Tunis Medina and, likewise, in other Arab-Muslim cities: no door can open directly opposite that of another house, just as no inner door can open directly onto a courtyard. (The fondouks, on the other hand, have an entrance that gives directly onto the street, or blind alley, without a skifa.) Every house projects its own harim—that is, the defence of its own uniqueness and intimacy—onto what is considered a public space. So it is possible to tie pack animals and leave bundles next to one's door, or let groups of clients wait on a doukana.

Instead of an appropriation of public space, this practice suggests a concept of built space that is not defined by property boundaries, but entails the potential extension of every building towards the rest: a form of possible intervention in a space which, rather than belonging to a collective body, is considered communal, or shared by many. The blind alley, with its extensions branching off in different directions—starting with the "stem" that links it to a public thoroughfare, main route or junction—seems to express this type of classification of spatial components. The dead-end of each blind alley denotes both the extreme privatization of the houses situated there and all kinds of relations of kinship and solidarity that can at any moment form a barricade, making access impossible.

The blind alley is the space used freely by the women and children of the houses that open onto it; like another wust ad-dar, only on a larger scale in terms of kinship and solidarity. Taken together, the branches of the original blind alley seem to indicate a network of close relationships, which were originally perhaps much wider (tribal even) and were later broken up and replaced by others, grouped together in a different form of inclusion or exclusion. Even the outlying houses that make up the complex and interesting structure of main routes and intersections can become part of the morphology of the blind alley on certain occasions. For instance, when a revolt calls for a fragmentation of the space, by locking communal gates or barricading passageways.

Sometimes, when the rubble from a building that has collapsed is not removed, this can affect the layout of the routes. A similar effect may be produced by certain social phenomena, such as a common origin from a given geographical area, devotion to the preaching of a holy man, or political rivalry between different neighbourhoods—especially in these cities where the courts were non-existent, or else more concerned with civil order than with safeguarding urban integrity and hygiene.[29]

Thus at the heart of the image of urban space there seems to be a category of ambiguity, or ambivalence, that makes of it both a unified whole and a realm of distinction; a distinction based on ancestry, origins (whether from a nomad or sedentary culture, for instance), and the socio-religious interpretation of the realities of citizenship and foreignness.[30] So every citizen is sometimes an outsider (with respect to the house or impasse of other groups, or the staples for foreigners), at other times a welcome guest, or the serene member of the group or groups to which he belongs.

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[29] Cf. Gustav von Grunebaum, Medieval Islam (Chicago and London, 1946, 1953, 1971): "One shouldn't be surprised, therefore, if the inhabitants of an Islamic city haven't developed any real administrative machinery... Under state administration a rudimentary neighbourhood organization continued to exist; this was merely a continuation of tribal customs, the desire to be guided by the head of one's tribe. The population continued the late antique tradition of the guilds, organizing themselves into a large number of groups in which everyone could find a place... In 1923 there were still 164 guilds in Fez, 115 in Marrakesh, and 106 in Meknes."

Perhaps precisely because of this ambiguity, or ambivalence, urban space acts as an agent of transformation. What seems even more relevant is that in the course of time different social organizations have conceived and realized a spatial order which has never been abandoned and which has left an indelible mark on every segment of space in the Arab-Muslim city, whatever its origins.

Dignitaries and clients, merchants and artisans, rich and poor, religious foundations, but also citizens and not-yet-citizens, religious and legal authorities, city centre, and suburbs for rural immigrants and their preparation for citizenship (just as in European, especially Italian, cities in the twelfth and thirteenth centuries) go to make up this multifarious, often divided, yet strongly cohesive universe that assumes concrete form in the construction of urban space. This distinction, this attribution of meaning forged in the urban melting pot, invests entire geographical areas, from the fortified and protected centres to the kasbahs and trading and military zones: weekly fairs (Suq el Khemis, Suq el Arba, Houmt Suq, etc.), streets under surveillance, rbats, shipyards, ports, waterways, and pirate routes, traditional routes across deserts and seas, caravanserai, routes made safe through an alliance with nomadic tribes. This is the potentially boundless net cast by this civilization, materially and culturally, over the changing geography of its own affirmation.

(English translation by Lisa Adams)

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[30] Even in crafts and trade; von Grunebaum translates a part of the Ihwân al-safâ: "...the crafts are differentiated in terms of prestige when one considers them under the following five categories: (1) the materials used: here the goldsmith and perfumer are at the top of the scale; (2) the finished product: here builders of complex instruments like astrolabes are at the top; (3) the demand that makes their work necessary: here weavers, agricultural workers, and masons are preferred; (4) general usefulness: here those who run the baths and the rubbish collectors are vital for city hygiene; and (5) those who are to be taken as they are, in terms of their particular skill, without considering their usefulness, etc: magicians, painters, and musicians are justified by their talent."

THE MAMLUK CITY[1]

Doris Behrens-Abouseif

From Fustat to al-Qahira

Cairo under Mamluk rule (1250–1517) was a major Muslim city and one of the largest in the world. Its evolution from the Ayyubid double capital Fustat-Qahira to the Mamluk metropolis was a tremendous transformation shaped by the intensive patronage of the ruling establishment. After having legitimized their rule by victories against the Crusaders and Mongols, the Mamluks set out to pursue a pious patronage of unparalleled dimensions. The magnitude of their endowment of mosques, colleges, khanqâhs, and other charitable foundations was coupled by urban expansion and a florescence of architecture in the cities of their empire. The Mamluk capital Cairo, seat of a shadow Abbasid caliphate installed by al-Zahir Baybars, succeeded Baghdad as the foremost capital of the Muslim world.

Mamluk Cairo covered a gigantic area that stretched from the mausoleum of Imam Shafi{i in the south, to the Dome of Yashbak, in what is today {Abbasiyya in the north, and from the Nile to the desert in the east. This area was not a homogenous agglomeration however. When the Mamluks came to power in 1250, Cairo was an unfocused double agglomeration, which consisted of the old capital Fustat, the Arab foundation and its subsequent satellites, and al-Qahira, the Fatimid city founded in the tenth century which was gradually losing its exclusive palatial character. Salah al-Din planned to unify Fustat with al-Qahira by encompassing them in a set of walls connected with his citadel and future princely residence on the Muqattam hill, between al-Qahira to the north and Fustat to the south. Instead of the fusion envisaged by Salah al-Din, al-Qahira thrived as the Mamluk capital and metropolis, expanding on all sides without fully merging with Fustat.

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[1] This article is inevitably very similar to chapter 8 in my book *Cairo of the Mamluks*.

The first monuments of the Mamluks indicate that the preference given to al-Qahira over Fustat took some time to materialize; however, from the outset the sultans expanded the buildings of the royal residence at the Citadel. The earliest buildings of the Mamluk period were the mausoleum dedicated to the last Ayyubid sultan al-Salih Najm al-Din Ayyub and a funerary madrasa, both founded in the same year, 1250, by Shajar al-Durr, al-Salih's widow, and herself the first sultan of the Mamluks for three months. The madrasa was built in the cemetery of Sayyida Nafisa to the southeast of the Citadel, in the vicinity of Fatimid shrines, notably the mausoleums of Sayyida Nafisa and Sayyida Ruqayya.[2] Near her madrasa and mausoleum, Shajar al-Durr built a hammam and a palace with gardens. No other ruler had been buried in this cemetery before; Shajar al-Durr's choice of the site could have been motivated by its vicinity to the royal residence in the Citadel and also to tombs of female saints. Her husband's mausoleum was erected beside his madrasa at Bayn al-Qasrayn Street in al-Qahira. The allegiance of the first Mamluks to the last Ayyubid sultan al-Salih, epitomized in this memorial building, enhanced the significance of Bayn al-Qasrayn with its inherited regal and religious traditions. As in the past, this site continued to be the heart of the Egyptian capital also under the Mamluks. The toponym Bayn al-Qasrayn, Between-the-Two-Palaces, referred to the Fatimid palatial centre and to Mamluk palaces built later in this area.

Shajar al-Durr's successor and her second husband, al-Mu{izz Aybak (r. 1250–57), preferred to build his madrasa (1256–7) in the area of southern Fustat, near the Nile shore, facing the Nilometer on the island of Rawda.[3] Its endowed estates, a double hammam, an apartment complex (rab{), a large commercial building, and a piece of land, were located nearby. This was the first and last Mamluk royal foundation in the capital to be built that far south. Sultan al-Mu{izz Qutuz (r. 1259–60) chose a different site by erecting his madrasa in the vicinity of the Citadel, in the quarter of Hadarat al-Baqar, where Sultan Hasan later erected his mosque.[4]

During the reign of al-Zahir Baybars (r. 1260–77), Fustat continued to enjoy religious and monumental patronage; the sultan's interest in developing the island of Rawda by restoring al-Salih's fortress and palace and adding a new Friday mosque, and his foundation of a large Friday mosque in 1273 between Fustat and al-Qahira, at Manshxat a-Maharani, were propitious to the development of the old capital.[5] However, Baybars' madrasa at Bayn al-Qasrayn (1262–3), close to that of his master al-Salih Najm al-Din, and his mosque at Husayniyya in al-Qahira's northern suburb signaled the shift of royal patronage to the north.[6] Although Baybars does not seem to have had schemes of urban development, his decision to multiply the *khutba* or Friday sermon in the capital, waiving the Shafi{i doctrine of his Ayyubid predecessors that restricted the number of Friday mosques to one for each agglomeration, had a significant decentralizing effect on the city.

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[2] Maqrîzî, Khitat, 1:343; Behrens-Abouseif, "Lost Minaret."

[3] Maqrîzî, Sulûk, 4:302; Ibn Duqmâq, 4:92; Ibn Taghrîbirdî, Nujûm, 7:14.

[4] Ibn Iyâs, I/1:308.

While the sultan established two major religious foundations in al-Qahira, some of his prominent civil servants, the Banu Hanna family of powerful and wealthy viziers and bureaucrats originating from Fustat, demonstrated their attachment to the old capital by endowing it with a number of religious and commercial buildings.[7] Also, the emir Mu{izz al-Din Aybak al-Afram (d. 1296), who started his career under al-Salih Najm al-Din launched a great urban development project in the southern outskirts of Fustat. Making use of the land added by the shift of the Nile bed, which created a new road along the river, he transformed part of the pond called al-Birka al-Shu{aybiyya into a walled garden equipped with a dam to protect it against the Nile flood, and he sublet the remaining land for the construction of residences. He also built a *ribât* and a mosque.[8]

The foundation of Sultan al-Mansur Qalawun (r. 1279–80) confirmed the supremacy of al-Qahira. His complex, which included a madrasa, mausoleum, and a large hospital, was built in 1284–5 at Bayn al-Qasrayn facing the madrasas of al-Salih Najm al-Din Ayyub and al-Zahir Baybars. With these three royal monuments, built in close proximity and surrounded by the commercial structures of their endowments, the heart of the Fatimid city became the cultural and commercial centre of the Mamluk metropolis. The hospital of Qalawun continued to be the major medical centre of pre-modern Egypt until the early nineteenth century. To acquire building material for this complex, Qalawun dismantled al-Salih's citadel and palace on the island of Rawda, after Baybars had restored them, thus depriving the island and the opposite Fustat shore of their aristocratic residential character.[9]

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[5] Ibn Duqmâq, 4:119; Maqrîzî, *Khitat*, 2:298.

[6] Maqrîzî, *Khitat*, 2:299, 378; Ibn Taghrîbirdî, *Nujûm*, 5:161f.

[7] Ibn Duqmâq, 4:101; Maqrîzî, *Khitat*, 2:298f., 370, 427, 429.

[8] Ibn Duqmâq, 4:55, 78, 101; Maqrîzî, *Khitat*, 2:158f., 165, 298.

The shift of the Nile bed to the west that had just come to a halt by the fourteenth century added land to the metropolitan area, and created new urbanization potentials in al-Qahira's northern and western outskirts. Unlike Fustat, built along the Nile shore, al-Qahira was built further east along the Canal or Khalij, which connected the Nile with the northeastern outskirts; its mouth was located opposite the northern tip of the island of Rawda. Al-Qahira expanded far beyond its Fatimid walls, which gradually disappeared behind buildings. From greater Fustat only the quarter around the mosque of Ibn Tulun, at the very northern periphery of the old capital, was integrated into al-Qahira with the Saliba artery connecting the Citadel to the Khalij. South of Saliba street an urban gap separated al-Qahira from Fustat.

Navigation on the Nile had always been important to Egypt's economy; Fustat continued to harbour ships carrying agricultural goods from Upper Egypt and merchandise from the Red Sea trade, which in the thirteenth and fourteenth centuries passed via Qus to the capital and further to Alexandria and Damietta on the Mediterranean shore. Mamluk Fustat was an industrial area with pottery kilns, oil and sugar presses, and a shipyard. Other luxury crafts seem also to have existed there, such as textiles and a carpet industry mentioned in the fourteenth century.[10] From the nine madrasas built in Fustat during the Mamluk period only that of Aybak was a royal foundation.[11] The others were founded by emirs, bureaucrats, and merchants. The mosque of {Amr, however, which enjoyed the status of the first Muslim sanctuary on Egyptian soil, was repeatedly restored. The scarcity of royal foundations and the absence of Fustat in the itinerary of royal ceremonial processions, confirm the marginality into which it gradually fell.

The southern cemeteries, which had developed in connection with Fustat, were maintained because of their religious significance due to the presence since the early Islamic period of saints' tombs. With al-Qahira's expansion new cemeteries with princely religious foundations emerged in the desert on the northeastern side of the city and to the southeast of the Citadel.

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[9] Maqrîzî, Khitat, 2:183f.

[10] Maqrîzî, Khitat, 2:72.

[11] This excludes the madrasas of Sanjar al-Jawli and Sarghitmish along the Salîba street. Denoix, Décrire le Caire, p. 95f.

Baybars and Qalawun's foundations were soon followed by other royal buildings in al-Qahira: al-Nasir Muhammad's madrasa (1295–1304), Baybars al-Jashankir's *khanqâh* (1306–10), and the multifunctional complexes of al-Zahir Barquq (1384–86), al-Ashraf Barsbay (1425), al-Muxayyad Shaykh (1415–20), and Qansuh al-Ghawri's (1504–5).

The Urban Patronage of Sultan al-Nasir Muhammad

Maqrizi described with nostalgia the reign of al-Nasir Muhammad as the golden age of Cairo's history.[12] Cairo's development during this period was favoured by the sultan's exceptionally long reign (1293–4, 1299–1309, 1310–41), which was a period of political stability and peace, propitious for economic expansion. Most importantly, al-Nasir Muhammad was spurred by an urban vision, through which he conceived and designed the capital in terms of a cityscape rather than individual monuments. Ambitious projects of civil engineering were a substantial factor in his building programme. With a number of additional bridges built during the reign of al-Nasir, the Canal or Khalij was no longer al-Qahira's western boundary, the western bank being opened to merge with the main city. The Canal and the ponds it supplied in the western, northern and southern suburbs, were flooded by the Nile during the summer and filled with greenery during the rest of the year, once the flood receded. This landscape attracted residential quarters at the same time as it provided venues for leisure and pastimes. The canal also provided Cairo with drinking water.

Al-Nasir pushed forward the urbanization of the western Khalij bank by digging in 1325 a new canal parallel to the main one, which it joined north of Baybars' mosque. The new canal nurtured the old one and connected Cairo with the village of Siryaqus, about twenty kilometres north of Cairo, where al-Nasir Muhammad built a great *khanqâh* with his mausoleum and a hippodrome along with residential structures.[13] Between the two canals al-Nasir dug the Nasiriyya pond, which became a magnet for new aristocratic mansions. The creation of the Siryaqus complex was not directly connected to Cairo's urban growth; the pleasance complex was related to the sultan's hunting ground, and the *khanqâh* fulfilled a pious vow after al-Nasir recovered from an ailment while he was once in this neighbourhood. However, being on the caravan road coming from Syria, the Hijaz, or beyond, Siryaqus must have provided an architectural foretaste to the visitor entering Cairo.

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[12] Raymond, *Cairo*, Chapter 3; Harithy, "Patronage."

[13] Williams, "Siryaqus."

The sultan orchestrated his metropolitan schemes with his emirs whom he urged to build, encouraging them with legal privileges on the land and with material support. He thus transformed the Birkat al-Fil or Pond of the Elephant into an aristocratic residential area which included the mosques of the emirs Ulmas (1329–30), Qawsun (1329–30), Bashtak (1336).[14] The area around the mosque of Ibn Tulun, the old Qataxi{, which became a satellite of the greater Fustat, had already been revived by Sultan Lajin after a long period of neglect by his renovation of this mosque in 1296 and his construction of a hippodrome in its vicinity. The emir Salar had built a palace at Qal{at al-Kabsh and a funerary madrasa (1303–4) nearby along Saliba Street.

Al-Nasir's urban vision is further demonstrated by his scheme for the transformation of the quarter of Hadarat al-Baqar beneath the Citadel, northwest of the Rumayla Square, where Sultan Hasan later erected his madrasa. He designed a palace complex with the idea of creating a spectacular architectural vista for himself to admire from his palace at the Citadel. It consisted of an ensemble of two palaces for his favourite emirs and in-laws, Yalbugha al-Yahawi and Maridani and four great "stables" for the emirs Qawsun, Tashtumur, and Aydighmish.[15] Such stables must have been important palaces like the one called Istabl Qawsun, the monumental ruins of which still attest to its grandeur,[16] and the palace of Baktimur, called Istabl Baktimur, which occupied the site of Sultan Lajin's hippodrome.

The great building boom of al-Nasir's reign included the cemeteries. Given Cairo's location between the Nile and the desert, it was natural that the cemeteries were located on the eastern desert side rather than along the green Nile shores. The religious foundations attached to the mausoleums of the Mamluk aristocracy bestowed an urban character on the cemeteries. Referring to the cemetery southeast of the Citadel, Maqrizi wrote:

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[14] Salmon, chapter 5.
[15] Maqrîzî, *Khitat*, 2:71–73.
[16] Garcin et al., pp. 51–59.

> The amirs followed by the military and all other people built tombs, monasteries, markets, mills and baths so that southern and eastern cemeteries were urbanized. Roads multiplied and streets were pierced. Many wished to dwell there because of the magnificent palaces that were erected there and which were called tombs, and because of the charities bestowed upon the inhabitants of the cemeteries.[17]

The Citadel founded by Salah al-Din, and completed by his successors, to be the center of administrative and political power, evolved into a palace-city under the Mamluk sultans. The Mamluk additions to the Ayyubid fortress extended the southern section with a palace complex that commanded a panorama encompassing the two cities al-Qahira and Fustat with their cemeteries and far beyond. The Citadel, perhaps the largest of its kind in the medieval world, has often been described as a city in itself, with its palaces and offices, barracks, dwellings and shops. Al-Nasir Muhammad replaced the old palaces and the mosque of the Citadel with new buildings. His mosque (1318–35) facing the monumental palaces, the Great Iwan (1310–11) and Striped Palace, al-Qasr al-Ablaq (1313), remained for centuries the major landmarks of the royal residence.[18] For the construction of the Hawsh, which comprised private apartments overlooking a pasture ground for cattle and sheep, al-Nasir initiated the gigantic undertaking of carving it out of the Muqattam hill, the plot on which the complex was erected. In addition to the aqueducts, his project to conduct water from the Nile up to the Citadel, through a canal and hydraulic installations, faced insurmountable difficulties, and was abandoned.

The Citadel had a dynamic impact on the development of the southern quarters of al-Qahira, attracting to its neighbourhood the markets of the horses and weapons to supply the demands of the military aristocracy and the army. Princely religious foundations spread along the streets that connected the Citadel to al-Qahira's southern gate, Bab Zuwayla.

During al-Nasir's reign eight mosques were built at Husayniyya, six in the northwestern outskirts including Bulaq, six in the southwestern zone, ten within al-Qahira, 16 between Bab Zuwayla and Ibn Tulun, four in the southern cemetery and three in the Fustat-Rawda area.[19]

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[17] Maqrîzî, Khitat, 2:444.

[18] On the Citadel in the Mamluk period, s. Casanova, Behrens-Abouseif, "Citadel," and Rabbat, Citadel.

The Friday mosques in the suburbs were planned to form nuclei for new quarters, or to consolidate areas still in the process of urbanization. The emirs usually built mosques near their residences, creating small urban entities that included commercial structures. When Emir Husayn built his mosque on the western Khalij shore, he built a bridge near it and even took the controversial decision to pierce a gate in the city's west wall, in order to attract worshippers.[20] Whereas the immediate northern and southern expansions proved to be durable and consistent with the city's natural needs, the western expansion, except for Bulaq and the street leading to it, did not survive the crises of the late fourteenth century.[21] The area around al-Nasir's greatest mosque, built in 1312 along the Nile shore facing the island of Rawda, was abandoned prior to Maqrizi's time.[22]

The mosque of Sultan Hasan built in 1356–62, while introducing a new dimension to Mamluk religious architecture, interacted through its monumental scale with the Citadel and the Rumayla square it faced. Built on the site of the palace his father al-Nasir Muhammad had erected to create an architectural vista for himself to admire from the Citadel, its design and proportions satisfied such expectations. Its function as a combination of mausoleum, Friday mosque, and madrasa, was an innovation that became henceforth the rule for all subsequent royal foundations.

The mosque of Sultan Hasan was the culmination of a period of building activity, which went on beyond al-Nasir's death in 1341 despite the great calamity or Black Death in 1348. Cairo is estimated to have lost during the Black Death between one-third and two-fifths of its population.[23] The building zeal of the Mamluk aristocracy could go on because such catastrophes helped replenish the State Treasury, which was the ultimate heir, thus releasing funds for new foundations. According to data from the 1950s,[24] Cairo inherited from the three decades following al-Nasir's death an important number of religious monuments attributed to the following patrons: Aslam al-Bahaxi 1344–45, Aydumur al-Bahlawan 1346, Aqsunqur 1346–47, Qutlbugha al-Dhahabi 1347, Arghun al-Isma{ili 1347, Tughay 1348, Manjaq al-Yusufi 1349, al-Kharrubi 1349, Shaykhu (mosque) 1349 and (khanqâh) 1349, Sarghitmish 1356, Nizam al-Din, 1356, Sultan Hasan 1356–63, Badr al-Din al-{Ajami 1357, al-Jamali Yusuf 1357, Tatar al-Hijaziyya 1360, Bashir Agha al-Jamdar 1360, Mithqal 1361–62, Taibugha 1366, Sultan Sha{ban's mother 1368–69, Asanbugha 1370, anonymous 1370, Uljay al-Yusufi 1373, Ibn al-Ghannam 1373, and al-Baqari 1374. This list does not include monuments that disappeared much earlier, such as the madrasa built by Sultan Sha{ban in 1375 near the Citadel and destroyed by his successor Sultan Barquq in 1411.

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[19] Raymond, *Cairo*, p. 136.

[20] Maqrîzî, *Khitat*, 2:307.

[21] Ayalon, "The Muslim City" and "The Expansion and Decline."

[22] Maqrîzî, *Khitat*, 2:304.

[23] Dols, p. 169ff.

[24] This list is based on Creswell's *Brief Chronology* and the "Index of Mohammedan Monuments" of the Egyptian Antiquities Organization.

The Circassian Period

Maqrizi's nostalgic praise of al-Nasir's reign and his gloomy perception of his own time, the first two decades of the fifteenth century, led historians to equate the entire Circassian Mamluk period with decline. Maqrizi was looking at a city that was still suffering from Timur's invasion of Syria in 1400, which heavily affected the Mamluk economy, and from a series of natural catastrophes alongside political instability. Many of Cairo's quarters and markets were abandoned or devastated. However, neither the building zeal of the ruling establishment nor the quality of the constructions dropped in times of economic crises. The reign of Sultan Barquq (r. 1382–90) and his fifteenth century successors al-Nasir Faraj (r. 1405–12), al-Muxayyad Shaykh (r. 1412–21), al-Ashraf Barsbay (r. 1422–38), al-Zahir Jaqmaq (r. 1438–53), al-Ashraf Inal (r. 1453–61), al-Zahir Khushqadam (r. 1461–7), al-Ashraf Qaytbay (r. 1468–96), al-{Adil Tumanbay (1501), Qansuh al-Ghawri (r. 1501–16) might not have all been prosperous, however they added religious monuments to the Mamluk capital, most of which survived, and attest to the continuing vigour and innovation of the building craft.

During the fifteenth century, Bulaq's status as a port, coinciding with the growing importance of the Mediterranean trade, increased; it became a commercial and industrial centre with a number of mosques and palaces.[25] Ibn Taghribirdi reported intensive urbanization activities that filled the desert area northeast of Cairo and Bulaq already prior to Qaytbay's reign.[26] No less than eighty mosques were built in the capital between 1412 and 1516.[27] Extant buildings point to an intensive period of construction also in the vicinity of the Citadel.

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[25] On Bûlâq see Hanna.

The northern cemetery, which had included so far only emirs' mausoleums, began to also attract royal foundations: Faraj ibn Barquq (r. 1400–11), Barsbay (1432), Inal (r. 1451–56), Khushqadam (r. 1461–67), Qaytbay (r. 1472–74), al-Zahir Qansuh Abu Sa{id (1498), and al-{Adil Tumanbay (1501) built their funerary structures there. Except that built by al-Zahir Khushqadam,[28] these have all survived to the present day. With time, the layout and architecture of the cemetery acquired increasingly urban features, emphasizing the facades and following the street perspective, as the buildings of Barsbay, Qaytbay, and Qurqumas (r. 1506–7) demonstrate.

Urban embellishment was also on the programme of Circassian sultans and emirs. Al-Muxayyad Shaykh built a new pleasance complex at Kaum al-Rish, a northern suburb along the canal, which included a new palace, called al-Khamas Wujuh or Pentagon, built on the ruins of a Fatimid palace of the same name.[29] He encouraged his courtiers to build residences nearby to be close to his court when he was there.[30] One of his high-ranking bureaucrats, {Abd al-Ghani al-Fakhri, demolished in 1417 all buildings along the Nile shore between the quarter of Maqs in the north and Qantarat al-Muski in the south—an area which Maqrizi described as equivalent to a Syrian town—in order to set up a garden near his residence.[31] Sultan Barsbay cleared the area around the Rumayla square, and Inal was praised for having enlarged the main artery at Bayn al-Qasrayn Street when he built his *rab{* with a double *hammam* in 1457 behind the line of the previous buildings. He moreover gave instructions to prevent obstructions, and to demolish all buildings that obstructed the roads along the Nile shore.[32]

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[26] Ibn Taghrîbirdî, *Nujûm*, 11:186f.

[27] Raymond, *Cairo*, p. 179.

[28] This monument did not survive; its exact foundation date is not known nor the circumstances of its vanishing.

[29] Ibn Taghrîbirdî, *Nujûm*, 14:94, 105f.; Ibn Taghrîbirdî, *Hawâdith*, 2:217; Maqrîzî, *Sulûk*, 4:526, 528, 538, 541.

[30] Ibn Taghrîbirdî, *Nujûm*, 14:105.

[31] Maqrîzî, *Sulûk*, 4:386.

[32] Ibn Taghrîbirdî, *Nujûm*, 15:118; idem, *Hawâdith*, 2:307.

During the reign of Sultan Khushqadam, the great secretary Janibak, launched an ambitious project of landscape transformation; it consisted of a walled garden covering an area of 120 faddâns i.e., ca. 130 acres facing the island of Rawda with a quay. The garden was set on the site of a pond that was filled in by pulling down a mound nearby. On its northern end, at Qanatir al-Siba{, the emir built his palace and on its southern end he established a sufi complex overlooking the Nile.[33]

Qaytbay's building programme was characterized by extensive restoration works of religious and secular monuments in the capital. In addition to his funerary mosque in the southern part of the northern cemetery and another mosque at Qal{at al-Kabsh, he restored the mosque of {Amr at Fustat, the mausoleum of Imam Shafi{i, the shrine of Sayyida Nafisa, the Azhar mosque, and a number of Mamluk mosques.[34] Moreover, he upgraded the urban waqf estates of previous foundations by restoring and reconstructing their commercial structures and dwellings,[35] thus revitalizing the commercial infrastructure of the city. In the Citadel he restored the monuments of al-Nasir Muhammad: the aqueduct, the Great Iwan and the mosque whose dome he rebuilt. He transformed the Hawsh area, which used to be the harem of the Bahri Mamluks, adding new structures to it and making it the venue for his audiences. Whereas the sultan himself was concentrating his efforts on the rehabilitation of monumental heritage rather than designing new urban schemes, his most powerful emirs, Azbak min Tutukh and Yashbak min Mahdi, pursued ambitious urban transformations.

An aspect of Mamluk princely urbanism in Cairo throughout the entire period was the expansion of the suburbs that filled urban gaps and extended the metropolitan area. The emir Azbak, commander-in-chief of Qaytbay's army, launched a project that was to transform and rehabilitate the western bank of the Khalij. He dug a large pond to the south of a predominantly Coptic quarter, filling an area that had been so far poorly urbanized and which was at that time run down. Along the southern shore of the pond Azbak founded a quarter with a palace, a mosque, apartment buildings and commercial structures including shops, a qaysariyya, and a double hammam built on both sides of a new street. The project began in 1476 (it was completed in 1484) and was named Azbakiyya after the founder.[36]

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[33] Ibn Taghrîbirdî, Hawâdith, Part 3, pp. 566–69, 766–68; Nujûm, 16:323; Ibn Iyâs 2:406.

[34] Al-Sakhâwî, 6:201ff.: Ibn Iyâs, 3:329.

[35] Behrens-Abouseif, "Waqf and power."

Another major urban project was launched by Yashbak min Mahdi, the Great Secretary. He built on the northern outskirts of Husayniyya/Raydaniyya a complex of residential and commercial structures alongside a domed mosque (1480) reached through a long elevated passage. The quarter overlooked a depression that turned into a pond during the Nile flood. On the desert side, he built his mausoleum. Only the domed mosque, known today as Qubbat al-Fadawiyya, has survived.[37]

Yashbak's name is also associated with an urban reform that divided minds at that time. In 1477–8 he launched an embellishment campaign for the capital to celebrate Qaytbay's return from a visit to Syria by issuing orders for people to paint their facades and remove all encroachments along the streets. Although the historians praised the initiative, it did provoke uproar among those who had to remove their illegal constructions, which had become a traditional feature of the city. Sultan al-{Adil Tumanbay (1501), although he ruled for only a hundred days, contributed to the expansion of the Raydaniyya area near the Mat{am al-Tayr with what seems to have been a substantial religious-funerary complex, comparable to that of Qurqumas erected in the northern cemetery in 1506–7, with residential structures and warehouses.[38] Only the domed mausoleum has survived.

At the very end of the Mamluk period and notwithstanding the Ottoman advance, Sultan al-Ghawri dedicated great attention as well as funds to prestigious building projects. At the intersection of the main avenue with the street leading to the al-Azhar mosque he built a funerary complex straddling the main street, displaying ingeniously urban-integrated architecture. The mosque with its minaret on one side of the street faces the mausoleum with its adjoining *khanqâh* and the *sabil-maktab* on the other. Between them a small piazza covered with a wooden roof was designed to include a market with booths and shops.

The proliferation of Mamluk religious and scholarly institutions did not diminish the status of al-Azhar as the first sanctuary of al-Qahira. Baybars re-established its *khutba* after it was abolished by Salah al-Din.

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[36] Behrens-Abouseif, *Azbakiyya*, pp. 3–25.

[37] Behrens-Abouseif, "A Circassian Mamluk suburb."

[38] Evliya Çelebi, pp. 397, 484, 1043. A description is included in the archive of al-Bâb al-{Âlî, 265/230:171f.

Its curriculum was enlarged to include additional disciplines, and philanthropic services, due to endowments and donations from the Mamluk establishment and ordinary individuals. The institution continued to attract students from abroad and from the provinces. The building was regularly consolidated and embellished; in the Bahri period Taybars (r. 1309–10) and Aqbugha (1340) and in the Circassian period Jawhar al-Qanqabaxi (1440) built madrasas adjacent to it. Qaytbay consolidated the building and added to it two gates and a minaret, and al-Ghawri added a minaret. Other major sanctuaries, such as the mosque of {Amr at Fustat, the mausoleums of Imam Shafi{i and Sayyida Nafisa were likewise restored and maintained on a regular basis.

Waqf, Building, and Maintenance

The mosques of the Mamluks were largely financed by urban estates. Although the foundation of Friday mosques contributed to stretch the urban boundaries and upgrade neighbourhoods, not all great waqfs were conceived to include all endowed commercial structures and dwellings around the mosque. Rather, the most common pattern in a royal foundation was that of diversified investments. Al-Zahir Baybars endowed his madrasa at Bayn al-Qasrayn with a large apartment complex near Bab Zuwayla, as well as a *qaysariyya* and a house in other quarters. Part of al-Ashraf Khalil's endowed estates to the benefit of his madrasa and his father's mausoleum consisted of rented land in the western suburbs alongside a variety of commercial structures in the capital and land in Syria. Al-Nasir's estates for his madrasa in the city or his *khanqâh* in Siryaqus were also mixed, including agricultural land, commercial structures and factories in Alexandria and Syria. The waqf of Sultan Hasan's madrasa consisted mainly of agricultural land and villages in Egypt and Syria. Qaytbay's and al-Ghawri's waqfs also consisted of a mixture of dispersed commercial structures and agricultural land. The diversified investments allowed the patrons to rehabilitate dilapidated estates and upgrade marginal areas all over the city. Through their creation of new quarters or upgrading of old ones, or simply by adding commercial structures and dwellings wherever needed, the ruling establishment renewed the urban fabric.

The sultan and the great emirs, by being *ex officio* the overseers of the great administration of the waqfs of their predecessors, could play an active role in the preservation of architectural heritage. They often appeared personally to oversee public works of vital significance, in particular civil works concerning the Nile; on such occasions, the emirs contributed with their resources and with the participation of their mamluks and members of their households. The sultans often went on inspection tours, looking after the construction of their mosques as well as other urban matters. Jaqmaq's and Qaytbay's inspection tours were a characteristic feature of their rule.[39]

The intensive building activities of the Mamluk establishment in the capital must have been coordinated by some form of urban planning due to the centralization of the building craft in the hands of the sultan and his surroundings. The great builders among the sultans are likely to have established a consensus with their subordinates regarding individual building projects. Moreover, the emphasis on the foundation of complexes or quarters rather individual buildings implied *per se* a certain amount of planning.

Although the qadis, the police prefect (*wâlî*) and the market inspector (*muhtasib*) were involved in the administration of the capital, the continuous and direct interference of the sultans assisted by their emirs, making ad-hoc choices and decisions, shaped the city's functions and morphology to a great extent. Inal's initiative to widen the main avenue at Bayn al-Qasrayn and Yashbak's measure to eliminate encroachments along its streets, demonstrate the direct involvement of the ruling establishment in matters of urban order and aesthetics. At the same time, they indicate that only the authority of a sultan or a powerful emir could be effective enough to implement order or introduce reforms.[40] However, the chroniclers regularly report that the sultans took the liberty to obstruct the road with their own buildings or to appropriate by dubious methods waqf estates from their predecessors. The positioning of Qaytbay's funerary mosque in the cemetery shows that he must have diverted the road to enhance the approach to his complex, as did Qansuh Abu Sa{id years later.[41]

With the exception of al-Nasir Muhammad's royal village at Siryaqus, none of the other sultans or emirs built residences or summerhouses in the provinces or in other Egyptian cities. On their hunting and other excursions and travels they dwelt in elaborate encampments. The

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[39] Jawhari, *Inbax*, 202, 244, 405.

[40] Raymond and Wiet, p. 54f.

[41] Ibn Iyâs, 3:437, 425.

Mamluk aristocracy lived continuously in Cairo, either in their urban mansions or in villas in the outskirts along the shores of the ponds, the Khalij, or the Nile. Quite often the emirs' palaces were not their private property but owned by the State, which they could enjoy as part of their remuneration and which was to return to the sultan upon their death or dismissal. Some belonged to waqf estates, their rent being part of the revenue of pious foundations. The palaces continued to be occupied for centuries, albeit not on a hereditary basis, being regularly remodelled and transformed.

The palaces of the Mamluk emirs were located in various areas within the premises of the Fatimid city and in the suburbs, notably in the southern quarters along the Saliba artery and the pond called Birkat al-Fil. Although the sources refer to places favored by the emirs and other notables such as the shores of the ponds, there was no exclusively aristocratic quarter in the Mamluk capital. Waqf descriptions of Azbakiyya and other quarters indicate that they were planned with palaces near ordinary dwellings of various sizes alongside shops and commercial buildings. The mamluks and other members of an emir's household would dwell in the same quarter.

The growth in the number of mosques with the status of jâmi{ or Friday mosques in the fourteenth century was a response to al-Nasir's ambitious schemes to expand the urban area. After sultan Hasan integrated the madrasa with the Friday mosque the multifunctional complex caught on in a big way. In the fifteenth century, not only sultans and emirs but also civilians of various backgrounds could found Friday mosques; at the same time earlier zâwiyas and madrasas were endowed with the khutba and new ones included it automatically. The proliferation of congregational mosques and multifunctional complexes led to saturation in the late fifteenth century, so that even Sultan Qaytbay could only build neighbourhood mosques, reduced in size and function. This development was accompanied by the adoption of residential features in religious architecture, with the mosque adopting the shape of a reception hall, and the living units in the form of a rab{.

Unlike many other Islamic cities, Cairo's domestic architecture was not introverted. The rab{, a typical form of dwelling for the middle class, consisted of apartments built above a row of shops or a commercial structure with a courtyard.[42] These apartments, mostly duplexes with an individual roof, preferably overlooked the street whenever access was available. Likewise, in mansions and palaces, the windows of the main hall or qâ{a opened onto the street. The qâ{a, which occupied the entire height of the house and was surrounded by smaller rooms on multiple stories, was the heart of the residence, whereas the courtyard—rather than being the centre of domestic life like the patio of the Syrian or Maghrebi house—included various service facilities, including a stable. In larger residences a second courtyard might fulfill the function of a garden.

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[42] Ali Ibrahim, "Middle-class Living Units."

Cairo received its drinking water from the Nile through the Khalij. Water was conducted to the Citadel through aqueducts and waterwheels. Pious foundations had their own sabîls, or water houses, which provided water to the public on a philanthropic basis. Since the late fourteenth century the sabîl was integrated architecturally in all religious buildings, usually at a corner and surmounted by the maktab or boys' primary school. Others, along with troughs for the animals, were independent structures. Houses and commercial buildings had cisterns, wells, and waterwheels. The cisterns were filled yearly during the flood season with water carried by camels or donkeys. Ambulant water-carriers sold water on the streets.

Open Spaces and Hippodromes

Maqrizi enumerates open spaces called rahbas often used as markets. Hippodromes multiplied in the Mamluk period, they often functioned as outposts of the Citadel, hosting, beside polo and military tournaments, princely weddings, congregational prayers, or even the sultan's audiences. The hippodromes were walled, often combined with gardens, and they included pavilions and residences.[43] The Rumayla square at the foot of the Citadel, which stretched between the Hadarat al-Baqar with its aqueduct, near Sultan Hasan's mosque, and Bâb al-Qarâfa, the gate of the cemetery, included a major hippodrome, and was the venue where public events, such as parades and the celebration of the departure of the pilgrimage caravan, took place. It was an Ayyubid foundation rebuilt by al-Nasir Muhammad, who used it as a falconry ground, to review the royal horses, celebrate the two great religious feasts, and for congregational prayers. At the very end of the Mamluk period, Sultan al-Ghawri refurbished the hippodrome to make it an outpost of the Citadel; he connected it with hydraulic installations to provide water for a pool and a garden planted with imported trees, and he built there pavilions and residential structures for his audiences and festivities.

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[43] Maqrîzî, Khitat, 2:197–200, 228.

The northern cemetery was originally a hippodrome, the Maydan al-Qabaq, built by al-Zahir Baybars. In 1267 he built there a kind of dais (mastaba) connected to a falconry (Mat{am al-Tayr). Al-Nasir transferred the falconry to southern Fustat at Birkat al-Habash, and allowed instead the cemetery to spread. However, a mastaba-hippodrome in the northern part of the cemetery continued to be mentioned in the chronicles to the end of the Mamluk period, as a venue of tournaments, parades, and various regal ceremonies.[44]

Al-Nasir Muhammad demolished two other hippodromes, set by his predecessors al-Zahir Baybars and al-{Adil Kitbugha, and replaced them with the Maydan al-Mahara located at Qanatir al-Siba{ between the two canals and another one at Bustan al-Khashshab between Fustat and al-Qahira along the Nile shore. With the exception of Siryaqus, which was abandoned in the Circassian period, the hippodromes established by al-Nasir continued to serve the Mamluk court; they were regularly restored by subsequent sultans.[45]

Streets and markets

Apart from the Citadel, the Mamluks did not fortify Cairo, the Egyptian capital being defended far beyond its own territory. They rather maintained the fortifications of Syrian and Egyptian coastal cities; Syria was the buffer zone between Egypt and any possible invaders. The Mongol and Timur's raids, which inflicted much damage on Syria, were halted there before they could reach Egypt. The main battle with the Ottoman conquerors was also fought there at Marj Dabiq near Aleppo.

The built area of Mamluk Cairo covered a huge area with varying demographic density. According to Garcin's estimation, the population of the Egyptian capital Fustat-Qahira in 1517 amounted to c. 270,000.[46]

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[44] Behrens-Abouseif, "Northeastern Extension."
[45] Maqrîzî, Sulûk, 4:529; Nujûm, 14: 95, 96, 99.
[46] Garcin, "Note sur la population du Caire."

Mamluk Cairo displayed the traditional Islamic street pattern with a few major arteries connected to winding streets and lanes ending in cul-de-sacs. Maqrizi's hierarchy of streets includes the hâra, khutt, zuqâq, and darb, the latter being a lane closed by a gate. The hâra was a large district with many quarters, whereas the khutt was a quarter. The map shows the main artery from Husayniyya down to Bab Zuwayla, where it bifurcates eastwards into al-Darb al-Ahmar street leading to the Citadel, and southwards to the pond Birkat al-Fil, and, after it crosses Saliba, continues further to the cemetery of Sayyida Nafisa, where it bifurcates westwards to Fustat and eastwards to the southern cemetery. On the west side, the bridges of the Khalij connected the city with Bulaq and the Nile shore.

The major markets stretched along the thoroughfares from Husayniyya in the north to the Citadel and further to Saliba in the south. They consisted of shops and booths built beneath rab{s or mosques or along their facades. The most prestigious markets were in the area of Bayn al-Qasrayn around the major royal mosques. They included the major commercial buildings of the khân, qaysariyya, and wakâla type, which functioned as specialized markets or factories as well as banks and stock markets.[47] Besides the trade of local and imported luxury goods, slaves, and agricultural products, a characteristic feature of Cairo's market streets, reported by many travellers, were the food stalls, and the cooks and peddlers, who sold cooked meals.

Virtually all commercial structures in al-Qahira's central market streets alongside their dwellings were the property of the great waqfs of the sultans and emirs, which financed their religious foundations at the same time as they provided revenue for themselves and their descendants. The Mamluk aristocracy and their officials controlled much of the urban trade.[48] A sultan or emir could force the transfer of a market or a group of craftsmen to his own premises, and merchants could be forced to purchase and sell certain goods at prices dictated by the sultan. The great markets provided the court with luxury and ceremonial articles. The famous Mamluk inlaid metalwork was produced in the bazaar before it disappeared in the fifteenth century, and the enamelled and gilded glass lamps and vessels could also have been made in the glass markets (zajjâjûn) mentioned by Maqrizi. The historian refers to markets of designers (rassâmîn),[49] who served various arts and crafts. Also ceremonial gowns and weapons were produced in the city. The merchants and craftsmen of the central markets were tenants and not the owners of their shops and workshops, as were most inhabitants of all types of domestic and residential structures, including mansions and palaces.

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[47] Raymond and Wiet, Marchés.

[48] Labib, p. 184ff.

The non-Muslim minorities were able to maintain their pre-Islamic sanctuaries in Fustat and in the outskirts of Cairo. Greek churches and a synagogue built in al-Qahira during the Fatimid period could maintain themselves. The Mamluks did not allow the dhimmîs to found new religious buildings, but only to restore the old ones. For the Copts, who worked in the commercial centre and dwelt in some of al-Qahira's quarters along the Khalij and in the western suburbs, the churches of Fustat no longer corresponded to their demographic concentration. The situation was different for the Jews, who had a synagogue at Harat Zuwayla, which was the main Jewish quarter behind the complex of Qalawun. Whereas some quarters were predominantly inhabited by non-Muslims, there were many mixed areas so that no strict segregation seems to have existed between the communities.

The Metropolitan Style

The involvement of the ruling aristocracy in the city's commerce, and the potentials of the waqf system, that led the Mamluks to invest in urban estates, dedicating their revenue to their private and pious foundations, had a significant impact on the city's image. With their mosques, dwellings, hammams, shops, and caravanserais integrated in princely patronage, Cairo's main streets must have had a homogenous princely character, with no room left for common building projects.

The Mamluks inherited a capital with a long history of unchallenged status as the capital of Muslim Egypt whose urban and architectural traditions did not fail to inspire them. The supremacy of the street aesthetic was a characteristic feature of Cairene architecture since the Fatimid period further cultivated by the Mamluks. They used the device, already applied in the Aqmar mosque (1125), to split the axis of the mosque's façade from that of the Mecca-oriented interior in order to adjust the building to the street and not disturb its alignment. This approach to the street perspective was elaborated in their religious-funerary monuments, which were designed to emphasize the domed mausoleum and its positioning with optimal visibility from the street,[50] as well as its harmonious relationship to the minaret. As a result, the Mamluk religious complexes display a large variety of layouts individually conceived to fit in their urban environment. These features, which combined inherited traditions with princely commemorative obsessions, shaped the inimitable metropolitan style that remained exclusive to the capital. Ayalon's observation that "few military aristocracies in Islamic history were as bound to the capital and as closely identified with it, in almost total disregard of the other towns, as were the Mamluks in relation to Cairo,"[51] is confirmed by the sultans' regular appearance in the streets and their direct involvement in the capital's urban development and maintenance. The exclusive and intimate relationship between the Mamluk ruling aristocracy and their capital contributed to shaping Mamluk Cairo as a singular phenomenon or, as Ibn Khaldun said, "a city beyond imagination."

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[49] Maqrîzî, Khitat, 2:101, 105.

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[50] Kessler, "Funerary Architecture."

[51] Ayalon, "The Muslim City," p. 319; idem, "Studies," p. 205.

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ISLAMIC JERUSALEM OR JERUSALEM UNDER MUSLIM RULE

Oleg Grabar

In drawings by eighteenth and nineteenth century travellers or in photographs from the second half of the nineteenth century until the fifties of the twentieth century, Jerusalem was always presented in the same fashion. It was shown from the southwest, from the southern spur of the Mount of Olives, where natural height and bareness of occupation allowed the visitor to see the city in its totality, on the other side of a deep valley filled with tombs. Beyond the realm of the dead, there was a squarish area outlined by massive and well-preserved walls with few visible gates; the one most easily seen from that angle, the Golden Gate handsomely outlined on the walls of the city, had been blocked since the seventh century and may never in fact been used as an entrance. That city seemed to be artificially perched on top of a craggy and stony uneven terrain. Inside, partly covered with trees, the large and open Muslim holy place known as the Haram al-Sharif, "the Noble Sanctuary," occupies the southeastern corner of the walled enclosure. It harbours the startling and imposing Dome of the Rock and, to the south of it, a large congregational mosque known as the Aqsa Mosque, also with a high dome. Crowded streets and buildings occupied the rest of the city, but the fairly modern domes of the ancient Holy Sepulchre, purposefully framed by the minarets of two small mosques, or the much more recent domes of Ashkenazi and Sephardic synagogues were clearly visible. Later in the nineteenth century, the tall Lutheran and Catholic towers served to identify yet another religious presence in the holy city as well as to evoke western Christian preeminence. No external sign or symbol identified the sectarian allegiance of these buildings, but local inhabitants knew what they were, because they were part of the fabric of the city, the indispensable means to its meaning and to its life. Most of those who came to Jerusalem were also aware of their existence, but the knowledge of the pilgrims was probably restricted to the monuments of their own faith or even of a specific segment of their faith.

This walled city acquired its present shape in the sixteenth century and, while much has been done over the past five hundred years to alter or to repair its individual parts, on the whole the character of its basic structure remains the same; even the electric lights of evening and night spectacles which have changed the looks of so many historic cities are absent from the walled city of Jerusalem. They have only reappeared on the western side of the city to satisfy the needs of a new tourism, just as the seventh century lights were left on the slope of the Mount of Olives that would lead the pilgrims into the Holy City. Changes in the urban structure of Jerusalem occurred mainly outside the walls, as mostly foreign institutions—schools, hospitals, monasteries, institutes of all sorts, later hotels and administrative buildings—were constructed in the more open and relatively free spaces to the north and west of the city. Small clusters of houses or single estates, usually fairly large ones, appeared there as well and formed the core of what later became villages and eventually were incorporated, not always willingly, into a megalopolis in the making.

What creates the originality, in fact the uniqueness, of Jerusalem is not its late nineteenth and twentieth century growth which it shares with hundreds of other urban centres, but two unique features characterizing the Old City. One is that its present shape was created under the leadership or rule of Muslims over a Roman imperial transformation of an ancient Jewish city. And the other is that its contents were Muslim, Jewish, and Christian in proportions and importance that varied according to the ebb and flow of history and with an increasing presence of secular functions and structures from the middle of the nineteenth century onward. No other holy city in the world is holy, in one way or the other, to three different, if historically and theologically related, systems of faith and practices of belief.

How did it happen? How did the city evolve? By what mechanisms did it endure? I will first sketch what can be reconstructed for the seventh century when the city fell under Muslim rule and then identify some of the primarily Muslim features which affected it over the following fourteen centuries.

Much is still mysterious about how Jerusalem became a Muslim city in or around 637 C.E. and it is unlikely that the truth will ever be known. Actually, what really happened is not as important for an understanding of the city's role in traditional Islamic art than what was imagined. What follows is a reconstruction of events and attitudes as they seem to me to have occurred. The city surrendered by the Greek patriarch Sophronius was a Roman military camp adapted to the ruins of Herodian Jerusalem and transformed into a Christian city after the conversion of Constantine the Great in the first half of the fourth century. Two themes dominated its life and its monuments: the commemoration of a holy history centred primarily on the Passion of Jesus and the expectation of the last day and the arrival of the Kingdom of God on earth. Churches, among which the most important was the complex of the Holy Sepulchre, were dedicated primarily to the life of Jesus, but relics in the treasuries of churches and locally made or locally sold objects of all sorts recalled all scriptural personages from Adam to Christ. Eschatology was mostly evoked through the many cemeteries which adjoined the walled city, and through the holy places on the Mount of Olives celebrating the Ascension of Christ and His eventual return. Jews were officially banned from the city and could only come once a year to lament the destruction of the Temple whose ruins, mixed with whatever was left of a few pagan constructions, occupied a large abandoned space in the southeastern corner of the city.

It was this space loaded with memories and filled with standing or ruined buildings that was taken over by the newly arrived Muslims, perhaps even the caliph {Umar himself, as their own restricted place. This space was then called bayt al-maqdis ("House of the holy place"), from which eventually came al-Quds, "the holy one," as the name of Jerusalem in Arabic. It is only several centuries later, after 1200, that the space acquired its present name of al-Haram al-Sharif, "the noble sanctuary." The Muslims prayed there, probably in the southern part of the area, where they soon built a simple hypostyle mosque. Most immigrating Muslim Arabs settled to the south and the west of the Haram area. Some may even have come to live in other parts of the city, for ethnically or religiously defined quarters had not yet appeared in most Near Eastern cities. At some point, probably around 700, two large buildings were built to the south and the southwest of the Haram, whose foundations have been cleared some time in the seventies of the twentieth century. There is much debate around the function of these buildings, which may have been palaces for the caliphs, administrative buildings (the dar al-{imarah of texts), or settlements for incoming families, or any combination of these functions. Whatever they were, whether they were even completed or not, and whatever the span of time in which they were used, these buildings were within the boundaries of the walled city and in direct contact through a variety of passageways with the Haram.

flooded by water for a very long period and being unable to yield any crops. On the contrary, when the level of Nile stopped below 16 cubits, the flooded areas would not have had sufficient water to guarantee a necessary agricultural production for the complete population. Nobody could feel sure till the level of Nile would not have reached those 16 cubits high, so the pieces of news about the level of the river were all kept secret to the population till the moment when the useful threshold was reached.[36] During the period of the inundation, the water covered all cultivated territories, so the same villages, even though they were in advanced places on a rise or on little rocky spurs, were isolated and could be only reached by some boats or by the superficial courses of the dams. When the soil received sufficient water, the officers let break the dams in some specific parts to give the water the opportunity to flow into other fields. After that water gradually withdrew (generally after 40 days) giving the possibility to proceed with the cultivation of the fields. This cultivation system without any additional water provisioning is practiced nowadays by the fallÊ and is called "winter harvest." [37]

Another subject of interest is constituted by the territory of the Fertile Crescent, delimited by the rivers Tigris and Euphrates. The plain of the Fertile Crescent[38] consisted—since the period of the old

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[36] This tradition was introduced by the Fatimid caliph al-Mu'izz in 973 (362 AH), when he forbade to diffuse along the Cairo ways, pieces of news about the elevation of the Nile's level, to avoid tensions, fears and financial crises among the population. The employed to the Nilometer announced the water level with the fingers without giving the exact indication with cubits. Only when the level reached the 16 cubits (generally in the months of July and August) could be communicated to the citizenship of reaching the level and the sultan had the right to impose the tax (kharaj) on the cultivated lands; H. M. Rabie, The Financial System of Egypt A.H. 564–741/A.D. 1169–1341 (London, 1972), 73; D. Bonneau, "Le nilomètre: aspect technique," in L'Homme et l'eau en Méditerranée et au Proche Orient, ed. P. Louis, vol. 3, TMO 11 (Lyon, 1986), 65–73.

[37] This type of harvest is distinguished by the "summer harvest" practiced during the months of February and March, employing artificial systems of irrigation with water wheels (directly deriving from the Persian noria even though they were moved by ox and not by water) and the water screws (as the cochlea). These methods of artificial irrigation were widespread in Egypt before the advent of the Arabs and are still nowadays in use. In particular, the wood wheels (of different kinds, the most used were the sakija and the mahal) were so widespread to sustain in the fourth century A.H. (tenth century) that, along the Nile, different towns and villages had an illimitable number.

[38] C. Cahen, "Le service de l'irrigation en Iraq au debut du XI^{e} siecle," BEO 13 (1949–51): 118–119, 130–131; M. R. Al-Feel, The Historical Geography of Iraq between the Mongolian and Ottoman Conquests, 1258–1534 (Najaf, 1965); E. Wirt, "Landschaft und Mensch in Binnendelta des unteren Tigris," Mitteilungen der geographischen Gesellschaft in Hamburg 52 (1955): 7–70; E. de Vaumas, "Le controle et l'utilisation des eaux du Tigre et de l'Euphrate," Revue de Géographie Alpine 46 (1958): 235–331.

Middle-East civilizations of Mesopotamia, developed until the fourth century A.D.—of scattered agricultural villages built with bricks, realized with clay extracted from the fluvial territory, and dominated each by a temple. In its complexity, the region of the actual Iraq is a plain tableland irrigated by two big rivers which do not have the same regularity as the Nile.[39] The Euphrates (al-Furāt) flows on a higher level in relation to that of Tigris (Dijla), so the extremely thick series of channels, parallel to one another and transversal in respect of the rivers, only drain the extra water of the Euphrates in the Tigris. An old law system based on local custom determined the quantity of water to be distributed and the period of use between the owners of the lands along the sides of the channels, and officers intentionally called had to assure this rule through the control of shutters or water gates. To the very thick comb structure of these channels, was opposed the channel of Nahrawan,[40] the only artificial channel flowing parallel along the settlement of Tigris, detaching from it in the northern part of the settlement of Samarra[41] and rejoining it 170km in the south of Baghdad. In the first Islamic period, the sluice of Al-Kantara was re-built, so the whole system of the channel reached its major development and along its way an endless sequence of little settlements was diffused. Starting in the late fourth century A.H. (tenth century A.D.) the channel suffered different alteration up to 326/937–8 when Ibn Raik interrupted the channel and diverged it into the Tigris in the vain attempt to prevent the march of Bajkam against Baghdad. From this moment the famine caused the abandonment of these lands and transformed part of the central Iraq into a marshy zone, the Batīḥa, whose draining was no longer possible.[42]

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[39] The irregularity of the water flows pushed to use different types of water wheels, dawlab, gharrāfa, shādhūf, characterized by a different way of taking the water and distributing it on the cultivated fields, considering the season and the number of men and animals necessary to work.

[40] Ibn Serapion, ed. and trans. G. le Strange, "Description of Mesopotamia and Baghdad" in JRAS 19 (1895): 267–270.

[41] The same abandon of the town of Samarra can be attributed to this particular collocation, near an artificial channel that, depending on an unstable river as the Tigris, could not guarantee a constant water provisioning to the capital; J. M. Rogers, "Samarra, A Study in Medieval Town planning," in *The Islamic City*, ed. A. H. Hourani and S. M. Stern (Oxford: Cassirer, 1970), 138 and sgg. The same thing did not happen in Baghdad that could directly count on the help of the Tigris and Euphrates, exposing it to the inundations, which were the main causes of its decline.

[42] G. le Strange, *Lands of the Eastern Caliphate*, 18, 36, 57–61; M. Ionides, *The Regime of the Rivers Euphrates and Tigris* (London, 1937); R. Mc C. Adams, *Land behind Baghdad* (Chicago, 1965), 67, 76–79, 81, 86, 94–95, 99–105, figs. 5, 6, 8, 9, 18, 19.

2) Little River Systems

Settlements which rise along superficial waterways at a changeable course (streams, wadi, oued) and rule the water function through canalization mechanisms (mudi, seguia, foggara).

In this case, the urban structure does not directly take its shape from the watercourse. In conditions of an extreme variability or water unavailability for long periods, these river systems are associated with structures for the harvest and conservation of superficial and meteoric water (cisterns, basins, tanks). The settlements tend, for this reason, to organize around these last water structures losing, apparently, in the urban morphology, the dependence from the former waterway.

Thus, in the capital of Yemen, Sanaʻa,[43] collocated at over 2,300 m above the sea level, on an upland surrounded by mountains, the rain nourishes the wadi which supplies the territory and its farm hinterland. In the valley of Wadi Dahr, the river goes out from a gorge cut in the rocky walls closing the cultivated plain, punctuated from isolated tower-houses, whereas the urban settlement settles near the mountain, around wide tanks which drained the water coming from the mountains themselves.

A not so different settling typology was that which characterized, in the Yemen, the Maxrib,[44] placed on a tableland at 1,200 m in the delta of the great wadi Adhana; today it is drained up.

Very similar urban behaviour may be found in the farm region of Cabilia, in the northwest of Algeria, where the massif of Jurjura, which defines the region, dominates the valley of the Wadi Soummam, which flows into the Mediterranean, near the harbour of Bejaïa.

Deep in the Sahara, in the region of Mzab[45] in the south of Algeria, lies the penta-town of Ghardaia. It extends on an area of approximately 8,000 km^2, on a wide stone plain, sweetly declining from west to east, and is cut from deep and tortuous valleys from which come the name of Chebka (shabka = net) of Mazab. This huge expanse is populated by different nomadic tribes and hosts, in the heart of Mzab, the five permanent settlements of the pentatown. They are five towns (El Ateuf, Bou Noura, Beni Isguen, Melika, and Ghardaia) founded by Ibadis in the fifth century A.H. (eleventh century A.D.) and placed in an arrow along the valley of the wadi Mzab, on a distance of 12 km. In this area everything is conditioned by the superficial water resources. In fact the underground strata do not have the capacity of a natural reloading. The only agent which is able to reload these strata is the wadi, with its rare and violent inundations, appropriately deviated by barrages and dams which break the force of the river in flood, and with a clever system of shutters having the shape of a reversed comb, capillaries distribute the water, nourish the several channels of distribution in the open air which, entering the properties, directly irrigate the plantations of date-palms. After this long way, water filters through the sand and recharges the deep stratum. Originally, the strata of Wadi Mzab, of Wadi Nsa, or Wadi Metlili were flooded, without being obstructed, for distances of 100–200 km, before disappearing in the desert, but the restraint-dams built for the palm plantation, supporting the infiltration and accumulation of underground provisions, have produced significant volumes of water. The underground level of the water stratum has raised the development of wells 20–30 m deep.[46]

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[43] R. B. Serjeant and R. Lewcock, eds., San{ax an Arabian Islamic City (London, 1983).

[44] The wadi drained the waters of the extended area of more than 10,000 km^2 of the northeast uplands of the Yemen, characterized by abundant rains. The reduction of the rainfalls made necessary the building of a dam which completely transformed, since the fifth century B.C., the aspect of the territory, making it particularly fertile and causing, then, its collapse, the end of the reign of the Sabei; A. P. Caussin de Perceval, Essai sur l'Histoire des Arabes (Paris, 1847–8).

[45] M. Mercier, La civilisation urbaine au Mzab (Algiers, 1932); A. de Calassanti Motylinski, Notes historiques sur le Mzab (Algiers, 1889); C. and P. Donadieu and H. and J. M. Didillon, Habiter le deserto Les maisons mozabites (Brussels: Mardaga, 1977);

Khirbat al-Mafjar,[47] generally known as Qasr Hisham,[48] is the modern name of the ruins of an uncompleted Omayyad castle, in the Wadi al-Nuwayima, in the north of Jericho. The ruins include three separated buildings: a real palace, a mosque, and a bathroom attached to a

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Kleinknetch, "Le probléme de l'eau au M'zab," *Bollettino della Società Geografica Italiana*, 1958; Berrien, "A Gardaia, le miracle de l'eau," *Renseignements Coloniaux et Documents du Comité d'Afrique Française* 48, no. 12 (December 1938): 311–316.

[46] In the Pentapolis, also the calcareous stone of the soil keeps, in its hinterland, some water bags at a depth of 400 m. These waters are reachable with deep artesian wells but, in Guerrara and Zelfana, this water naturally flows at a strong pressure, on the surface, facilitating the irrigation of very wide areas, even though it results in warm (45° to 55°) and rich of impurities.

[47] D. C. Baramki, *Guide to the palace at Khirbat al-Mafjar* (Amman, 1956).

[48] Hisham, tenth caliph of the Omayyad dynasty, during the fifteen years of its reign, mainly devoted to the agricultural and economical development of the territory, going on with the provisioning works, started with his predecessors. F. Gabrieli, *Il califfato di Hisham. Studi di storia omayyade*, Memoires de la Societe Royale d'archeologie d'Alexandrie, 7/1 (Alexandria, 1935).

room. On the east side of this complex, there is a pillared large square with an ornamental swimming pool in the centre. The foundations of the wall, found in the north of the site, suggest that the buildings were originally enclosed with a field surrounded by walls, including cultivated fields, agricultural houses and, perhaps, a hunting reserve. A complex system of irrigation, developed since the Roman period and based on three nearby sources—al-Sultan, Ayn al-Nuwayima and Ayn al-Duyuk—guaranteed the water supply for the residential buildings and the cultivation of the lands. The modern name of this place, which means "Place where water comes from the land," is a witness to the abundance of water in this area. We do not know much about this place, as other different settlements of this nature, placed on the Syrian upland, are known as "castles of the desert."[49] These places were considered as residences of the Omayyad caliphs till Souvaget[50] supposed that these buildings, connected to wide farms with little villages and hunting reserves, were real urban villages, farmhouses organized around a castle, for the "good retirement" of the princes. These fortresses are situated in the heart of the Omayyad kingdom, at hundreds of kilometres from the nearest borderland, but they can be explained as fortified areas against the Byzantines.[51] The building of these several garrisons on the roman limes was useful to defend the trade, the places devoted to agriculture and the sources (wadis) from the raid of the nomads. So Qasr al-Hayr, al-Gharbi, Qasr al-Hayr al-Sharki, Khirbat al-Mafjar, Mashatta, Kusayr Amra, and many other palaces were characterized by a high walled fence.[52]

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[49] K. A. C. Creswell, Early Muslim architecture, A.D. 622–750 (Oxford, 1969), 1/2: 561–576.

[50] J. Sauvaget, Chateaux Umayyades de Syrie (Paris: Geuthner, 1968); U. Monneret De Villard, Introduzione allo studio dell'archeologia islamica. Le origini e il periodo omayyade (Venezia, 1966); O. Grabar, R. Holod, J. Knustad, and W. Trousdale, City in the deserto Qasr al Hayr East, 2 vols. (Cambridge, MA: Harvard University Press, 1978).

[51] S. Tateo, "The Landscape of the Limes Arabicus: From the Defensive Roman Castra to the Omayyadi Palaces" (doctoral thesis, tutor A. Petruccioli, Politecnico of Bari, Faculty of Architecture, Bari, 2004). To the study and the analysis of the Omayyad palaces we may refer to the following texts, P. Canivet and J. P. Rey-Coquais, eds., La Syrie de Byzance a l'Islam VII–VIII siecles: Acts of the International Discourse (Damascus, 1992). Particularly interesting are the following articles: H. Kennedy, "The Impact of Muslim Rule on the Pattern of Rural Settlement," 281–290; I. Shahid, "Ghassanid and Umayyad Structures: A Case of Byzance apres Byzance," 291–298. H. Kennedy underlines the deep interest of the dynasty for the development of the agriculture through the foundation of huge land property near the lands already prepared during the Byzantine epoch to avoid contrast with the local populations. All sites had important water works such as dams or channels. In particular, the excavations of D. Schlumberger in Qasr al-Hayr al Garbi confirm that it deals with Omayyad and not Roman works. A central question is the reason for the concentration of so big investments in areas as the steppes, where the rains are few and not reliable. The answers may be different, from the importance of the hunt, to the necessity to live in contact with the badiyya, the steppe, from the nomad population. Kennedy underlines the financial aspect deriving from the presence of local markets. Shahid discovers in

Equally extraordinary were the settlements present in Fez,[53] a town founded by Idris in 192–193 A.H. (808 A.D.). The town rises in the northeast extremity of the plain of Saxis, exactly where the waters of

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the Arabian Christian tribes of the Ghassanids, the joining element that would have allowed the pacific occupation of Syria and Transjordan. The Ghassanids, leading the south region corresponding to the Limes Arabicus, created and modified different Byzantine building institutional structures in order to favour the transition. In particular, the author accepts the interpretation of H. Gaube, who sees the Castles of the Desert as royal residences dedicated to the meetings with the masters of the nomad tribes. The author also remembers different Ghassanid settlements, called Hira, Jillaq, Havvwarin, and Qastal, which were developed under the Omayyads.

G. R. D. King and A. Cameron, eds., The Byzantine and Early Islamic Near East, II. Land use and Settlement Patterns, (Princeton, 1994). In particular the following articles: "Introduction" by G. R. D. King, facing the delicate question of the terminology and the differences between misr, qasr, and medina, underlining as the word qasr would not only show a palace or a fortification, but also a farm settlement; Mac Adam Innes, "Settlements and Settlement Patterns in Northern and Central Transjordania, ca 550–750," 49–93, sustains not only a continuity of the living ways from the Roman period to the advent of Islam, but also a strong continuity among them, verifying as many Castle of the Deserts would be born next to old camps or fortifications. It tells the case of Aquaba, the Omayyad harbour in the extreme south, but also cases like Udruh, al-Humayma, etc., and analyses as Qastal was originate by a Roman settlement; Qasr al-Mushatta is the biggest castle of Transjordan; Qasr al-Muwaqqar and Qasr al-Kharana are original Omayyad structures and that in Qasr al-Mushash was found enough Byzantine pottery, to suggest a modest previous settlement. In the end, the article abandons the hypothesis that the Castles of the Desert sign the advent of the Islamic Arabs as a distinctive and social desegregation period with the communities present in the Region.

G. Bisheh, F. Zayadine, M. al-Asad, I. Kehrberg, and L. Tohme, eds., Gli Omayyadi: The Rise of the Islamic Arts (Milano: Electa, 2000). Particularly useful the chapter: "The Omayyidi Palaces," by M. Al-Asad and G. Bisheh where the castles of the desert of the Giordano central area as Mashatta, Al-Qastal, Kharana, QusayrxArnra, Qasr al-Hallabat are described and indicates the occasional use of the King.

[52] The fence of Qasr al-Hayr al-Sharki is wide almost 1,5 km and long 7 km, with stoned walls 1.5 metres high where a second parameter of 2 metres was posed made of mud bricks. In the middle of this irregular fence a wadi flew, distributing on the right and on the left some walled canalizations.

[53] S. Bianca, "Fes. City of Water, Gardens and Fountains," in "Water and Architecture," ed. Carucci, Environmental Design: Journal of the Islamic Environmental Design Research Centre 2 (1985), 58–63; Titus Burckhardt, "Fez" in The Islamic City (UNESCO, 1980); Schéma Directeur de la ville des Fes (UNESCO, 1980); S. Bianca, Fez—Toward the Rehabilitation of a Great City, Seminar No. 2, Aga Khan Award for Architecture (Istanbul, 1978); Stefano Bianca, Stadtebau in islamischen Landern, ETH/ORL Institute (Zurich, 1980).

the west side of this place go down in the valley of Sebou, crossing the valley of the wadi Fas. This capital was extremely rich in water. Apart from that river (wadi Fas), the town had a great number of sources—Leo Africanus counts 600—from where water was "distributed for different uses and brought to the houses, the cult places, the colleges and hostels."[54] The presence of the river guaranteed a supplementary flow employed for the function of the mills, to bring the rubbish away, to fill fountains and basins and to irrigate gardens. During the time, some important works were undertaken, yet we can't know exactly the type of distribution within the urban space.[55] The essential data tell us that the town has had a long net of channels since a long time, some of them are superficial and other are underground, diffusing from the main channels through terracotta tubes, bringing water to each house and from here to the sewer crossing the different quarters.[56] This complex water structure had probably its origin in the eleventh century A.D., reaching its greatest development during the Merinid epoch, in the fifteenth century D.C.

In some regions, less lucky under the point of view of water, as the ghuta of the pre-Libyan or the valleys of the Moroccan atlas side,[57] the few water resources confirm a landscape characterized by several oases of small dimensions. Among these, the case of the Ghuta of Damascus is particularly interesting.[58] Damascus rises where the Barada, the only perpetual water flow of the region, rises on the tableland after it went beyond the mountains of the pre-Libyan desert. Thanks to a clever system of irrigation, men learned to use this water, trying to remove a part of territory from the desert, making in this way Damascus one of the richest farm regions of the whole of Asia and into a city that the Muslim tradition considers to be one of the three Earthly Paradise, (the other ones are Samarkand and al-Ubulla).[59] With its position, between the desert and the mountains, its fertile soil and the richness of water, it could sustain a so numerous population that we can to consider it as a metropolis. The Ghuta of Damascus surrounds the Omayyad capital outside the gorge of Rabwa and it is made fertile by an intense net of irrigated trenches, nourished by the Barada, which flow, at different heights, parallel to the river course. Along these tubes which open to fan outside the gorge of Rabwa, water simply flows by gravity, not needing either aqueducts or restraint dams. Among the different channels, only two cross the town of Damascus, (the Kanawat and the Banias), whereas a third one (the Thora) flows down towards the most external quarters. Damascus is characterized by a grid system with straight roads and rectangular intersections. The same structure of irrigation channels, following and coordinating the system, improves till it nourishes the whole urban system, reaching each public or private house through fountains (talè), and troughs (sebil), perfectly exploiting the organization of the water net, the regular plan of the urban system.

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[54] Leo Africanus (sixteenth century A.D.), Description de l'Afrique, trans. A. Epaulard (Paris, 1956), 1:179–241.

[55] R. le Tourneau, Fes avant le protectorat (Casablanca, 1949), 232–239.

[56] MUHTE (Ministere d'Urbanisme, du Turisme et de l'Environment), Schema Directeur d'Urbanisme à Fes, annex 13: Notes sur les Fontaines de Fes (Fez, 1977); W. Betsch, "The Fountains of Fes," AARP, December 1977, 33–41.

[57] J. Celerier, "Le paysage rural au Maroc," Hesperis, 1943, 129–142.

[58] R. Tresse, L'irrigation dans la ghuta de Damas, Revue des Études Islamiques 3 (Paris: Geuthner, 1929), 459–476.

[59] R. Thoumin, "Notes sur l'amenagement et la distribution des eaux a Damas et dans sa Ghuta," BEO 4 (1934), 1–26.

In the oasis of Isfahan, in modern Iraq, the main water source is the river Zayandeh Rud. Excluding the mountain districts of Firaydan and Cahar Mahall, the whole irrigation is operated by the river water, with qanat or wells. The river Zayandah Rud whose source is on the east slope of Zarda Kuh, receives different tributaries from the uplands of Fraydan and Cahar Maxhall and than flows southeast through the town of Isfahan and finally runs into the seasonal lake Gavkhwani at the east part of the town. Between Linjan, where the Zayanda Rud enters the plain of Isfahan and the lake Gavkhwani, its water washes the districts (buluks) of Linjan, Marbin Jay, Kararij, Baraxan and Rudasht,[60] thanks to the use of 105 channels, locally known with the name of madi. The first water organization was attributed by Ibn Rusta[61] to Ardashir Babak, while the modern division goes back to ShahxAbbas.[62] Between Linjan and the Gavkhwani, the river was crossed by twelve perpetual bridges and two temporary ones.[63] After these last ones in Varzana three dam-bridges used to elevate the water level to irrigate the surrounding waters. During the Safavid epoch the *madi* developed to shape a complex grid which, exploiting the slope of the soil, entered the town of Isfahan designing the structure. Along this grid of *madi*, kiosks and villas were built and the channels began to function as real streets, with bridges and footbridges surmounting it. Each house had water. These valuable conditions brought Chardin,[64] who visited Persia between 1664 and 1677, to talk about Isfahan as "one of the most beautiful towns of the whole East." The complexity of the water organization of the whole valley of Isfahan, under the Safavids, is also shown by one of the most ambitious and tormented water projects of the pre-industrial history: The building of the tunnel of KÖhrang, which, through the deviation of waters of the river Karun,[65] has allowed a significant increase of the waterflow of the river ZyÊanda R ÖD

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[60] The province of Isfahan was disseminated by a myriad of settlements. Let us think as, under the Mongol, its province contained three main towns: Isfahan, Firuzan, and Farifaxan, and was composed by eight districts (buluks) and 400 farm villages surrounded by an abundant cultivated land. G. le Strange, The Lands of the Eastern Caliphate (London, 1919), 40–51.

[61] Ibn Rusta, Kitab al-a{lak al-nafisa, ed. de Goeje (Leiden, 1892), Fr. trans. G. Wiet, Les Atours precieux (Cairo, 1955).

[62] The project of Shah Abbas for Isfahan was realized only in part as sustains the Italian traveller Pietro della Valle: the sovereign wanted to shape the image of the town as a great chahar bagh, whose vertical axes was the homonym monumental tree-lined avenue, and the horizontal one was the river Zayanda Rud. A. Petruccioli, Dar Al Islam. Architectures of the Islamic Lands (Rome: Carucci, 1985), 164.

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[63] H. Goblot, "Dans L'ancien Iran: les techniques de l'eau et la grande Histoire," *Annales Economies Societes Civilisations* 18, no. 3 (1963): 499–520; J. C. Cardonnier, "Les tendance nouvelle de l'agricolture irriguée dans l'oasis de Isfahan," *Revue géographique de l'Este*, 1964, 387–392; B. Spooner, "City and River in Iran: Urbanization and Irrigation of the Iranian Plateau," *Iranian Studies* 7 (1974): 681–714; A. K. S. Lambton, "The regulation of the waters of the Zayande Rud," *Bulletin of the School of Oriental and African Studies* 9 (1938): 663–673.

[64] Chardin, *Voyages*, ed. Langles (Paris, 1811), 8:134.

[65] ShÊh TahmÊsp (930–84 A.H./1524–76 A.D.) was the first to try to deviate water of the KÊrÖn in the ZÊyanda RÖd through a linking tunnel, crossing the top of the mountain which separated them. The work was abandoned but ShÊh {AbbÊs (996–1038/1587–1629) analysed the project again, leaving the idea of a tunnel for a cut in the open air. Even though 100,000 men were employed, this task failed, too. ShÊh {AbbÊs II (1052–77 A.H./1642–67 A.D.) made another attempt, trusting in a French engineer called Genest. Through the Kairun was built a dam 91 m long and 32 m high to deviate the water of the river, during the cut of the channel. The Smith hypothesis states that Genest was thinking of more than a simple deviation of the river, but he hoped to reduce the quantity of excavation through the mountains, raising the level of the river. The work was abandoned after the cut of the first 30 metres of the channel that would have joined the two rivers. The idea emerged again during the reign of Reza ShÊh PahlawÒwho completed the cut of the channel, known as the tunnel of KÖhrang, in 1953. The increase of the water flow coming from the river Zayanda Rud, allowed cultivating more land in the districts where the river flew. N. Smith, *Man and Water* (London, 1975), 72–74.

3) Canalization Systems and Structures

Settlements which take the shape from the agricultural landscape and from the irrigation systems of the countries

This condition is only apparently similar to the one analysed for the big well-watered basins, but the substantial difference lies in the origin of the water. For the dimensions and their water sustenance, they can be compared to real rivers, for the regularity and the length of their plans they become ordering axis of the anthropic space of the town and the countryside and real architectural signs for the scale of the landscape. The settlements depend on the organization of the soil and assume a pattern that is more or less regular and orthogonal.

In India, as it happened for the harnessing of the river for watering purposes, the building of big artificial channels began with the kingdom of the Sultan {AlÊ al-DÊn KhaljÒ (695–715 A.H./1296–1315 A.D.), towards the end of the eighth century A.H. (thirteenth century A.D.). These channels were realized in great number and were built for a major development of the agriculture.[66] The merit for the building of a certain number of channels in the region between the river Sutlej and Delhi goes to FÒrÖz-Shah. At first, the attention was due to the huge but arid way of HaryÊnÊ, where only one harvest per year was produced, during the rainy season. In 755 A.H./1354 A.D., he founded the town of HisÊr FÒrÖzÊ (the modern HisÊr) and than he built a system of two channels alimented by the rivers Sutlej and JamunÊ.[67] Both channels passed through Karnal and, in correspondence to the town of HisÊr FÒrÖzÊ, the two channels guided their waters through the only channel into the ditch surrounding the town. Apart from these channels, we often find mention of other ones, deviated by the river Sutlej, whose water were brought to Jhajhar (town in the district of Rotha), irrigating a wide arid way of 96 square miles. The most important channel was, nevertheless, that of JamunÊ which went till the capital FÒrÖzÊbÊd. In its hinterland also the waters of the channel SalÒmÊ, dug in the hills of SiwÊlÒk and SirsÖlÒ, were deviated, in order to let its water flow up to the town of ShÊhÊbÊd. In the eleventh century A.H. (seventeenth century A.D.) under the reign of ShÊh JahÊn new channels were excavated and built in new lands. ShÊh JahÊn also increased the length of the channel of JamunÊ of FÒÖ z-ShÊh, bringing its waters to ShÊh-JahÊnÊ bÊd (Delhi) after a route of 130 km, where it was introduced as a central water spine into the new capital.

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[66] Iqtidar Alam Khan, "Guru Ka Tal a Pre-Modern Water-Work," in "Technology from Tradition to Innovation," ed. Carucci, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1988): 64–67.

[67] The channel alimented by the river Sutlej flows along the towns of Rupar and Sirhind, crossing the channel alimented by the river JamunÊ near the town of HisÊr FÒrÖzÊ.

In Morocco, in the hydrographic basin of Hauz of Marrakesh,[68] the Almohadis added after the Almoravid dynasty another system of canalizations in the open air to the system of the hidden canalizations (khittara); these were the seguias, which were draining the waters of the mountain Atlas to the town for kilometres. So, the royal channel of Tasultat canalizes the water for 30km, from Aghmat to Marrakesh, and that of Al Ya{qubiyya for a distance of 90km, irrigating the homonymous plain. The seguias are commonly associated to some basins, which are useful either for cisterns or for regulation of the irrigation systems. The same principle was also used in the building of towns like Rabat and Meknes, and with the extension of the Almoravid properties towards the Iberian Peninsula and also in Gibraltar and Seville.[69] From the seguias derives an organization of the territory for sectors, hierarchically following the water flow. The plain is so crossed by a dense tree-design, where to each secondary branch corresponds the vital space of a village. The following branches of this tree-structure which goes beyond the village organize, in series, the quarters at perpetual irrigation, the quarters at spring irrigation, the winter quarters, (with cereal cultivations) and, in the end, the un-irrigated quarters (for the sheep farming).

To the same area belongs the case of Meknes, which rises on a side of a mountain spur beyond the mattock excavated from the Wadi Bu-Fekran. The complicated water system of this town starts from the barricade of the river Bu-Fekran. The water is directly introduced into a canalization in the open air and is partly assigned to the irrigation of olive groves following the route. As it enters the urban space, the canalization divides into two branches, going along the perimeter of the town wall. The western conduct serves, through different ramifications, the Palace of Dar al-Beida and the mellah and finishes in the shrine of Sadi Said. The eastern canalization also divides in order to recharge the water reserve of the town, the big basin Sahrij Souani, and to nourish the imperial gardens and Palaces. This conduct nourishes the four big channels of the medina beyond the imperial zone. Each of these channels brings water to a cubic tank called maadi, from where the canalizations of the different quarters leave, and they have other maadi along their way, having the function of divider of the secondary channels (kadus). In this way, the distribution system of water presents itself as a net with very close meshes, covering the whole town.[70]

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[68] P. Pascon, Le Haouz de Marrakech, 2 vols. (Rabat, 1983); L. Voinot, "Les Zaouia de Marrakech et de la région voisine," Revue de Géographie Marocaine 1 (1937): 5–53; J. M. Poupart, "Les problèmes de l'eau a Marrakech," Les Cahiers de Outre-Mer 11 (1949).

[69] O. Tebbaa, "From the garden as living source to the Imperial garden l'Agdal of Marrakesh," in Islamic Gardens: Architecture, Ecology, ed. M. Matteini and A. Petruccioli (Geneva: Microart's ed., 2001), 71–87.

4) Aqueducts and Dams

Structures and architectural elements coming from the landscape and entering into the urban space, defining in its hinterland some axis for development[71]

This is the case of structures like aqueducts, aqueduct-bridges, dams and barricades. These structures, for their big dimensions, impose a direct comparison with the urban fabric, becoming structural axis and spines of the settlement or, in other cases, real walls which, rising for ten metres towards the sky, divide the space of the landscape into two.

In this connection, it is possible to think of the richness of the big pre-Muslim civilizations of the Yemen upland,[72] that reached a high level of wealth thanks to a flourishing agriculture based on sophisticated water techniques, as witnessed by the great dam of Maxrib with its 350 m of height; its collapse, in the sixth century A.D., provoked the decline of the same south Arabian reigns.[73]

After the conquest of Istanbul, the Ottomans developed for this town a sophisticated system of water adduction,[74] which was later extended to the other towns of the reign, particularly to Jerusalem and Mecca.[75] In Istanbul, the system of water adduction consisted of gathering the water coming from the two hill areas of the suburbs of the town (from the valley of the khalkali and from the forest of Belgrade), into tanks or *bends* (from the Persian *band*), bringing this water, through the subsoil, through wide tubes into the high parts of the town. Some elevation towers (*su terÊzÒs*) were built to bring the water high and sediments (*maslaks* and *maksams*) to distribute water into the different parts of the town. The building and maintenance of the water structures was financed and organized through religious authorization (*awkÊ*), made by single persons or the Sultans. The main water conducts and the aqueducts brought water to the structures surrounding the big mosques and that, in turn, constituted the nucleus around which all Ottoman towns developed. The base of this complex water system was created through the efforts of two sultans, Mehmed II and SuleymÊn I. In the winter of 861 A.H./1456 A.D. Mehmed II ordered to bring water in abundance from the countryside to the town through aqueducts.[76] Byzantine water works, conducts and aqueducts collapsed during the last centuries of the reign, were discovered again and used by Mehmed the Conqueror to create the first Ottoman water system. The kirk-Cashme or forty fountains built by the Conqueror received water from the near aqueduct of Valente. The increasing number of the inhabitants of the town, first under BÊyzÒd II and than under SuleymÊn I, together with the building of important mosques, led to the research of water sources in big distances. Under SuleymÊn I, the second greatest Ottoman water project was executed, gathering the waters from the valley

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[70] A. Petruccioli, Dar Al Islam: Architectures of the Islamic Lands (Rome: Carucci, 1985), 122–123; M. Bonjan, "L'hygiène d'une ville marocaine au XVII^{e} siècle (Meknés)," BHM 1, fasc. 3 (1931): 5–17.

[71] K. A. C. Creswell, A Short Account of Early Muslim Architecture (Oxford, 1958), 119; Sayyid Hussain Nasr, Islamic Science (London, 1976), 213, 215.

[72] In the period of extreme expansion, also thanks to the propitious position on the spices way, it included in the borders of its reign, Ethiopia, Oman, and the regions in the north of Medina, from these lands different periods of Islam would have developed.

[73] P. Costa and E. Vicario, Yemen paese di costruttori (Milano: Electa, 1977); B. Doc, Southern Arabia (London: Thames and Hudson, 1971); X. de Planhol, Les fondements géographiques de l'histoire de l'Islam (Paris, 1968), 52.

[74] S. N. Nirven, Istanbul sulari [Waters of Istanbul] (Istanbul, 1946); O. Onur, Edime su kultaru [Edirne Water Culture] (Istanbul, 1985?); U. Ozis, "The Ancient Dams of

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Istanbul," *Water Power and Dam Construction* 29, no. 7 (July 1977): 49–51 and no. 8 (August 1977): 44–47; U. Ozis, "The ancient Istanbul dams within the perspective of dam technology history," in *International Congress on the History of Turkish-Islamic Science and Technology*, III (1981), 19–30; U. Ozis, "Istanbul'un tarihi su getirme sistemleri," [Historical water supply systems of Istanbul] in *çevre '83; II. Ulusal çevre Muhendisligi Sempozyumu*, Izmir: Dokuz Eylul Universitesi (Izmir, 1983), p. CS–25, n. 32; U. Ozis, *Su muhendisligi tarihi açisindan Anadolu'daki eski su yapilari* [Ancient water works in Anatolia with regard to hydraulic engineering history], Izmir, Dokuz Eylul Universitesi, Muhendislik-Mimarlik Fakultesi, No. 73 (Izmir, 1984), 149; N. Yungul, *Taksim suyu tesis/eri* [Teksim water works], Belediyesi Sular Idaresi, No. 3 (Istanbul, 1957), 72.

[75] X. de Planhol, *De la plaine pamphylienne aux lacs pisidiens* (Paris, 1958), 157–158, 323–328; X. de Planhol, *Les fondements géographiques de l'histoire de l'Islam* (Paris, 1968); Unal Ozis, "The Water Conveyance System of Edirne," in "Technology from Tradition to Innovation," ed. Carucci, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1988): 68–73.

[76] Kritovoulos, *History of Mehmed the Conqueror*, trans. Riggs (Princeton, 1954), 105.

of kÊghidkÊne, also used for the water provisioning of Byzantium till 1204.[77] It is probable, at this point, that the Ottomans borrowed some water techniques from the Roman-Byzantine system and, combining them with their own tradition, created a complex structure to supply their big capital. The same water systems created under the sultan SuleymÊn brought the town and its mosque a great quantity of water, which was distributed to a great number of fountains. The water that did not directly go to the fountains was destined for the Sultan's Palaces and Gardens, for the important people of the town, and also for the public baths. The base-system was further extended by the following sultans, with a particular attention to the new mosques. New cisterns and waterways were built and the ones already existing in the two main areas of kÊghidkÊne and khalkali were extended.[78]

In the Syrian upland, among the Omayyad castles, is the interesting case of Qasr al-Hayr al-Gharbi, at 60 km in the southwest of Palmyra, on the way to Damascus. The inner part of the blockhouse includes the residential Palace, a *hammam*, a *Khan*, a big garden (*bustan*) and a wide zone of cultivated lands, irrigated by connected canalizations with a *birka* to the Roman dam of Harbaka, of 365 u 20 m. The dam of Harbaka, built by the Romans in the first century B.C., allowed the development of a rich oasis. The Roman building is posed at 16 km south of the slopes of the mountain Jabal al-Rawak and shapes a lake of 1550 m length and 800 m width, nourished by the waters coming from the near mountains. Through three inlets, water flows into a system of channels, above all underground systems, bringing it to a cultivated area where, at 600 m west to the Palace, a 60 m long and 3.65 m deep *birka* was found, surrounded by a dike. Furthermore, the water arriving in the *bustan* is kept by a second dam nourishing the irrigation system, organized with shutters and distributors.[79]

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[77] Dalman and Wittek show that the main aqueducts (*su-Kemeris*) of these lands were realised by the architect Sinan that built them firstly in 961/1554 and, a second time, in 971/1564, after that heavy rains destroyed them. P. Wittek and K. O. Dalman, *Der Valens-Aquadukt in Konstantinopel* (Bamberg, 1933); K. Çeçen, *Sinan's Water Supply Systems in Istanbul* (Istanbul, 1992).

[78] Fearing that the water provision for imperial mosques, palaces, public fountains, would reduce in a short period of time, it was established that when a new charity building had to be built, as a mosque, a bath or a fountain, its founder would have found a water source outside the town. This water was brought in the town through means called *Katma*, or else added to the main water conducts.

[79] M. D. Schlumberger, "Les fouilles de Qasr el-Heir el-Gharbi (1936–38)," Preliminary Report in *Syria* 20, nos. 3–4 (1939): 195–238, 324–373; M. D. Schlumberger,

The dams, together with the restraint lakes, had a big influence in the Muslim world, so much that one finds traces of Omayyad dams also in the hinterland of Mecca and in the oasis of Taif.

In the KhzÖstÊ n of the Sasanian epoch, there existed many dams of big dimensions, as the bridge dams of ShÖshtar and Dizful, respectively built by ShÊpÖr I and ShÊpÖr II, the dam of the JarrÊhÒ near KhalafbÊÊ d and the dam on the MÊrÖn in ArrajÊ. These dams were used during different periods after the collapse of the SÊssanide empire. The dam of ShÖshtar was collocated on a rocky surfacing, on the east side of KÊrÖn.[80] The dam of Dizful, a repetition of the dam of ShÖshtar, was 380 m long. After its collapse, the local irrigation depended on raw stone dams which were re-built after each inundation.[81] Another dam on the ¹ b-I Gargar, called Pul-I BulaytÒ was added during the Muslim period to that of ShÖshtar. This was a mechanic dam; some mills were installed in tunnels excavated in the rock on each side of the channel, procuring the necessary quantity of water to make the wheel of the mill move.[82]

In many parts of Persia, it is possible to find storage dams. Even though their total contribution was not as big as that of the Qanat, or the dams in KhÖzistÊn, they had a significant local importance and let those lands be productive from the moment that they could not be cultivated in another way. One of the most interesting systems is that on the river Kur in FÊrs, which allowed irrigation of the whole district of KurbÊl for 2.000 years. The most famous dam of this district is Band I-AmÒ built in 349 A.H./960 A.D. by BÖyid {Adud al-Dala, probably on previous Achemenid foundations. Before its rebuilding, the water of Kur could not be elevated to irrigate the superior part of KurbÊl. The riverbed was paved for many miles, either to the plain or to the mountain, and the provisioning channels extended for more than ten miles and served 300 villages on the plain

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"Deux fresques omeyyades," *Syria* 25 (1946): 86–102; H. Stern, "Note sur l'architecture des châteaux omeyyades," *Ars Islamica* 11–12 (1946): 72–97.

[80] The dam, built by the Roman war prisoners in 260 A.C. was perforated with different shutters in order to leave the water in case of extra flow. It needed three years for the building, during which the river Karun was deviated through two deviation channels. When the work of the dam was completed, the entry to Ɨb-i Gargar was closed by a second dam, the dam of Kaisar.

[81] H. Wulff, *The Traditional Crafts of Persia* (Chicago, 1967), 248; N. Smith, *A History of Dams* (London, 1971), 59, 81, 82; A. K. S. Lambton, *Landlord and Peasant in Persia*, reprint (Oxford, 1969), 216.

[82] G. N. Curzon, *Persia and the Persian Question*, 2 vols. (London, 1892), 1:372–374.

of Marwdasht. Near the dam, which is 36 m high and 84 m long, ten water mills were built, and its top was sufficiently wide to let two knights placed one next to the other ride through the dam itself.[83] The end of the seventh century A.H. (thirteenth century A.D.) and the beginning of the eighth century A.H. (fourteenth century A.D.) constituted an important period for Medieval Persia which became rich with many dams. The arch dam of Kibar (Kivar), 15 miles in the south of Qumm, is the oldest existing example of this type of a structure so far away.[84]

5) Underground Channels

Settlements which depend on the canalization and transportation systems of the underground systems (qanat, etc.)[85]

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[83] Le Strange, Description of the province of Fars in Persia at the beginning of the 12th century A.D. (London, 1912). H. Goblot, "Dans L'ancien Iran: les techniques de l'eau et la grande Histoire," Annales Economies Sociétés Civilisations 18, no. 3 (1963): 499–520; B. Fisher, "Irrigation System of Persia," Geographical Review, 1928, 302–306; F. Bemont, "L'irrigation en Iran," Annales de Géographie 70, no. 377 (1961).

[84] Built in a gorge which transforms into a deep ravine, the dam is 26 metres high and 55 metres long on the top, with a largeness between 4.5 and 5 metres. The bend radius is 38 metres. The dam has got a series of vertical opening on the water, linked to wells and galleries to provide to the water passage through the walls of the dam (even though their exact function is not sure); H. Goblot, "Du nouveau sur les barrages Iraniens de l'époque mongole," Arts et Manufactures, no. 239 (April, 1973), 15–20; H. Goblot, "Kebar en Iran sans doute le plus ancien des barrages-voûtes," Science-Progress, no. 3358 (February, 1965); H. Goblot, "Sur quelques barrages anciens et la genèse des barrages-voûtes," Revue d'Histoire des Sciences, Cahier no. 6.

[85] For further information about qanats and karezs (kehrezs) see:

M. Streck, "Kanat," in Islame Ansiklopedisi, vol. 6 (Istanbul, 1967); M. Siroux, Caravanserails d'Iran et petites Constructions Routieres (Cairo, 1949), 120–131; J. Bergren, Guide Français-Arabe Vulgaire (Upsala, 1844), 56; S. Sajjadi, Quanat/Kariz. Storia, tecnica costruttiva ed evoluzione (Tehran, 1982); G. B. Cressey, "Qanats, Karez and Foggaras," Geographical Review 48, no. 9 (1958); P. W. English, City and Village in Iran: Settlement and Economy in the Kirman Basin (London, 1966); P. W. English, "The origin and spread of Qanats in the old world," in Proceedings of the American Philosophical Society 112, no. 3 (1968): 170–181; W. B. Fisher, The Land of Iran, The Cambridge History of Iran, vol. 1 (Cambridge, 1968); R. J. Forbes, Studies in Ancient Technology, vol. 1 (Leiden, 1964); PH. Gignoux, H. Goblot, "les qanats, une technique d'acquisition de l'eau," Studia Iranica 9, fasc. 1 (1980); H. Goblot, "Essai d'une histoire des techniques de l'eau sur le plateau iranien," Persica, no. 8 (1979): 117–128; T. Jacobsen and S. Lloyd, Sennacherib's Aqueduct at Jerwan, vol. 24 (Chicago: The University of Chicago Press, 1935); L. Kolori, "Same Notes on Diffusion of Qanats," Orient 9 (1973); R. Lamt, Manuel d'Epigraphie Akkadienne, Librairie Orientaliste Paul Geuthner S. A. (Paris: l'Edition, 1963); S. H. Nasr, Islamic Science: an Illustrated Study (1976); A. T. Olmestead, History of the Persian Empire, 6th impression (Chicago, 1970); A. Smith, Blind white Fish in Persia (London, 1953); A. T. Wilson, The Persian Gulf (Oxford, 1928); H. E. Wulff, The Traditional Crafts of Persia (Chicago, 1967); E. Noel, "Qanat," Journal of the Royal Central Asian Society 31: 191–202; M. A.

The qanat represents one of the oldest mineral techniques, consisting of the exploitation of the deep water strata through draining tunnels.[86] The qanat is an upside aqueduct and has the advantage not to disperse water for evaporation. The underground water is brought by gravity from the superior part, where the tunnel enters, to an exit on the surface, in the low part of the channel, through a tunnel (majra) with a very slight inclination (usually 1:1000 to 1:1500), tracing the alluvial soil and passing under the plain of water up to find out the aquifer. It is interesting to observe, as the length of the qanat is extremely variable, that a qanat can reach lengths between 5 km and 15 km, and in some cases between the 25 km and 50 km, as it is shown by the different cases of the Yard and of Kerman (which seems to be the richest qanat with the presence of almost 3900 chains).[87] The presence of qanat is bound to an arid climate, to the almost total absence of superficial water sources, to the presence of a pervious subsoil, allowing the formation of deep strata, sufficiently and continuously alimented, and to a morphologic condition of the site, characterized by the presence of mountain chains sufficiently wide to guarantee the recharge of the rain-collection, and on a slightly slope hill zone, useful for the percolation of water along the galleries up to the collection point. These reasons are fundamental bonds for the presence of qanat, but also for the determination of a specific settling type.[88] Almost all natural basins of the Iranian upland respect these principles, making of this region the main experimental area of these water techniques.

At the foot of the chain of Elbourz is the site where the town of Tehran rises, a natural amphitheatre alimented by an illimitated number of qanat which, arriving in proximity to the town, deviate their water along the distribution conducts of the urban space. The cycle of the utilisation of water imposes a strong formal bond on the urban development. The qanat present two extremely interesting themes: the

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Butler, "Irrigation in Persia by Kanats," Civil Engineering 3 (1933): 69–73; C. Braun, Teheran, Marrakesch und Madrid. Ihre Wasserversorgung mit Hilfe von Qanaten (Bonn, 1974); S. S. Seyyed Mansur, Qanat/Kariz Storia, tecnica costruttiva ed evoluzione (Tehran: Istituto Italiano di Cultura, 1982).

[86] Similar structures in other regions of the Islamic world take little by little the name of foggara (Algerian Sahara) falaj (Oman); khittara (Morocco); viajes (Spain); H. Goblot, "Le problème de l'eau en Iran," Orient 23 (1962): 46–55.

[87] In the North of Africa, the length of the qanat is particularly reduced, reaching almost 500 metres.

[88] X. de Planhol, "Geography of settlement," in The Cambridge History of Iran, ed. W. B. Fisher, vol. 1 (Cambridge, 1968): 419–420.

first aspect is bound to the fact that the qanat, in their long ways from the piedmont areas to the settlements, subtract some space from the agriculture and, because of their strong draining power, from each water reserve to the territories crossing them. This shows that the only possible forms of orchards or gardens are those placed in proximity to the settlements and alimented by the same water of the qanat. A second aspect is bound to the impossibility to stop the water flow of the qanat. This condition brings to the mouth of the qanat a retaining tank which can control the distribution of the liquid to prevent the waste of the water resources. This last condition, similar to a water alimenting model like a natural waterfall, lets the settlements be always very compact and the territory be organized following a specific tree structure which, from the mouth of the qanat or from the tank, progressively widens placing the different elements of the settlements into the following sequence: qanat, retaining basin, village, enclosed orchards, secondary agricultural areas (cultivated in the season where the water provisioning is particularly abundant). Within the urban nucleus it is possible to observe a strong hierarchy, depending on the value of water and the social role of some local sirs. So, for example, in the settlements of the Saharan oases and in the poles of small to middle dimension of Iran, a hierarchical order is respected, imposing the passage of water firstly from the mosques (with proper drinking tanks) and then, in sequence, to the settlements of the masters, to the bazaars, to the poorest urban quarters and, in the end, to the fields.[89] The qanat have played an important role in Persia, influencing the nature and the shape of the landscape, the settlements and the cultivations. Towns like Hamadan, Qazvin,[90] Tehran, Nishapur, Kerman, Yazd, and many others owe their existence to these systems. In some cases, like Qazvin, the water of the qanat had to be used only for alimentary purposes and not for irrigation, and flowed through the most important residences of the town, as it happened for some of the house of Arrajān[91] and Shūshtar.

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[89] The installing data results are particularly important, so much as to push the water-engineer Goblot to conclude that half of the cultivated lands in Persia are irrigated by the qanat, and that some areas of the farm upland would not have been cultivated if it had not been possible to install a village qanat in its proximity. H. Goblot, "Le probleme de l'eau en Iran," *Orient* 23 (1962); R. J. Forbes, *Studies in Ancient Technology* (Leiden, 1955–8), 1:153; J. Laessoe, "Reflections on modern and ancient oriental waterworks," *Journal of Cuneiform Studies* 7 (1953): 5–26; R. Ghirshman, *Iran from the Earliest Times to the Islamic Conquest* (Harmondsworth, 1954), 239; H. Goblot, "Essai d'une histoire des techniques de l'eau sur le plateau Iranien," *Persica* 8 (1979): 120.

[90] The water of the town of Kazwin originally derives from wells. The first qanat was only built after the first urban expansion. The water of this qanat served more than a quarter of the town. Afterwards, a major numbers of qanat was realised to serve the different urban quarters.

In the first centuries of the Islamic reign there was another diffusion of this technique, picking up thanks to the Omayyad who introduced it in Spain, in Madrid, (founded by Muhammad I in 877 A.D.)[92] and to the Almoravid who, in 1070 A.D., diffused it in Morocco and particularly in Marrakech.[93]

Very similar to the technique of the Persian qanat were the underground canalization systems of the Moroccan *khittaras*[94] (as the qanat of Andalusia) which changed the landscape of Marrakech and its settlements in a significant way. The hidden water of the underground stratum of the Atlas, bound to that coming from the atmospheric rainfall, was gathered in tanks from 500 underground tubes, excavated by hand for a complex length of more than 700 km. The *khittara* have here a length of 4–5 km and water is distributed from the aquifer and the level of the watercourse through tubes covered with stone and terracotta for the irrigation of the gardens and as drinking water.[95] Marrakech and the area of the park of Aguedal have kept till the twentieth century A.D. a particular extended shape with a north–south direction, deriving from the necessity to catch up on the different exit mouths of the *khittara*. This condition has also favoured an urban design based on relatively long and regular streets, having the function of water transportation lines. This particular condition also characterized the town of Tehran whose main streets followed the line of greatest slope of the soil and crossed at 90° with the secondary streets, defining a very compact grid.

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[91] Sefer Nameh, *Relation du voyage de Nassiri Khosrau*, ed. and trans. C. Schefer (Paris, 1881), Persian text 81.

[92] J. Oliver Asin, *Historia del nombre "Madrid"* (Madrid, 1959).

[93] C. Troll, "Techniques agricoles, milieu naturel et Histoire de l'Humanité," *Bull. de la société géographique de Liège* (December 1967).

[94] The *khittara* are underground drainage galleries gathering the water of the phreatic stratum to bring them up to the surface. The system is composed, at its source, of a draining gallery (having ventilation wells placed at a distance of 20–25 metres), taking the water of the stratum, afterwards, by a transport conduct and an accumulation basin for a constant alimentation of the gardens and the settlements. O. Tebbaa, "From the garden as living shape to the imperial garden: l'Aghdal of Marrakesh," in *Islamic Gardens: Architecture, Ecology*, ed. M. Matteini and A. Petruccioli (Geneva: Microart's ed., 2001), 71–87.

[95] G. Deverdun, *Marrakech* (Rabat, 1959), 15–17, 85–90.

The ruins found in the region of Kairouan, in Tunisia, have also suggested the knowledge of this water technique from the Romans, even though their origin in North Africa,[96] as the findings near Gafsa and Tunis[97] show, is undoubtedly Arabic.

In the tenth century A.D., this technique was also introduced in Algeria, where it took the name of *foggara*. It can be found in the oasis of Touat, Gourara, Souf, Mzab, Tidikelt, and Figuig.[98] Here, immediately after the mouth of *foggara*, we may find a series of ramifications directly entering the gardens. These works constitute for the number and the role they have in agriculture the most important complex, after that of the Iranian area. The case of the oasis of Gourara[99] is particularly interesting to underline the incessant transformation of the territory. The villages connect to the system of *foggara* to exploit the purest water, whereas the palm grove extends soon after for a depth of almost one kilometre. Then, at the stratum where the foggara inserts and tends to finish, one reduces the tunnels to find out the deepest stratums. In this way, the exit point of water is significantly low and leaves at their shoulders the previous settlement and a part of the palm grove, which falls into disuse because it cannot be provisioned any more. In this way, the settlement is moved into another place, in the lowest part of the valley.

II. Polar and Closed Water Shapes

1) Great Gathering Systems of the Superficial Waters

Settlements rising near either natural or artificial depressions of the territory (water basins, artificial lakes, etc.)

This refers to architectural signs belonging to the scale of the landscape. and an urban dimension is only assumed in some cases, when we have monumental shapes bound, above all, to big main towns.

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[96] M. Solignac, "Recherches sur les installations hydrauliques de Kairouan et des steppes tunisiennes du VII au XI siecle," AIEO (Alger) 10–11 (1952–1953): 1–272.

[97] M. Solignac, "Travaux hydrauliques hafsides de Tunis," *Revue Africaine*, Congrès de la Fédération des sociétés savantes de l'Afrique du Nord, 1936: 517–580.

[98] J. Brunhes, "Les oasis du Souf et du M'zab," *La Géographie* 5 (1902): 180.

[99] P. Laureano, "Wadi Villages and Sebkha Villages in the Saharan Ecosystem," in "Water and Architecture," ed. Carucci, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 2 (1985): 16–25.

Since the pre-Islamic epoch, almost each human settlement in the northeastern regions of India needs one or more artificial lakes, following a "sandwich among the waters" scheme, common to other cultures, as in the Guangdong in China. Often these lakes were pharaonic works made by stone, as that of Kankaria in Ahmedabad. In the region of Rajasthan alone, the examples are numerous. To the Mughal period belong the Ana Sagar of Ajmer with the gardens of Jahangir and the great water works linked to the foundation of Udaipur in 1567. The same Udaipur finds itself in the centre of three lakes: Pichola, Fateh Sagar, and Umaid Sagar with different little isles used for the summer residence. In the neighbourhood of the town, the Jaisamand, built after 1681, is the greatest artificial tank of Asia, with a dam on the river Gomti 9 km long and 14 m wide.

Another interesting example for the relationship between the settlement and the artificial lake is that of Amber, in the valley formed by the hills of the Kali Khoh, half way between Malwa and Gujarat. The settlement lies in the highest part, near the Surya Mandir, the Sun temple, and is dominated by the volume of the palace. The town is flanked by two lakes placed at different heights: the Sagar Samovar and the Manta Samovar. The palace, collocated at an intermediate height, had direct access to the inferior lake through a terraced structure which directly led to the garden placed in the middle of the lake,[100] going beyond the access way to the palace.

In Sikri, in 1526, Babur, the founder of the Mughal dynasty, built an artificial little isle in an artificial tank at the foot of a hill, surmounted by a pavilion. In 1569, the nephew Akbar chose this deeply morphologically articulated site to build the new capital Fathpur Sikri. The little tank of Babur was transformed into an artificial lake through a bank traced perpendicularly to the hill to protect the existing village, whereas a system of thirteen enclosures allowed an easy control of the water level. In this way, all elements, dominated by the new urban system, placed on the highest point of the ridge (the royal Palace with the Harem, the Friday Mosque and the quarter of Selim Chishti) were planned to overlook the water.[101] All these cases correspond to a specific territorial type, composed by the sequence of a fertile plain taken from the mountains, of one or more artificial tanks controlled by dams and land enclosures.

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[100] A. Petruccioli, "The artificial lake as territorial topology of the Moghul India," in Islamic Gardens: Architecture, Ecology, ed. M. Matteini and A. Petruccioli (Geneva: Microart's ed., 2001), 3–7.

[101] A. Petruccioli, Fathpur Sikri: Town of the Sun and the Water (Rome: Carucci, 1988).

In India, the first lake built by the Sultan ShÊms al DÒn Iltutmish (607–33 A.H./1211–36 A.D.) outside the capital Delhi was called the Haud-I SultÊnÒ (or also Haud-I Shmsi)Ò[102] Ibn BattÖtÊ tells us about its dimensions and says that it was two miles long and half a mile wide and refers to the nashmÊ-I ÊftÊb ("sun sources") as the source where the lake was alimented. The details given by the Sultan FÒrÖz-ShÊh (and from the compiler of the SÒrat-I FÒrÖz-ShÊh)Ò on the reparation of the lake keep references to the original channels which were once originated to join the river to the lake. These channels supplemented the water supply of rainy water directly gathered from the lake, so that the water reserve was sufficient for the whole year. The Sultan Ala al-Din Khalji was really interested in the development of the water systems in his sultanate for the progress of the agriculture. At the time of his ascension to the throne in Delhi (695 A.H./1296 A.D.), the Haud-I ShÊhÒ was full of mud and the population of the town was increasing, so the Sultan had the Haud tidied and a new lake built, bigger than the previous one, outside the walls of his new capital SÒrÒ (near Delhi), which was called Haud-I KhÊss.[103] In this way, the building of these real lakes strongly increased the water resources in the areas where they were placed, permitting the development of new settlements, but reducing the deepness of the irrigated sources in the surrounding areas, creating various problems for the irrigation of the fields. During the period of the Tughlukidi we register an increasing number of water instalments. The number of lakes and tanks increased not only in Delhi but also in the towns of the province, reflecting, on one side, the progress of civil engineering and, on the other, the concerns of the sultans to produce lakes and tanks more beautiful than the ones built by the previous sultans. In the twelfth century A.H. (eighteenth century A.D.) Sultan TÒpÖ showed interest in the problems of the irrigation, building new tanks and restoring the old ones. The huge tank he built in the Doraji has got a very wide bank of 4 km length and 14 m hight. All these lakes and tanks were preserved from the Middle Ages up to the twentieth century A.D., but with the modern expansion of villages and towns, many of these examples of water architecture were filled up and their space used for residential purposes. In the South of India some still survive and are used as places for picnics and holiday entertainment.

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[102] The Indo-Persian medieval writers mention it as a tank built to provision drinking water to the town of Delhi, but the references of Ibn BattÖtÊ to the cultivation of seasonal fruits and the vegetables along its banks, show that the water was also used to irrigate the fields.

[103] Under the sultan FÒrÖz-ShÊ the artificial lake was integrated by very high banks to favour the accumulation of rainy water of the adjacent areas.

2) The Punctual Systems of Superficial Waters Collection

Settlements rising around the water collection basins

In this sphere, the collection and preserving systems of the superficial and meteoric waters in the big cisterns, the tanks, the basins in the open air and the covered ones was often bound to systems of channels and aqueducts. These shapes, recurrent in the Islamic landscape, gather elements of pure geometry as those of Kairouan[104] or organic shapes embedded in the mountain as in the Yemen, or big mirrors of still water as in Morocco. In all these cases, we deal with shapes working on the building process of the town, through the development of elementary nuclei which progressively aggregate, even though they maintain a certain formal autonomy.

A first interesting case is that of Kairouan (al-Qayrawan), in Tunisia, whose elevated position was due to the necessity of protection from enemy attacks and, above all, from the inundations which are, in these regions, rare but destructive. The problem of the water provisioning was solved by Aghlabids, proposing a solution firstly offered by the Romans and than by the Arabs. At some kilometres south of the town was built a water system called Qasr al-Ma (Water castle). This system, realised in the ninth century A.D., was alimented by an aqueduct, called Hanshir Dwimis, gathering the waters of the river Mams, 33 km west of the town. The Qasr al-Ma was a double basin system; the biggest one had a circular shape and 130m of diameter.[105] Immediately north there is a little basin of small dimensions, called Al-Fisquiya, (the tank), receiving the water coming from the aqueduct and functioning as a valve, putting the water into the big basin through an opening called Es-Sarh (the tipping), when this last one overcomes the level of two measures.

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[104] P. Gauckler, ed., Enquete sur les installations hydrauliques des Romains en Tunisie, 2 vols. (Tunis, 1897–1912).

[105] In the middle of this basin there are some pillars supporting a pavilion used by the governors to relax at the fresh air during the summer evenings.

The sequence constituted by the decantation basin and the big tank having the function of a water provision, was completed by a big tank covered at vault, collocated on the opposite part of the tank, and used to take water.[106] Aghlabids brought, in this way, prosperity to this land, following a politics that was devoted to providing all mosques and the houses of the town with wells and tanks[107] and proposing this same water scheme in several other settlements present in the suburbs of Kairouan, in the Sahel (between Soussa and Sfax) and in Gafsa.

In India, many water basins were built before the arrival of the Muslims. The earliest examples are the big open tanks placed in the towns and around them. Commonly called in India tÊor t ÊÊ{ (in case of Muslim buildings they are also called haud), they may have different shapes but they are commonly rectangular, sometimes walled and with steps directly arriving under the middle level of the water. While water is used or is drained, some steps emerge from the waters, whose grounds are useful for ablutions or to wash clothes. Some pavilions, called KÖk or chattri may be added. Similar walled works (ghat) may be found along the banks of rivers or artificial lakes originating through the presence of a valley (as for example the artificial lakes of AnsÊÊ gar and Ajmïr and PioholÊ in Udaipur).[108] In ninth century A.H. (fifteenth century A.D.) many cisterns were built by the kings of single regions which were born in India after the invasions of the Timurids (800 A.H.–1398 A.D.). The building of fountains, in JaunpÖr, Gujarat and in other towns of the plain, led to the realization of cisterns, in order that their waters, flowing from a more elevated height through small canals, could nourish the fountains collocated in the town. As seen in the IqtÊ[109] given to the nobles from the king instead of salaries during the pre-Mughal period, the grantees built big tanks in their lands to extend the cultivations and the horticulture. Later, also the Mughal Emperors and the sultans of BÒdar, GolkondÊ, BijÊÖ r and Ahmadnagar built several basins for water gathering. The references to these basins found in some works of that period underline the great technical ability reached in their construction and the Muhammad-NÊd, a basin built in BijÊÖ r in 1165 A.H./1751–2 A.D. by Afdal KhÊn, is a testimony to this ability.

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[106] M. Solignac, “Recherches sur les installations hydrauliques de Kairouan et des steppes tunisiennes du VII^{e} au XI^{e} siècle,” Annales de l’Institut d’Etudes Orientales 10–11 (1952–1953): 5–273.

[107] G. Marçais, Tunis et Kairouan (Paris, 1937); Ch. Monchicourt, “Etudes kairouanaises,” RT, 1931–6; P. Penet, Kairouan, Sbeitla, le Jerid, guide illustre du touriste dans le sud-ouest tunisien (Tunis, 1911), 1–41.

[108] The extension of the water surfaces determines a perceptible change of the micro-clime, so along these banks were built numerous structures that exploited the refreshing effect of the evaporation (as for example the madrasah of FÒÖz ShÊh and other structures on both sides of the Hauz KhÊss in Delhi, the Palace of MahmÖd ShÊh, the tombs and the mosque in Sarkej), and many other pavilions are collocated in the middle of artificial tanks (as, for example, the complex of Hiran MÒÊr of JahÊgÒin ShaykhupÖra, the tombs of Shï ShÊ h and SalÒm ShÊh in SasarÊm, the kiosks Mughal in NarnÊul, the Zafar Mahall in the garden HayÊt Bakhsh in the fortress of Delhi).

[109] Word used to show a form of administrative succession, often (wrongly) translated in the European word of “feud” (the German Lehn). The Muslim state, in its

In Persia the cisterns, the water tanks, and the artificial lakes are particularly widespread in the districts on the bank of the central desert. They are provisioned by the water of qanat, by underground sources, or by rainwater. Some are made with stones or bricks and cement and they have also significant dimensions. {Abd Al-RahÒm DarrÊÒ thinks that all villages and little settlements in Kashan had little tanks (istakhr). The function of an istakhr is very complex. "In the small settlements (mazÊx) water is inferior regarding that requested for the dimensions of a plot of land (the kardu) during the first farm rotation, when water must be left on the land to sow or in the orchards. A long period of time is requested, in order to flood the plot of land, because when the quantity of water is small, as soon as it arrives, it goes down in the land and the plot of land does not flood. Consequently, water is kept in a tank (istakhar). When this last one is full, or when its content is necessary to the land, it is spread in the irrigation channels till the desired result is obtained. It may also happen that the water of a small village is sufficient for the first period of the rotation, but it is necessary to lead the water to a plot of land (dasht) or to fields (mazÊ {) collocated to big distances, losing a big part of water on the way between the mouth of the qanat and the land to irrigate, with the result that the field will not be flooded (or at least a bigger quantity of water is not previously kept in a tank). It may happen that a village has sufficient water in the first period of rotation for three or four plots of land, and wants to divide water into three or four irrigating channels, some having more water, some other less water. It is therefore necessary to have a tank, so the requested quantity may be distributed in each irrigation channel, or that the water coming from two or three sources may be distributed into

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first centuries, distributed to its notables parts of its territory called QatÊi (the pl. of QatÊa). These parts were divided into half-properties, submitted to the tithe, as it happened for all properties of Muslim origin.

different channels and later on divided.[110] In the big houses and in the crossing of the main roads of many Persian towns, we may find tanks for deposit, covered at vault (Êb-anbÊr),[111] built with terracotta bricks and covered with waterproof mortar (sÊjÖ), which an open tank was added to (haud), that in the houses is usually collocated in the courtyard. These private tanks were filled through qanat or other sources when it was the turn of the master. Their water was used for the family needs, but not necessarily to drink. In some districts where water was not sufficient or brackish, the drinking water was brought from faraway places on the backs of animals. The Êb-anbÊr are structures typical of the Persian architecture. They are circular, covered with a dome of 17–23 m in diameter which may reach 5–7 m of height. They are placed under the surface to keep the water fresh and to avoid evaporation. Next to the tank, one or more wind towers connected to the structure (badgir), create in their inner part a continuous air current which contributes to keeping water fresh.[112] The Êb-anbÊr, common in the towns and in the villages placed along the central desert, may also be found along the big route ways, sometimes associated to caravanserais. Some of them have personal sources, but usually the water is kept by the qanat or the rainwater.

In Uzbekistan, Samarkand was a town of gardens in the middle of an artificial oasis, realised with a system of channels gathering the water of the river Zarafshan. It was built, since the period of the Samanids (ninth-tenth century), as little urban oasis kept within the walls organized along the Khanata, an integrated complex of public and religious buildings, developed along a water basin (hauz) of a regular shape, surrounded by big steps coming down the water and shaded by trees. The hauz constituted the aggregating element of the activities and of the daily life of the quarter and the whole town counted almost one hundred.[113]

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[110] Encyclopaedia of Islam, s.v. "6. Irrigation in Persia" (Leiden: Koninklijke Brill NV, 1999).

[111] R. Holod, s.v. "Ab-anbar," in Encyclopaedia Iranica, vol. 1 (London: Routledge and Kegan Paul, 1982), 39–41; E. Beazley and M. Harverson, Living with the Desert: Working Buildings of the Iranian Plateau (Warminster, Wilts: Aris and Phillips, 1982), 39–44; G. Pougatchenkova, Chefs-d'oeuvre (d'architecture de l'Asie Centrale. XIV^e–XV^e siècle) (Paris: UNESCO, 1981).

[112] H. Wulff, The Traditional Crafts of Persia (Chicago, 1967), 258–259.

[113] A. Gangler, H. Gaube, and A. Petruccioli, Bukhara, The Eastern Dome of Islam (Stuttgart and London: Menges, 2004), 65–66.

3) Punctual Systems to Catch the Deep Waters

Settlements rising near wells

This is a system of catching water directly from underground strata (wells, etc.).

In this specific case, water is not gathered, as in the previous cases, through the regulation of the soil and the use of channels and drainage lines. The water, present in the subsoil, does not interfere with the morphologic structure of the soil or the urban structure, but the well, as an elementary architectural shape, becomes the organizing point of a few living polarities added one to another.

In India, the pure well does not fit the ornamentation, but can be considered part of a complex system, as the ones JahÊngÒlet build at intervals of a day along the way towards KashmÒ(made up of sarÊÒ + mosque + well). In other conditions, the well assumes an absolutely monumental role; as in the twelfth century A.H. (eighteenth century A.D.) the wife of the sultan { dil ShÊh had, with the money of the sultan TÊj, built BijÊpÖr, a great tank-well with rooms. The PÊnÒ-Mahall (the water palace) in NÊdrÖg and the tank of MÊ-sÊhibÊ in HaydarÊbÊd are other significant examples of these water architectures. These tank-wells are mentioned in the different sources as pÊ or baxÒ or bÊolÒ. In particular, the bÊolÒare wells with big steps, used by men and animals, and are often associated with the use of the Persian wheel. These wells, with rooms placed at different levels of depth and placed at direct contact with the surface of water (to become fresh resting places during the long and very warm summers) assume either a great decorative or functional value. Similar structures are present in the GujarÊt[114] and called vÊ; they are at the surface-level and are presented as completely closed wells. They consist of one or more cylindrical wells (in this case, one serves for the irrigation and the second one for drinking water) where the level of water is reached through an inclined plain cutting the soil, better than through a helicoidally scale. The structure is later completed by an intense complex of pillars and architraves which function as a structural prison for the land.[115]

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[114] S. Shah, "The Water Structures of Gujarat: an Examination of the 19th and 20th Century Historiography," in "Water and Architecture," ed. Carucci, *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 2 (1985): 26–35; J. Jain, *Step Wells of Gujarat* (New Delhi, 1982).

[115] Hobson-Jobson, *A Glossary of Colloquial Anglo-Indian Words and Phrases* (New Delhi, 1968).

Conclusions

In the Islamic world the idea of a humanized landscape is constantly present, a landscape where parts of the territory are wrested by human hands from a virgin nature, made up of deserts and inaccessible places, and transformed into villages, towns, gardens, orchards. Here, water, which is never completely available, concretises into rivers, irrigation basins, tanks, wells and conducts. The humanized, cultivated, irrigated space becomes the counterpoint of the desert. Space, defined by the cultures and the settlements, modulated in function of the water ways, contrasts with the open and infinite natural landscape. In this context, the artificial lakes, the basins, the wells, the tanks, become places devoted to exalt the value of the hosting fluid and to elevate the urban quality through the reflections of the light, the gushing of fountains and rainfalls, the capacity to evaporate at the shadow of deep pavilions and to spread a light chill. Before the diffusion of the Islamic culture, these shapes were bound directly to local building traditions and specific environmental exigencies. With the advent of Islam, we witness an important unification of knowledge which often corresponds to the union of technical shapes and sciences, deriving from distant areas (as it happens for the diffusion of the qanat from Persia towards the whole Mediterranean basin), but which locally reach an important formal autonomy.

Furthermore, water architecture unfolds in the Islamic world on more basic scales, tending to vary from the dimension of the territory (with shapes of rivers or big lakes) to that of the town and its gardens (with aqueducts, tanks, basins), to that of the houses (with water conducts and basins), and assuming the dimensions of isolated architectural elements (with fountains and wells). Independently from their dimensional scale, these shapes always express a deep connection with urban space, revealing different types of links with the surrounding territory. In this sense, tables 1 and 2 try to explain the transition from open shapes, as those of the artificial lakes, to more closed and contracted ones, as those of the qanat and the tanks, as a result of an adaptation process to the territory and the urban space. So, whereas in the Indian regions, alimented only in particular periods of the year through the monsoon rains, the humidity of the air, the great water availability and the scarce evaporation allow the development of open and extended water shapes as those of the artificial lake, where settlements open totally, we progressively recur in more arid and drier areas, where the evaporation constitutes an important factor for the water balance, to more contained formal solutions (as in the case of open tanks and piscine, but also covered tanks, cisterns, wells with steps), gathered within the living tissue, where it is easy to find protection from the dominant winds and the sun, giving back to the urban space, more humidity and wealth.

THE ECONOMY OF THE TRADITIONAL CITY

André Raymond

1.

The Arab city is, above all, a market-city. The importance of the economy and the "suq" in the formation and development of the "Muslim" city was recognized long ago by one of the first Orientalists to have devoted his attention to these problems: Louis Massignon, from his studies of Iraqi cities, proposed the notion that the Muslim city is founded on the combination of market and Great Mosque. This theme was taken up by all the major interpreters of the Orientalist school. "The suqs," wrote Sauvaget, with reference to Damascus, "…are finally the chief *raison d'être* of the agglomeration." And Eugen Wirth, on the basis of research on the Islamic, Arab or Eastern city, concluded: "The cities of the Middle East are specifically marked out by their suq, which is the main commercial quarter…The suq is, indeed, the characteristic sign and most striking distinctive feature of cities of Islamic culture."[1] While the market can hardly be regarded as the sole distinguishing feature of the Arab city, it must, nonetheless, be adjudged as representing the central element around which this city is created, organized, and developed.[2] It is clearly of importance to know the precise origin of this specific feature; and we may, perhaps, learn this from an archaeological study of the pre-Islamic Arab city.[3]

We propose here to make a study of these economic functions within a group of Arabo-Mediterranean cities, with the cities of Morocco, Iraq, and Yemen naturally included in our analysis; and we shall approach them from the viewpoint of a period that might be designated "modern"—one that, in most cases, corresponds to the Ottoman period (sixteenth to eighteenth centuries). However, many of the characteristics we shall identify could naturally also apply to the preceding "classical" period.

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[1] J. Sauvaget, "Esquisse d'une histoire de la ville de Damas," REI 4 (1934): 454; E. Wirth, "Villes islamiques, villes arabes, villes orientales?" in *La ville arabe dans l'Islam*, ed. A. Bouhdiba and D. Chevallier (Tunis, 1982), 197.

[2] On the general aspects of the Arab city, see A. Raymond, "The Spatial Organization of the City," in this present work.

[3] See the studies of A. al-Ansary, especially "Qaryat Dhat Kahl: Al-Fau," in *Sciences sociales et phénomènes urbains dans le monde arabe*, ed. M. Naciri and A. Raymond (Casablanca, 1997).

2. The city: production and trade

Contrary to frequently advanced theories about the very negative role played by the city in the overall Muslim context ("parasitic" is a term heard in this connection), the city actually had a positive impact on the local, regional, or international level.

2.1

The countryside was a place of craft manufacture, in the context of production within family-run workshops; in Egypt, for instance, the provincial centres of the Delta, Fayyum, and Sa{d played a crucial role in the production of textiles. G. Baer notes how, out of a thousand or so villages mentioned in the major work of {Ali Pasha Mubarak, two hundred had a local craft production.[4] Fundamentally, however, it was in the cities that more specialized production was located, in a highly varied set of fields that catered for the immediate needs not just of the city population but of that of the rural districts, too. It is estimated that, in the eighteenth century, craftsmen represented half the active population of Cairo. The "basic" crafts in question, to be found in all the large cities, were especially in the professions involving metal, wood, and leather, but they also entailed the manufacture of articles in gold and silver which were widely hoarded in the countryside. One of the most noteworthy examples of this kind of urban craft—one that no doubt played its part in catering for the domestic needs of the rural districts—was the production of articles in copper which was generally highly developed in the cities. So great was the importance of this that in Cairo it was established (its noisy character notwithstanding), in the very heart of the city: the suq of the nahhasin occupied the northern section of the avenue of the Qasaba around which the city's economic centre was set.

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[4] G. Baer, "Village and City," in The Islamic Middle East, ed. A. L. Udovitch (Princeton, 1981), 603.

In a certain number of cases, this urban production took on the character of a veritable industry producing not only a current of redistribution to the rural districts but also an outward commercial flow that made its contribution to the overall economic balance of the country. A few examples may be given.

In Tunis, the production of red caps (sheshias), encouraged at the beginning of the seventeenth century with the settlement of thousands of Andalusis expelled from Spain, was, around the end of the eighteenth century, providing employment for 300 masters and 15,000 craftsmen (fig. 1). These caps (sometimes assessed at 100,000 dozen in number) were exported to every region of the Ottoman Empire, notably to Egypt, which bought to the value of 35.4 million paras (a full third of imports coming in from the Maghreb). The city of Cairo was also a theatre for substantial textile activity: Evliya Chelebi, describing the city around 1660, estimated the number of textile craft workers there at 12,000; and surveys of the judicial court registers (mahkama) at the end of the seventeenth and eighteenth centuries show that around a third of the craftsmen recorded were in fact involved in the manufacture of cloths. This whole production was the source of a vigorous export trade.[5] At the beginning of the nineteenth century, Nablus possessed 13 soap-making works; and part of this production—the most substantial in Palestine—was sold in Cairo, where the soap caravanserai (khan al-sabun) was a centre for Palestinian trade (fig. 2).[6] With regard to textiles, Aleppo was a highly active production centre: the 12,000 looms to be found there at the beginning of the nineteenth century provided for export as far as Europe. The quantities imported by Marseille had multiplied twenty-fold over the course of the eighteenth century.[7] All these examples show clearly enough how the notion of a general economic decline in the provinces of the Ottoman empire at the end of the eighteenth century sits ill with the actual reality; and that a drastic reassessment is needed in this area.

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[5] A. Raymond, Artisans et commerçants au Caire, 2 vols. (Damascus, 1974), 1:299.

[6] B. Doumani, Rediscovering Palestine (Berkeley: University of California Press, 1995), 257.

[7] A. Raymond, La ville arabe, Alep, à l'époque ottomane (Damascus: IFD, 1998), 359–361.

2.2

The city was not simply a place of production. It was also a place of exchanges at all levels: local, regional, and international.

While village crafts were often highly active and could even produce a saleable surplus (in the textile sphere, for instance), the most specialized and sophisticated products came, beyond doubt, from the city. This point is indeed noted by Girard in the *Description de l'Egypte*: industry, he says, "is limited, in the countryside, to the arts of basic necessity and to the management of certain products from the soil that serve for daily consumption... The cities are always the seat of a more select industry, concerned with transforming raw materials imported from outside into objects for a more or less widespread use."[8]

It was likewise from the city that the redistribution of imported products was undertaken. The raw materials necessary for rural crafts passed through the cities first and were then redistributed in the countryside. The use of luxury products became popularized in the cities before spreading, in turn, to the countryside. In this way, the use of European draperies became widespread in Egypt, till finally, in 1767, two French merchants founded an establishment at Farshut, in Sa{id, for the sale of cloths. It was via Cairo that the use of Mocha coffee became common in the seventeenth century and spread through the country; when the café des Iles, of lesser quality but less expensive, made its appearance, this spread rapidly in the countryside: "The great and the rich," noted the French Consul in 1740, "do not make use of it. It is used in the public cafés and for the villages."[9] Research into historical ethnology would be needed to appreciate the variety of products in common use, and of implements of daily life, which were thus consumed in the countryside, and whose introduction into the land was made via the cities, thanks to the international trade of which they were the centre.

The cities, for their part, were supplied by the hinterland with foodstuffs for their consumption and raw materials for their craft. This well-known aspect of the relations between cities and countryside has been studied, with respect to the provisioning of the inhabitants of

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[8] P. S. Girard, *Description de l'Egypte, Etat Moderne* (Paris, 1812), 2:1, "Mémoire sur l'agriculture, l'industrie et le commerce," 590, 617.

[9] Raymond, *Artisans et commerçants*, 1:197, 157.

Tunis and Damascus, by Paul Sebag and Antoine Abdel Nour.[10] It is not necessary to detail the variety of produce transported to the cities in this way, to feed the inhabitants and give them the means to produce. It is, though, useful to point out that this local trade exerted a considerable influence on the urban structure by virtue of the siting, on the periphery of cities, of markets where agricultural produce was stored and made available for sale, and where commercial relations between city and country were concentrated. This is a point to which we shall return in connection with the economic structure of the city.

It was the cities, obviously, that made possible the commercialization of produce and products cultivated and manufactured in the rural zones. Moreover, it happened, in the context of these relations between cities and their countrysides, that the process of production gave rise to a full-fledged cooperation involving a division of tasks. In Egypt, with regard to flax and cotton, preliminary operations up to the spinning were often carried out in rural family workshops, with the weaving then being carried out in Cairo and other provincial centres. No doubt, the same was the case in other great cities. The most noteworthy case of an association of this kind concerned the manufacture of Tunisian sheshias: the knitting of the caps was undertaken at Ariana, a suburb of Tunis; they were then sewn in Tunis; the fulling was undertaken in the workshops at Tebourba, a small town on the banks of the Mejerda; the carding took place in the suqs of Tunis; the dyeing needed a further operation in Zaghouan; then they were given their final form in the capital. Thus, there was, in this case, a constant to and fro of activity, throughout the process of manufacture, between the city and the country.

2.3

Most of the great Mediterranean Arab cities under consideration here were also the seats of an intensive international trade which gave them their importance and ensured their prosperity. These cities were normally sited at strategic points on the great axes of international trade: Tunis at the point where Europe joined Africa and the western Mediterranean basin was divided from the eastern; Cairo at the focal point between the three continents of Asia, Africa and Europe (via the maritime route across the Mediterranean); Aleppo at the natural point of contact between the caravan land commerce towards the East and the maritime traffic towards the heart of the Empire and towards Europe; and, finally, Mosul at a crossing point of the Tigris, where the land routes towards the East, Mesopotamia and the West all met.

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[10] A. Abdel Nour, *Introduction à l'histoire urbaine de la Syrie ottomane* (Beirut, 1982), 217 et seq.; Paul Sebag, *Tunis au XVII$^{\text{ème}}$ siècle* (Paris, 1989), 199, et seq.

These cities were the places of exchange for local and regional production, for manufactured products from Europe, and, traditionally, for exotic products: the celebrated spices imported from the East were now supplemented by Yemeni coffee which had become an item of major consumption around 1650; the oriental cloths brought from India continued to be the subject of active trade; products from the heart of Africa came via Algiers, Tunis and Cairo. Such international activity explains the power of the commercial apparatus with which these cities were endowed (caravanserais and suqs), the prosperity of the great local traders (the tujjar) who carried out operations there (and whose importance has only in recent years been set at its proper worth), and, also, the presence of significant colonies of western merchants. Of these last, the most active were the French and the Italians who carried on their business there and whose "nations" were installed in the funduqs or khans (caravanserais) reserved for them.

Such diversity of function, such production destined for local and international markets, such transit activity on all levels—all these things explain the prime importance assumed by economic activities in these cities. It is easy to understand how this pre-eminence would be visibly reflected in the very spatial structure of these cities.

3. Central activities

The Mediterranean Arab city was marked by a high degree of centralization and by the pronounced separation that existed between, on the one hand, a centre devoted to major economic activities—and which, given the presence of the Great Mosque and of organs of power and administration, might be termed the "public" zone—and, on the other, a residential zone almost totally bereft of economic activities, and which might be regarded as "private." From the centre of the city out to the edges, activities were arranged according to their decreasing level of importance. Within this very logical organization, the various aspects of economic activity were thus correspondingly reflected, in spatial terms, in a differentiated localization.

The existence of a central zone of markets (suqs), close to the Great Mosque, has been noted by all scholars concerning themselves with the structure of the city, whether this city is termed Muslim (L. Massignon) or Eastern (E. Wirth). The zone was marked by the density of those structures, economic in nature, that were the site of large-scale trade, specialized trade and the most important craft activities.[11] On a quite different level, the presence of traders in books (kutubiyyin) could be explained by the proximity of the Great Mosque, the centre of teaching that brought together hundreds of students and teachers. This was the case, for instance, in Tunis (close to the Zaytuna) and in Cairo (al-Azhar).

3.1

The most lucrative activities, those giving rise to an active international trade, were often concentrated within a "covered market" which could be closed off for reasons of security. It was traditionally named the qaysariyya, but during the Ottoman period it was also called the bedesten, after the one to be found in Istanbul. The "Kisariya" of Fez, still in existence, has been the subject of a detailed study by R. Le Tourneau (fig. 3), one which is equally valid for most cities where such a structure exists. Situated between the Great Mosque of the Qarawiyyin and the sanctuary of the city's founder Moulay Idris, in the heart of the market quarter—in a particularly sensitive spot of the city (and one reserved in principle for Muslims)—it is made up of a group of parallel streets and streets crossing them at right angles, to which access was via exits equipped with gates that were closed at night—at which time the qaysariyya, totally deserted, was kept under observation by patrols of guards. The streets were bordered by the shops of traders practising the professions most esteemed in the city: jewellers (sagha), perfumers ({attarin), traders in candles (shamma{in), traders in imported cloths, etc. "This market," wrote Leo Africanus at the beginning of the sixteenth century, "is a kind of small town surrounded by walls containing twelve gates around the circumference."[12] The Khan al-Khalili in Cairo was an assemblage of several *khans* to which access was from two streets closed off by monumental gates dating from the Mamluk era, and within which the great international trade of Cairo was carried on. It was doubtless conceived as a *bedesten* (a term sometimes accorded it in the form *bazastan*); this is suggested by the fact that it was built in 1511 by the Mamluk sultan al-Ghuri, with Turkish traders specifically in mind.[13] *Qaysariyya* and *bedesten* are mentioned in Algiers, Damascus, Aleppo, and Baghdad.

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[11] I have tackled these questions in Grandes villes arabes à l'époque ottomane (Paris: Sindbad, 1985). See also my contribution "Spatial Organization" in the present work. For the siting of activities in Tunis in the seventeenth century, see Sebag, Tunis au XVIIème siècle, from which I have derived frequent inspiration.

[12] R. Le Tourneau, Fès avant le Protectorat (Casablanca, 1949), 374–376; Jean-Léon l'Africain, Description de l'Afrique, ed. A. Epaulard (Paris: Adrien-Maisonneuve, 1956), 198.

The economic centre was likewise characterized by the presence of caravanserais where major international trade, wholesale trade, was carried on. Traders from other regions resided here, but so also did part of the local population, especially "floating" elements like soldiers. These centres were called *funduq* in North Africa (and in Tunisia *wakala*, in the form "oukala"), *wakala* and *khan* in Cairo (where *funduq* and *qaysariyya* had also been known during the Mamluk era), *khan* in Syria and Iraq, and *samsara* in Yemen (where the word *khan* had also been used). Regardless of the term and the region in question, these structures were fairly consistent in form. They were square or oblong buildings opening on to the street by means of a single, often monumental gate. They were made up of a central courtyard where animals could stand, and giving on to this were warehouses where goods could be stored, along with rooms for the merchants, perhaps on two storeys. Damascus contains a number of covered caravanserais, among them the khan As{ad Pasha (1753), an imposing structure 52 by 46 metres and containing 9 domes. This no doubt reflects an Ottoman architectural influence which can be likewise discerned in other older buildings.

The dimensions of the caravanserais reflected the scope of the commercial activity being undertaken there, but also the importance of the city. The funduq al-{Attarin in Tunis, at 625 square metres, was modest in size. Similarly, the funduq of the French in Tunis did not exceed 1,000 square metres. In Cairo the wakala Dhulfiqar (fig. 4) measured 2,625 square metres and comprised 32 warehouses and 35 rooms, but the *wakalas* of the Bulaq outer harbour were much bigger: the wakala al-Kharnub was a full 3,840 square metres. The most monumental caravanserais—and also the most finely decorated—were those in Aleppo (fig. 5). The khan al-Gumruk extended over 6,167 square metres and contained 52 warehouses at ground level and 77 rooms on the first floor. The number of caravanserais in a city provides a good indication of its role as a commercial centre: 34 have been identified in Algiers, 44 in Baghdad, 35 in Mosul and 57 in Damascus, around 100 in Aleppo, but 360 in Cairo—eloquent testimony to the economic activity of this metropolis and to its paramount position in the Arab world.

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[13] See S. Denoix, J.-Ch. Depaule, and M. Tuchscherer, *Le Khan al-Khalili*, 2 vols. (Cairo: IFAO, 1999).

The markets (suq) that developed in this central zone were generally open structures where the shops occupied a section of street, a crossroad, or, more rarely, a square; this last was in fact the case in Fez, where the traders in local cloths were grouped around four small squares next to the suq al-{Attarin.[14] In most cases, it would seem, we are dealing with a spontaneous grouping of the shops of craftsmen and traders who practised the same profession, and who were joined in professional bodies (Cairo had no fewer than 250 of these) dealing with highly segmented activities and having an extremely restricted location. Thus, the name of a profession designated, at one and the same time, a type of professional activity, a professional body and a precise spot in the city. In consequence, a toponym could go on designating a place where the activity in question had actually long since ceased to be carried out: in the Cairo of the Ottoman period, the place known as "Fahhamin" (i.e., traders in coal, a not very lucrative activity generally found on the outskirts), in the Qasaba in the centre of Qahira, was occupied by very well-off cloth merchants. Such changes are commonly found in cities, and are a source of information as to these cities' histories.

There are many examples, too, of suqs with a distinctive architectural character, especially in the neighbourhood of the Great Mosque, where the most prosperous professions were to be found. During the first half of the seventeenth century, in the reign of Yusuf Dey, the covered suqs of Hafsid Tunis, around the Zaytuna, saw the addition of the suq al-Truk (Turkish suq)—a great covered street—and the suq al-Birka, whose six columns held the covering of the small square in question (fig. 6). The Qasabat Ridwan in Cairo, covered along a length of 50 metres, was built around 1640 by a powerful Mamluk emir; it provides the sole instance of a covered suq in Cairo (fig. 7). In sixteenth-century Aleppo, large covered suqs were built by the pashas who developed major foundations (waqf) in the central district of the Mdineh. The suq of Bahram Pasha—constructed in 1583 between a mosque and a

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[14] Le Tourneau, Fès, 373.

qaysariyya, with a system of domes ensuring a link between these diverse monuments—is a fine example of these structures that are utilitarian in purpose, yet not bereft of architectural qualities distinctive to Aleppo. All these cases clearly involved major urban projects overseen by people in high political authority.

As with the caravanserais, the number of *suqs* varied considerably from one city to another: Cairo had 145, Aleppo 77, Baghdad, Damascus, and Algiers only around 50. Within the central zone the markets were located, broadly, in decreasing order of importance: the markets for goldsmiths and money changers (*sagha*), for spices (*{attarin*), and for cloths (*suq al-qumash*) normally occupied the area closest to the centre. The division of activities in Tunis, around the Zaytuna, is especially significant in this regard.

The basic element of these central quarters was the shop (*dukkan*, *hanut*), which seems to have seen little variation in type between the Middle Ages and modern times, and which can be found almost identically today from Morocco to Afghanistan. The descriptions provided by J. Sauvaget for Zangid Aleppo, by E. Lane for Ottoman Cairo, and by R. Le Tourneau for Fez at the beginning of the last century, show close agreement: a small, square building, 6 or 7 feet high (writes Lane), 3 or 4 feet wide, sometimes with a storage area. The floor of the shop is generally raised above the level of the street. A stone bench set out on to the street (*mastaba*) allows the shopkeeper to sit down. The shop is closed at night by wooden shutters whose upper part rises to form a porch and whose lower part folds to form a counter.[15] So simple and economical was the structure in question that shops were very inexpensive and could be built in rows, sometimes hundreds at a time, within the framework of pious foundations (*waqf*/*hubus*). In 1750, twenty or so were built in Cairo for a unit-price of 1,670 paras, whereas the cost of a *wakala* in Cairo, at that time, exceeded a million paras. Shops in markets that were erected as part of an architectural project were fitted out in a rather more spacious and elaborate fashion. The number of shops varied according to the importance of the particular city: Tunis contained 5,000 in 1860, Damascus 6,600 in 1871, Cairo very probably 20,000 in 1729.[16]

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[15] J. Sauvaget, *Alep. Essai sur le développement d'une grande ville syrienne* (Paris, 1941), 120; E. Lane, *The Modern Egyptians* (London, 1954), 322–324; Le Tourneau, *Fès*, 315–317.

[16] Raymond, *Grandes villes arabes*, 241.

Over and above commercial activities linked to cloths, spices (plus coffee) and precious metals, which have been given special attention above, the centre was the scene of a considerable variety of other activities that were in general the subject of major trade. Such a case, for example, was the trade in dried fruits (nuql) imported from Turkey and Syria, whose market was to be found in Tunis close to the Great Mosque, and in Cairo in the Sukkariyya, at the southernmost point of the Qasaba. The nuqliyyin were prosperous traders. The fresh fruit markets were, by contrast, situated towards the periphery, and the sellers there were often poor fellows. Examples could be multiplied. The urban centres likewise brought together various craft activities. In many professions, in fact, the maker was also the trader in his products; there was no clear separation between the two processes of manufacture and sale. Here in these central districts were to be found professions making items for everyday use, which could be fairly luxurious. There was, for instance, a wide variety of shoes. In Tunis the balghajiyya were installed right alongside the traders in spices, in a privileged site; Yusuf Dey (1610–1637) built a suq for the bashamqiyya alongside his mosque. Most of the Cairo qawwafin were immediately outside Bab Zuwayla, and the emir Ridwan Bey built for them a splendid covered market that spoke volumes for the prosperity of this craft; a fair number of shoemakers were in the Khan al-Khalili, in a still more prestigious spot. The types of manufacture causing the greatest nuisance were, as we shall see, normally pushed out towards the periphery. Exceptionally, though, a craft as important as that of the coppersmiths (nahhasin), which provided essential kitchenware and household implements, could, despite its noisy character, be installed in the centre. This was the case with the al-Nahas suqs in Tunis and Cairo.

3.2

The greater part of the considerable commercial apparatus to be found in the great Arab cities was concentrated in these centres. In Algiers, half of the 54 suqs identified were grouped within the central district. In Cairo, out of the 348 caravanserais whose site is known, 229 were in the Qahira district (fig. 8). In Aleppo, 19 khans rose within the Mdineh district, and their overall surface area (4.4 hectares) represented almost half that of this central zone. An idea of the enormous concentration of economic activities within this central economic district may be gained from the example of Cairo, where a study of judicial court documents (mahkama) enables us to locate the activity of craftsmen and traders whose fortunes are known to us by virtue of the estates they bequeathed. During the period 1776–1798, 65.5 per cent of recorded estates for Cairo as a whole concerned individuals who carried on their activities along the roadsides of the Qasaba, the major artery which crossed the Fatimid quarter of the city from north to south, and which was still, in the eighteenth century, the centre of activities. Still more significant, the amount of their estates came to 88.3 per cent of the sum total of estates for the city as a whole. This last figure perfectly demonstrates the overwhelming economic part played by the economic centre where activities and wealth were concentrated: within a zone amounting to no more than a fifteenth of the total surface area of the city was concentrated almost 90 per cent of the wealth of Cairo.[17]

The structure and dimensions of these central regions can be determined by the presence of economic structures within which major trade took place: specialized suqs and above all caravanserais. A cartography of this kind clearly demonstrates the difference in scale that existed between cities catering for local and regional areas and the great metropolises: ranging from Algiers (2 hectares), through medium-size cities—Tunis, Damascus, Mosul, to major centres—Aleppo, Baghdad—(10 hectares), and finally to the outright metropolis of Cairo (60 hectares), to which only the capital Istanbul could be compared. These economic centres were such distinctive features within the city that they were sometimes given a specific name: Rab{in Tunis, Qahira in Cairo, Mdineh in Aleppo.

It is hardly surprising that in cities whose irregular layout has so often been underlined by Orientalists these central regions should have been linked to the exterior by a network of streets that were (within the required limits for traffic using not cars, but restricted to the transportation of goods on animal back) relatively broad and direct. Such a network was obviously necessary for the proper functioning of the city. Tunis was linked to the main city gates set in the walls (Bab Suwayqa, Bab al-Bahr and Bab Jadid) by a network of sometimes doubled roads. The Cairo Qasaba, laid out by the Fatimids, had a width of 6 metres, and a fairly rectilinear appearance, from Bab al-Futuh in the north to Bab Zuwayla in the south. Damascus had inherited from Antiquity the Long Street (suq Midhat Pasha) joining Bab al-Jabiya to Bab Sharqi.

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[17] Raymond, Artisans et commerçants, 1:366–367.

Finally, the Mdineh in Aleppo was crossed by a line of markets, double, triple, sometimes quadruple, following the layout of the ancient Roman road, and linking Bab Antakiya to the Citadel, passing close by the Great Mosque.

3.3

The central zones were, in general, extremely stable within the city, due to the virtually organic link that existed between the markets and the Great Mosque, and also, no doubt, to the complex links forged between the activities thus brought together in the heart of the city. This did not rule out a degree of plasticity. During periods of expansion, growth of the central economic zone was effected by overflowing into the residential zone surrounding it, the houses being replaced by suqs and caravanserais. A development of this type has been noted in the cities of Tunis, Cairo and Aleppo in the Ottoman period. For the last two, it has been possible to measure this, the surface area covered by the centre having increased from 40 to 60 hectares (with regard to Qahira) and from 6 to 11 (in the case of the Mdineh). Just one example exists of the urban centre being displaced. This is in Mosul, where the markets had been conventionally spread around the Great Mosque built by Nur al-Din in the geometric centre of the city, and where the "centre" was then displaced to the north-east in the seventeenth and eighteenth centuries, the quarter of the major markets being set close to the Ottoman citadel and the crossing point of the Tigris (fig. 9).[18]

The markets, on the other hand, were doubtless less stable within these centres than L. Massignon suggested, when he conjured up a fixed division into professional groups—the consequence, by his interpretation, of a stagnation of techniques.[19] This statement is valid in the case of the goldsmiths (*sagha*); in Cairo, for example, we may note the permanent placement of this market, on a site adjacent to the central part of the Qasaba, from the time of the Mamluks to that of the *Description de l'Egypte*—a period of over five centuries. On a more detailed level, however, we may in fact note movements, substitutions that are consequent to another rule regarding the siting of professions:

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[18] Dina Khoury, *State and Provincial Society in the Ottoman Empire, Mosul* (Cambridge: University Press, 1997), 202–203.

[19] L. Massignon, *Mission en Mésopotamie*, 2 vols. (Cairo: IFAO, 1912), 2:92.

that which specifies greater proximity to the centre for those more important and a gradually increasing distance from the centre in proportion to their lessening importance. We noted above the case of the fahhamin, in the Qasaba in Cairo, where traders in cloth had taken the place of traders in coal. The Cairo furriers (farra{in) moved from a very central settled spot in the Mamluk period (when fur had considerable importance as a symbol of accession to a certain political and military rank, and trade in it was consequently essential) to a more distant spot in the southern quarter during the Ottoman period (when the use of fur for ceremonial purposes had lost importance). By contrast, a new product like coffee immediately took a central place, given the major economic role it assumed from 1650 onwards. In 1798, the 62 caravanserais where trade in it took place were all sited in the heart of the city.

4. The residential zones

In the residential zones surrounding the central district mainly devoted to economic activities there was normally no specialized activity; only non-specialized markets (suwayqa), which J. Sauvaget has described in terms applicable not only to the Syrian cities of Damascus and Aleppo, but to all great Arab cities (fig. 10). This description is worth quoting: "Each quarter thus has a suq, but on an appropriately reduced scale: the respective guilds are now represented merely by one or two shops, and the goods retailed there are most of the time limited to foodstuffs and to absolutely essential manufactured products. As such, it is...'a suq in miniature' (suwayqa)." R. Le Tourneau, considering the economy of the quarters of Fez, notes that the only items to be found there were those that were liable to be needed at every moment: oil, butter, honey (from the bekkal), fresh vegetables and fruit (from the khdaïri), spices and sugar (from the {attar), charcoal (from the fehham), and brooms from dwarf palms. This rudimentary provision was supplemented by ovens for bread. The Mokhiya quarter, for instance, contained two ovens and nine shops. These small establishments were usually grouped together at a crossroads or on one of the main streets of the quarter, in a spot where a larger number of potential buyers might be expected to turn up. "The moment the inhabitants of outer quarters wanted to procure goods not of a totally everyday nature (meat and fish, for example), the moment they wanted to buy an article of clothing, or have their hair cut, they had to go to the central markets." The small concentrations of shops, known as hawanit ("the shops"), that were scattered through the upper city of Algiers performed the same function.[20]

Nevertheless, in the case of the greatest cities, the considerable distances that had to be covered to reach the centre led to the creation of secondary centres of activity commonly sited close to the gates of the city within the walls, beyond which the city then extended further into large suburbs. These secondary centres of activity often recalled an ancient configuration of the city. Thus, in Cairo during the Ottoman period, two of the chief exits from the Fatimid city were the scene of considerable groupings of markets. In the west, Bab al-Sha{riyya had no fewer than 12 wakala (caravanserais) established beyond the walls, on the road leading to Bulaq; in the south, close to Bab Zuwayla, there were 7 wakala beyond the walls, at the beginning of the road leading to Fustat-Old Cairo.

5. Activities on the periphery

The rule whereby economic activities were normally graded from the centre to the periphery in a descending hierarchy explains the pushing out, towards the periphery of the city, of the least important types of crafts, of professions connected with the countryside, of those that needed very large amounts of space, and, finally, of those that were liable to be a source of nuisance to the population.[21]

The markets dealing in agricultural produce settled, logically, on the periphery of the city, for reasons of proximity and ease of transport, and also because such produce, voluminous in size but relatively small in value, needed large open spaces for its handling and storage. The markets in grain and straw normally developed on vast squares known as ruq{a, rahba, {arsa and, in Iraq, {alwa. The grain market (rahba) in Algiers was situated just inside Bab {Azzun. One of the chief Cairo grain markets was situated beyond Bab al-Sha{riyya, in a spot called the ruq{at al-qamh (grain enclosure) or midan al-ghalla (grain square). There were other grain squares close to the city gates, at Rumayla, Bab al-Luq, and Husayniyya. In Damascus the central artery of the southern suburb of Midan was lined with warehouses called baxika, buildings from 100 to 300 square metres in size where grain, wheat or straw were stored; Brigitte Marino has counted around sixty of these.[22] The siting was a logical one, on the road leading to the Hauran, a major region for agricultural produce. The markets for fruit and vegetables were likewise sited on the periphery; Tunis, through the toponym Bab al-Khadra, has preserved a memory of the vegetable sellers who were to be found round about this entrance in the northern suburb of the city (Bab Suwayqa). In Cairo, the vegetable sellers have left traces of their presence in the southern district of the city, notably with a suq al-Khudariyya in the immediate vicinity of the Ibn Tulun Mosque.

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[20] J. Sauvaget, "Décrets Mamelouks de Syrie, I," BEO 2 (1932): 29–30, idem, "Esquisse," 452–453, idem, Alep, 105; Le Tourneau, Fès, 223–225; T. Shuval, La ville d'Alger vers la fin du XVIII^{ème} siècle (Paris: CNRS, 1998), 207–208.

[21] On these problems, see Raymond, Grandes villes arabes, 189–194.

The trade in livestock, at once cumbersome, noisy and polluting, was likewise sited close to the gates of the cities. Even in present-day Tunis the memory is kept of squares for sheep (rahbat al-ghanam) and for horses (murkad) which have stretched, since the Hafsid period, within the city's southern suburb. In Cairo the toponymy preserves the memory of a suq al-Ghanam just outside Bab Zuwayla, the southern gate of the Fatimid city; but, from the end of the Mamluk period and under the Ottomans, at a time when the city came to stretch much further in this direction, the sheep market was on the edge of the city's southern suburb. The Cairo horse market (suq al-Khayl) was at Rumayla, a huge esplanade situated at the foot of the Citadel; this was partly on account of the space necessary for it, but also, obviously, because of the close proximity, in the palace and barracks of the Citadel, of soldiers who were the chief buyers of these mounts.

A siting on the periphery was likewise essential for a certain number of professions involved in the transformation of raw materials (reeds, palm leaves) that came in from the country; these, highly cumbersome but having a poor market value, needed a good deal of space for the manufacture of the products derived from them. This was especially the case with the rope-makers (habbalin) and mat-makers (husuriyya) whose workshops, in Cairo, were concentrated in the southern part of the city, between Rumayla and Qanatir al-Siba, in very poor quarters corresponding to the character of this craft. The Habbala quarter was one of the most wretched in Cairo.

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[22] B. Marino, Le faubourg du Mîdân à l'époque ottomane (Damascus: IFD, 1997), 95–97.

Other products coming in from the outside were subject to the same exclusion: markets for firewood, on account of the product's cumbersome nature and the difficulty of carting it in large quantities to the interior of the city; charcoal (in Cairo this was brought by Bedouins from the Tur region in Sinai, by caravans of one to two thousand camels, and sold in markets situated close to Bab al-Nasr and Bab al-Luq); briquettes made from a kind of caked cow-dung, burned as a fuel in Egypt and sold at the suq al-Ghilla on the western edge of Cairo. Oil presses were likewise close to the city gates to facilitate the provisioning of workshops and avoid a particularly soiling raw material being transported into the city; the presses mentioned in the Description de l'Egypte were all situated on the western edge of the city. The distancing of "industrial" activities, especially those most unpleasant for the environment—such as ovens of all kind, on account of the smoke, dust and smells they generated—was a standard feature. In Algiers the charcoal ovens, and those for lime and plaster, were situated outside the western gate of Bab {Azzun. Dye-works were subject to the same exclusion on account of the soiling character of these workshops and their needs in terms of water and space.

Among those activities causing nuisance and pollution and situated close to the gates, mention should also be made of the abattoirs, the neighbourhood of which was especially unpleasant (due to passage of animals, noise, smells, the spilling of blood). The six "butcher's shops" in Cairo were situated on the edges of the city, at Husayniyya in the north, at Bab al-Luq (near which a pool bore the telling name Birkat al-Dam, or "pool of blood") and Harat al-Saqqaxin in the west, lastly at the Lions' Bridge in the south. This is in fact characteristic of every city. It was above all the case with the tanneries (dabbagha, madabigh), which were a considerable nuisance to the neighbourhood on account of the stench for which they were responsible, and which had heavy need of water to treat the skins and of space to dry them. Their siting outside the city was thus absolutely essential, and no exception was made in this respect.

In the case of these activities on the periphery, changes in siting are often a sign of urban transformation, especially when the city's growth made necessary the distancing, towards the exterior, of an activity now integrated into the urban fabric, but with the old name nonetheless preserved—sometimes with the qualification "old" (qadim, {atiq)—a relic highly indicative of the city's history. Instances of this phenomenon are quite numerous. Algiers preserves a toponym "rahbat al-qadima"

(Old Grain Market), and there was a space for selling grain close to Bab {Azzun. In Cairo the street situated beyond Bab Zuwayla, in the full urban centre, preserved the name suq al-Ghanam al-qadim (Old Sheep Market), witness to an old siting, whereas the sheep market was, thereafter, situated on the southernmost edge of the city. In Aleppo there was a mosque "of the Old Tannery" (al-Dabbagha al-{atiqa) in the former tanners' quarter. The displacement of the tanneries is, it should be said, an especially interesting urban indication, since it must be interpreted as resulting from a city development compelling the transfer of the workshops in question, from a site now become an inner one towards a site outside the city. I have noted three separate transfers of this kind—in Aleppo around 1570, in Cairo around 1600, and in Tunis around 1770—which do in fact correspond to stages of major urban expansion.[23]

The location of such activities on the periphery of the city bears a character so logical that it is tempting to see in it a "spontaneous" phenomenon stemming from a natural play of variables. We cannot, though, rule out the possibility that the intervention of urban officials played some part in this organization: judges (qadi) and hisba officials (supervision of morals and superintendence of markets) were liable to take decisions in matters of this kind. The displacement of the tanneries, which assumed an especially spectacular character on account of the vast dimensions of the zone assigned to these activities, was often a process in which the highest authorities became involved. We know that, in 1552, the Ottoman sultan himself took up the problem posed by the presence of the tanneries in a central spot in Cairo, not far from Bab Zuwayla, and that he set in motion a procedure in which the Pasha of Cairo became involved, and which ended, almost half a century later, in their transfer to a place close to Bab al-Luq, the western gate of the city.[24] In Aleppo the decision probably came from a pasha of the city. As for Tunis, it was the sovereign {Ali Bey himself who took the decision, in order to remedy the housing crisis that was becoming acute in the city.

In obedience to a similar logic, activities concerning travel were generally arranged close to the gates. The very broad range of professions involved (trade in saddle and pack animals, professions involving leather, harness, implements for encampment, foodstuffs) were of interest to caravaneers and their customers (including pilgrims undertaking the hajj), and, also, to members of the ruling caste. Beneath the Citadel in Cairo, where resided thousands of soldiers and Mamluks—and a place also frequented by pilgrims preparing their journey to Mecca—the great esplanade of Rumayla brought together traders in tents (khiyamiyyin), saddlers (baradi{iyya) and all kinds of professions, likewise traders in foodstuffs indispensable for extended journeys, military expeditions or pilgrimage. J. Sauvaget describes the assemblage of markets that had developed outside the north-east gate of the city of Aleppo within the walls, and which had preserved, as its main function, the equipping and victualling of caravans; it involved saddlers, smiths, tent-makers, stores of foodstuffs. This assemblage of activities had developed in the Mamluk period, the quarter retaining the name of the village of Banqusa, which had been absorbed by the expansion of the city beyond the walls. In the Ottoman period these activities developed along the whole length of the road leading to Bab Qarliq, about a kilometre further to the northeast.[25]

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[23] A. Raymond, "Le déplacement des tanneries à Alep, au Caire et à Tunis," *Revue d'Histoire Maghrébine*, 1977; reprinted in Raymond, *La ville arabe, Alep*, 128–37.

[24] Topkapi Library, KK 888, fol. 324 r., no. 1407. This document was kindly communicated to me by Professor G. Veinstein, to whom I express my heartfelt thanks.

The extensive dimensions of the cities, and the active nature of the exchanges taking place where urban territory and the countryside joined, had led to the development, close to the gates, of trade and craft agglomerations whose diversity was effectively a smaller-scale reproduction of that of the central districts, but with a very pronounced rural character. This was the case with the Rumayla district of Cairo. In Damascus, J. Sauvaget has described the process whereby there was a migration of activities, formerly located in the city, towards the district located "beneath the Citadel" (Taht al-Qal{a). It was a comparable process, we may suppose, that brought about, in Mosul, the displacement of economic activities located around the Great Mosque towards a district endowed with a double crucial advantage: the proximity of the citadel set up by the Ottomans along the Tigris, and the presence of a crossing point over the river. In Aleppo such extensions had been effected from Bab Nayrab, where populations of peasant and Bedouin origin had settled.

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[25] Sauvaget, Alep, 175, 228–230.

6. Conclusions

Study of the cities shows (as Louis Massignon so emphatically noted) the degree to which their economic functions contributed to their organization. The spatial structure of these cities owes much to the organization of the economic life that unfolded there; in certain respects one might say it is the product of this organization. In some extreme cases, the market district even played an intermediary role between forces that might have risked threatening the overall unity of the city—we are thinking here of a city like Antioch, divided between religious and ethnic communities (Turkish Sunnis, Christians, Alawis) for whom the market district provided a geographical space accessible to every community (even if the commercial space was itself the subject of inter-community division).

Arab cities were the theatre of highly diversified economic activities, designed not simply to satisfy the population's daily needs but to nourish a regional and international trade. Europe, which had not yet acquired, in this sphere, the supremacy it would enjoy in the nineteenth century, received manufactured products such as cloths from the lands of the Maghreb and the Mashriq. In the absence of reliable statistics, the very structure of the city supplies valuable information about economic activities, by the variety it reveals with regard to specialized, lucrative activities which had their place in the urban centres, and everyday, non-lucrative activities, which developed some way off. The vitality of the urban centres, and their development in the modern period, provide an interesting indication of the maintenance of a general economic activity not exclusively geared towards the production of items for common use. There seems, then, no justification at all for the verdict of irremediable economic decline, on the verge of the nineteenth century that has so often been pronounced by the Orientalists.

It is not any truer to say that the cities played an exclusively negative role in their relations with their rural environment. As the producer of manufactured goods needed by the countryside, as the consumer of agricultural produce and of raw materials necessary for its crafts, as the redistributors both of imported products and of goods produced by the countryside, the city was intimately bound up with the rural space surrounding it. It is unreasonable, then, to speak—as has so often been done, notably by J. Weulersse, in connection with Syrian cities[26]—of

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[26] J. Weulersse, *Paysans de Syrie et du Proche-Orient* (Paris, 1946).

"parasitism," of an exploitation of the countryside by the city. There are rather, in reality, the signs of normal co-existence and cooperation with regard to two complementary entities. This complementarity has been perfectly described by A. H. Hourani: "The village needed the town; but the town could not exist without the food produced by the peasant and delivered to the urban market, whether for sale or in payment of taxes. The basic unit of Near Eastern society was the "agro-city," the urban conglomeration together with the rural hinterland from which it drew its food and to which it sold part at least of its manufactures."[27]

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[27] A. H. Hourani, "The Islamic City in the Light of Recent Research," in *The Islamic City*, ed. A. H. Hourani and S. M. Stern (Oxford, 1970), 16.

PILGRIMAGE CITY

David J. Roxburgh

> And (Noah) said: "Embark. In the name of God be its course and mooring. My Lord is surely forgiving and kind"
>
> (Qur'an 11:41)

Of all the cities, not to mention extra-urban sites, that one could introduce under the topic of pilgrimage, this chapter focuses on the three pre-eminent cities of Muslim pilgrimage, Mecca, Medina, and Jerusalem. And of the many ways that one could explore cultural ideas about pilgrimage cities, here the chief objective is to examine how these destinations were visualized for pilgrims and their families. The primary source of this inquiry is a corpus of eleventh- through early-fourteenth-century pilgrimage certificates that are characterized by a recurring visual programme which maps the principal sites of pilgrimage through immediately recognizable visual forms. Images of Mecca, Medina, and Jerusalem are seen together in a rapid sequence, separated by texts describing the activities of the pilgrim and selected excerpts from such sources as the Qur'an. For the pilgrim, the certificate provided material evidence of an obligation met and instilled a set of memories by its selective record of things seen and actions made. While the certificates were composed as gatherings of static images on one long page, the pilgrim's kinetic memory activated relationships between the successive sites of individual cities, or between cities, and the accompanying texts served as an inventory of physical movements and the aural sensations of invocation and prayer.

In essence, the pilgrimage certificates provide one example of how one could combine the sites of pilgrimage and the pilgrim's activities, or recorded observations, in the study of Islamic pilgrimage. It is an approach that has not yet been pursued in a systematic way, with some notable exceptions, including two pertaining to medieval Jerusalem. The first is Oleg Grabar's book about the Dome of the Rock and its immediate setting, the Haram al-Sharif ("the noble precinct"), a study organized through four successive chronological periods in the history of Jerusalem.[1] Through Computer Aided Design (CAD) technology, Grabar developed observations about the topographical position of the Haram al-Sharif and its monuments in relationship to the city's topography, especially to its Christian landmarks (figure 1). The second study, by Amikam Elad, took a different tack.[2] His book examined how specific significances or associations—mostly linked to the timetable of Muslim cosmology, in the past and in the future—adhered to places and buildings on the Haram al-Sharif and its wider environment, a landscape that Tarif Khalidi styles "geo-theological."[3] For his study, Elad turned to one of the earliest pilgrimage itineraries recorded by Ibn al-Murajja in the middle of the eleventh century as well as numerous written sources. Analysis of Ibn al-Murajja's text yielded a map identifying locations that were annotated in numerical order by their sequence of visitation (figure 2).

Elad, like Grabar, understands the locus of Muslim pilgrimage in Jerusalem as a dynamic entity, subject to developing and changing meanings over time. Each author embraces a multiplicity of sources and methods—the buildings and sites of a city and their archaeology; a panoply of texts running from chronicles to visitor's narratives and pilgrimage guides—and endeavours to correlate historically grounded arguments about the configuration of a sacred space with the spiritual choreography of the pilgrim. Both studies are implicitly concerned with the impact of the cityscape and its monuments on the visitor and how the formation or codification of practice shaped and directed the visitors' itineraries. Both books might be described as inherently phenomenological in approach, directed toward the experiential dimensions of pilgrimage, though they are different in their emphasis.

Grabar's book is conceptualized through the pilgrim's apprehension of a sacred landscape by vision, a landscape punctuated with visual nodes that attract attention, principally the buildings set over the platform called the Haram al-Sharif and the Dome of the Rock in particular. Elad's book deals with the bodily movement of the pilgrim through a succession of urban spaces and the constellation of meanings assigned to each as a historical layering by accretion, or as a series of erasures, one meaning substituting another. While Grabar's study is static and intrinsically visual, a seeing visitor prompted by factors of form, mass, scale and colour, exploring the aspect of the gaze, Elad's is fluid and kinetic and gives less emphasis to vision as a form of consciousness than it does to other orders of awareness: for example, how the pilgrim must move his body; what invocations he must recite (liturgical designators such as the basmala, kalima, talbiya, tasliya, takbir); the historical presences and events that permeate the landscape making it pregnant with meanings. Elad's pilgrim is prompted less by what he sees, and how it might direct or guide his movements, than he is by a pre-scripted text of actions. Elad's pilgrim could easily be blind, for the particularities of the cityscape he moves through do not affect him. Both views are inherent to the visual technologies selected by Grabar and Elad—CAD and line drawing—to present their viewers with information about a physical setting of Jerusalem.[4]

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[1] Oleg Grabar, *The Shape of the Holy: Early Islamic Jerusalem* (Princeton, NJ: Princeton University Press, 1996). Also see ibid., "Upon Reading al-Azraqi," *Muqarnas* 3 (1985): 1–7.

[2] Amikam Elad, *Medieval Jerusalem and Islamic Worship: Holy Places, Ceremonies, Pilgrimage* (Leiden and Boston: E. J. Brill, 1999).

[3] Tarif Khalidi, "Space, Holiness, and Time: Palestine in the Classical Arab Centuries," in *Studies in Arab History: The Antonius Lectures, 1978–87*, ed. Derek Hopwood (London: Macmillan Press, 1990), 165–174.

In essence, Elad's method remains bound to conventional studies of the pilgrimage to Mecca, the preeminent locus of pilgrimage characterized by a highly routinized ritual choreography. This is not surprising given that Meccan pilgrimage (both major, hajj, and minor, {umra, pilgrimages) was a religious obligation (wajib) rather than a recommendation (mustahabb) like pilgrimage or visitation (ziyara) to shrines located in such centres as Medina, Jerusalem, and Karbala, to name a few. In fact, Ibn al-Murajja's itinerary—the earliest of several examples—can be understood simultaneously as an attempt to settle and secure the often ambiguous significance of Jerusalem for the Muslim faith and to respond to a need for codifying ritual and ceremony during pilgrimage. In that aspect, Ibn al-Murajja's text participated in a widespread effort to clarify and exalt Jerusalem's status through a genre of literature termed Fadaxil al-Quds or Fadaxil Bayt al-Maqdis (literature in praise of Jerusalem), an effort that would be revived after the Frankish Christians had taken Jerusalem.[5] This movement corresponded to other efforts—before, during, and after the Crusades—to establish “geo-theological” connections between Jerusalem and Mecca, whose preeminent sanctity was inviolable up until the end of days. Examples linking Mecca to Jerusalem include the Prophet Muhammad’s nocturnal journey from Mecca to Jerusalem (israx) and his ascension from Jerusalem to the throne of God (mi{aj); the underground joining of the waters of Zamzam to Silwan (var. Siloam) during the “feast of the sacrifice” ({id al-adha); and the transfer of the Ka{ba and its black stone from Mecca to Jerusalem during the last days.[6] These various traditions linked Jerusalem to Mecca, sometimes by sets of doubled features, in a near symmetry and in a calendar that will culminate during the end of days.

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[4] Interestingly, and paradoxically, CAD technology allows for a kinetic effect immediately, and this is how it was developed in the first place by Grabar and his colleagues. The fact that the results are presented in a book erases all the fly-through aspects of the original investigation procedures made available in a video (Jerusalem 600–1100, Muhammad al-Asad, Abeer Audeh, and Oleg Grabar [Princeton, NJ: Intermedia Communications for the Institute of Advanced Study, 1993]). In Elad's case, his decision to use a map also plays into certain mapping traditions of the display of information.

Grabar’s and Elad’s books contend with a tough problem, the challenge of populating “historical” sites of pilgrimage—of establishing connections between people and places—that have long since become changed environments. Some obvious examples include the house of the Prophet Muhammad in Medina, long thought to have been transformed into the Medinese community’s first mosque in 622–23 and later becoming the prophet’s burial place.[7] The body of the Prophet Muhammad was joined by those of the first two caliphs, Abu Bakr and {Umar. Line drawings hazard visual approximations of the “house-turned-mosque,” a rudimentary structure of mud-brick and palm trees built over the site where the Prophet Muhammad’s camel stopped after being set free to roam. The Prophet Muhammad purchased the land from the orphans Sahl and Suhayl and then cleared the site before construction.[8] Two recent line drawings represent one transect from the building's complex horizontal and vertical history, an architectural history of an expanding ground plan and new elevations.[9]

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[5] See Emmanuel Sivan, “The Beginnings of the Fadaxil al-Quds Literature,” *Israel Oriental Studies* 1 (1971): 263–271. The earliest known tract is by Abu Bakr Muhammad b. Ahmad al-Wasiti (before 1019–1020) who had been a preacher at the al-Aqsa mosque in Jerusalem. For the period during the Crusades, see idem, “Le caractère de Jerusalem dans l’Islam aux XII^{e}–XIII^{e} siècles,” *Studia Islamica* 27 (1967): 149–182. The revival of the genre under the Ayyubids is discussed by Elad, *Medieval Jerusalem and Islamic Worship*, 15.

[6] The numerous connections between Jerusalem and Mecca are enumerated by Heribert Busse, “The Sanctity of Jerusalem in Islam,” *Judaism* 17, no. 4 (1968): 441–468. Al-Wasiti wrote that during the last days, paradise would be established in Jerusalem and the Ka{ba and the black stone would move from Mecca to Jerusalem.

[7] Recent analysis of the sources, and interpretations by architectural historians (principally Caetani and Creswell), led Jeremy Johns to conclude that the mosque and the domestic structures built for the Prophet Muhammad and his wives have been incorrectly conflated. See Jeremy Johns, “The ‘House of the Prophet’ and the Concept of the Mosque,” in *Bayt al-Maqdis: Jerusalem and Early Islam*, ed. Jeremy Johns, Oxford Studies in Islamic Art 9, 2 (Oxford: Oxford University Press, 1999), 59–112, 80.

The perimeter of the Mosque of the Prophet in Medina today has been expanded considerably since its inception; throughout these expansions, the site maintained the physical placement of elements dating to the immediate aftermath of the Prophet Muhammad's life until the fire of 1483. These include the site of the Prophet Muhammad's tomb and historically important mihrabs and minbars inside the sanctuary. Even since the late 1880s, the mosque has undergone numerous refurbishments and actual reconstructions, and equally significant, the entire urban area adjacent to the mosque has been reconfigured, in some instances cleared, to open up the space around the mosque and facilitate access and circulation.[10]

Equally changed in its physical aspects since its inception is the al-Masjid al-Haram in Mecca and its centrepiece, the Ka{ba. All the while, it maintains and expands its meanings and its very long history in Muslim cosmology. According to tradition, the Ka{ba occupies the site of creation first fashioned by God and the location of the primordial temple constructed by Adam and where he prayed after the expulsion. The Ka{ba, or "House of God" (Bayt Allah), was rebuilt by Ibrahim (father of the prophets) and Isma{il after its destruction in the flood. Historical photographs dramatize the massive architectural and urban developments that have been pursued in efforts to address the logistical difficulties of pilgrimage in the modern period.

In attending to the challenge of historical reconstruction, Grabar and Elad move well beyond the conventional disconnect that obtains in pilgrimage studies as they continue to unfold in the disciplines of history of art and architecture and history of religion. What do I mean by this disconnect? First, the marked tendency of architectural historians to privilege the reconstruction of an archaeology of buildings (a generous definition is intended), and possibly urban environments, a process that plays out as a cycle of new interpretations of long known materials or refinements to existing arguments.[11] And second is the historian of religion's effort to establish continuities and changes between Muslim, Jewish, and Christian ritual;[12] to examine theological debates and discourses and assess their impact on the practice of faith; to weigh the effects of political agendas or other extrinsic socioeconomic forces.[13] Is it possible not merely to shuttle between these two disciplinary traditions and their legacies of conventional problems and questions, but to integrate them and thereby continue the visual and kinetic reconstruction and animation begun in the scholarly inquiries of Grabar and Elad?[14]

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[8] See ibid., 103, for a discussion of the foundation trope and its numerous resonances.

[9] See ibid., fig. 15 for the reconstructions, as well as a number of architectural plans of the mosque at Medina.

[10] For a history of the site and the mosque, see Jean Sauvaget, *La Mosquée Omeyyade de Médine. Études sur les origines architecturales de la mosquée et de la basilique* (Paris: Vanoest, 1947). For the modern history, in particular, and other references, see *Encyclopaedia of Islam*, 2nd ed. (henceforth EI2), s.v. "Madina" (W. M. Watt et al.).

My interest in this topic was aroused by the different disciplinary priorities evidenced in studies of pilgrimage but perhaps even more by a repertoire of two-dimensional images and how they embody and shape our understanding of space. (Made more urgent, perhaps, at a time when new media technologies appear to be directed toward the visual evocation of sensible and tangible truths). Such images include renderings in line of architectural plans, elevations, and perspectives; maps of various sorts; CAD image captures; and photographs. Many of these image-making techniques may be understood as remediations of linear perspective through photography; one of the consequences of photography has been the naturalization of perspectival orderings of visible phenomena, a process noted in passing by Erwin Panofsky in his *Die Perspektive als symbolische Form* of 1924.[15] Though most people would agree that all of these images are culturally encoded constructions of space, that is, culturally relative, and show that space is never "given," still others do not contest their power of logic and coherence, or of how they can approximate optical perception, what the person of sound ability takes in through his eyes.[16] For example, writing about representational traditions in the Islamic world, Jonathan Bloom remarks:

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[11] The Dome of the Rock provides a potent example of ongoing interpretation. See the essays by Oleg Grabar, "The Umayyad Dome of the Rock in Jerusalem," *Ars Orientalis* 3 (1959): 33–62; Priscilla Soucek, "The Temple of Solomon in Legend and Art," in *The Temple of Solomon: Archaeological Fact and Medieval Tradition in Christian, Islamic, and Jewish Art*, ed. J. Gutmann (Missoula, MT: Scholars Press for American Academy of Religion, 1976), 73–123; Nasser Rabbat, "The Meaning of the Umayyad Dome of the Rock," *Muqarnas* 6 (1989): 12–21; and idem, "The Dome of the Rock Revisited: Some Remarks on al-Wasiti's Remarks," *Muqarnas* 10 (1993): 66–75.

[12] From a large literature, see G. R. Hawting, "The Origins of the Muslim Sanctuary at Mecca," in *Studies on the First Century of Islam*, ed. G. H. A. Juynboll (Carbondale: University of Southern Illinois Press, 1982), 25–47; idem, "The Disappearance and Rediscovery of Zamzam and the 'Well of the Ka{ba'," *Bulletin of the School of Oriental and African Studies* 43 (1980): 44–54; Uri Rubin, "The Ka{ba: Aspects of its Ritual Functions and Positions in Pre-Islamic and Early Islamic Times," *Jerusalem Studies in Arabic and Islam* 8 (1986): 97–131; and Yehuda D. Nevo and Judith Koren, "The Origins of the Muslim Descriptions of the Jahili Meccan Sanctuary," *Journal of Near Eastern Studies* 49 (1990): 23–44.

[13] Studies on these themes include Juan E. Campo, "Authority, Ritual, and Spatial order in Islam: The Pilgrimage to Mecca," *Journal of Ritual Studies* 5, no. 1 (1991): 65–91; William R. Roff, "Sanitation and Security. The Imperial Powers and the Nineteenth Century Hajj," *Arabian Studies* 6 (1982): 143–60; and Mohammed Jamil Brownson, "Mecca: The Socio-Economic Dynamics of the Sacred City," in *Hajj Studies*, ed. Ziauddin Sardar and M. A. Zaki Badawi (London: Croom Helm, 1978).

[14] Spatial aspects of pilgrimage crop up in the scholarship, principally recurring through the theoretical model of Victor Turner, "The Center Out There: Pilgrim's Goal," *History of Religions* 12, no. 1 (1972): 191–230, but tend to retain their metaphenomenal character. Many other studies generally refer to boundaries or site markers—coordinates in space and what one encounters there—but only in passing (for example, see Anne H. Betteridge, "Specialists in Miraculous Action: Some Shrines in Shiraz," in *Sacred Journeys: The Anthropology of Pilgrimage*, ed. Alan Morinis [Westport, CT: Greenwood Press, 1992], 189–210).

> Literate people today tend to forget that the ability to conceptualize and represent three-dimensional spaces on two-dimensional surfaces (and decode these representations) is an extremely sophisticated skill, one that has been honed in the West since the Renaissance. There is no evidence that medieval Islamic builders, much less ordinary or even exalted folk, were able to think of buildings and spaces in this way.[17]

Bloom goes on to discuss the geographer al-Mas{udi's description of the ninth-century Hiri Palace and concludes: "Had al-Masudi known how to describe buildings as a succession of spaces or how to depict them graphically, he undoubtedly would have done so."[18] The implications of these assessments are obvious enough—they target both visual and verbal systems of describing architecture. The principal result of Bloom's assessments might be to discourage others from delving too deeply into representations of architecture or of places that seem to lack the visual traits of representations current during the Renaissance and later, and perhaps not at all in the Islamic lands.

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[15] Erwin Panofsky, *Perspective as Symbolic Form*, trans. Christopher S. Woods (New York: Zone Books, 1997), 34.

[16] Though Panofsky made perspective "culturally relative," he ends up using it, in Michael Podro's words "as providing an absolute viewpoint for interpreting other cultures" (Michael Podro, *The Critical Historians of Art* [New Haven and London: Yale University Press, 1982], 186).

[17] Jonathan M. Bloom, *Paper Before Print: The History and Impact of Paper in the Islamic World* (New Haven and London: Yale University Press, 2001), 175. Bloom has discussed this question in depth in an earlier study, specifically with reference to architectural design methods ("On the Transmission of Designs in Early Islamic Architecture," *Muqarnas* 10 [1993]: 21–28). For a sustained analysis of the role of notation in architectural practice, see Gülru Necipo•lu, *The Topkapi Scroll: Geometry and Ornament in Islamic Architecture* (Santa Monica, CA: Getty Center for the History of Art and the Humanities, 1995).

[18] Bloom, *Paper Before Print*, 176.

Nonetheless, buildings and spaces did exist as visual representations and were created within Islamic visual traditions and are deserving of more than a cursory analysis. Examples such as those found in the Great Mosque at Sana{a, Yemen (figures 3 and 4), embody the long-lived representational tradition that Bloom touches upon: a practice of representing architecture as a clearly defined, iconic form in which multiple viewpoints are collapsed and integrated into a singular visual scheme of maximal density. In one example (figure 3), a plan showing the outer perimeter of the building and its interior courtyard contains a series of sections—the elevations of successive arcades, each arch holding a lamp—stacked one on top of the next. This might look like a multi-storied building facade, but in fact shows a building in plan and elevation as well as exteriors and interiors simultaneously (that is, the facades of successive interior arcades and the plan of the courtyard at the centre). Though this tattered fragment still inspires debate about both date and provenance, it probably dates to between 691 and 743, and hence is among the earliest known representations of architecture from the Islamic lands.[19] The second representation (figure 4) manifests identical techniques of representing a building in space; its lower section, still complete, shows three elaborate entrances at the top of flights of stairs. In this example, an elevation is sutured directly onto a plan. The interior of the mosque, stacked vertically, is also composed through a succession of arcades, except that each one is doubled in height. These two representations attest to the early development of a visual language for depicting architecture—a visual portrayal of architecture that can accommodate much information in a single image—and show how that architecture was apprehended through movement (whether the eye reading the image or the imagination of a body moving through space).

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[19] See Marilyn Jenkins, "A Vocabulary of Umayyad Ornament: New Foundations for the Study of Early Qur'an Manuscripts," *Masahif San{a* (Kuwait: Dar al-Athar al-Islamiyya, 1985), 19–23; Hans-Caspar Graf von Bothmer, "Masterworks of Islamic Book Art: Koranic Calligraphy and Illumination in the Manuscripts Found at the Great Mosque in Sanaa," in *Yemen, 3000 Years of Art and Civilisation in Arabia Felix*, ed. Werner Daum (Innsbruck: Pinguin-Verlag, 1987), 178–187; idem, "Architekturbilder im Koran: eine Prachthandschrift der Umayyadenzeit aus dem Yemen," *Pantheon* 45 (1987): 4–20; and Oleg Grabar, *The Mediation of Ornament* (Princeton, NJ: Princeton University Press, 1992), esp. 155–193.

A corpus of pilgrimage scrolls (*darj*; pl. *duruj*), discovered in 1893 in the Great Mosque of Damascus after a fire count among the earliest representations of the cities of Islamic pilgrimage.[20] The scrolls were relocated to Istanbul where they are now kept by the Museum of Turkish and Islamic Art. The scrolls were first published by Janine Sourdel-Thomine and Dominique Sourdel in 1964 and then again in 1984.[21] More recently, “ule Aksoy and Rachel Milstein studied a selected group of scrolls and analyzed their visual programs more than Sourdel-Thomine and Sourdel had before.[22]

One hundred and fifty scrolls are extant. These are dated to between 1084 and 1310, with a peak in production around the periods of Seljuq (1078–1117) and Ayyubid (1186–1260) rule of Damascus. What Aksoy and Milstein deduced from the chronological sequence of examples is that the practice of adding images to the texts occurred around the late 1100s, though certificates without images continued to be made. Beginning in ca. 1193, representations of the holy places increasingly supplanted the accompanying texts that were now either squeezed between successive images or positioned in the margins. Despite the magnification and elaboration of representations, however, the monumental basmala—"In the name of God, the Compassionate, the Merciful"—positioned as the textual headpiece of the scroll was maintained. Many examples attest to the visual prominence of the basmala (figure 5).

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[20] Historically earlier depictions of the Meccan Ka{ba are found on carved stone plaques. Oleg Grabar studied one, dated 498 (1098), during a visit to the Baghdad Museum in 1956 (“Upon Reading al-Azraqi,” 6, n. 3). Another plaque was published in Paulo Cuneo, *Storia dell'urbanistica: il mondo islamico* (Bari: Laterza, 1986), 17. The brief caption identifies the plaque—showing only the al-Masjid al-Haram bracketed by texts—as dated in 1104, from Mosul, and owned by the Iraq Museum, Baghdad.

[21] Janine Sourdel-Thomine and Dominique Sourdel, “Nouveaux documents sur l'histoire religieuse et sociale de Damas au moyen age,” *Revue des Études Islamiques* 33 (1964): 1–25; and idem, “Une collection médiévale de certificats de pèlerinage à la Mekke conservés à Istanbul: Les actes de la période seljoukide et bouride (jusqu'à 549/1154),” in *Études Médiévales et Patrimoine Turc*, ed. J. Sourdel-Thomine, Culture et Civilizations Médiévales 1 (Paris, 1983), 167–273. The authors propose that the collection of the scrolls in the great mosque of Damascus results from the practice of displaying the documents as a sign of the pilgrim's successful completion of the *hajj* and or *{umra* (“Nouveaux documents,” 4). They do not address the larger context of the collection of documents, that is, a corpus of Qur'ans and pages from Qur'ans that suggests a geniza. Also see Janine Sourdel-Thomine, “Une image musulmane de Jérusalem au début du XIII^{e} siècle,” in *Jerusalem, Rome, Constantinople: L'image et le mythe de la ville au moyen age*, ed. Daniel Poirion (Paris: P.U.P.S., 1986), 217–233.

[22] “ule Aksoy and Rachel Milstein, “A Collection of Thirteenth-Century Illustrated Hajj Certificates,” in *M. Ulur Derman: 65 Ya‘Arma •anı*, ed. Irvin Cemil Schick (Istanbul: Sabancı Üniversitesi, 2000), 101–134.

The other texts were positioned as marginal borders, interstitial lines, or blocks of text written out in the spaces between images. The written components of the scrolls comprise the basmala, apt verses from the Qur'an, and texts concerning the pilgrimage and the pilgrim. The last include a detailed enumeration of the places to be visited and the rites to be performed. The texts usually begin with invocations to God and go on to mention the name of the individual who has performed either the major (hajj) or minor ({umra) pilgrimage, or both; and in the case of pilgrimages by proxy, which actually represent the majority of scrolls, the name of a third party is also given. In most examples, the scroll concludes with the signatures of witnesses who attest to the veracity of the pilgrimage (whether performed by substitution or not).[23]

After the preliminaries on one certificate recording an {umra—where the surrogate pilgrim, Fadaxil b. Mahmud, is introduced, stated to be known by the witnesses, and the beneficiary Abu al-Kataxib b. al-Ruhawi, is identified—the body of the text gives a narrative account of the rites performed. It reads:

> First he reached al-Tan{im, made two rak{a at the oratory of {Aysha, the mother of believers, who God is satisfied with as much as her father, and consecrated himself for an {umra…, maintaining the state of consecration all the time repeating the formula "Here I am" (labbayka) at every occasion, in easy and difficult passages, in rising and descending. He did not cease his labbayka until he saw the Ka{ba, the sacred house, brought himself before the black stone, kissed it, made the journey of the House seven times, entirely, three times running and four times walking, said invocations in favor of the above-named person at the four corners, as well as at the site of embrace, under the spout and nearby al-Mustajar, made the two

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[23] The subject of pilgrimage by proxy is understudied. General references to the practice note that according to a tradition of the Prophet Muhammad, the practice was legitimate on behalf of deceased relatives who intended but were unable to make the pilgrimage, or on behalf of feeble or unwell individuals. The substitute pilgrim was also required to have undertaken a hajj for himself before performing one by proxy.

The fact that many certificates were executed for people who had died before they had completed the rukn of pilgrimage raises intriguing questions about audience, questions that are beyond the reach of this study. Physical analysis of the certificates—and a much later traveller's account by Chardin—led Aksoy and Milstein to suggest that the scrolls were displayed in public ("A Collection of Thirteenth-Century Illustrated Hajj Certificates," 103–104). Sourdel and Sourdel-Thomine made the same suggestion ("Nouveaux documents," 4).

> rak{a of the circumambulation behind the station of Ibrahim, the friend of God—may peace be upon him—in accordance with God's words, may He be exalted!—"Make the spot where Abraham stood the place of worship" [2:125], entered under the dome of Zamzam, drank of its water, and sprinkled it on his body and on his clothes, seeking blessing and praise from God—"The water of Zamzam is useful, that was the intention in having drunk it," asked that God water the above-named person with the water reserved for the pure with the help of the cup of the chosen Prophet—may God grant him benediction and praise—left for al-Safa by the door of al-Safa, . . . recited the formula "God is Great," made numerous invocations in favor of the above-mentioned person, ran between al-Safa and al-Marwa seven times, in accordance with God's speech—may He be exalted—"Truly Safa and Marwa are the symbols of God" [2:158], hastened his pace between the two boundaries, shaved his head, deconsecrated himself and asked that the merit of this {umra be attributed to the above-named person—may God pardon him—. This blessed {umra took place . . . May God suffice as a witness.[24]

Like all other certificates, the text of this example concludes with the names of the witnesses.

Orthographic differences between texts in the body of the scroll and authenticating texts added by the witnesses suggested to Sourdel-Thomine and Sourdel that the scrolls were made in advance, speculatively, and later purchased by the pilgrim. Aksoy and Milstein's examination of the Damascus corpus bring us more specific information about each scroll: block-printed illustrations, a technique which they presume responded to high demand, "expanded continuously alongside the hand-painted ones. By the second quarter of the thirteenth century, it seems, only printed documents were produced."[25] They add that by the early Mamluk period even printed versions reduced in quality and that ultimately the illustrations were abandoned. Their research also showed the combination of block-printed calligraphy with handwritten passages, corroborating earlier theories that the prefabricated scrolls were customized by the addition of handwritten segments.[26]

Regardless of whether the specific pilgrimage involved the successful completion of minor ({umra) or major (hajj) pilgrimage, all of the scrolls from the Ayyubid period represent the full cycle of illustration according to a standardized order from top to bottom. They begin with the major stations of the hajj in Mecca and its vicinity and end with the Prophet's Mosque in Medina and the Haram al-Sharif in Jerusalem.

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[24] The text is translated from the French published in Sourdel-Thomine and Sourdel, "Nouveaux Documents," 24–25.

[25] Aksoy and Milstein, "A Collection of Thirteenth-Century Illustrated Hajj Certificates," 123–124.

[26] Ibid., passim. Their essay contains numerous observations about the certificates' production techniques.

One scroll dated to the Ayyubid period in 608 (1211) (figures 6 and 7) depicts schematic images of Mecca, Medina, and Jerusalem as a compressed column with little space left over for text (texts are omitted from Milstein and Aksoy's line drawings). Several of the components of the scroll are internally annotated with labels. The scroll begins with the first of several self-contained units corresponding to the plain of Arafat located at some thirteen miles east of Mecca. The complete pilgrimage—hajj—[27]was designated to begin on 8 Dhu al-Hijja, the twelfth month of the Islamic calendar, when pilgrims set out east from Mecca in a condition of ritual consecration (ihram). After spending the first night in Mina, pilgrims arrive at Arafat on 9 Dhu al-Hijja to begin the "standing" (wuquf), which lasts until sunset. Pilgrims listen to a sermon delivered after midday in recollection of one delivered by the Prophet Muhammad during his farewell pilgrimage of 632 when the requirements of hajj were first established.

Rather than sketch or present this spatial and temporal itinerary, the first image on the scroll depicts Jabal al-Rahma, the "Mount of Mercy" (also known as Jabal Arafat), on the plain of Arafat near a mosque that Ibrahim is thought to have built and that contained the preacher's pulpit. The Jabal al-Rahma is shown as a triangle surmounted by a domed structure containing a candle with flights of stairs on either side. Areas flanking the upper reaches of the mountain are filled with banners—set below the basmala—inscribed with the name of the ruling caliph, al-Nasir al-Din Allah (1180–1225). Immediately below the mountain is a rectangle containing images of boundary markers (a{lam) of the sacred precinct (haram), the mosque of Ibrahim with the preacher's minbar, a pool, and the tomb of Adam.[28] Two aspects of the scroll's images already become apparent: the practice of representing architecture and landmarks as delimited entities or visual icons; and the integration of viewpoints into single schemes that suggests an eye

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[27] Useful summaries of the rites performed during hajj and {umra can be found in The Encyclopaedia of Religion, s.v. "Muslim Pilgrimage" (Richard C. Martin); and EI2, s.v. "Hadjdj" (A. J. Wensinck et al.).

[28] All of these elements (and all others for the different sites of Mecca, Medina, and Jerusalem) have been identified by Aksoy and Milstein and are annotated in their meticulous diagrams.

(or a visual culture) accustomed to moving between representations of buildings in elevation and plan.

After a thin margin of paper another lateral band appears, this one signifying Muzdalifa. At sunset, the pilgrims break camp in Arafat and next go to Muzdalifa where they will pass the night of 9 Dhu al-Hijja. The image of Muzdalifa shows, from left to right, a mosque (al-mash{ar al-haram), its mihrab, wells (abar), and the "domes" (qibab) of Muzdalifa. Again, plan views are shown alongside sectional views and elevations through a network of lines that would receive colour.

After another gap on the scroll, also filled with text, comes Mina. Pilgrims arrive here on the morning of 10 Dhu al-Hijja, if they did not arrive earlier, and spend the next three days. During these days, the pilgrim throws seven stones at three pillars (jamra), popularly known as "satans," on each day, and on 10 Dhu al-Hijja performs a sacrifice ({d al-adha) and feasts in commemoration of Ibrahim (usually in the vicinity of the masjid nahr al-tashriq, "mosque of the sacrifice"), and visits Mecca for the "farewell circumambulation" (tawaf al-ifada). The pilgrim usually returns to Mina for 11–13 Dhu al-Hijja for days of relaxation.[29] Mina, concentrated around a row of shops, is also a place for the exchange of goods between pilgrims. Shops are usually represented by a line of domes (qibab Mina). The section of the scroll showing Mina comprises the pillars, the domes of Mina, and two mosques—the mosque of the sacrifice and the mosque of Khayf.

The largest and most detailed illustration in the entire cycle of the scrolls is for al-Masjid al-Haram in Mecca. Here the composition is divided into three components, the first one depicting a minaret and the madrasas of the Malikis and Shafi{is flanking the gate of Ibrahim. All of these structures were adjacent to the west wall of the mosque.

In the central and main section, the Ka{ba is encircled by numerous elements. These include the al-hatim, a small curved wall believed to mark the burial sites of Hajar and Isma{il and where the Prophet Muhammad slept on the night of his journey from Mecca to Jerusalem in 620; a staircase on wheels that facilitated access to the door of the Ka{ba; the well of Zamzam commemorating God's providential relief to Hajar; the "station" (maqam) of Ibrahim marking the final point in the circuit of circumambulation that sheltered a stone upon which Ibrahim stood and where he is said to have prayed toward the Ka{ba; and the "dome of drinking" (qubbat al-sharib).[30] A small arch, flanked by candles, below the Ka{ba, is probably the Bab al-shayba through which pilgrims entered the space of circumambulation (mataf). Four rectangular elements, depicted further away from the Ka{ba, have been identified as raised platforms for the four imams who represented the legal schools of Islam.

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[29] The various elements of hajj and {umra, and their level of obligation according to the four madhhabs of Islamic law, are usefully summarized in a table compiled by Muhammad Labib al-Batanuni, Al-Rihla al-Hijaziyya: li-wali al-Ni{am al-Hajj {Abbas Hilmi Basha al-Thani Khadiw Misr (Egypt [Cairo]: Matba{a al-jamaliyya, 1329/1911), 178.

The third component depicts the "trotting space" (mas{a), which the pilgrims traverse seven times, pacing between green posts. The mas{a, a distance of some four hundred and fifty yards, runs between the single arch of Marwa and the triple arch of Safa. Mt. Abu Qubays is shown adjacent to Safa. A fifth element comprises a domed structure nearby Marwa that Aksoy and Milstein identify as the Dome of {Umar (most of these components are annotated on the scrolls with small written labels).

After the completion of pilgrimage to Mecca, pilgrims often elected to travel to Medina and the Prophet Muhammad's mosque and tomb, though it was not required. In the scroll, the depiction of Medina is limited to the mosque, which is split into two bands comprising a covered hall and tomb and the open court. In the top section one sees a row of lamps running along the uppermost edge of the mosque's qibla wall and the tomb of the Prophet Muhammad, Abu Bakr, and {Umar. Adjacent to the tomb is a smaller element with a grilled wall called the mihrab of Fatima. The prayer hall is referred to as al-Rawda. The lower section—another rectangular strip—shows the mosque's courtyard as four rows or arches set on columns with depictions of palm trees and the small domed structure used to store oil and wax for lighting.

Immediately after Medina comes Jerusalem and the Haram al-Sharif whose sacred precinct is arranged as two sections with no space between them. The "Dome of the Temple" (Qubbat al-maqdis) is depicted at the top flanked by minarets. Below it are five elements comprising, from left to right, the mihrab of al-Aqsa or David, the cradle of Jesus, the rock stamped with the Prophet Muhammad's footprint, an olive tree, and the mihrab of David or Zakariyya (the father of John the Baptist).

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[30] Aksoy and Milstein identify it as the "siqayat {Abbas or al-qubba al-{abbasiyya of medieval literature, which sheltered a Qur'an from the year 18 A.H." ("A Collection of Thirteenth-Century Illustrated Hajj Certificates," 112).

These additional architectural notations show how conventional the representations of sites could become; conventional as individual components and as a repeated structure of successive places strung together as if it were a hanging necklace. These conventions of form and composition achieved a level of normativity for the pilgrimage certificate format and enhanced the documents' regulative nature and didactic tone. It is worth noting that the verbal texts accompanying the visual schema spend most of their time attesting—in the form of lists—to the prescribed actions and utterances performed by the individual pilgrim in the presence of specific places, actions or utterances that often required a specific spatial orientation. In some aspects, then, the combined effect of visual and verbal elements in each scroll is mutual cognitive reinforcement, the binding of actions to sites that together indicate the pilgrim's constitutive experience of space. And these spaces were pregnant with meaning for they were associated with events that occur within the total frame of Muslim cosmology, some ancient, others yet to happen. In performing the rites of pilgrimage, many of the actions are commemorative, intended to fulfil an obligation but essentially practices that establish reminiscences of the Prophet Muhammad, Ibrahim, Hajar, and Isma{il. This aspect of the pilgrimage is carried over to the pilgrimage certificate by its name, dhikr, which has the sense of "a recollection" (from the Arabic verb dhakara "to recollect"). In certain devotional settings dhikr also suggested repetition. The scroll, thereby, functioned as a visual and verbal reminiscence, recollecting a set of actions performed in sacred spaces.

The descriptive itineraries that have been rehearsed here for one scroll, but that are actually valid for many, highlight the conceptualization of each sacred space as a mapping of historically significant events that yield an accumulation of site "markers." These site markers are organized into coherent space-units, each unit separated from the next, gaps that were to be filled with text but that nonetheless signify distance (conveyed telegraphically) and thresholds between successive harams. The boundaries of these sacred precincts were marked by the {alam (pl. a{lam). Images of architecture control the apprehension of "specificity" by establishing a visual form that hovers between the "iconic" or "picture emblem"—the single feature that makes each site immediately recognizable—and the typological—morphological similarities, or a repertoire of signs, that speak to the sacredness of each place. The scrolls evidence a vector toward sameness, an abstracted affiliation between places that are separate, that have a genius loci, but that properly belong in the same category: in this case, places that are visited during pilgrimage. This feature brings us closer to a historicized conception of how images structured spatial experiences for contemporary pilgrims, and how their visual language privileged some aspects of experience and not others.

Other examples, from 1189 and 1291 (figure 8), indicate an alternative visual and verbal paradigm for the certificate to the ones previously discussed; their most striking difference is an increased visual dislocation between places. Because they are not positioned as a rapid sequence of slightly divided units, as was true of the paradigm in the example dated 1211, there is an increased tendency to see the units as autonomous and hence in a broken cognitive/visual structure. Linking successive units together requires more work in the examples dated 1189 and 1291. The specific interrelation of units is not constructed in the scroll's composition; the result is a diminished impression of pilgrimage as an itinerary and a reduced sensation of the pilgrim's experience of time passing as he moves between sacred sites. This type of temporal graphing is in distinct contrast to the paradigm of the 1211 example. What kind of temporality, then, does the 1211 certificate invoke?

What is most striking about the position of al-Masjid al-Haram and the Ka{ba is that their placement in the sequence of Meccan pilgrimage obligations emphasizes a temporality oriented toward the farewell circumambulation: the Ka{ba as a final destination before one leaves for Medina and Jerusalem. The "circumambulation" (tawaf)—seven circuits around the Ka{ba—and the "trotting" (sa{y) between Safa and Marwa, commemorating Hajar's search for water, together constituted the obligations of the {umra, or minor pilgrimage, which could be accomplished at any time in the Islamic calendar, though a certain season or times were favored more than others, for example, during the month of Ramadan. The completion of {umra did not necessarily coincide with performing hajj, though the Prophet Muhammad established the tradition of joining the two. Generally, the {umra is completed before 8 Dhu al-Hijja and the pilgrim's departure for Arafat which inaugurates the beginning of hajj. {Umra can be completed any time before the hajj—the only requirement is that pilgrims deconsecrate themselves after {umra and renew the process of ritual consecration prior to performing the hajj. It was possible to perform the sa{y after hajj if one had not completed this element of the {umra, that is having only accomplished the tawaf, prior to 8 Dhu al-Hijja. Equally, pilgrims could perform the {umra in its entirety after completing the hajj.

In the scroll of 1211 and many others of its type, the composition brings the viewer into a schematic image of pilgrimage showing the Jabal al-Rahma—Arafat's spatial designator—thus visually privileging hajj over {umra in accordance with their status relative to each other. The {umra is referenced in the central component through the appearance of the al-Masjid al-Haram, the Ka{ba, and the corridor running between the low eminences of Safa and Marwa. Together they configure the sites where the pilgrim performs circumambulation and sa{y and the numerous places visited by the pilgrim on the mataf associated with the Prophet Muhammad, Ibrahim, Hajar, and Isma{il. If this scroll were simply a visual itinerary of the hajj, there would be no need to reference Safa and Marwa because they are not typically involved in the pilgrim's farewell circumambulation that is undertaken after the pilgrim's deconsecration.

All of this is to note that the compositional arrangement of sites on this scroll and many others does not aim to lay out an itinerary that parallels a specific temporal combination of {umra and hajj; nor does it seek to produce a visual template for the precise sequence of hajj alone for it begins in media res at Arafat. Of course, these kinds of linear movements—dictated by the thin elongated column of the scroll—can be easily subverted by letting the eye follow pathways within individual spatial units, or by jumping from one unit to the next. It is also worth noting the fact that regardless of the specific pilgrimage rites written out in the text of the certificate—hajj or {umra—every certificate shows the sites of Mecca, Medina, and Jerusalem. Until the texts of the Ayyubid and Mamluk period scrolls have been published in their entirety, it will not be possible to determine if the practice and pattern of commissioning scrolls had changed since the earlier Seljuq period. If, for example, the custom of buying scrolls to commemorate the completion of a hajj increased. Sourdel and Sourdel-Thomine's exemplary analysis of the texts on certificates yielded a statistical reckoning that out of two hundred scrolls, only forty were for hajj (whether accompanied or not by an {umra), the majority recording solely {umras.[31] They do not indicate if this proportion applies to the total corpus of extant certificates across the entire historical period (from the Seljuqs to the Mamluks), or only to scrolls until ca. 1154 (which constitute the focus of their study of texts). To compound the difficulty, their textual study focuses on a corpus of scrolls that lack illustrations.

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[31] Sourdel and Sourdel-Thomine, "Une collection médiévale," 170. Their total count exceeds Aksoy and Milstein's by fifty scrolls.

The compositional paradigms developed for certificates and their visual conventions of arranging space and depicting architecture from the eleventh century until the thirteenth century continued in later periods. One certificate, dated in 836 (1432–3) and made for Maymuna bint Muhammad b. {Abd Allah al-Zardali, attests to this.[32] Its representation of the Ka{ba is the closest to the paradigms developed in the earlier scroll tradition, while its representation of Medina is now dominated by the tomb located in the covered sanctuary of the mosque. By the fifteenth century, the tomb offered the primary visual interest with the architectural enclosure reduced to a perimeter wall with suggested arcades.[33]

Another example, still later in date, is perhaps the best studied of all pilgrimage certificates.[34] It is a stunning certificate of a pilgrimage made by proxy (*Hac Vekaletnamesi*) on behalf of the deceased “ehzade Mehmed (d. 1543). The scroll is dated 951 (1544–45). The Ottoman ruler Suleyman the Magnificent, “ehzade Mehmed’s father, ordered the pilgrimage certificate. The certificate’s texts are bilingual. Those written in Ottoman Turkish are done in *nasta{liq* and identify the places represented on the scroll, while the stenciled bands of *thuluth* in Arabic record traditions of the Prophet Muhammad and verses from the Qur’an related to the *hajj*. These stenciled epigraphic bands function as frames for each of the scroll’s fifteen scenes. The scroll is structured as a series of panels showing the main stations of the pilgrimage at Mecca and in its vicinity; the shrine at Medina, showing the late-fifteenth-century restorations of the Mamluk Sultan Qayt Bay; and other sites to visit in the vicinity of Medina, including the cemetery al-Baqi; the monuments of the Haram al-Sharif in Jerusalem; and ends with the Prophet Muhammad's sandals. A short text concluding the scroll is an attestation by three custodians of the Meccan sanctuary, Khusraw, {Ali, and Mustafa, and an amir, {Ali b. Muhammad b. Husayn b. {Abd Allah, in which the scribe, Muhammad Abu al-Fadl al-Sinjari, writes that Piri b. Sayyid Ahmad has completed the appropriate pilgrimage obligations and rites. This portion of the text also identifies the deceased “ehzade Mehmed for whose benefit the pilgrimage has been performed. The general structure of the scroll departs from earlier models in that it begins with the al-Masjid al-Haram and moves out to Safa and Marwa, Mina, Muzdalifa, and then Arafat, before continuing with Medina, and concluding with Jerusalem and the Prophet Muhammad's sandals (na{ayn), that according to tradition grazed the throne of God during the Prophet Muhammad's ascension.[35]

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[32] London, British Library, Add. 27566.

[33] For illustrations, see Nurhan Atasoy, et al., *The Art of Islam* (Paris: Unesco and Flammarion, 1990), 10; and Desmond Stewart, *Mecca* (New York: Newsweek, 1980), 20.

[34] Istanbul, Topkapi Palace Library, H.1812, 524 u 460 mm. For a discussion of the scroll, see Emel Esin, “Un manuscrit illustré representante les sanctuaires de la Mecque et Medine et le dome du Mi’radj, à l’époque des Sultans turcs Selim et Suleyman 1er (H.982–74/1516–66),” in *Les provinces arabes et leurs sources documentaires à l’époque ottomane* (Tunis, 1984), 175–190; Zeren Tanındı, “Resimli Bir Hac Vekaletnamesi,” *Sanat Dunyamız* 9, no. 28 (1983): 2–5; J. M. Rogers and R. W. Ward, *Suleyman the Magnificent* (London: British Museum Publications, 1988), 100–101; and Rachel Milstein, “Drawings of the Haram of Jerusalem in Ottoman Manuscripts,” in *Aspects of Ottoman History: Papers from CIEPO 9, Jerusalem*, ed. Amy Singer and Amnon Cohen (Jerusalem: Magnes Press, 1994), 62–69.

Two aspects of this Ottoman scroll are striking. The first is its balancing act between tradition, manifest in its artistic conventions and the custom of making such visual and verbal documents, and the manipulation of tradition manifest in its attention to changes in the built environment and the reordering of the cities and sites appearing on the scroll. The specific content of the scroll reflects changes in the landscape of Mecca (and the other sacred precincts of Medina and Jerusalem) by showing new buildings or restorations to older ones. These are added to the scroll's visual catalogue. The other key change is the addition of the prophet's sandals. Such an addition might be seen as a culmination of the historically earlier scrolls, which implicitly linked Jerusalem to Mecca by showing the two close together on a single document. In the earlier, previously discussed examples, other connections of a geo-theological order were left to one's knowledge, extrinsic to the scroll proper. In the Ottoman example, on the other hand, the Prophet Muhammad's sandals function as a symbol of the link between Jerusalem and Mecca by invoking the Prophet Muhammad's night journey from Mecca to Jerusalem, and his ascension from Jerusalem to the banks of Kawthar and thence through the seven heavens of Muslim cosmology to the throne of God and on to paradise and hell. It is a powerful expression of the extension of a portion of Mecca's holiness to Jerusalem. The link between the two sacred sites is developed by the representation of the Dome of the Rock and the configuration of its sacred precinct—it draws a visual analogy to the Meccan Ka{ba and its haram. Moreover, the Prophet Muhammad's sandals point upward toward the Dome of the Rock, and beyond it lies the al-Aqsa mosque. All three components are thus oriented toward the qibla, a sacred direction that lies further up the scroll to the Ka{ba in Mecca. The observance of qibla in the last three visual components of the scroll creates a reverse linear order, again suggestive of the links between Jerusalem and Mecca.

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[35] The fifteen framed scenes, identified by Esin, are: 1. Ka{ba; 2. Safa and Marwa; 3. oratories of Mecca, the house of prophet; 4. mosques of Muda{a and Rayat; 5. mountains associated with events in the life of the Prophet Muhammad; 6. Mina with mosque of Khayf and house of the Sharif of Mecca; 7. mosque of Mash{ar al-Haram at Muzdalifa; 8. the plain of Arafat with pilgrims' tents; 9. monuments on the road to Judda, the cemetery of Shubayka, and the tomb of Mahmud, son of saint Ibrahim Adham; 10. Medina, mosque of the Prophet Muhammad; 11. cemetery of al-Baqi in Medina; 12. the surroundings of Medina; 13–14. Haram al-Sharif in Jerusalem; 15. the Prophet Muhammad's sandals (na{layn). For an expanded enumeration and description, see Esin, "Un manuscrit illustré."

The second intriguing aspect of “ehzade Mehmed's scroll is its apparent resistance to other modes of representation that were being explored at the same time, especially manuscripts making up Matrakci Nasuh's history of the Ottomans. In each manuscript—including the best known work of Matrakci's opus, the Majmu{-i menazil (The Sum of Halting Places) of 1537–38—ways of suggesting space fold together conventions adopted from topographic and cartographic sources, including the bird's-eye view and the diagrammatic, schematic language used to show monuments and cities in the historically earlier traditions of the pilgrimage scrolls.[36] Historical manuscripts were peppered with representations of cityscapes under the Ottomans, and coincided with a broader movement across a variety of literary genres to include depictions of places in books.

These books included books of prayers containing selections from the Qur'an, lists of the names of God, and verbal portraits of the Prophet Muhammad and the first four caliphs, as well as pilgrimage guides including descriptions of the holy places, such as Muhyi Lari's Futuh al-Haramayn from before 1526–27.[37] Muhyi Lari's book contained poetical descriptions of Mecca and Medina. Images of the holy sites of Mecca and Medina figure prominently in the frontispieces to Muhyi Lari's text, and others too, representations that had achieved iconic status by virtue of a longstanding visual tradition. They draw on the traditions developed in the pilgrimage certificates of earlier centuries, and like the Ottoman certificate, do not employ the way of showing views associated with the cartographic and topographic modes.

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[36] The heavily illustrated manuscript recorded the halting places of Sultan Suleyman the Magnificent's campaign to the "two Iraqs" in 1533–35. The manuscript is in Istanbul, Istanbul University Library (T.5964, 109 ff., 315 u 235 mm).

[37] He dedicated his work to the Sultan of Gujarat. The text is a general description of the station and rites of pilgrimage, together with the customs and sacrifices.

It may well be that these new, alternative graphic modes that were being explored in the sixteenth century were pre-empted by the sheer weight of an artistic tradition in the specific format of the pilgrimage scroll, except that sacred spaces shown in the Ottoman scroll acknowledge the force of history, that these sites and their architectural configurations had changed over time. At some level, then, the scroll could adapt to an external reality. One could also argue that the legal status of the pilgrimage scrolls—documents proving the successful completion of a religious duty by a person or his surrogate—also encouraged the development of a routine visual language. And yet, that would not explain the easy transfer of visual prototypes from scrolls to books.

In the final analysis, the visual language of these depicted sacred spaces—first known in scrolls and later continued in scrolls and also transferred to books—favors continuity in the face of change by retaining a diagrammatic conception which privileges abstraction as its primary mode. We are called to recollect or imagine these places, and our or someone else's itineraries through them, by way of a series of iconic wholes that evade description.[38] While particularity is not completely eschewed—after all, each place is sufficiently differentiated from the next—morphological and typological similarities are stressed. There is little to distract our attention, a focus held in tow by the aural and kinetic aspects of the certificate that are embedded and encoded in its verbal texts, texts that are performed during the activity of seeing the sacred sites represented on the scroll. In this respect, the encounter and experiences of space imagined in the scroll, and reconstructable through our interaction with it, lies somewhere between the concepts of

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[38] In a brief assessment of images of the holy cities, Grabar noted the absence of description and proposed that they were intended as "evocations of holiness" ("Upon Reading al-Azraqi," 1). He goes on to contrast the visual polemic of the images against the descriptive properties of many visitors to Mecca and other holy sites. This comparison—between the nature of experience fostered in pilgrimage accounts and other written sources and the images of holy places appearing on pilgrimage certificates or books of different sorts—merits further analysis.

Grabar and Elad. The experience of space proscribed in the certificates is one in which the pilgrim does see the material forms before him and is conscious of the distances he traverses, but the pilgrimage cities are an aggregate of signs that prompt him to do or say something, signs resonant with historical events and meanings.

THE MANAGEMENT OF THE CITY

André Raymond

The following treatment concerns the city that might be designated "traditional," before, that is, the episode of modernization that began in the nineteenth century. It is a city whose characteristic features are fairly well known to us, given that these are still visible in what remains of ancient cities more or less preserved in the "medinas," a city on which our information is especially plentiful thanks to the wealth and variety of the sources available to us (historical records in particular) and to descriptions made of it on the verge of the contemporary era, based on a cartography now become scientific.

This study will limit itself to the Mediterranean Arab cities, which are the best known, and whose characteristics are sufficiently homogeneous for generalizations to be made about them—which would not be the case, if we tackled the "Islamic" domain whose extent and variety make any overall description somewhat difficult. We shall thus be dealing, essentially, with the major Arab cities of the Ottoman Empire, including Moroccan and Yemeni cities that are extensively and precisely documented.

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We clearly need, first of all, to recall "classically" developed representations of the administration of the Arab city. Orientalist doctrine in this connection was essentially stated by Jean Sauvaget, in his studies of Damascus and Aleppo, and then given its final formulation in the work of Gustav von Grunebaum. "The status of cities," J. Sauvaget wrote, "is the subject of no specific provision on the part of Islamic Law. There are thus no longer [in contrast to the city of Antiquity] any municipal institutions. The city is no longer regarded...as an entity, as something having its own existence, complex and alive; it is now merely a meeting of individuals with conflicting interests." The city is breaking up, is becoming "an inconsistent and inorganic assemblage of quarters." Scarcely administered, if at all, abandoned to the arbitrary decision of the prince, the city is "the negation, as it were, of urban order."[1] G. von Grunebaum speaks in similar terms: "The apparent inconsistencies which we observe in the administration of any major Muslim town in which there does not exist any code regulating the competence of government and citizenry are due largely to a concept of governance which fails to set clear-cut limits to the executive and which, at the same time, seems to assume that, where the government fails to interfere, more or less normal, traditional bodies will take charge. Thence appears the impression of jerkiness, of whimsicality, and at any rate of arbitrariness which is provoked by the spectacle of the frequent shifts from an extreme laissez-faire to an equally extreme regime of state control."[2]

A city thus bereft of specific legislation and administration, and given over to the negligent and arbitrary ways of its rulers, should, in fact, present a spectacle of total urban anarchy. And this is indeed the firm impression given by writers of classic works, like those of Jean Sauvaget on Aleppo or Marcel Clerget on Cairo, in their general treatment. Yet, at the same time, the descriptions they provide show clearly enough that these cities have in no way sunk into the urban disorder propounded. There is an evident contradiction between theory and the practical observation of cities which have endured and in most cases have prospered; and this contradiction can be resolved only by a study of the devices whereby these cities were nonetheless able to function. Some of these devices might bear a specific character and offer original solutions to problems tackled differently in another cultural environment.

2. Urban authorities

On highly distinct levels, and with highly diverse responsibilities, authorities did in fact intervene in the management of the city, however much it may have lacked its own proper status.

In the case of cities belonging to the Ottoman Empire, the effects of central government intervention were felt in the provincial capitals—at least during the period when sultan authority was still perceptible in the provinces—and this was naturally more marked in those provinces that were closest to the centre. From this viewpoint, there is a large difference between distant provincial capitals like Algiers and Tunis, where it is virtually impossible to discern any intervention by the central power, and a province like that of Aleppo, where the Sublime Porte's concern over the city's problems is manifested in Sultanic Orders (awamir sultaniyya) up to the beginning of the second half of the eighteenth century. We may note, for example, decisions concerning the city's water supply (upkeep of the water conduits for the city, or for a quarter, in 1742), the organization of abattoirs (1725, 1733, 1762), the organization of the road network (widening of a road in 1739), measures concerning public morality (problems posed by the mingling of the sexes in the markets or gardens, in 1739 and 1742).[3] In contrast to this variety of concerns, the case of Cairo, in a province which quickly escaped the direct influence of the sultanate, reveals less frequent interventions, and these only in connection with the earliest period. The most noteworthy case is that of the shifting of the city's tanneries (madabigh) from a site that had become too central (to the southwest of Bab Zuwayla) to a more exterior location (round about Bab al-Luq); a sultan correspondence, in 1552, instructs the Pasha of Cairo to consider the shifting of establishments that are "liable to cause harm to our children" to a more suitable place outside the walls.[4] The transfer would be carried out around 1600.

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[1] Jean Sauvaget, "Esquisse d'une histoire de la ville de Damas," *REI* 4 (1934): 455–456; idem, *Alep*, 2 vols. (Paris, 1941), 247–248.

[2] G. von Grunebaum, *Islam* (London, 1961), 149–150.

Given their proximity, the local political authorities naturally played a more active role, though their interest in urban problems inevitably lessened as their political weight grew less; such was the case with the pashas sent by sultans into those provinces of the Empire where the Porte still maintained a degree of control over local matters. But governors could not neglect problems liable to provoke disorder in the province with which they had been entrusted. Over two centuries the pashas in Cairo demonstrated a real interest in urban affairs: Muhammad Pasha (1607–1611) had a cubit of land removed in the streets of Cairo, where the level had been raised by the accumulation of dust and rubbish; Muhammad Pasha (1652–1656) instructed those in charge of the Cairo mosques to have them repaired and whitened, which gained him the sobriquet "Abu 'l-Nur" ("father of light"); Muhammad Pasha

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[3] André Raymond, Grandes villes arabes (Paris, 1985), 128–129.

[4] See A. Raymond, La ville arabe, Alep (Damascus: IFD, 1998), 38–40.

(1699–1704) took measures to widen the markets and had a cubit of accumulated earth removed. In Damascus in 1757, Musa Khikhiya, the representative of Rajib Pasha, instructed the population to restore the old houses in the city quarters. In the North African Regencies, in Algiers and Tunis, a comparable role was played by the local political authorities, the deys and beys, who were the real holders of power alongside pashas reduced to an honorific role. {Ali Neksis, Dey of Algiers (1754–1766), who has received a bad press from historians, restored or built thirteen fountains between 1759 and 1765, to make good the damage caused by the 1755 earthquake. One of these bears the following significant inscription: "{Ali Pasha thought to win salvation through the use of his wealth, in performing a charitable work." In Tunis it was the deys, then the beys, who played this "municipal" role on behalf of the population of the capital for which they bore responsibility: the Hussayni {Ali Bey (1759–1782), to remedy the problems posed by over-population in some quarters of the city, gave instruction that the Tanners' suq, which was sited within the walls to the north-east of the Medina, should be transferred beyond the enclosure, round about the Gate of the Sea (Bab al-Bahr).[5]

In most provinces of the Empire, the chiefs among the Janissaries, the principal militia set up on the spot to ensure security within the province, were drawn to play an important role: in policing, obviously, but sometimes, too, in particular problems regarding urban affairs. In Cairo, in 1703 and 1711, {Ali Agha made arrangements to have the streets cleansed of the earth that had accumulated there, and to ease movement within the markets by tearing down the benches (mastaba) set up in front of the shops.

Too little attention has been given to the part played in urban affairs by the judges, who were called to rule on a wide variety of suits in every sphere touching on the lives of individuals; and inevitably, therefore, touching on problems regarding what might be called the city's administration. The multifarious activity of the qadis led, inevitably, to the formulation of a kind of doctrine, or principles at least, on which a clear light has been shed by R. Brunschvig: his study deals specifically with the Maliki jurists of the Maghreb in the medieval period, but it is clearly valid for every legal school and every period. The rulings in question concern problems of the road system (streets and cul-de-sacs), of the solidity of the walls, etc. There can be no doubt that, over the course of the Ottoman period, the jurisdiction of the qadis showed a certain tendency to increase, to the point where it covered a very large area of urban affairs; this is shown even by a relatively succinct inventory like that carried out by Galal el-Nahal in the archives of the Judicial Court (mahkama) of Cairo: interventions to allow freedom of movement in the streets (so as to ensure that "a mounted soldier or a loaded camel" could proceed without difficulty), to safeguard privacy and the quality of neighbourhood (troublesome noise), to check the effective solidity of buildings, etc. With regard to a more modern era, S. A. Hathloul shows clearly how, in the detail of decisions taken on a case by case basis in Medina, a clear and coherent doctrine has emerged regarding the main urban problems: ideal width of streets, protection of public ways against encroachment, protection of private life, and of access to light and air.[6] It can be seen that the actions of the qadis were above all suppressive: that is, they sought to provide a remedy for wrongs and possible abuses. Within these bounds, nevertheless, such actions allowed the resolution of many of the problems posed by urban life, and the formulation, indeed, of a kind of regulatory norm in the absence of specific regulation.

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[5] Raymond, Grandes villes arabes, 125; H. de Grammont, Histoire d'Alger (Angers, 1887), 309–314; Gabriel Colin, Corpus des inscriptions arabes et turques de l'Algérie (Paris, 1901), 1:117–128, nos. 77–88.

We also need to take account of the presence, in "traditional" cities, of strictly urban officials responsible for resolving the problems posed—and this despite the somewhat radical statement of J. Sauvaget: "As an integral, indivisible part of the wider Muslim community, [the city] no longer has anyone enabled to manage its destinies, with full knowledge of the case and in exclusive fashion."[7] Cities traditionally possessed two specialized officials: the muhtasib and the wali. Doubtless the muhtasib ("provost of the markets") had lost part of the very broad prerogative for the censoring of morals that the medieval official had enjoyed—all the more so, perhaps, on account of the growing part played by the judge. In most cities the activity of the muhtasib focused on the supervision of those whose professions involved the provision of food, and of the appropriate markets for this in the city centre; this work he carried out to the picturesque accompaniment of a cortège comprising bearers of scales and executioners; the immediate and inventive punishments he inflicted (on the unscrupulous butcher from whom a piece of buttock would be cut off, the fraudulent pastry-cook made to sit on his burning hot tray) stimulated lively interest in chroniclers and travellers, but would certainly have had a dissuasive effect on shopkeepers. The wali ("governor"), also called subashi or za{im, had prerogatives of night policing, which meant he played an active role in the fight against fires; in Cairo the wali had the use of premises in the city centre from which watch could be kept for possible outbreaks of fire, and teams from the appropriate professions (water carriers, fullers) sent out to extinguish them.[8]

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[6] Robert Brunschvig, "Urbanisme médiéval et droit musulman," REI (1947); Galal H. El-Nahal, The Judicial Administration of Ottoman Egypt (Minneapolis, 1979), 52–53; Saleh al-Hathloul, Tradition, Continuity and Change in the Physical Environment [thesis] (Cambridge: MIT, 1981), 83, 128.

[7] Sauvaget, "Esquisse," 440, 455.

No doubt there were other officials. In any case, while it may not be possible to know the reason for this regional difference (which may stem from a difference in the information we have), we may note that the major cities of the Maghreb were generally endowed with a greater variety of urban authorities. In Tripoli (from the eighteenth century at least) there was a shaykh al-bilad assisted by a jama{a al-bilad , an assembly made up of city notables. In Tunis the Medina and its two suburbs, northern (Bab al-Suwayqa) and southern (Bab al-Jazira), were endowed with shaykhs appointed by the authority and having powers of urban policing, especially at night. Algiers had a shaykh al-balad (or shaykh al-madina), assisted by naybs and amins, who was responsible for policing and for various urban functions (upkeep of roads, cleaning). Its premises were located, significantly, right in the city centre, near the palace of the dey. In Fez the sultan appointed a governor ({amil), who exercised administrative and judicial powers in the madina with the assistance of the muhtasib and the qadi.[9]

All things considered, then, there was no lack of officials liable to concern themselves with urban affairs, whether on the highest political level or on a more local level. This intervention of the political power in urban affairs was not without its drawbacks, given that a specific urban domain was not always defined with regard to the different officials involved; this could well lead to an overlapping of jurisdictions, and to conflicts—given, too, that the varied elements living in the city (minorities of every kind) were likely to be answerable to various officials on account of exemptions they might enjoy. Such a situation could only lead to a degree of incoherence in the management of urban affairs and meant that the authorities had to respond, in an emergency, to difficult situations that demanded immediate redress, rather than being able to devise a coherent urban policy.

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[8] André Raymond, Artisans et commerçants au Caire au XVIII$^{\text{ème}}$ siècle (Damascus: IFD, 1974), 608–609.

[9] Nora Lafi, Une ville du Maghreb (Paris, 2002), 105 et seq.; Tal Shuval, La ville d'Alger vers la fin du XVIII$^{\text{ème}}$ siècle (Paris: CNRS, 1998), 172; R. Le Tourneau, Fès avant le protectorat (Casablanca, 1949), 211–212.

3. Urban communal institutions

The numerous "groupings" (tawaxif) that existed in cities (corporate bodies on the professional level, communities of quarters on the geographical level, ethnic and religious communities) to some extent mitigated these gaps in the management of the city. While they cannot, of course, be regarded as "municipal" institutions, these groupings nonetheless played an active role in urban life. The relatively "decentralist" outlook of the Ottomans—who made practical use of such "natural" groupings for the management of their vast territories, thereby relieving themselves of the need to administer directly—doubtless contributed to reinforcing the autonomy of these groupings and the part they played. We see here one of the most original aspects of the structure of Arab cities, and one that has been generally neglected by the classic writers, who have, as such, been prevented from understanding the way these cities functioned. The subject is, it must be conceded, a somewhat difficult one, by reason of a lack of specific documentation regarding these diverse communities, who have left no records; this no doubt explains the scarcity of research on the problems in question.

The professional corporations brought together the active population: that is to say, the entire "native" population with the sole exception of the {ulama.[10] The number of these corporations obviously depended on a city's importance and economic activity: Algiers had only 57, whereas Cairo had close to 250 in all. These corporations were run by shaykhs (amin in Tunisia and Algeria), commonly chosen by the corporation's members but invested by the authorities who could, in case of difficulty, intervene more directly in the process of appointment. The corporations had as their main aim the supervision of their members' professional activity, but, if we take into account the strict localization of professions, and the link that existed between an activity and a particular geographical sector of the city, these guilds played an inevitable part in the administration of the markets, substantial numbers of which were situated in the city's central district. The heads of corporations concerned themselves with security within the geographical area which the profession occupied, and which could be closed off by gates shut during the night when movement was commonly forbidden in the city. The professional bodies were, thus, associated with the administration of the city, being effectively a kind of "para-administrative" cell permitting management of the city with respect to its (central) public part. It is not certain that this corporate organization was subject to any strict hierarchy, at least in the Mashriq; Damascus is, to the best of our knowledge, the only city where there existed a shaykh al-mashaykh (shaykh of shaykhs)—and his prerogative may indeed have been no more than honorific. In the Maghreb things were different. In Tunis the corporate organization was headed by the chief trader (amin al-tujjar) who was also the head of the Andalusian makers of sheshias, these immigrants having apparently reconstituted the Tunisian corporate organization after their arrival from Spain around 1609. In Algiers there was likewise an amin al-umana (shaykh of shaykhs); he governed the corporations in accordance with a regulation (qanun al-Jazaxir {ala 'l-aswaq), which fixed the rules of competition between craftsmen. In Yemen the Sana{a market was similarly governed by a shaykh al-mashaykh, with a ruling here (qanun Sana{a) also fixing the rules for the functioning of the fifty or so professions involved.[11] These personages were clearly called upon to play a role alongside the governing class in administering the central part of the city where the corporations operated.

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[10] See, in the present work, Nelly Hanna, "Guilds in Recent Historical Scholarship."

This role in the administration of subjects was still more evident in the case of ethnic and religious communities which grouped together the numerous minorities present in the major Arab cities. Of these the most widespread was the Jewish community which was to be found in every city from Morocco to Iraq; and Christian communities existed in every major city of the Near East. But likewise to be found were Kurdish communities (in Damascus), Alawi communities (in Antioch), Mozabite communities in Algiers, and so on. In the case of the Christian and Jewish "protected people" (*dhimmis*), and the Muslim communities most markedly individualized by difference of language or rite, such communities tended to congregate in one part of the city (or in several parts, as with the Copts in Cairo). In accordance with the general tendencies of the Ottomans' provincial administration, these minority communities were accorded a broad degree of autonomy; this was especially effective when the communities in question were strongly concentrated. In such a case the religious heads under whose authority they were placed, and who took responsibility for their administration, supervised, under the aegis of the Ottoman authorities, a specified sector of the city within which administration was carried out through their mediation. Whole sectors of the city were, thus, placed under a quasi-autonomous religious, administrative, and financial authority. These sectors could be lying quite far away, like the Jewish quarter in Sana{a, the Jewish quarter in Mosul, the Alawi quarter in Antioch, the Christian quarter in Aleppo, the Kurdish, Jewish, and Christian quarters in Damascus, or the Coptic quarters in Cairo. Often, though, they were very close to the city's central district, like the Jewish and Christian quarters in Baghdad (fig. 1), the Jewish quarter in Aleppo, the Jewish quarter in Cairo, or the Jewish quarters in Tunis and Algiers. The broad administrative autonomy accorded to such communities naturally facilitated the task of the Ottoman authorities who were, thus, released from the responsibility entailed in the administration of populations whose religion, culture and sometimes language were different from those of the dominant Arab and Muslim population. Such autonomy must certainly have helped in the noteworthy rise of Christian communities in particular, over the three centuries of Ottoman domination (fig. 2).

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[11] R. B. Serjeant and R. Lewcock, San{a (London, 1983); Raymond, Grandes villes arabes, 130–133; Houari Touati, "Les corporations de métiers à Alger," Revue d'Histoire Maghrébine 47–48 (1987): 267–292; Nacereddin Saïdouni, Règlement des souks d'Alger, Beyrouth, 2006.

Within the residential zones situated around the "public" centre, in the "private" part of the city, the city was divided into residential quarters that were relatively distinct geographically and partially autonomous from the viewpoint of their administration.[12] What we have here is doubtless an old-established phenomenon, one that sometimes reflects the original concern to lodge the varied groups present at the city's foundation; in Cairo the Maghrebi contingents that had accompanied the Fatimid army in 969 settled in this way, in specified quarters whose names were preserved in the topography of the city. Subsequently, considerations of security reinforced this fragmentation, which no doubt became accentuated in the modern era, given the "decentralizing" viewpoint of Ottoman administration.

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[12] Raymond, *Grandes villes arabes*, 129–139.

These residential quarters bore various names: hawma in Algiers and Tunis, hara in Cairo, Damascus, and Sana{a, mahalla in Aleppo, Mosul, and Baghdad. But their structure was identical from one end of the Arab world to the other (fig. 3): an entrance that could be closed by means of a gate (fig. 4) giving access to a main street (darb) sub-divided into secondary streets, then into cul-de-sacs; the edge of the quarter being marked not by a wall, but rather located between the last houses of the quarter and the houses of the neighbouring quarter, on to which they backed. The surface area of quarters varied greatly: in Cairo it ranged from 0.25 hectares to more than 7 hectares, with an average of 2 hectares, representing a population of around 600 to 800 people, one small enough to allow personal relations among the inhabitants and to ensure the possibility of individual supervision. The number of quarters obviously depended on the city's importance: there were around 40 in Tunis, around 60 in Baghdad, around 100 in Cairo.

Just like the professional bodies, the quarters constituted an elementary division for the city. They were placed under the authority of shaykhs (called muharrik in Tunis, {aqil in Sana{a), who were assisted by deputies and sometimes by subordinates (who might be scribes). We may assume that shaykhs of quarters were commonly chosen from among the families of notables, very probably by the inhabitants themselves, with the possible intervention of the authority, especially if a problem should arise. The shaykhs' powers were, essentially, to help ensure security and order within the quarter, and to settle any internal disputes that might arise; in this they might be aided by the presence of a watchman (bawwab), or even of a number of guards in a post situated at the entrance to the quarter—and also, no doubt, by the presence of militias made up of inhabitants ({assa in Tunis) or young people (the Damascene futuwwa). The task was eased by the small-scale nature of the unit involved: inhabitants could, finally, exercise a strict control on themselves, noting the presence of alien, suspicious elements and picking up any deviant behaviour on the part of the actual inhabitants, especially in matters of morals; undesirable types were spotted without difficulty, and could, if necessary, be expelled from the quarter. During the night the gate to the quarter would be closed, and no one could now move around the city without making himself known. The shaykhs of the quarters were the natural intermediaries between the authorities and the population; they were expected to apportion urban taxes or exceptional contributions among the residents, and to call upon them when the authorities required the population to provide labour for works in the general interest.

It is clear, finally, that the quarter was the framework for the settlement of minor urban problems about which residents made application to the judicial authorities. This is shown by examinations made of the Cairo court registers. In a matter relating to potential nuisance from the setting up of a workshop, an inquiry is made on the order of the qadi; the people of the hara are in favour of the project submitted to them, deeming it useful for the quarter, and the judge comes to a decision in accordance with this view. The inhabitants of a quarter complain that their mosque has been neglected; the judge accepts this, and measures are taken for the pious foundation (waqf) concerned to intervene to repair the building.[13]

When we consider the extent of the zones thus broadly entrusted to groupings endowed with a degree of autonomy (the central districts with respect to the professional bodies, the residential zones with respect to the quarter communities, the zones inhabited by religious and ethnic communities), we see that a very substantial part of the city was delegated in this way by the Ottoman power to a local administration. Such a system was indeed liable to lead less to urban anarchy than to a supervision all the more rigorous for being carried out by the inhabitants themselves, in a regime of collective responsibility whereby the whole community was stricken in case of infringement. We are, in fact, very far from a population given over to individualism, in the way described by J. Sauvaget. We should rather view city-dwellers, enclosed within networks superimposed on one another and supplementing one another, as being subject to a close and permanent supervision, over the various phases of their existence: by means of professional communities in the framework of their working activities; by virtue of quarter communities over the private part of their existence; or else, in the case of minorities, within ethnic and religious communities. These different communities in some degree mitigated the absence of civil society, providing the social bonds that enabled life to be carried on in the context of substantial collective structures. The city-dweller emerges not as an isolated individual, confronted by an often alien authority, but as a social being, fitting closely within a network of solidarities whereby he was controlled but also to some extent protected.

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[13] El-Nahal, Judicial Administration, 53, 55. See, in this work, pages 62 and 63.

4. Religious foundations (*waqf*, *habus*)

A determining role was played, in the management of cities, by the Muslim institution of the *waqf* (*habus* in the Maghreb).[14] The general principle of the *waqf* is well known: "a mortmain good that has been declared inalienable by its owner, and the income from which is dedicated to a precise use, specified by the donor, in such a way that his foundation is pleasing to God."[15] In urban practice, the setting up of a *waqf* for the purposes of a monument or religious work was most commonly effected by the "mobilization" of buildings used for economic purposes (suqs, shops, caravanserais, public baths, cafés), whose income would be set apart to ensure the permanence of the institution. While it did sometimes happen that buildings "mobilized" in this way were already in existence and were acquired by the one setting up the foundation (*waqif*), it was likewise common for the latter to construct them himself, with a view to their being used in the context of his foundation. Since, for convenience of organization and management, the construction benefiting from the *waqf* and the constructions erected to endow it were often situated in the same zone, the setting up of a *waqf* could become an urban operation; one which, in the most substantial cases, affected a whole quarter and finally led to a complete re-modelling of a sector of the city. In fact, this occurred frequently during the Ottoman period, when, for various reasons, there was a huge activity in the setting up of *waqf*s and *habus*. The number of *waqf* documents preserved for the city of Cairo alone is considerably more than ten thousand, while in Algiers, before 1830, it is considered that 840 houses and 258 shops were constituted into *habus* simply for the *habus* of the two Holy Cities (*Haramayn*). Viewed in this light, *waqf*s are indicators of urban flow, showing the sectors where the city's dynamism was being asserted; and they represented, indeed, a practice that ensured the city's expansion during periods of urban development, such as the Ottoman period was in most of the major Arab cities.

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[14] On these problems see, in the same work, Randi Deguilhem, "The *Waqf* in the City."

[15] Dominique and Janine Sourdel, *Dictionnaire historique de l'Islam* (Paris, 1991), 849.

It is hardly necessary to labour the point.[16] We shall simply set down here some examples of operations of this nature that punctuated and shaped the urban expansion of Cairo, Aleppo, and Tunis in the sixteenth and seventeenth centuries. In Cairo, three waqfs, brought into being by Iskandar Pasha (1555–1558), by Ridwan Bey (between 1629 and 1647) and by Ibrahim Agha of the Janissaries (between 1632 and 1657), and sited within the zone to the south of Bab Zuwayla, accompanied the urban re-arrangement witnessed by this southern district of Cairo, at the time when the city tanneries were being displaced—this also being a factor in the district's urban development. In Aleppo four great waqfs (of Khusru Pasha in 1544, Muhammad Pasha Dukakin Zada in 1555, Muhammad Pasha in 1574, and Bahram Pasha in 1583), set up in the south of the central economic Mdineh district, led to a complete remodelling of this vitally important district and ensured that it virtually doubled in size within forty years or so, from 6 to 11 hectares, vis-à-vis its surface area in the Mamluk period. In Tunis the works of Yusuf Dey around its Suq al-Bashamkiyya mosque (1615), a little to the west of the Great Mosque (involving the building of a madrasa, markets such as the Suq al-Truk, a public bath, and a café), were carried out by means of habus and signalled the expansion, subsequently pursued, of the central zone of Tunis, whose surface area may be considered to have increased, within a few decades, from 4 to 6 hectares, a development of fifty per cent.[17]

The waqfs provided, then, a juridical framework allowing for the urban development of cities in the context of the architectural operations to which they gave rise. But, within the ambit of its religious and charitable aims, the institution itself permitted the building and financing of what we would regard as establishments of public utility. The conception of a pious work was sufficiently broad to embrace, for example, not only educational institutions (elementary schools, madrasas, mosque-universities), and public health establishments (hospitals)—all of which functioned by means of waqfs—but also what we would regard today as simple public services: the cleaning of the city, for instance, or the provision of water. It was in this last field especially that recourse to waqfs proved crucial: there are numerous examples, whatever the particular means of providing water for the city in question. We shall be returning to this point, and will just briefly note a number of examples here. In Aleppo waqfs were employed, on the responsibility of judges who supervised the use of the sums available, for the upkeep of canalizations bringing in the water. In Cairo the public fountains (sabil), which could be stocked with water conveyed by porterage from the Nile, were likewise the subject of foundations that regulated the use of funds designed for their upkeep. In Algiers, where water was brought to the city by aqueducts, private habus were dedicated to the upkeep of conduits and to the working of fountains.[18]

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[16] A. Raymond, "Les grands waqfs et l'organisation de l'espace urbain à Alep et au Caire," in La ville arabe, Alep, 141–160.

[17] Ahmed Saadaoui, Tunis, ville ottomane (Tunis, 2001).

It is, then, impossible to exaggerate the importance of waqfs which enabled a number of essential public services to be carried out, and, furthermore, provided the juridical framework for major urban operations. They were very much a fundamental urban institution, and only by taking them into account can we understand the functioning of major Arab cities, lacking as these were in the communal or state institutions that filled an equivalent role in western cities.

5. "Public services"

In the absence of charters or explicit statutory texts, the combination of varied resources supplied by the wide-ranging panoply of authorities and institutions described above allowed in the major Arab cities the functioning of what can be designated only very approximately, and at the risk of an equally glaring anachronism, as "public services." Action in this sphere seems to have stemmed, most often, from ad hoc initiatives taken when a particular situation became too urgent to ignore, not from an organization taking account of the various problems with which large agglomerations were faced. From this viewpoint we may note with interest the existence in Algiers of permanent specialized services which, in Arab cities of the time, look exceptional: for instance, a "khodja el-aïoun who oversaw the provision of water and administered the habus set up to this end," a “caïd ez-zebel responsible for the cleaning of the city,” and a “caïd ech-chouara responsible for drains.”[19] These are officials whose equivalents are not found in Near Eastern cities—which raises once more the problem of a possibly specific Maghrebi situation in this sphere.

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[18] Raymond, Grandes villes arabes, 155–167.

Day-to-day security was ensured by various supervisory measures within the framework of the organization into communities already mentioned.[20] A fairly strict watch was maintained during the day by patrols of guards in the city centre, and the markets were closed when night fell. In principle, it was forbidden to move around the city at night, except with an escort and lanterns, and entrance to the residential quarters could only be gained by making oneself known to the watchmen. In Tunis vagabonds intercepted at night by the shaykhs of the medina or suburbs were legally liable to imprisonment on this ground alone, even if no actual crime had been committed.[21] The pression exercised by the judges and the different authorities was based on a varied panoply of sanctions whose severity had an undoubted deterrent effect, all the more so in that the severest punishments were applied with a publicity that was pedagogic in character. “The inhabitants of Egypt,” Chabrol writes, “...are marked out by a very great probity, which is due in part to the severity of the punishments meted out to thieves.” The generally prevalent principle of collective responsibility was likewise such as to reduce the risk of misdemeanours and crimes; the collective entities in question had an interest in preventing them and in making it easier for them to be punished. As such, Arab cities had a good reputation for their safety. The Egyptian chronicler Ibn Abi ’l-Surur, having told of break-ins at forty-eight shops in the Ibn Tulun market (a quite exceptional event to judge by the attention he devotes to it), concludes that a characteristic feature of Cairo was “the great safety prevailing there.” This observation is echoed a century-and-a-half later by the American consul Shaler, with regard to Algiers: “There is probably no city in the world where the police are more vigilant, where fewer crimes punishable by law are committed, or where a surer safety prevails for people and property.”[22]

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[19] {Abd al-Hakîm al-Qafsî, “Ma{âlim wa mawâqi,” Revue d’Histoire Maghrébine 91–92 (1998): 670; Pierre Boyer, La vie quotidienne à Alger (Paris, 1963), 98–99.

[20] For Aleppo, see Abraham Marcus, Aleppo in the Eighteenth Century (New York: Columbia UP, 1989), 110–120.

[21] Abdulhamid Henia, “Prisons et prisonniers à Tunis vers 1762,” Revue d’Histoire Maghrébine 31–32 (1983): 245.

[22] M. de Chabrol, “Essai sur les moeurs des habitants modernes de l’Egypte,” in Description de l’Egypte, Etat Moderne (Paris, 1822), 2:424; Ibn Abi ’l-Surur, Kitab al-kawakib,

The cleansing of streets was essential, not simply to keep them clean but also to avoid the inevitable result of any prolonged negligence in this field: the gradual elevation of the street level as a result of accumulated rubbish, earth and dust (fig. 5). We know that in the district of the markets, in the heart of the city, and in the residential zone, sweeping and watering took place on an organized basis. In Cairo, for instance, there were professional sweepers (zabbalin) remunerated by the residents, while rubbish was removed by a specialized body, that of the tarrabin, then deposited beyond the walls, in a district where, over the centuries, the accumulation of this earth and refuse eventually built up into full-scale hills, the "tells," which have just been reconverted into public gardens under the auspices of the Aga Khan Foundation (fig. 6). In Algiers, the service was systematically organized under the supervision of a qaxid al-zabal: rubbish was deposited in holes worked into the walls and picked up by people who then went to deposit it outside the city. Nevertheless, numerous indications in chronicles or travellers' accounts, and the present-day situation with frontages buried to a height of a metre or one metre fifty, indicate a prevailing negligence in this area: and an authority had, from time to time, to summon inhabitants to a major street-cleaning operation, in the form of removing the earth that had become a hindrance. In Tunis it was Dey Usta Murad (1637–1640) who ordered the removal of rubbish that was building up outside the Bab al-Bahr gate, the work being carried out, in turn, by inhabitants of the medina and the two suburbs. Similarly, Dey Muhammad Hajj Ughli (1666–1669) ordered the removal of rubbish built up at Sidi {Abdallah al-Sharif, using the same system of forced labour.[23] In Cairo such street clearance, to a depth that might reach one cubit, was ordered in this way by pashas or Janissary agas: in 1609, around 1700, in 1703, and in 1711.[24] Examples of such operations, ordered by high authorities and carried out through mobilization of the city population, could be multiplied.

It is in the matter of water distribution, obviously a vital problem for substantial agglomerations situated in relatively dry regions that we most clearly see at work the way in which—outside any regulation and intervention by a specialized authority—a service could be ensured

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MS (BN Paris, 1852), in Arabic, pp. 75b, 169a; W. Shaler, Sketches of Algiers (Boston, 1828), 52.

[23] Ibn Abi Dinar al-Qayrawani, Mu'nis (Tunis, 1931), 187, 194.

[24] Raymond, Grandes villes arabes, 150.

thanks to the conjunction of private initiatives and a variety of institutions. The case of Cairo is especially revealing.[25] This metropolis was entirely bereft of any intrinsic source of provision: virtually no rain, and brackish well-water unfit for consumption. All of Cairo's drinking water had, therefore, to be brought on animal back from the Nile, a distance of around a kilometre. The porterage of water from the river was effected by water carriers (saqqaxin) organized into guilds (four of these using donkeys and one camels), localized all along the western edge of the city. Distribution within the city was entrusted to five guilds. This system, paid for totally by the users (with the participation of waqfs), appears to have functioned autonomously, doubtless under a degree of supervision by the authorities. An important role was played by the public fountains (sabil), which were kept stocked with water for redistribution to those passing. More than three hundred in number, almost all built during the Ottoman period, these sabils were spread fairly evenly over the total surface area of Cairo; to the extent, indeed, that it has been possible to use their geographical distribution as an indicator for population distribution in the different parts of the city (fig. 7).

These structures, often modest but sometimes sumptuous, had been built at their own expense by notables, mostly officers of the Cairo militias, as charitable works (fig. 8). Generally speaking, the building of fountains follows the movement of urban population. Thus, it was a matter of individual contributions to the population's welfare. Their management was made possible in the context of pious foundations (waqfs), the income from which ensured the meeting of necessary expenses for the upkeep of the structure, the remuneration of the water carriers and the purchase of fresh water. This system functioned through the three centuries of the Ottoman period, with no apparent difficulty, except when political crises impeded the provision of Nile water. We see clearly here the working of a system that set in train the resources provided by "free enterprise," guild organizations, individual patronage, and a religious institution. Without any apparent intervention by regulation, authorities, and administration (though some degree of control must, we suspect, have been exercised in cases of difficulty), this system ensured the provision of water for a city of 250,000 inhabitants.

The case of Cairo is an extreme one. When provision of water was ensured by means of canalizations or aqueducts, the distribution of responsibilities was obviously different and made more call on "public" intervention. This was the case in Algiers, which, before the Ottoman conquest, had no organized water supply system, and whose network of aqueducts for catchments of the springs of the Sahel was established entirely by the Ottoman authorities.[26] The Telemly aqueduct (3,800 m) was perhaps built around 1550 by Hasan Pasha. The Birtraria aqueduct (1,700 m) was apparently built by 'Arab Ahmad Pasha in 1573. The Hamma aqueduct (4,300 m) was completed in 1611 in the time of Kusa Mustafa Pasha. The Ayn Zeboudja aqueduct (9 km) was built around the middle of the eighteenth century (fig. 9). Many fountains, of which there were around a hundred in Algiers, were built in the seventeenth and eighteenth centuries by pashas and deys; we saw earlier the noteworthy activity of Dey Baba {Ali Neksis. The highest political authorities had, thus, taken the initiative over works in the general interest. But particular individuals could concern themselves with the provision of water by setting up habus whose income was dedicated to the upkeep of water conduits and fountains, a pious intention not entirely devoid of ulterior motive, since such generosity enabled the donor to obtain an allocation of water for his house.

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[25] Ibid., 156–161.

We might multiply local examples, and might make consideration of the way the problems of combating fires, or those of urban transport, were resolved.[27] We would, in these cases, discover the same mixture of intervention by the political powers (less absent than has been supposed), of local officials (more commonly found in the Maghreb), of activity on the part of specialized professional guilds remunerated by users, of participation by waqfs set up by the powerful and the rich for the benefit of the community. All these elements combined to enable major cities to function in the absence of a true urban administration, and to ensure the working of "public services." In each of the cases considered, the blend of stimulus from the authorities, individual enterprise and religious patronage contributed to the setting up of a system bereft of any homogeneity and any juridical and regulatory cloak—but one that was relatively efficient.

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[26] Ibid., 163–167.

[27] Ibid., 153–157.

6. Conclusions

Major Arab cities were thus not as totally lacking in administration as has often been suggested. Had such a deficiency existed, indeed, it would be difficult to account for the way they have endured. The conjunction of intervention in urban affairs by "national" and "local" political authorities, the action of a number of specialized urban officials, the existence of communities of various types, and the resort to waqfs/habus, ensured the management of these cities, and even permitted them to develop in periods of urban expansion, such as the Ottoman period was.

The security of cities was generally quite well maintained, thanks, no doubt, to the severity of the punitive measures taken to suppress crimes and misdemeanours, and thanks, too, to a tight framework of collective controls weighing on inhabitants. These latter had few possibilities of eluding a surveillance to which they were subject in every area of their collective lives; and this coercive pressure was all the more effective for being based on a self-supervision carried out by the collective entity in the various forms it assumed (professional, geographical and religious communities). Contrary to what is often propounded on the subject, the sphere of private life was severely restricted by the existence of a broad communal sector within which the individual was closely watched, and, if necessary, denounced and punished for any deviance from the norm. The theoretically opaque walls of the "Muslim house" did not really protect familial intimacy from the watchful eye of the neighbourhood.

Paradoxical as it may appear, the lack of specialized officers and administrations did not prevent the needs of the population from being met in the area of what we call "public services," with an efficiency that cannot but surprise us, given the rudimentary nature of the means used and of the procedures set in place.

THE COUNTRYSIDE:
THE ROMAN AGRICULTURAL AND HYDRAULIC LEGACY OF THE ISLAMIC MEDITERRANEAN

D. Fairchild Ruggles

The geographer Jean Brunhes wrote that "a town is not an independent unit, but depends on the soil that bears it, the climate it enjoys, and the environment on which it subsists."[1] His concept of the "Terrestrial Whole" provides a useful framework for understanding relationships between city and country because it positions human agency within a larger ecological model of interdependency in which humans are subject to the natural conditions of the landscape and yet exert their will upon them. Whereas historical models emphasize human decisions, social competition and interactions, and short-term temporal change, the geographical model pays more attention to what Brunhes called the "terrestrial realities" of space, distance, and difference in level.[2] This is a productive way to think about landscape because it can explain continuities in the human-land relationship that the traditional historical model often fails to recognize. In the essay that follows, I will balance a series of dualistic concepts: architecture and landscape, city and country, autonomy and interdependence, Islam and Rome, and change and continuity. This dualism is as artificial and exaggerated as any structure-based model, but it serves to highlight important aspects of the built environment of the Mediterranean in the period of change from the late Roman to the early Islamic period so that they may be examined and analyzed.

Architecture is built by the hand of a builder and a patron and can be dated to a specific historic moment or series of moments, but a landscape is a continuous ecological process. While it has stone slabs, walls, and fountains, it is also made of water, earth, and living organisms that are renewed and recycled seasonally or even daily. The role of historical precedent is important in both the built and the cultivated environment, but it occurs at different levels of human consciousness. In the Mediterranean, al-Andalus offers a good case study for the different ways in which human society has acknowledged or ignored the role of history in the architecture of its cities and the development of the landscape of its countryside. This study will focus primarily on that historic time and place, but it will refer as well to many Islamic countries around the Mediterranean in the same period, eighth through twelfth centuries.

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[1] Jean Brunhes, *Human Geography*, abridged, ed. and trans. E. F. Row (London: George G. Harrap, 1952), 26.

[2] Brunhes, *Human Geography*, 229.

Islam emerged from the Arabian Peninsula, a desert that supported nomadic animal husbandry and trade but little settled agriculture. But as the Umayyad dynasty (661–750) began conquering the eastern and southern coast of the Mediterranean—north and east to Syria, Jordan, Israel, Lebanon, Iraq, and most of Iran, and west to Egypt, Tunisia, and the Maghreb (Morocco and Spain)—the growing population of Muslim converts began to include not only city dwellers and nomadic tribes people, but also agriculturalists who developed the land for their own use as well as future generations. These early Muslims farmed a landscape that had been developed five hundred years earlier by the Romans (and served later societies such as Byzantines and Copts), and they used similar agricultural techniques and planted similar crops.

While the Mediterranean rim itself received seasonal rainfall, the inland areas were thoroughly arid. Agriculture was possible by means of drought-tolerant crops like dates and olives, augmented by other more demanding crops such as fruit and grain that were only grown with regular irrigation by means of collecting, storing, and transporting precious water. Irrigation was costly, but the technology offered economic benefits to landowners and farmers who learned from Roman and Persian precedents. In many areas of the Mediterranean, Muslim communities did not build new irrigation networks as much as they renovated and built upon older hydraulic works. However, despite the clear debt to Roman and Persian irrigation systems, historians of the first centuries of Islam rarely acknowledged the material debt to the earlier empires.

For example, the cities of Anjar (figure 1) and Rusafa (Sergiopolis) were pre-existing Roman and Byzantine sites that were expanded and settled by Islamic communities in the late seventh century. When the handsome gypsum walled city of Sergiopolis was chosen by the caliph Hisham (r. 724–43) for the site of his country estate, renamed Rusafa, he added a mud-brick-walled garden outside the city walls (figure 2).[3] The water that nourished this new garden came from the same seasonal stream (wadi) that flowed in stone channels through the Byzantine city. Similarly, Qasr al-Hayr West, built for Hisham in 724–7 about 60 km west of Palmyra, relied on an ancient water source. Although it was endowed with a handsome palace that housed political and cultural gatherings, it was also a productive estate devoted to irrigated agriculture and olive trees, and it was popularly known as al-Zaytuna, meaning "olive." The water for this enterprise was brought by qanat (a Persian technique) from a third-century Roman dam, 16 km to the south.[4] In other words, the landscape was entirely dependent upon a set of irrigation practices and a structure that had been developed centuries before the advent of Islam. Similarly, Khirbat al-Mafjar was dependent upon a Roman aqueduct.[5] The pre-Islamic hydraulic foundations that enabled the construction of these estates were seldom acknowledged by the Islamic patrons and their chroniclers (and have often been ignored by modern historians who wished to see the greening of the desert as a purely Islamic enterprise). In part this reflects a natural tendency to highlight change and innovation rather than continuity, and in part it is a methodological issue stemming from the prevalence of the architectural model, which focuses on acts of construction, rather than a landscape model, which observes both new construction and the enduring character of conditions such as climate, topography, and rainfall.

In the Alanya region of Anatolia, the remains of a Roman aqueduct and canalization supplied water to one of the largest Islamic garden and hunting estates in the second half of the thirteenth century. In settling the region and exploiting the resources in wood, game, and agriculture, the Seljuk rulers clearly sought to build strategically so as to take advantage of existing natural and ancient water systems.[6] In Ifriqiya (Tunisia), the Roman system of tapping water from mountain sources such as the so-called Temple des Eaux in Zaghouan (figure 3), and storing it in enormous basins such as those in the vicinity of Kairouan (figure 4), was kept alive in the Islamic period. Indeed, the coast of northern Africa was marked by numerous Roman hydraulic systems that were still intact in the nineteenth century.[7] There was no reason for rejecting perfectly utilitarian land management systems and so these systems were typically not abandoned until they silted up or ceased to function. They typically did not fall into ruin until the knowledge of how to maintain them was lost or, more likely, the agricultural economy that they supported either declined so that such large quantities of water were not needed, or expanded so that the older irrigation projects were replaced by newer larger ones.

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[3] The estate is discussed in Michael Mackensen et al., Resafa I: Eine befestigte spätantike Anlage vor den Stadtmauern von Resafa. Ausgrabungen und spätantike Kleinfunde eines Surveys im Umland von Resafa-Sergiopolis (Mainz, 1984). One of the enclosures was excavated and discussed by Thilo Ulbert, "Ein umaiyadischer Pavillion in Resafa-Rusafat Hisam," Damaszener Mitteilungen 7 (1993): 213–231; the significance of the find for the history of Islamic gardens is examined in D. Fairchild Ruggles, "Il giardini con pianta a croce nel Mediterraneo islamico," in Il giardino islamico: Architettura, natura, paesaggio, ed. Attilio Petruccioli (Milan: Electa, 1993), 143–154; German edition: "Der als Achsenkreuz angelegte islamische Garten des Mittelmeerraums und seine Bedeutung," in Der islamische Garten: Architektur. Natur. Landschaft (Stuttgart: Deutsche Verlag-Anstalt, 1994), 143–154.

[4] K. A. C. Creswell, and rev. James Allan, A Short Account of Early Muslim Architecture (Cairo: American University in Cairo Press; Aldershot: Scholar Press, 1989), 135–146; Oleg Grabar, "Umayyad 'Palace' and {Abbasid 'Revolution'," Studia Islamica 18 (1963): 3–18.

[5] R. W. Hamilton, Khirbat al-Mafjar: An Arabian Mansion in the Jordan Valley (Oxford: Clarendon Press, 1959).

When the Muslim army invaded the Iberian Peninsula in 711, the Syrian experience of encountering an already inscribed landscape was repeated. The first buildings to be put into the service of the new order were converted Visigothic structures: the old Visigothic palace on Cordoba's west side became the governor's residence and the major church gave a portion of its space over to the new Muslim congregation. When major buildings were initiated after the first Umayyad prince, {Abd al-Rahman I, arrived to rule al-Andalus in 756, the builders had plenty of available old material which they did not hesitate to convert, tear down, and reuse. The architectural examples of this are well known: in the first century of rule by the Umayyad governors and emirs, the handsome Mosque of Cordoba was built on the site of a former Visigothic church (the presence of which has been confirmed by excavation), and the Roman bridge on Cordoba's south side and its Roman city walls were restored from ruinous condition. Indeed, many words have been devoted to the fascinating subject of architectural continuity and conversion, but these discussions generally have addressed only a very small part of the built environment. Focusing on cities and their buildings, they have ignored the road systems, the hydraulic and agricultural structures, and even the stocks of plants that were developed in the landscape and that allowed urban life to flourish. Like the architecture of cities, the material and botanical fabric of the landscape tells of continuity that endured despite shifts from one political regime to another.

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[6] Scott Redford, *Landscape and the State in Medieval Anatolia: Seljuk Gardens and Pavilions of Alanya* (Oxford: Archaeopress, 2000); and Redford, "Seljuk Pavilions and Enclosures in and around Alanya," *Aratırma Sonuçlar ı Toplantısı* 14 (Ankara, 1997): 453–467.

[7] M. M. Knight, "Water and the course of empire in North Africa," *Quarterly Journal of Economics* 43 (1928–29): 44–93.

In al-Andalus, the landscape that stretched from Seville to Cordoba was arrayed along the fertile Guadalquivir River valley, an area richly endowed with natural resources and well suited to agricultural development. Seville was densely settled in the Roman era with 194 villas, with the city of Itálica one of its largest centres. The Romans, who ruled the Iberian Peninsula from 152 B.C.E. to the early fifth century C.E., also built a great many villas along the Guadalquivir valley, some sixteen of which have been rediscovered in the province of Cordoba (figure 5).[8] These rustic villas had their urban counterparts; for example, northwest of the old walled city of Cordoba, the Roman palace of Cercadilla has been recently excavated. Eight hectares in size, it was an important administrative complex dating to the reign of the emperor Maximian, probably commissioned soon after his visit to the city in 296 C.E.[9]

Although the great Spanish archaeologist Leopoldo Torres Balbás lamented the lack of studies on Roman Cordoba in the mid-twentieth century, he noted the singular richness of the fragments that had been discovered in the course of digging for water mains, telephone lines and other mundane excavations.[10] Surely, if modern excavators found ancient debris when digging for their new constructions, the Andalusians of the ninth and tenth century would have unearthed such treasure as well. Indeed, there is evidence of this not only in the city of Cordoba but also for the wreath of *munyas* (agricultural estates) and palaces built around it in the eighth through tenth centuries.

Beginning with the Munyat al-Rusafa, built in the second half of the eighth century north of Cordoba by {Abd al-Rahman I, these munyas provided their owners with rural alternatives to residences in the crowded and probably noisy medina.[11] Like the Roman villas, the munyas took advantage of the excellent alluvial soil along the Guadalquivir. But they were not historically continuous because by the time the munya economy began, the Roman villas had collapsed. Perhaps the villas fell into ruin during the Visigothic period when the entire agricultural economy declined (as occurred again in Cordoba after the fitna of 1010–11). There are also signs that these Roman villas were destroyed as a result of vandal invasions in the early fifth century, for much of the Roman art found in Cordoba is broken as if it had suffered through violent times. In either case, by the time of the Muslim conquest, they served as quarrying grounds for builders seeking well-cut stone blocks, column shafts, capitals, and the occasional basin or statue. The Mosque of Cordoba had many such reused Roman and Visigothic pieces. Similarly, Madinat al-Zahrax, the great caliphal palace city built a short distance from Cordoba in 936 by the caliph {Abd al-Rahman III al-Nasir, had numerous water basins made from Roman sarcophagi, and above its principal gate there even stood a Roman statue of a woman.[12] This gate was called variously Bab al-Madina (Gate to the City) or Bab al-Sura (Gate of the Figure), in reference to the unusual sculpture. Historians al-Razi and Ibn Hayyan did not perceive the antiquity of the statue, but they did recognize its unusual character, identifying it as a representation of the legendary Umayyad concubine al-Zahrax[13] However, it must have been Roman, for there was likewise a statue over the Roman gate where the great bridge led into the walled city.[14] The presence of such sculpture was unusual but

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[8] Jean-Gérard Gorges, *Les villas hispano-romaines: Inventaire et problématique archéologiques* (Paris and Talence, 1979).

[9] It was built on top of an even older Roman circus. R. Hidalgo and Pedro Marfíl Ruiz, "El yacimiento arqueológico de Cercadilla: avance de resultados," *Anales de Arqueología Cordobesa* 3 (1992): 277–308.

[10] For a summary of Roman archaeology in Cordoba, see P. León Alonso, ed., *Colonia Patricia Corduba. Una reflexión arqueológica* (Cordoba, 1996).

[11] Antonio Arjona Castro, "Las Ruzafas de Siria y de Córdoba," in *El Esplendor de*

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los Omeyas cordobesas (Exposición en Madinat al-Zahrax 3 de mayo a 30 de septiembre de 2001), ed. M. J. Viguera Molins and C. Castillo (Granada: Fundación El Legado Andalusí, 2001), 380–385.

[12] On the sarcophagi, see J. Beltrán Fortes, "La collección arqueológica de época romana en Madinat al-Zahrax," Cuadernos de Madinat al-Zahrax 2 (1991): 109–126.

[13] Many of the concubines were slaves from the Christian north. They had a different cultural formation and spoke a different language. On the identity and Roman origins of the gate statue, see D. Fairchild Ruggles, "Mothers of a Hybrid Dynasty: Race, Genealogy, and Acculturation in al-Andalus," The Journal of Medieval and Early Modern Studies 34 (2004): 65–94, and in Spanish, "La lengua materna: convivencia y cultura en al-Andalus," in Américo Castro y la Revisión de la Memoria (España y El Islam), ed. Eduardo Subirats (Madrid: Ediciones Libertarias, 2003).

[14] Al-Maqqari, Analectes sur l'histoire et la littérature des arabes d'Espagne, ed. R. Dozy, G. Dugat, L. Krehl, and W. Wright, 2 vols. in 3 (Leiden: E. J. Brill, 1855–61; reprinted London: Oriental Press, 1967), 1:344, citing al-Razi and Ibn Hayyan; trans. Pascual de Gayangos, History of the Mohammedan Dynasties in Spain, 2 vols. (London: Oriental Translation Fund, 1840). See also E. Lévi-Provençal, Histoire de l'Espagne Musulmane, 3 vols. (Paris: Maisonneuve, 1950–53), 2:135–136.

not unique: Ibn Hayyan reported that marble statues, surely of Roman origin, guarded the walls of Écija.[15]

The historians of the period ignored the Roman origins of not only figural spolia but many other aspects of the built environment around Cordoba as well.[16] Al-Maqqari, writing in the early seventeenth century on the basis of earlier eyewitnesses such as al-Razi and Ibn Hayyan, attributed the aqueduct that served the Munyat al-Na{ura (329/940) to the patronage of the caliph {Abd al-Rahman III al-Nasir:

> At the beginning of this year [329/940], al-Nasir finished the construction of the extraordinary man-made aqueduct that brought fresh water from the mountains to the Qasr al-Na{ura on the west side of Cordoba. Water flowed through the fabricated channels on a fantastic arrangement of connecting arches, emptying into a large pool at the edge of which was a lion enormous in size, unique in design, and fearful in appearance . . . and the palace's entire range of gardens were irrigated by its juices which flowed over the grounds and surrounding area.[17]

Of the many kilometres of channels that brought water from the mountains down to Cordoba and its suburbs, some stretches, such as the short arched span of the Aqueduct of Valdepuentes above Madinat al-Zahrax, were built anew in the tenth century. However, when archaeologists examined the material fabric, they discovered that most of the aqueducts and water channels that served the city of Cordoba and suburban palace estates such as the Munyat al-Na{ura and Madinat al-Zahrax belonged to the *Aqua Augustana*, a linked network constructed during the first century C.E. (figure 6).[18] In both the

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[15] Ibn Hayyan, Al-*Muqtabis* V, ed. Pedro Chalmeta, F. Corriente, and M. Subh (Madrid, 1976), 56; cited in Janina Safran, "From Alien Terrain to the Abode of Islam: Landscapes in the Conquest of Al-Andalus," in *Inventing Medieval Landscapes*, ed. John Howe and Michael Wolfe (Gainesville: University Press of Florida, 2002), 136–149.

[16] On the Arab attitude toward Roman and Visigothic remains, see D. Fairchild Ruggles, *Gardens, Landscape, and Vision in the Palaces of Islamic Spain* (University Park: Pennsylvania State University Press, 2000), 37–40; Safran, "From Alien Terrain to the Abode of Islam," 136–149, and Janina Safran, *The Second Umayyad Caliphate* (Cambridge, MA: Center for Middle Eastern Studies and Harvard University Press, 2000), 143–150.

[17] Al-Maqqar,Ò *Analectes*, 1:371.

[18] A. Ventura Villanueva, *El abastecimiento de agua a la Córdoba romana. I. El Acueducto de Valdepuentes* (Cordoba, 1993). On the archaeology of the aqueducts around Cordoba, see R. Castejón, *Excavaciones del plan nacional en Medina Azahra (Córdoba), campaña de 1943* (Madrid: Ministerio de Educación Nacional, 1945), 14–17. On the hydraulic infrastructure of Madinat al-Zahrax, see C. Flores Sancristobal, *El aprovechamiento del sistema de saneamiento de Madinat al-Zahrax* (Cordoba, 1991), and Vallejo, "Madinat al-Zahrax, capital y sede del Califato omeya andalusí," in *El Esplendor de los Omeyas cordobeses* (Granada: Fundación Andalusí, 2001), 386–397.

Roman and the Islamic era, these aqueducts brought water to the city as well as the countryside, one hydraulic system serving the two sets of requirements. Remains of this system are visible even today in Cordoba (figure 7).

Water was an urgent necessity for several reasons. It was absolutely essential to all inhabitants for drinking and ordinary bodily hygiene; to Muslims it was also required for the ritual purification (*wudux*) required before the five acts of daily prayer. Hence, to provide a community with a public drinking fountain and to supply water to a city's baths and mosques was a charitable deed. Water was also a critical economic resource. Some cities, like Fez, had more than enough to supply its many fountains and even private residences. Others, like Tangier, suffered from perennial droughts that could not be alleviated by the digging of wells and careful management.[19]

Although the sierra that lined the Guadalquivir valley from Seville to Cordoba had ample supplies of water, the farms depended on irrigation systems to bring it. In that area, rainfall averages 3.7 inches in November but dries to almost nothing in the summer months.[20] The river could provide only a limited amount of water because it had to be lifted up to the fields where it was needed, a costly investment in labour. But for estates further away, such as Madinat al-Zahraxat an elevation 100 metres above the river and at a considerable distance from its banks, water had to be obtained from the seasonal streams that ran off the mountains north of the river (figure 8). These streams were diverted into canals and aqueducts that flowed to the farmlands, supplemented by wells which dotted the landscape around Cordoba and that took advantage of the elevated water table near the river.[21] Although the water was always present, a variety of engineering techniques were employed to get it to the place where it was needed for irrigation. One such technique was the surface canal, as we have seen. The principle is to allow water to flow at a constant rate of decline that is neither too level, nor too steep. The aqueduct is an adaptation of this: it carries a steadily sloping conduit across an irregular topography. Aqueducts are usually the most visible portion of longer canals that run at ground level and tunnel through mountains.

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[19] Susan G. Miller, "Watering the Garden of Tangier: Colonial Contestations in a Moroccan City," in *The Walled Arab City in Architecture, Literature and History*, ed. Susan Slyomovics (Portland and London: Frank Cass, 2001), 25–50.

[20] James Ruffner and Frank Bair, eds., *The Weather Almanac*, 4th ed. (Detroit, 1984), 332. On the human geography and irrigation systems of Spain, see Thomas Glick, *Islamic and Christian Spain in the Early Middle Ages* (Princeton: Princeton University Press, 1979). On the agricultural systems of the Guadalquivir valley, see Ruggles, *Gardens, Landscape, and Vision*, 5–7.

[21] The practice of locating wells adjacent to rivers was advocated by Ibn Bassal in *Kitab al-Filaha, Libro de agricultura*, Arabic ed. and trans. José M. Millás Vallicrosa and Mohamed Aziman (Tetuan: Instituto Muley el-Hassan, 1955), 223–226. See also Glick, *Islamic and Christian Spain*, 238.

Aqueducts were a technique for transporting water from a higher source to a lower point of delivery. But screw pumps and waterwheels, which consisted of two basic types, performed the opposite task, lifting water from a river or well up to the land where it was needed for irrigation. The first type was the river-powered noria (na{ura), a large wooden wheel with paddles and cups attached to its outer circumference. As the river current propelled the wheel's rotation, the cups scooped water from the river and lifted it upward, dumping it just after the apex of the arc into a canal or basin from which it flowed gravitationally to a field or garden where it was used for irrigation (figure 9). This kind of waterwheel could lift the water no higher than its own height, but it took advantage of a natural and fairly constant source of energy and required little or no human labour to operate it. Its greatest limitation was that it could only provide water to land adjacent to rivers.

Another type of waterwheel, called a saqiya, used animal power to rotate a horizontal wheel that joined cogs with a vertical wheel. A long rope or chain with cups or buckets was attached to this wheel and hung down into a well or low source point (figure 10). As the wheel was made to turn, the cups brought water from the depth of the well up to a considerable height, pouring it into a basin or channel from where it flowed to a field or reservoir. The advantage of this system was that water could be raised from a great depth and was not dependent upon a river source; the disadvantage was the extra expense of animal labour. The two types of waterwheels could also be used together, a river-propelled noria turning a saqiya, thus combining the benefits of height and natural power.[22]

The screw pump, or Archimedes screw, used a different mechanical technique to perform the same task of raising water. A long screw was inserted into a wooden cylinder, usually a hollowed tree trunk. As the screw was turned, its thread trapped water and rotated it successively to the top of the tube (figure 11). Although fairly simple to construct, the efficacy of the screw pump was limited to the length of its shaft-screw combination, usually no more than a few metres; by the fact that it required a human operator; and by the relatively small quantities of water that it could lift.

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[22] The most thorough source on waterwheel technology is Thorkild Schioler, Roman and Islamic Water-Lifting Wheels (Denmark: Odense University Press, 1971); see also Donald Hill, Islamic Science and Engineering (Edinburgh: Edinburgh University Press, 1993). On the social impact of such technologies, see Glick, Islamic and Christian Spain, especially 68–78, and on technology see 217–247.

The thirteenth-century eulogist al-Shaqundi listed 5,000 waterwheels on the Guadalquivir. Although some of these powered grain mills, the rest provided water for agriculture and residential use; it is no wonder that he could praise the Guadalquivir valley for the pleasing effect of the many orchards, plantations, and cultivated fields along its banks.[23] The traces of this water infrastructure are still visible in the landscape of Cordoba. For example, the remains of an immense na{ura that raised water from the river to the gardens of the Alcazar can be seen on the riverbank today. Water rushes more forcefully when under pressure, which is precisely what happened when the river flowed through the piers of the bridge, and because of the extra propulsion in the area of the river on this side of the bridge, there were a great many waterwheels. Most of these belonged to mills, the stone foundations of which can still be seen in islands in the middle of the river, but those along the banks functioned as lifting mechanisms for irrigation. A painted illustration in the Bayad wa Riyad manuscript of thirteenth- or fourteenth-century al-Andalus shows such a wheel lifting water from a river to a elevated courtly garden protected by high stone walls, similar to that of the Alcazar in Cordoba.[24]

Gravitational systems are also very much in evidence today. In Madinat al-Zahra's comprehensive water system, not only did fresh water flow through nearly every room, but a parallel sewage flush was also operative.[25] Higher up in the mountains, in an area used today for raising toros bravos, an agricultural estate from the Islamic period had an ornamental basin fed by a stone canal that poured water through a fountain shaped like an elephant or boar (figure 12).[26] Although in a remote location, this site was connected to the urban centre to which its produce was taken for sale and also connected through its watercourses to all the other farms around Cordoba. In 967, the same water system was extended to supply the two ablution fountains of the Great Mosque of Cordoba.[27] The name of the estate with the elephant fountain was not recorded by historians and its residential buildings are long gone, but the fact that its tank continued to fill with water (collected from rainfall) in the 1980s, when this author saw it, gives witness to the durability of utilitarian systems, despite the vagaries of political fortunes.

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[23] Al-Maqqari (citing al-Shaqundi), The History of the Mohammedan Dynasties in Spain, trans. Pascual de Gayangos, 2 vols. (London: Oriental Translation Fund, 1840), 1:41–42; also al-Shaqundi, Elogio del Islam español, trans. E. García Gómez (Madrid: Escuela de Estudios Árabes, 1934), 105.

[24] The only known copy of this manuscript is in the collection of the Vatican (Ar. 368); it is reproduced in Richard Ettinghausen, Arab Painting (New York: Rizzoli, 1977), 127.

[25] Flores, El aprovechamiento del sistema de saneamiento de Madinat al-Zahrax

The improvement and extension of the irrigation networks by the Umayyad emirs and caliphs allowed patrons to go farther and farther from the city to found new estates and farms. In time, the immediate suburbs of Cordoba were so thickly settled that the poet al-Shaqundi remarked that "I have heard it said that the cities of Cordoba, al-Zahrax, and al-Zahira together covered at one time an area of ground measuring ten miles in length, a distance that might be travelled at night by the light of lamps placed close to one another."[28] Archaeological survey showed that wells in this area were sunk sometimes as close as three to four metres apart, indicating a very thick settlement.[29] The hydraulics was usually installed to serve a royal patron first and foremost, but they became catalysts for new regional development. Clearly the stimulation of new suburbs was intentional: in the building of Madinat al-Zahrax, the caliph gave generous sums to encourage his followers to construct homes in the area.[30]

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[26] This fountain has recently been moved to a courtyard in one of Cordoba's museums. On this and similar animal-shaped fountains, see Ruggles, *Gardens, Landscape, and Vision*, 209–212.

[27] The mosque had previously filled its cisterns with the rain that ran off the gables of the prayer hall's roof, but the caliph al-Hakam II extended the irrigation network to provide a constant supply of fresh water. Ibn {Idhari, *Histoire de l'Afrique et de l'Espagne intitulée al-Bayano'l-Mogrib*, trans. E. Fagnan, 2 vols. (Algiers, 1901–4), 2:396.

[28] Al-Shaqundi in al-Maqqari, *The History of the Mohammedan Dynasties in Spain*, trans. Pascual de Gayangos, 1:41. The translation here is adapted from Gayangos.

[29] Rafael Castejón, "Córdoba Caliphal," *Boletín de la Real Academia e Ciencias, Bellas Letras y Nobles Artes de Córdoba* 8, no. 25 (1929): 295.

[30] Ibn Hawqal, *Configuration de la terre* [Kitab surat al-ard], ed. and trans. J. H. Kramers and G. Wiet, 2 vols. (Paris and Beirut, 1964), 1:110–111 [French], and 2:111 [Arabic]; Ibn Sa{d al-Maghribi, *Kitab al-Mughrib*, ed. Shawqi Dayf, in the series *Dhakhaxir al-{arab*, vol. 10 (Cairo: Dar al-Maarif, 1953), 174.

Beyond the densely settled suburbs in the area immediately encircling Cordoba's medina, the estates were spaced at ever greater distances from each other. The historical texts give us the names and descriptions of many of these, usually those built by or belonging to members of the Umayyad family, and archaeology has revealed the remains of a few. These included Rusafa, built by {Abd al-Rahman I between 138–172/756–788), north of the medina in the area known today as Turruñuelos.[31] The Munyat {Ajab, on the opposite bank from the medina was the work of al-Hakam I's wife in the early ninth century.[32] This was not a royal residence but a working estate, doubtless endowed as a waqf, the proceeds of which supported a leper colony. The Munyat al-Nasr was built by a wealthy slave of {Abd al-Rahman II (r. 822–52) and acquired and renovated by {Abd Allah (r. 888–912). Located south of the madina on the opposite bank, it had so many mills along the riverbanks that it was popularly known as Arhaxal-Hinna, or "henna mills."[33] The Munyat al-Qurashiyya, an estate belonging to one of Halam II's brothers, was similarly located on the riverbank and was nicknamed variously "al-Shamat" or "al-Shamamat," meaning sweet-smelling.[34] There was also the Munyat al-Bunti, Munyat al-Naxura, Ibn Shuhayd's Villa, the Dar al-Rawda, Munyat al-Muntali, the Castillo of Albaida, al-Rummaniyya, Madinat al-Zahira, Munyat al-Mughira, Qasr al-Bustan, al-Dimishq, Munyat Zubayr, al-Mushafiyya, Hayr al-Zajjali, and many more that were described without being named.[35]

In poetry and geographic descriptions, Andalusians praised nature, but not wilderness. To have economic value and social utility, nature had to be domesticated through its relationship to the city and the civilizing effect of urban culture. Thus, there was a logical positioning of farm and recreation estates on the map, determined by this urban/rural bond. Each munya had an impact on both the urban centre and the environment around it, in unison representing a systematic exploitation of the Guadalquivir valley. More than simply spatial interventions, they were also catalysts for temporal development that had an impact on not only the present ecology but future growth. *Munyas* were strategically arrayed around cities in order to take advantage of market centres as well as social networks. The relationship of the city to the *munya* was like that of the royal Alcazar to the suburban palace estate: most were close enough that wealthy patrons could and did move between them frequently. Even Madinat al-Zahrax one of the farthest at approximately seven kilometres from Cordoba, was not inhabited continually. During the coldest winter months and for public gatherings such as military assemblies, the caliph would return to the Alcazar. Not only was the agricultural bounty of the countryside taken to the city for sale in its markets, but the profits realized by merchants in the urban centre through trade and the processing of raw materials (such as leather, perfumes, and textiles) were invested back into the countryside, so that the economic prosperity of the city was dependent upon and also contributed to the prosperity of the outlying rural areas.[36] In both economic and cultural terms, this proximity meant that there was little separation between the life of city and suburb.

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[31] Ruggles, Gardens, Landscape and Vision, 42–45; Arjona Castro, "Las Ruzafas de Siria y de Córdoba," 380–385. Aerial photography has revealed an enclosure with a cross-axial, quadripartite layout; however the identification of this site as Rusafa remains speculative.

[32] Lévi-Provençal, Histoire de l'Espagne Musuman, 3:381–382; Castejón, "Cordoba Califal," 291 and 301; Ruggles, Gardens, Landscape and Vision, 45.

[33] Ruggles, Gardens, Landscape, and Vision, 45–47.

[34] E. Garcia Gomez, "Notas sobre topografía cordobesa en los 'Anales de al-Hakam II' por {Isa Razi," Al-Andalus 30 (1965): 339.

[35] For these see Ruggles, Gardens, Landscape, and Vision, 35–52, 110–132; Torres Balbás, Ciudades hispanomusulmanas, 2nd ed. (Madrid: Instituto Hispano-Arabe de Cultura, 1985), 141; al-Maqqari (citing Ibn Bashkuwal), Analectes 1:304.

The *munyas* were productive enterprises. Although admired for their beauty—their gleaming white walls were like "the scattering of a string of pearls" according to Ibn Sa{id—their orchards and gardens also yielded food, spices, and useful aromatics, and the Arab historians were quick to praise both of these aspects.[37] The lovely orange, lemon, and almond trees that had such a heady fragrance when in spring bloom, gave edible fruit and nuts in the fall. Flowers also had economic value: the fall-blooming crocus produced saffron, and the rose was both an ingredient used both in cooking and in perfume. Roses grew prolifically around Cordoba and one observer wrote that they were a good source of revenue because a *ruba{* (twenty-five pounds) of rose leaves fetched a price of four *dirhams* or more at market.[38] Indeed, the wide variety of fruits, flowers, and staple crops grown in successive seasons was an insurance against the failure of any single harvest. The agricultural manual of Ibn al-{Awwam listed 120 species, the most common of which were wheat, olives, lemon, almond, and grape,[39] and of the 177 species discussed in Ibn Bassal's Kitab al-filaha, easily half were what today would be termed ornamentals.

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[36] Maurice Lombard, *Espaces et réseaux du haut moyen âge* (Paris and the Hague, 1972), 63; Glick, *Islamic and Christian Spain*, 74.

[37] Al-Maqqari (quoting al-Shaqundi's description of Cordoba), *History of the Mohammedan Dynasties in Spain*, trans. Pascual de Gayangos, 1:41–42.

[38] Al-Maqqari (quoting al-Shaqundi), *History of the Mohammedan Dynasties in Spain*, 1:41.

The irrigation system that allowed the agricultural landscape around Cordoba to flourish was based on Roman foundations and ancient technology, rebuilt and intensified by the Muslim landowners, who had economic and legal incentives to maximize the productivity of the land. However, the Arab historians focused exclusively on the renovation, portraying it as an altogether new construction. In this, the irrigation network was not the only Roman legacy that the Andalusian historians ignored. When in 711 the invading Muslim army marched from the coast of Gibraltar to Cordoba and then Toledo, capturing Seville in 712, Merida in 713, and cities further to the north in 713–14, the soldiers travelled along paved Roman highways.[40] However, the medieval historians did not mention the facility of travel as a significant aspect of the conquest. Perhaps this is because the roads were in poor condition—possibly mere footpaths—after centuries of Visigothic neglect when trade had declined and an intercity road network was less valued. But since the Guadalquivir is the only navigable Spanish river, it is logical that stretches of road connecting that waterway to the inland urban centres of the southern Iberian Peninsula would have received regular use and survived. On the other hand, perhaps the paved surface mattered little to an army that travelled on foot and horseback, without wheeled vehicles. Nonetheless, it was Roman engineering and travel routes that facilitated the soldiers' long journey.

When they reached Cordoba, in order to cross from the southern bank of the Guadalquivir to the city on the northern bank, the army forded the river downstream. The attack took place in October and the river would not have swelled to its full depth until late winter, so it was traversable. However, once Cordoba was vanquished, the ancient bridge was the obvious way to cross the river. Built by the Romans in the age of Augustus, the bridge had seriously deteriorated and had to be rebuilt in 721 by the Muslim governor of Cordoba who took stone from the city wall to do it. It was later repaired again and enlarged by {Abd al-Rahman I sometime after 756, although the historians called it a new construction (figure 13).[41]

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[39] Ibn al-{Awwam, Le Livre de l'agriculture d'Ibn al-Awam (Kitab al-Filaha), trans. J.-J. Clément-Mullet, 2 vols. in 3 (Paris, 1865–67; reprinted Tunis: Éditions Bouslama, 1977). See also Jaime Vicens Vives, An Economic History of Spain, trans. F. M. López-Morillas, from 3rd ed. of 1964 (Princeton: Princeton University Press, 1969), 108–109.

[40] Francisco Vidal Castro, "De Arabia a Toledo: la expansion terrestre," in El Esplendor de los Omeyas cordobeses, 24–33.

Finally, the Roman walls of Cordoba encircled a city approximately 182 hectares in area (only slightly smaller than Roman Seville). {Abd al-Rahman I (r. 756–788) repaired and enlarged the city walls, but historians such as al-Nuwayri wrote that the emir actually built them.[42] Although Visigothic structures may have obscured many Roman foundations, there are still the standing remains of a temple and there was an abundance of Visigothic and Roman spolia that was reemployed in the Great Mosque. In Seville, the Roman forum, theatre, baths, and aqueduct were still visible. Today, the Roman level runs at a depth of between three and six metres below the present city street level in Cordoba.

One place where the Arab authors did reveal their debt to the ancients was the realm of science and philosophy. In agricultural manuals and botanical treatises, such as the beautifully illustrated copy of the *De materia medica* of Dioscorides, a Greek text written ca 78 C.E., that was sent from the Byzantine emperor to the caliph {Abd al-Rahman III in 337/948, the Hellenistic legacy was not only recognized but celebrated. Indeed, it was a sign of erudition to cite the work of the Greek and Latin writers Pliny, Galen, Columella, and Varron.[43] Authors such as {Arib Ibn Sa{d, Ibn Juljul, Ibn Wafid, and Ibn Sina (known in the West as Avicenna) moved with ease between classical book learning and actual observation in the landscape, assimilating ancient plant information and providing glosses to make it more useful for the Andalusian context.[44] The arrival of new non-native plant specimens, such as the saffron crocus, spinach, cannabis, citron, sorghum, and henna from the eighth through fourteenth centuries led to botanical diversity which demanded that the botanists understand the practical business of how to domesticate exotic plants and improve stock by techniques such as grafting, selection, and soil amendment.[45] The eager reception of the works of the agronomists Ibn Wafid, Ibn Hajjaj, Ibn Bassal, Ibn Luyun, and Abu'l-Khayr may have been due to their skill derived from direct practical experience with planting in combination with their knowledge gained from books.[46]

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[41] Al-Dimishqi, *Nukhabat al-dahr fi {ajaxib al-barr wa-l bahr*, ed. M. A. F. Mehren (Leipzig, 1923), 242.

[42] Al-Nuwayri, *Historia de los musulmanes de España y Africa* (*Nihayat al-{arab fi funun al-adab*), ed. and trans. M. Gaspar Remiro, 2 vols. (Granada: Centro de Estudios Históricos, 1917), 1:9.

[43] Ruggles, *Gardens, Landscape, and Vision*, pp. 19–29. On Diocorides, see César E. Dubler, *La "materia médica" de Diocórides: Transmisión medieval y renacentista*, 6 vols. (Barcelona: Emporium, 1953–59); volume one addresses the Arabic versions of Diocorides.

[44] Ruggles, *Gardens, Landscape, and Vision*, 20–25. This was not unique to al-Andalus: the Christian physician Ibn Butlan (d. 1066) in Baghdad similarly emphasized both ancient sources as well as practical experience, according to Eva Baer, "The Illustrations for an Early Manuscript of Ibn Butlan's *Da{wat al-atibbax* in the L. A. Mayer Memorial in Jerusalem," *Muqarnas* 19 (2002): 1–11.

There is a sharp divide between those chroniclers who wrote about the building of the walls and water systems of al-Andalus and those scientists who wrote learned treatises. The latter took pride in knowing the wisdom of the ancients and in constructing a kind of *isnad* (chain of transmission), whereas the chroniclers, historians, and geographers proudly pointed to the *newness* of Andalusian construction. In a sense, they were writing propaganda, the purpose of which was to glorify the reign of the Umayyad dynasty, either for an Umayyad patron who in many cases commissioned the chronicle in the first place, or for future readers who would look back to the Umayyad period as a golden age.

If the historians failed to praise the aqueducts and to identify them as Roman, it may also have been because Islamic culture from its earliest decades flourished in a Mediterranean landscape that was already deeply and widely inscribed by the Roman Empire. It is here that the differences between architecture and landscape become apparent. The elements of landscape, more than any other form of art and material culture, become quickly naturalized in human eyes so that changes made to the landscape are hard to perceive. Whether in Roman, Visigothic, Islamic, Renaissance, or modern times, the same sun shines on the same river and the same alluvial soil is nourished by the same rainfall. Although the paths of seasonal streams may vary, they still run down from the same mountains. In an unchanging pattern, the damp winter chill and dry summer heat alternately numbs and warms the earth. The climatic conditions are fairly constant, and so, barring big changes such as the introduction of exotic species or new genetically manufactured varieties, or extinction (such as occurred with aromatic balsam in the Dead Sea area in the sixth century)[47] the same plants grow and reproduce themselves. The grapes, wheat and barley that were cultivated in the fertile Guadalquivir valley in the Islamic period were the same crops grown by farmers for centuries previously, and the olive trees that produced the major crop in the time of Islamic al-Andalus were the genetic clones of ancient trees made by successive cuttings taken from Roman and Visigothic stock (figure 14).[48]

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[45] J. E. Hernández Bermejo and E. García Sánchez, "Economic Botany and Ethnobotany in Al-Andalus," *Economic Botany* 52:1 (1998): 23; see also Andrew Watson, *Agricultural Innovation in the Early Islamic World: the Diffusion of Crops and Farming Techniques, 700–1100* (Cambridge: Cambridge University Press, 1983).

[46] Ruggles, *Gardens, Landscape, and Vision*, 21–29.

Although there was a transition from a dry-farmed, large-scale economy based on Roman latifundias to a more intensely irrigated, botanically diverse environment in the Islamic period, this was not a sudden change that occurred in a single decisive moment as a result of a political conquest. Despite the improvements to agriculture in the eighth through twelfth centuries as a result of the intensified application of fertilizers (each with mineral properties ideal for the enhancement of specific types of soil), the introduction of new plant varieties, and increased irrigation leading to an overall intensification in land use, it was not an instantaneous revolution but a steady incremental process achieved as a result of the creative relationship between human society and the physical landscape of water, soil, and plants. The investments made to the *munya* economy were stimulated by the tax and rent structures. The tenants and landowners were free individuals whose activities were guided by mutually beneficial contracts that gave each party incentive to improve production. The landowner was responsible for capital improvements such as clearing the land, digging wells, and installing waterwheels, and might contribute to the purchase of seed and draft animals. Taxes were regulated by market inspectors on the basis of pre-harvest calculations—in other words, on the land's potential—with allowances made for changes in market prices and unpredictable misfortunes.[49] Indeed, Islamic law and administrative policy constantly emphasized justice in tax assessment and explained the benefits to the overall economy. As early as the mid-seventh century, the fourth caliph, {Ali b. Abi-Talib, had instructed his administrators:

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[47] Izhar Hirschfeld, recent excavations at Ein Gedi (Israel), described in an online news article by Abraham Rabinovich, 25 February 1997, in http://www.archaeology.org/online/news/balsam.html (consulted 6 June 2004).

[48] K. D. White, *Roman Farming* (Ithaca: Cornell University Press, 1970).

[49] S. M. Imamuddin, *The Economic History of Spain (Under the Umayyads, 711–1031 A.C.)* (Dacca: Asiatic Society of Pakistan, 1963), 48; Pedro Chalmeta, "Un formulaire notarial hispano-arabe du IV/X^{e} siècle: Glanes économiques," *Revista del Instituto Egipcio de Estudios Islámicos en Madrid*, 23 (1985–86): 181–202; Ruggles, *Gardens, Landscape, and Vision*, 5–7.

> Remember that the whole nation is dependent upon revenues through taxation. Therefore, you should give greater importance to fertility of the land than to collection of taxes because ability to pay taxes rests upon productivity of the land, the mother of all resources. A ruler who concentrates on collection of taxes, careless of the productivity of the land and prosperity of the people inevitably lays waste the land, ruins the state and the people. His rule cannot last long.
>
> If your people complain of heavy taxation or have become victims to unforeseen natural disasters such as vagaries of seasonal rain, stoppage of irrigation facilities, locust attack, insect pests, flood, drought or diseased seed, you must consider their plight with utmost sympathy and reduce their taxes, to the extent that will help them improve their condition. That will provide them opportunities and ease their circumstances.[50]

The hisba manual of Ibn Abdun, written for twelfth-century Seville, similarly emphasized the link between fair treatment of labourers and ordinary farmers and a flourishing economy: "The ruler must order that a greater effort be invested in the cultivation of the soil. It ought to be protected, and the cultivators ought to be treated benevolently and taken care of while they work the fields."[51] Regarding tax assessment, Ibn {Abdun wrote that farmers should be protected from overzealous tax collectors by setting the actual tax twenty-five percent less than the assessment. This allowed a generous margin for unexpected calamities of weather or crop failure due to disease. He stated, "In the case of cereals, the harvest should not be counted until the sheaves of wheat are gathered in ricks, and after the deduction of the declared rise in prices at the time of harvest."[52]

The agency of individuals was an important characteristic of the Islamic agricultural system, but the impact was felt in aggregate. Landscape only changes by huge collective human effort. It is never the work of one individual but a widespread change in social practice that causes water to be channelled across long distances or stored in reservoirs for use during the arid summer season. Although a new plant may be introduced through the agency of one individual—such as the Dunaqal fig that al-Ghazali hid in a stack of books and smuggled from Constantinople to al-Andalus in the early ninth century[53]—it is always a major and widespread change that allows it to be adopted for general use in the human diet or industry. Trees grow slowly and are typically reproduced by rooting cuttings, but many seasonal plants grow quickly and are easily dispersed. A particularly fine melon in one vegetable plot can be made to grow in the neighbouring garden the following year—indeed, it can hardly be prevented from doing so. Similarly there is no such thing as one locust: they are a plague that besieges the entire community. Droughts and floods affect everyone. The solutions to these problems, as well as the responses to new opportunities, are communal and integrated.

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[50] "A Classic Administrative Policy Letter of Hazrat Ali, 4th caliph," [pamphlet] ed. and trans. Shamsul Alam (Dacca, 1976), 14.

[51] Ibn {Abdun, in E. Lévi-Provençal, Seville Musulmane au Début du XII^{e} Siècle: le Traité d'Ibn {Abdun (Paris: G. P. Maisonneuve, 1947), 5 [Arabic].

[52] Ibn {Abdun in Lévi-Provençal, Seville Musulmane, 5–6 [Arabic].

The political and economic transformation of the Mediterranean in the late eighth through eleventh century was reported in numerous historical texts, but the Roman precedents that allowed it to occur were ignored because of a widespread—perhaps universal—perception of nature and landscape. While art and architecture are perceived as social and historical creations, emerging at a particular time and place and made by human hands at the behest of a specific patron, the landscape appears ongoing and timeless. It is precisely because landscape is constantly produced and everywhere, that it appears to not be produced at all, and for this reason, the Roman foundations of the Islamic landscape were nearly invisible: the Roman past was both continuous and too ubiquitous to merit description. Moreover, Islamic ideology did not have the goal of carrying forward or reviving pagan Roman, Byzantine, or Visigothic civilizations. Theologically and materially, the Muslims of al-Andalus took pride in replacing the old system with something better. Hence, the chroniclers did not emphasize the Roman origins of the walls, bridges, gates, statues, water systems, and olive plantations that surrounded and sustained them because they truly saw the architectural reconstructions as new beginnings and the landscape itself as without history.

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[53] E. García Gómez, “Sobre agricultura arábigoandaluza. Cuestiones biobiliográfigas,” Al-Andalus 10 (1945): 134.

List of plant species identified in the *Kitab al-filaha* of Ibn Bassal (from Hernández Bermejo and García Sánchez) “Economic Botany and Ethnobotany in Al-Andalus,” *Economic Botany* 52:1 (1998): 15–26.

acacia
almond
amaranth (2 varieties)
apple mint
apricot tree
artichoke
ash (3 varieties)
asparagus (3 varieties)
asparagus bean
balsam tree
barley
basil
beet
bindweed (3 varieties)
bitter apple (citrullus vulgaris)
black cumin
black mustard
black pepper
bottle gourd
box thorn
bramble
broccoli (brassica oleracea)
broom
broom (retama sphaerocarpa)
broomcorn
bugloss
cabbage
caper bush (2 varieties)
caraway
cardoon
carob tree
carrot
celandine
chamomile (anthemis and 2 varieties of chamaemelum)
chestnut
chick pea
chicory
citron
coco grass
madonna lily
mahaleb
maiden hair fern
cowpea
crocus (saffron)
cucumber
cumin
cypress
cyprus-turpentine (pistacia terebinthus)
date palm
dock
dyer’s broom
eggplant/aubergine
elm (2 varieties)
esparto grass
fig tree
flax
foxtail millet
frankincense tree
garden pea
garlic
gingerbread palm (hyphaene thebiacca)
golden-shower (cassia fistula)
grape (wine)
hackberry
hazelnut
henna
hollyhock
hyacinth bean
jasmine
jujube
kale
laurel
leek
lemon
lentil
lettuce
madder
rush (lygeum spartum and juncus)
safflower (2 varieties)
sea onion
sesame
snake melon
snowbell (2 varieties)
soft rush
sorghum

mallow (althaea, 2 varieties)
matricary
melon
millet
morning glory
mulberry (2 varieties)
mullein
myrobalan
myrrh
myrtle
narcissus (4 varieties)
nut sedge
oak tree
oil grass (cymbopogon
  schoenanthus)
oleander
oleaster
olive tree
onion
orach
orange (citrus aurantium)
panis grass
paradise tree
parsnip
peach
pear
pepper grass
pine tree
pistachio tree
plum tree
pomegranate
poplar (2 varieties)
poppy (2 varieties)
privet
purslane
quince
radish
rape
reed
rice
rose
rue
common anise
common apple
common balm
coriander
cotton (2 varieties)
spinach
stock
strawberry tree (arbutus unedo)
sweet cherry tree
sweet marjoram
sycamore
thistle
thyme
vetch (3 varieties)
viola
wallflower
walnut
watercress
watermelon
wheat
white lupine
white mustard
wild peas
wild teasel
willow (4 varieties)
wormwood
yellow sweet clover

CITIZENHOOD: PROOF AGAINST THE CENTURY

Mohammed Naciri

The twentieth century has seen two periods during which old citizen "citadins" in french, or "citadinite" for citizenhood societies have been the centre of scholarly interest. The first period corresponds to the first third of the century, when these societies were still under the influence of the traditional urban order at a time when colonialism was seeking to impose its domination. The second corresponds to the last third of the same century; and it coincides with a time when old cities throughout the Arab-Muslim world appeared to be definitively condemned by the exodus of their original population and destined to dilapidation, degradation and neglect by the public authorities.

Between the middle of the century and the beginning of the 1980s, this interest weakened, even disappeared, except in history and anthropology, from the field of urban research—as though citizens "citadins" in french, or "citadinite" for citizenhood and their spaces, whatever their nature, were not factors worth considering. The renewed interest in these societies over the past twenty years or so is a genuine paradox, since, in terms of population, citizen society has been in constant decline and, in terms of the occupation of space old cities have been reduced to mere islets within the spread of modern urbanization.

To follow the evolution of a society's socio-cultural state and its relation to the urban—that is, to its citizenhood—from the beginning to the end of the twentieth century requires an overall assessment of the whole of research into Arab-Islamic cities. Such a work is too vast and goes beyond the framework of these brief considerations about the evolution of a notion (some would say of a concept) that was long regarded as a totally obsolete and inadequate tool for the analysis of urban societies.

For historical and cultural reasons, and for reasons of territorial configuration and political structure with regard to urban powers, citizenhood poses complex problems: does it have the same meaning everywhere, in all cities and at all periods of their evolution? There are, here, risks of anachronism, of inadequate comparison, and of the obscuring of the specific in the interests of global character. What of citizenhood in the past and in the present? In what sense are present cities urban? This paper will try to answer the above questions by showing the long evolution of the concept and the magnitude of its polysemy.

A citizenhood nowhere to be found: The uneasiness aroused by these questions is accentuated when we search for the meaning of the French term citadinité ("citizenhood"). Not a single French dictionary provides the meaning of the word; only the word citadin, of Italian origin, is mentioned. The term citadinité comes from the north of Italy, where the oppositional pairing cittadino/contadino reflects the intense nature of the relations between inhabitants of town and countryside resulting from the political domination of Italian cities over the space of their rural environment. This relation is an essential element in citizenhood relations. In the literature at the beginning of the century, the term citadin designated inhabitants of the traditional city. The English language does not truly have this term, since the coined word citizenhood, derived from French, is rich in civic connotations but does not restore the complex meaning of citadinité.[1]

The same difficulty arises in the Arabic language. Ibn Khaldun used the concept of al-{umran al-hadari, meaning city population, translated in the Pléiade version as civilisation urbaine ("urban civilization"). At present, a neologism, al-tamadduniyya, is attempting to retrieve the sense. Not everyone finds this term satisfactory. Some prefer the term "urban culture," so as to avoid a semantic shift towards al-temdin, meaning urbanization.

The temporal and spatial dimension of citizenhood also poses a problem. Citizenhood of a city is not a matter of its size. A small city may have a profound citizenhood, while a huge agglomeration may not. Hence, citizenhood knows no linear progression, but is rather subject to discontinuities, to periods of limited influence or rapid development. As such, it is important to understand citizenhood not as some stable, intangible state, but rather in terms of its evolutionary and enduring dimension.

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[1] "Citizenhood": we have coined this equivalent from the French word citadinité, since it seems to us best to express the idea of belonging to and in a city. The adopted translation is from Middle Eastern Cities in Comparative Perspective. Point de vue sur les villes du Maghreb et du Machreq, Franco-British Symposium, London, 10–14 May 1984, ed. Kenneth Brown, Michèle Jolé, Peter Sluglett, and Sami Zubaida (London: Ithaca Press, 1986), 250.

Nevertheless, despite the possible ruptures between citizenhood in cities and potential urbanity in megalopolises, the links between historical spaces, individuals and groups do not disappear just like that. Citizenhood as a socio-cultural relation, one that remains meaningful from one generation to the next, structures the life of society, marking, sometimes indelibly, practices, attitudes and mental representations of both individuals and contemporary social groups. Its influence may express itself in the form of a dominant cultural model, with apparent diverse effects on the architecture and decoration of houses, and on furnishing, on the organization of domestic space and on gastronomy.

How does it relate to the human and social sciences? The conditions, within which reflection on citizenhood appeared, the reasons for its eclipse, for some thirty years, from the middle of the century on, and the context of its re-emergence into the field of disciplines attempting to give it a resolutely problematic dimension, are closely bound up with the contexts of mutations within the social and human sciences. The start of the century is marked by the quest for an autonomous status for disciplines in the process of being formed; the end of the century, by contrast, is characterized by the desire for reconciliation, and in some cases convergence, through collective research projects starting from problems jointly worked out. Each period, however, reveals a crisis in citizen society and a crisis in the problems used in order to understand it in its totality. Hence, the interest in citizenhood is revealing, simultaneously, dysfunctions within society and the incapacity of available tools to permit a better understanding of the circumstances and particularities of the crisis. In both periods, “attempts” to foster an urban “science” are not the smallest contribution made by studies on citizenhood to the progress of human and social sciences regarding the city.

The complexity of citizenhood as a concept lay behind many ambiguities: misunderstandings, disagreements about its pertinence for present times, acceptance of its use so long as this was restricted to the Arab-Islamic world, or outright rejection, with citizenhood regarded as a tool to be consigned to the museum of accessories. The reversing of these tendencies finally allowed citizenhood to be given the rights of the city, in the wake of debates punctuated by a series of scholarly meetings and pieces of collective and individual research, over a long road whose principal stages we shall try to trace over the past century.

1. Historical conditions of the construction of citizenhood

The periods of major interest vis-à-vis the societies of traditional cities are a reflection of the profound changes that have calibrated the historical development of Arab-Islamic countries over the course of the century: colonization was marked by a profound political upheaval, which saw Arab-Islamic cities fall, some for the first time in their history, under foreign domination. The beginnings of independence saw the initial emergence of a demographic revolution; one that gave rise to a complete reconfiguration of social hierarchies and a remodelling of spaces within the city. Urban populations were becoming the majority in a number of countries where, to use the expression of Jacques Berque, a rural rusticité ("rusticity") had up till then been the dominant feature. Authoritarianism, and a turning back to religious values, was symptomatic of considerable disarray. The elite turned out to be incapable of containing the rise of internal and external perils, in a context aggravated by under-development, and of social and spatial disparities that transformed urban space in cities growing ever more gigantic. These upheavals were accompanied by a triple deprivation—political, cultural and economic—that revealed the extent of the crisis of urban society, and, at the same time, explained the liveliness of the debate on the evolution of citizenhood.

Initial attempts at research into citizenhood took place, first, in Morocco. The late colonization of the country was the underlying reason for a remarkable conservation of the old fabric, and for the relative maintenance of its population during the first decades of the Protectorate.[2]

To understand better, and so dominate better

At the beginning of the colonial conquest, cities had put up no notable resistance to occupation. It was assumed that the inhabitants would be hostile to the new invaders (especially those of "Fez, a city regarded in the West as being more fanatical and more closed to foreigners than other cities"), but the reality had reserved an exquisite surprise. "The first contact of citizens with westerners was without violence. The urbanity of the bourgeoisie was met, on our side, by a firm benevolence and an attentive respect for traditions. They [the citizens] are refined and cultivated people, who maintain in the city what remains of a glorious Moorish civilization."[3]

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[2] The term bidonville ("shanty town"), the initial term used to designate poor urban growths, was for some time specific to Morocco, before (to the best of our knowledge) becoming generalized in its use and before its realities were regarded as a subject for research. Would this not be a paradox with regard to citizenhood?

However, once the sway of the colonial power had been ensured over the countryside, it was the cities, especially "citizen cities" like Fez and Salé, which, from the 1930s on, represented the major challenge to long-term colonial continuance by virtue of their passive or active resistance. A similar situation occurred in Aleppo, affecting the relation between urban society, the national movement, and the Mandate authority.[4] In fact, the urban elites had lost the power over their own city, along with their own souls, while the State, whose protection they expected, was falling apart. This deprivation felt as if their entire universe was put into question. It was the start of an irremediable crumbling of the old urban order. "At that point there began, for citizens of pedigree, a time of doubt, of loss of landmarks, of a kind of flickering of referential thought."[5]

The "colonials" had not waited for these reactions before paying the most considerable attention, from the beginning of the Protectorate, to knowledge of citizen society. The strategic requirements for this knowledge were best expressed by Georges Hardy, the eminent co-worker with Lyautey, an ethnographer more than a geographer, a "geo-politician" on colonial issues, and one of the most prominent pioneers with regard to reflection on citizen society. In his work *L'Âme marocaine d'après la littérature française*,[6] he set out one of his objectives. "We aim to convince authors of every kind that their effort should preferably be oriented towards the only research that really counts in the troubled times in which we live: the knowledge of men before us and beside us." As a politician he recognized the contribution of ethnographers in the realization of this objective. "Most of them were not simply passersby; they remained in contact with the living realities. They wrote not only for academies. They worked jointly with men of action representing the colonial authorities."[7]

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[3] Robert Montagne, *Révolution au Maroc* (Paris: Edition France Empire, 1957), 76.

[4] Marion Farouk-Sluglett and Peter Sluglett, "Early, recent and future research on the modern history of Aleppo: a review and some proposals," in *Middle Eastern Cities in Comparative Perspective*, 290.

[5] Robert Escalier, "Élites, pouvoirs et ville dans le monde arabe: éléments d'analyse de la citadinité," in *La citadinité en questions*, ed. Michel Lussault and Pierre Signoles, Collection Sciences de la Ville no. 13, Fascicule de Recherches d' Urbama 29 (Tours: URBAMA, 1996), 29.

[6] Georges Hardy, *L'Âme marocaine d'après la littérature française* (Rabat: Éditions du Bulletin de l'Enseignement Public du Maroc, No. 73, April 1926; Paris: Librairie Emile Larose, 1926).

A veritable landscape of hierarchies within urban society was established in the chapter of his work entitled "citizens" (citadins).[8] This term designated, at one and the same time, the city and its inhabitants. The mode of life and cultural activity determined the quality of citizenhood of a city like Fez, here taken as a model. "Fez is the city of citizenhood par excellence: we find there a real luxury in housing, clothing, in the table kept; the language is purer than elsewhere, and literature is more honoured. The inhabitants of Fez, the Fassis, justly lay claim to forming the chief oasis of culture in the Empire."[9] Fez was also a true city by virtue of its functions. It provided "that rare combination of a learned city, a center of academic, religious and theological studies, existing alongside a very active market and a vast manufacturing workshop; all Fassis are born tajer (traders), by heredity and by tradition, like the Phoenicians of Antiquity." Fez was accounted a true city, finally, by virtue of its capacity for integration and effulgence. It "functioned, at one and the same time, as a melting pot and a centre: a melting pot where various ethnic elements came together in an amalgam of original Moorish and citizen imprints; a centre whose effulgence reached to the most remote parts of the old Berber bloc, to soften it and enlighten it little by little."

However, in order to be better supervised, "citizen cities" needed to remain apart from the colonial city. This seminal divorce, reflected in the heterogeneous nature of twentieth-century cities, was governed by "the absolute principle of the separation of the Moroccan city from the new European cities." This marginalization of traditional cities in space was accompanied by their being thrust into a remote past; for Lyautey "the old medinas were medieval wonders that had to be absolutely preserved." Georges Hardy recognized that few people escaped "the temptation to conceive of Morocco as a surviving remnant of our Middle Ages, and it is true that, in various aspects, a medina necessarily evokes, even today, after fourteen years of French Protectorate, many an image of our past." Robert Montagne stated, for his part, that "...citizens form among themselves a society somewhat analogous to the one constituted in the Middle Ages in the great commercial cities of Europe."

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[7] L'Âme marocaine, 2, 155.

[8] L'Âme marocaine, 118, 119, 117.

[9] Montagne, Révolution au Maroc, 81.

The diagnosis was clear then: an unchanging society had endured through time, within a framework frozen over centuries. The expression of citizenhood was understood through the prism of representations that observers had of their own past. Georges Hardy was not, however, fooled by this vision. This similitude between the past of one society and the present of another was, for him, a mere "superficial analogy." "No possible parallelism should intrude between this social state [of Morocco] and that of feudalism," he concluded, following an analysis of the characteristics of feudalism in general and the feudal city in particular.

From utilitarian aims of knowledge to the scholarly project

Georges Hardy strove to go beyond "false analogies in time that are added to false analogies in space, to aggravate the confusion." As such, he undertook to demonstrate the scope of his project and to indicate the methods of investigation used. "It should be understood that this *Âme marocaine* is, in the final analysis, simply the outcome of experiences, and that our preoccupations go beyond the domain of colonial politics." The intention was clear. This study of citizen society should not be undertaken for circumstantial reasons, to provide a plan of campaign designed for "colonials." Its aim was to understand the "psychology" of citizens through investigation of their social categories and their professions, of their powerful men and their notables, with a view to acquiring "the sense of the indigenous." This latter was characterized by patience, sensitivity and divination, and necessitated "prolonged, intimate, meticulous mingling with the groups to be studied. There exists a whole psychology to be reconstituted in order to know what affects this sense and attracts it, what shocks and repels it."

This intuitive knowledge should take account of systematic rules: psychological study should, in addition to systematically exploiting documentary sources, "delve everywhere into psychological information, should clarify it, supplement it, and cross-check it against scientific data." He adds: "All the sciences of humanity are already participating, more or less widely, in this movement of research." In setting itself within the evolution of "sciences of humanity," his seminal project for a new research method stated that "literature, in its full sense, was inspired by scientific concern, and scientific literature never lost sight of the psychological object in view."[10] This showed a manifest intention to build a bridge between disciplines for the new integrated knowledge that was being formed.

Who are the protagonists in the seminal project for this new knowledge?[11] First, ethnographers "concerned more with local psychology than with general psychology." Considering the subject of their studies, still in the course of being developed, and their uncertain research methods, G. Hardy underlined the necessity of knowing the practical lives of citizens, of knowing their attitudes towards religion, to go beyond research basing itself on folklore. He insisted on the need to interpret their tales and legends, so as not to neglect "the rules of the genre, the gap between observation and account, between the real and the imaginary." He wanted to combine research on institutions with the study of law, and to consider arts that needed to be liberated from "conventional orientalism." He noted that linguists "were of an astonishing fecundity," but that they separated the language from the spirit, making little "study of syntax, which ought to provide us with high quality psychological documentation." Finally, he advised, in order to create this new "collective psychology," the methodical exploitation of a new source, of "the plays of physiognomy, gesture and attitude," together with the "relations between details of everyday life, and of ways of thinking, with the different postures of the body." To this effect, he cited P. Odinot, for whom "the way of sitting modifies everything: the height of windows, the height of furniture, musical instruments; the whole of life."[12]

The contributions of the various disciplines to his wide-ranging research project were unequal. For Georges Hardy, professional geographers "seem reserved to excess; they are held back by scientific scruples. Psychological geography, which has nowhere acquired a clear form as yet" could expect nothing from the discipline, though it should recognize, in geographers, the merit of challenging the pitfalls of determinism.[13]

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[10] L'Âme marocaine, 7, 10, 2, 154–55, 164, 155.

[11] See Nellia Dias, "Une science nouvelle? La géo-ethnographie de Jomard," in L'Invention scientifique de la Méditerranée (Paris: Éditions de l'EHESS, 1998), 159–183. This article retraces the history of the constitution of ethnography within disciplines.

[12] L'Âme marocaine, 157–159, 162. Concerning the way of sitting, Maurice Le Glay observes: "We are not a squatting race, and I have the impression that we may not, without losing our superiority over this [Moroccan] people, adopt their ways of life and methods of work."

Georges Hardy gave history a prime place within his procedure, since "historical explanations add nuance to ethnographic and geographical considerations," thus restoring particularities to the local character. For him, "it is clear that in the study...of every city, every social group, historical explanation should play an eminent role."

A powerful preoccupation to begin with, a concern for knowledge, even a project for putting together a new knowledge about "collective psychology," in order to understand not just citizens but the population of the country as a whole. G. Hardy's ambition to develop "scientific" research methods was still at the stage of a sketch. He himself recognized its limits. "A whole treatise needs to be written about the method," in order to resolve the more general problems.[14]

Though produced in quite different circumstances, Marcel Clerget's work on Cairo showed similarities, up to a point, to this will to provide new problems of research on the city. In 1934, M. Clerget "was the first to demonstrate [in his thesis on the geography of Cairo] that it is not possible to grasp the urban fabric without its historical, juridical, economic, demographic or social dimensions. It was a huge project, which was misunderstood at the time"[15] by the academic bodies in France, as was the case with G. Hardy's attempt.

This incomprehension, with respect to the scope of these attempts to re-found disciplines geared to research on the city, was merely the initial indication of a sustained crisis which was to affect the renewal of knowledge on traditional cities and the evolution of their societies.

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[13] Georges Hardy criticizes ethnography, which cannot explain everything and advances ethnic temperament as a once-and-for-all piece of data, needing to be supplemented and corrected by geography. Concerning this last discipline and its practice by some, "naturally, we neglect, out of hand, that false geography, inaccurate and full of sentiment, which explains everything and nothing, based on the poorly determined influence, merely apparent, of atmosphere and landscape, and which depends almost exclusively on sensibility and ideas preconceived by the observer."

[14] *L'Âme marocaine*, 164, 153.

[15] Robert Ilbert, "Méthodologie et idéologie, la recherche française sur les politiques urbaines en Égypte," in *Middle Eastern Cities in Comparative Perspective*, 103–114.

Citizenhood as a link with the world: civilization or culture?

Two people have played an essential role in identifying the characteristics of citizenhood. They represent the final researchers of the colonial era, the final witnesses of "citizen life."

The picture of Fassi society painted by Roger Le Tourneau shed a clear light on every aspect of the complex life of a large city in two stages of its evolution, at the beginning and at the end of a period stretching over half a century. Despite his intimate knowledge of Fassi society, however, he makes no mention at all of its citizenhood. He analyses its evident expression in all the aspects of the city and of the life of society, yet does not once use the term. He speaks of a "great effort of moral codification," but especially about the success of the people of Fez in "creating a way of life specific to them, rich, full of nuance, and applying to every action of life, from the way of eating and receiving, to the highest intellectual relations. Such an effort is called civilization." He underlines the "masterpiece" of Fassis' collective life, which is "reasonable and realistic," and notes that "they had succeeded in constituting an original civilization even within Morocco, refined without excess and at ease with itself."[16] This is a stance, among others, within the tradition of colonial ethnography, which makes the term "citizenhood" more complex and enriches its meaning.

To Jacques Berque we owe the use of the term "citizenhood," and also its conceptualization. The expression "citizenhood as perfection of a culture" makes the concept more complex and its use more delicate, since it refers to the polysemy of the notion of culture—which does nothing to simplify matters. He did not, however, content himself with this elliptical formulation. Citizenhood was analyzed in a way that made it part of judicial anthropology rather than embodying an ethnographic or sociological approach. Nourished by Islamic sciences, he was better fitted than ethnographers to understand the profound impact of institutions on the state of society and the status of the city. Huge agglomerations possessing all the attributes of a "city," with a mosque and sermons, hammams and suqs, could nevertheless not claim to be "citizen cities." "Hence, to the statistical threshold that agglomerations need to pass, in order to be designated cities, we should add another threshold, related to what we call citizenhood." He cited evident cases to support this approach. "In the Tunisian Sahel, Msaken, which had some twenty thousand inhabitants, is not considered a medina, while Monastir and Mahdia are such with only half the number." He made the same observation in the eastern sphere. "Paltry cities like Nablus in Palestine and Zahle in Lebanon breathe a lively citizenhood," while huge agglomerations in Egypt were not "citizen cities." Probably sensing the limits of this observation in defining citizenhood, he offered the following suggestions: "It stems from impalpable elements: urban tradition, historical memories, bourgeois outlines, and specialization in certain work, historical or spiritual aspects. Then there must be material ones: physical appearance, surrounding walls, architectural distinction." Through computations and progressive touches, he came to specify that the passage from sizeable village to city depends "on the function the city has to fulfil according to the Muslim ethic: to be a place of exchange and testimony." By showing the intricacy, in the practice of civil law, of exchange and testimony, he developed around the theme of the suq and the mosque the elements that form the basis of contradictory rationales of the unity/division that govern urban life: between the peasant and the city-dweller with regard to exchange, and between the unitary expression of the city, by virtue of the sermon mosque, and the outpouring of testimony through the multiplication of weekly sermons in quarter mosques.

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[16] Roger Le Tourneau, *La vie quotidienne de Fès en 1900* (Paris: Hachette, 1965). See also, idem, *Fès, avant le Protectorat. Étude économique et sociale d'une ville de l'Occident musulman* (Casablanca: Société Marocaine de Librairie et d'Edition, 1949), 668 photos and maps. See pages 38, 302.

The citizenhood approach could not avoid a close analysis of urban institutions: relations between the waqf and the market, the relations of these pious foundations to urban services, the fundamental division between the exercise of property and right deriving from property accumulation, which has an effect on the entire city economy. For J. Berque, the Muslim city is not an ideal of virtue and organization, since "there reigns a tension between the reality of the city and its juridical ideal." The jurisprudence vis-à-vis the city and its institutions, represented by fiqh, functioned as a regulating element. "The fiqh is a rigorous censor of citizenhood." Because "the city, despite its vices, is the place of faith, the place of law." This is probably what R. Le Tourneau meant by civilization when speaking of citizenhood.

J. Berque did not, in determining the sense, even the "essence" of citizenhood, content himself with reflections arising from juridical anthropology. In order to attain this objective, he crossed group lineages with their professions, so as to define a "tri-functional order" which formed a concrete basis for citizenhood. It is "a synthesis whereby individuals of different lineages overlap within a system of activities organized according to a ternary alternation: craft, trade and study. A family is city-dwelling to the extent that it is represented in the three activities of the city. This is still the case today with Fez, Salé, and Tunis."[17]

With regard to the spatio-temporal organization of the city, J. Berque noted two dimensions: the physical structure of the city and the mutations of its temporalities. Contrary to the traditional ethnographic and geographical trend, which gave no consideration to the spatial organization of the city, he peremptorily affirmed: "to speak of the city is to speak of a plan." As such, he showed a marked tendency to link physical fact, social act and political action closely together, as a means of conceiving the urban in its spatial complexity.[18] It is probably with regard to time in the city that he showed the changes that were beginning to affect the urban order. "We pass," he notes, "from a seasonal conception of the passage of time, from a liturgy that intertwined work and days throughout the year, to the conception of a daily life that encloses you." Hence, the city changed rhythms as it witnessed the change in status of elements of its tri-functional citizenhood order, namely those of craftsman and merchant. He noted the displacement involved in "the passage from the city of craftsmen to that of workers," while the trader continued to ignore the bank and worked only through storage. However, the absence of analysis, by the author, of the role of the {alim, one of the personages symbolizing citizenhood in the city, is surprising. Was he already propounding the eclipse of the latter's role in the process of mutation affecting the city, on the religious level especially, as a prelude to the time of fundamentalisms?

These elliptical visions of the changes affecting urban society reflected J. Berque's consciousness of the dynamics that were actively placing citizenhood at the heart of this tension of which he spoke, as a motor of ineluctable change in the city. Twenty years after his seminal text,

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[17] All the above quotations are from the seminal article written by J. Berque in 1958: "Médinas, villeneuves et bidonvilles," in *Opéra Minora* by J. Berque, vol. 2 (Paris: Éditions Bouchene, 2000), 239–272.

[18] Mohammed Naciri, "La médina de Fès, trame urbaine en impasses et impasse de la planification urbaine," in *Présent et Avenir des Médinas (De Marrakech à Alep)*, Fascicule de Recherches d' Urbama 10–11 (Tours: URBAMA, 1982), 237–254. See in particular the table on page 247, on the hierarchy of spaces, forms of framework and their insertion in the urban fabric.

J. Berque wished that "having lost its old *h'isba*, the guarantor of citizenhood morals, [Fez] could find a morality of business and manufacturing,"[19] For a new citizenhood?

The reign of disciplines with a "prescriptive finality"

In the weakening of city structures and spaces under the influence of urbanization, the old medinas were forgotten. They served as an outlet for the rural flow. The former citizens and public authorities accommodated themselves to this evolution; the former for economic reasons, sometimes mercantile, the latter for motives of socio-political regulation. Dilapidation and degradation had taken hold of the old structure, due to the abandonment of maintenance and to density pressure stemming from compression and grouping. In Morocco, as in Algeria, rehabilitation projects were considered, but they remained unrealized.[20] In Tunisia, an urge to modernization threatened the destruction of the old city in Tunis through the planning of major inroads. Reconsideration, however, saved the city from real destruction.[21] "Many a time destined to the wrecker's pickaxe, the great Tunisian medinas nevertheless evolved, maintaining an original character while giving examples of surprising adaptation in every field of citizen life."[22]

In general, disciplines whose main subject of study and research was urban found themselves helpless before the complexity of citizen society and the particularities of its articulations with regard to historical urban spaces. "In this field, the conceptual voids, and the non-reference to the social, are as marked from Fez to Damascus and from Sanaa to Algiers."[23]

On the level of action, city administrators and experts from the large international study bureaux, and from urban research institutions,[24] did not in fact (with some exceptions) have the specific practical knowledge allowing them to intervene in an urban fabric filled with symbols and social values. Intervention in modern cities is based on techniques difficult to adapt "without putting into perspective the role of medinas in twentieth-century cities and without envisaging a large-scale social policy for the poor populations living there. It should also be noted that traditional architecture and urbanism of the medina type have, with rare exceptions, not been reproduced."[25] Policy-makers acted as if the city had no memory. Hence their actions had no imperative leading them to refer to history.

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[19] Jacques Berque, "Fès, ou le destin d'une médina," in *De l'Euphrate à l'Atlas*, vol. 1, *Espaces et monuments* (Paris: Sindbad, 1978), 380–415.

[20] Daniele Pini, "Croissance urbaine et sous intégration, la Casbah d'Alger," in *Présent et Avenir des Médinas*, 121–144.

[21] Jellal Abdelkafi, "La médina de Tunis, des études aux actions," in *Présent et Avenir des Médinas*, 237–255.

[22] Paul Lowy, "Evolution des grandes médinas tunisiennes," in *Présent et Avenir des Médinas*, 103–120.

[23] Jean-Marie Miossec, "Recherche urbaine et politiques urbaines en Tunisie," in *Middle Eastern Cities in Comparative Perspective*, 115–140.

[24] Michèle Jolé, "La recherche sur les villes arabo-musulmanes et la notion de

This crisis of perspectives in the urban research of the 1960s and 1970s resulted from a triple convergence: that of the difficulty urban disciplines had in leaving the beaten tracks of monography, the calculable results of the growth of cities and the description of their activities and functions; that of urban engineering, which regarded traditional cities as chaotic and could not comprehend the rationale of space hierarchy and the capacities of traditional urban institutions for framework and integration; and, finally, that of States, whose management of cities was conceived more as an instrument of political control than as a tool for development.[26] The time frames directing their actions were short ones, and geared to political goals; they were based on technical means of resolving society's problems.

From the middle of the century on, individual research had taken a direction contrary to dominant approaches in the study of urban phenomena. Three currents open to the different approaches of the social and human sciences made their appearances: the first in the Maghreb, the second in Egypt, and the third in Lebanon and Syria. Their aim was to grasp the urban in its totality, to understand the change within its contradictions, to understand tradition and modernity with their ongoing tensions.

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politique urbaine, instrument de classement ou instrument d'analyse," in *Middle Eastern Cities in Comparative Perspective*, 93–102.

[25] Miossec, "Recherche urbaine," 124. See also, idem, "Identité tunisienne: de la personnalité géographique d'un pays du Maghreb, du Monde arabo-musulman et de la Méditerranée," *Revue tunisienne des sciences sociales* (Tunis, Ceres) 36, no. 118 (1999): 43–91, especially, 52–58.

[26] Mohammed Naciri, "Les politiques urbaines, instrument de pouvoir ou outil de développement?" introduction to *Politiques urbaines dans le Monde arabe*, ed. J. Métral and G. Mutin, Collection Etude sur le Monde Arabe 1 (Lyons: Maison Méditerranéenne, 1984), 13–42.

2. Resurgence of interest in the urban

The anthropology of Morocco was mainly Anglo-Saxon and rural during colonization, citizen-based and North American following independence. From the 1960s on, the contributions of the new generation—whose most eminent representative has been Clifford Geertz[27]—approaching anthropology from different disciplinary fields, have in various ways distanced themselves from the colonial literature on traditional cities.

In the Maghreb: the contributions of anthropology

The Ahl Sala[28] was the first work to analyse, in depth, the intimate mechanisms whereby the citizen's personality was formed. It is an accurate analysis of the life of the citizen community, one that restituted, throughout the cycle of life, how and in what circumstances—notably the manifestations of the sacred impacting on existence—the individual and the community are involved in complex processes of socialization. Citizenhood took the form of an art of living, of a behaviour ethic translated into practices of exchange and opening out, through activities, celebrations and religious rituals. It showed how society had changed over a century of history, through multiple ruptures which had not in any way worn down the cultural unity of the community. The progressive creation of a hierarchy in Slawi society, and its deeply rooted conservatism, has not weakened its capacity for adaptation and cohesion. For the Slawis, bonds linking individuals within a social and cultural structure constituted a fabric of total coherence, which gathered in social groups organized into networks and antagonistic coalitions. This is not the least of the paradoxes of its citizenhood.

After the fashion of J. Berque, who stressed in his analysis of the traditional city the central role of the suq, whose "frequenting determines an area in space and a unity in economic and social life," the team of anthropologists led by Clifford Geertz undertook a highly detailed study of the complex relations pertaining to the suq. The choice of the city of Sefrou, whose inhabitants compete with those of Fez in terms of citizenhood, gave the team the chance to explore the multiple aspects of the role of the suq in urban life: "Kinship, obligations, exchanges, residence, linguistic affiliation are seen as 'social frames'—relational possibilities and available social resources—and not of themselves the bases of political alliances or economic associations."[29] Through analysis of the role of the waqf, the zawiyas and the corporations [{hanta, plural {hnateh] in the animation of economic and social life in the suq, C. Geertz shows how social frames and alliances were in action in the "bled Sefrou," at once city and countryside, structured by the networks of clienteles, associations and alliances which formed the citizenhood framework, through the relation between country and city, as essential elements in the life of citizen society.[30]

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[27] Daniel Cefaï, "Le sûq de Sefrou, analyse culturelle d'une forme sociale," introduction to and translation of Clifford Geertz's contribution, "The Bazar economy of Sefrou," published in *Meaning and Order in Moroccan Society: Three Essays in Cultural Analysis* (Cambridge: Cambridge University Press, 1979). Translation entitled *Le sûq de Sefrou sur l'économie du Bazar* (Paris: Édition Bouchene, 2003), 9–53.

[28] Kenneth L. Brown, *People of Salé: Traditions and Change in a Moroccan City (1830–1930)* (Manchester: Manchester University Press, 1976). French translation: *Les gens de Salé, les Slawis, traditions et changements de 1830 à 1930* (Casablanca: Eddif, 2001).

Beyond this economic and cultural anthropology, called "the 'Muslim city,' traditional, pre-colonial, pre-industrial or simply medina," the concept of an Islamic specificity remains meaningful and implicit in this new current of anthropological studies of the urban.[31] The progress achieved in the knowledge of the old cities of Morocco has nonetheless paved the way for a slow resurgence of considerations of citizenhood in the last third of the twentieth century.

In the Mashriq: the traditional city, between material degradation and rehabilitation through historical research

Trends in anthropological thought were not the only motivators of the renewal of reflection on the urban phenomenon in the Islamic world. Compared to large cities constantly overflowing the historical nucleus, the future of this latter became ever more uncertain. But the more the obliteration of its importance in cities (sometimes becoming megalopolises) was accentuated, the more it became a major subject of interest for historical research. This paradox results, on the one hand, from the place and the conception of the patrimony in public policies relative to the city, where modernization and its challenges leave hardly any place for real patrimonial policies for old cities, and, on the other hand, from the increasing interest of the scholarly community in the cities of the Arab-Islamic world.

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[29] K. Brown, "The uses of a concept, the 'Muslim City,' " in *Middle Eastern Cities in Comparative Perspective*, 73–82. See especially, 79.

[30] André Raymond, "Les relations villes-campagnes dans les pays arabes à l'époque ottomane XVI^e^–XVIII^e^ siècles," in *La ville arabe, Alep, à l'époque ottomane XVI^e^–XVIII^e^ siècles* (Damascus: Institut Français de Damas, 1998); see also Thierry Boissière, *Jardiniers et société citadine dans la vallée de l'Oronte en Syrie centrale*, 2 vols. (Lyon: Université Lumière 2, Faculty of Sociology and Anthropology, 1999). It is an example of citizenhood integration comparable to the citizen-gardeners of Salé. Mohammed Naciri, "Salé Etude de géographie," *Revue de géographie du Maroc* Publication du Centre Universitaire de la Recherche scientifique, 3–4 (1963): 11–82.

[31] Brown, "Uses of a concept."

The second area of renewed reflection on traditional cities, after that of the Maghreb, was formed in Egypt, especially around historians like Jean-Claude Garcin and André Raymond, whose work on Cairo in the Mamluk and Ottoman periods gave a new impetus to the renewal of historical research in this field.[32] A generation of new historians, preparing their theses under the direction of these two figures, had undertaken innovatory research on spaces and societies in the cities of Cairo and Alexandria.

We shall not analyse all this work here. We intend solely to indicate how they have contributed, from the sixties on, to the opening out of new perspectives for urban research. At a time when the classical research of geographers was unable to explain the global character and complexity of these evolutions, as a result of the dimensions assumed by the modern city in a context of under-development, historians, served by remarkably rich documentary sources, new methods and creative intuitions, succeeded in reconstituting the interweaving of urban frameworks, with regard to the social fabric and the role of institutional frames in the evolution of urban society. This orientation of historical research towards the long term had allowed the restitution of the ruptures and continuities of evolutions, emphasizing the diversity of their dynamics in the past. The premises of a re-creation of reflection on the urban issue appeared in a piece of social historical research carried out by

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[32] Jean-Claude Garcin and André Raymond have each produced a work of remarkable richness, marking a renewal of historical research on the cities of the Mashriq. See especially Jean-Claude Garcin, *Un centre de la Haute Égypte médiévale: Qus* (Cairo: IFAO, 1976). Also, "Note sur la population du Caire en 1517" and "Le Caire" (in collaboration with Doris Behrens-Abouseif and Sylvie Denoix), in *Grandes villes méditerranéennes du monde musulman*, ed. J.-C. Garcin, with the collaboration of J.-L. Arnaud and S. Denoix (Rome: École Française de Rome, 2000).

André Raymond, *Grandes villes arabes à l'époque ottomane* (Paris: Sindbad, 1985). This work is a synthesis whose major interest lies in its coverage of problems regarding urban structures, institutions, functions, and activities that had not been sufficiently considered before. The Orientalist approach has been firmly transcended.

J. Berque on a quarter of Cairo[33] at the end of the sixties. He was probably the initiator of what we might call today a geo-history crossed with anthropology, which consisted in researching, over an extended period, the determining impacts of political, economic and social decisions on the structure of urban space in its historical evolution. Hence, it is possible, thanks to these past evolutions, to shed light on the reasons behind present types of behaviour in the face of change hampered by the multiplicity of rationales governing the city.

Thus, the new research has set aside the fixed representations of a single Muslim city whose model of organization has been repeated over the varied face of history. By challenging this vision of an archetype of the *eastern city*, the work of historians showed the dynamics and diversities of organization types in the cities of Cairo and Alexandria, thus marking the factors of rupture and continuity in their physical extension, together with the mutations of their social hierarchy and their links to the dominant powers and social groups that had determined the city's historical evolution.

The results of historical research on institutions, among them the *waqf*, showed the flexibility of relations within citizen societies. Means of adjustment and means of adaptation to urban realities may circumvent the evidently intangible prescriptions of *fiqh*, without questioning the religious basis of a society culturally unified but socially heterogeneous. The spatial division of social categories sheds light on the proportion of poverty and wealth within the urban framework. Traditional cities have known contradictory rationales, the play of powers, competition and battles for control of the city and its resources. However, they have also built up (though sometimes infringed) an ethic that has permitted group life and exchange between individuals. Historical research had not explicitly built a concept of this *culture of living together*, called citizenhood; but it showed its constituent elements through the existence of mechanisms of institutional framing and multiple solidarities linking different categories of citizen society, thus attenuating the social contrasts involved. Understood in terms of their cultural diversities, the integration processes of groups and individuals within urban society therefore seemed diverse, contingent, and variable, according to social groups, to their origin and faith, their environment and particular space within the city, along with the forms of framing and socio-political control entailed. Robert Ilbert, in *Alexandrie*,[34] evokes "the history [of a citizen community] woven from a heterogeneous framework. Some elements disappear while others are maintained. Time seems to stop while new mutations are being prepared. The historian tries to untangle the threads, reconstitute facts and causes that might, if not explain, at least partially clarify the evolutions, or make them less opaque." This process is at the heart of the search for a better comprehension of citizenhood, especially in its cosmopolitan expression stemming from universality, as this was translated in medieval megalopolises of the Middle East.[35]

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[33] Jacques Berque and Mustafa al Shakâa, "La Gamaliya depuis un siècle: essai d'histoire sociale d'un quartier du Caire," *Revue des Etudes Islamique*, 1974, 45–99.

From patrimony to public space: inversion of the role of citizenhood

The third area of preparation for reflection on citizenhood was in Syria and Lebanon, where geo-history took on an element of anthropology. Geographers, historians and sociologists were attracted by what I might call the *disciplinary overflow*. An iterative process going back into the past, leading to the construction of a representation of the evolution of urban society in traditional cities, beginning from investigations of observable realities in the present city, and going beyond all specialist frontiers. A geographer adopting this approach is not afraid to go back into the past to tackle subjects that normally form part of the competence of a historian, or to explore the present in its political and socio-cultural dimensions, which is the task of a political scientist, sociologist or anthropologist. He does not decline, either, to deal with the relations between the State, the future of the historical patrimony in terms of urban policy and the reaction of the technical, intellectual and political elite to projects, on the part of the Syrian and Lebanese governments, for the renovation of old centres.[36] The identification of contradictions between local powers and upper levels of decision-making may, thus, provide material for reflection and research in political sciences and in anthropology dealing with public spaces. Transverse thematics, such as rehabilitation policies, problems of patrimony, the originality of institutions of traditional urbanism, attempts at adaptation to change in old quarters, the role of tradition in modern urbanism, nourished meaningful research on the city. Thus was developed a new reading of the historical heritage in its triple spatial, institutional and social dimensions, inducing a reflection on the relation of tradition to modernity. Such a process permitted light to be shed on the sometimes conflicting relations between upper levels of decision-making, local powers and urban elites, giving rise to the emergence of research on the nature of civil society and the forms of public and private spaces within traditional cities, together with the continuities and ruptures of their equivalents in the modern city.

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[34] Robert Ilbert, *Alexandrie: Histoire d'une communauté citadine*, 1830–1930, 2 vols., Bibliothèque d'Etude 112/1 (Cairo: Institut français d'Archéologie Orientale, 1996).

[35] Jean-Claude Garcin, "La notion de mégapole," in *Villes médiévales et orientales*, 3–6. A report submitted at the meeting held on 10–11 February 1995 for the preparation of *Mégapoles en Méditerranée, Géographie urbaine retrospective*, ed. Claude Nicolet, Robert Ilbert, and Jean-Charles Depaule (Paris: Maisonneuve and Larose; Aix-en-Provence: MMSH; Rome: École Française de Rome, 2000). See also J.-C. Garcin (with Thierry Bianquis), "De la notion de mégapole," in *Grandes villes méditerranéennes du monde musulman médiéval*.

[36] Jean-Claude David, a geographer, is typically representative of this current of research. See his article "L'évolution des axes de circulation et d'activités à Alep de

The Lebanese civil war was an essential factor for progress in reflection on the passage from an urban society, in the past governed and regulated by a citizenhood based on inter-confessional exchange, to a society of dramatic confrontations between segments whose multiplicity of status had not, in the past, forestalled commerce in its primary sense. It was, thus, possible to see, within a context first of the State's weakness and then of the State's absence, how implacable rationales of power were able to destroy the co-existence of diversity within a society whose relations were founded on codes of behaviour and state of being between the descendants of old citizen generations. Solidarities had knotted together a whole complex network of exchange, inscribed in the centrality of the old fabric of Beirut. There was, thus, a motivation to evoke and study the citizenhood which had sunk into war, and to explore the possibility of its mutation into citizenship when the moment of reconciliation came. The most remarkable thing about Beirut's case was the debate on this citizenhood as a patrimonial basis

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1870 à nos jours: une continuité de développement urbain," in *Présent et Avenir des Médinas*, 255–260; and "Politique et urbanisme à Alep. Le projet de Bab Al Faraj," in *État, ville et mouvements sociaux au Maghreb et au Moyen Orient/Urban crises and social movements in the Middle East* (Paris: L'Harmattan, 1989), 317–324. See also Nabil Beyhum and J.-C. David, "Du sûq à la place, du citadin au citoyen," in *Sciences sociales et phénomènes urbains dans le monde arabe*, ed. Mohammed Naciri and André Raymond (Casablanca: Fondation du Roi Abdul-Aziz Al Saoud, 1997); and Jean-Paul Pascual, "La Syrie à l'époque ottomane (le XX^{e} siècle)," in *La Syrie à l'époque ottomane*. See the bibliographical data below.

for the reconstruction of the old centre destroyed by the war.[37] In contrast to the colonial era, the understanding of citizenhood was not a way of controlling society but rather the means of access to a new modernity. This inversion of the operational value of citizenhood from the status of a control tool to that of an instrument for the cultural reconstruction of a citizenship, through the rehabilitation of its urban heritage, was one of the evident signs of its complexity. How, under these conditions, were the relations between citizenhood, patrimony and citizenship to be grasped?

3. Genesis of the formation of a consensus on citizenhood

To judge by the number of collective works, in all the various disciplines, the debate on the Arab-Islamic city, the crisis in the social and human sciences, and the place of the traditional city as a patrimony and an integral part within urban development, has been the subject of abundant research over a period of 20 years. The variety of disciplines, the membership of particular research traditions—European, Anglo-Saxon, Arab, and Japanese—allowed the development of renovated problems on the theme of citizenhood. These collective works did not, however, tackle the subject of citizenhood directly, with the exception of three collective publications of which we shall analyze certain elements in connection with this concept. They have permitted a direct examination of its validity, and have provided perspectives going beyond objections about the opportunity for, and efficacy of, its use in urban research.

Citizenhood rediscovered

Since modern cities agglomerate without integrating, dissolve collective components and shake cultural identities without offering their inhabitants new references to facilitate an anchorage on new solidarities, they hardly facilitate processes of urban integration. Their spatial fragmentation reflects social and economic disparities that are constantly being aggravated, with no perspective for emerging from the crisis.

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[37] Nabil Beyhum, *Espaces éclatés, espaces dominés: Etude de la recomposition des espaces publics centraux de Beyrouth de 1975 à 1990*, 2 vols. (Lyon: Université 2 Lumière, Faculty of Sociology, academic year 1990–1991). See also M. Naciri, “Succès de la ville, crise de l’urbanité,” *Espaces et Sociétés* (Paris: L’Harmattan), no. 65 (1991): 9–18.

In this context, a Franco-British colloquium held in London in 1984 set itself the objective of "establishing an analytical and comparative assessment of urban research on the Maghreb and Mashriq undertaken in France and Great Britain."[38] Over and above a comparison of institutional research policies on the city in the two countries, debates were launched on the validity of the concept of *Muslim city* and on the specificity of Arab-Islamic cities. Are they Third World cities or have they kept, from their past, a socio-cultural and political element that differentiates them fundamentally from other cities of the world? The differentiation with regard to Cairo, between a traditional city, a colonial city and a megalopolis,[39] takes into account the composite nature of the Arab city and allows an understanding of divergences within evolution dynamics: are we dealing with continuity or rupture in time, juxtaposition or fusion in space? Consideration of the urban crisis, of social movements and public policies in urbanism, along with their relation to the rise of the religious element, found their continuations, especially regarding this last thematic, in the second Franco-British colloquium held in Paris in 1986, under the title *État, ville, et mouvements sociaux au Maghreb et au Moyent Orient*.

What strategy might result from research on realities lived, observable and analysed, in terms of general explanatory principles for urban study? And indeed, according to what scale and meaningful magnitude should we apprehend the realities of the social body? Urban anthropology provides a better knowledge of representations, discourse, and the practices of daily life, so shedding light on the forms of sociability within the old fabrics, and, in consequence, measuring the dimensions of change and the transitions towards the societies of modern cities. In his reflections on the recent formation of small Middle East cities in Syria, J. Métral has put forward some suggestions; and these are all the more significant in that they propose a "from the bottom up" understanding of "urbanity" as a cultural identity common to inhabitants of the city since its foundation. Gestation processes of urbanity have supposed the identification of lineages when the small city was first created. "For urbanity to be formed and developed is it not necessary that there should be a number of lineages that establish civil codes, among themselves, so as to regulate their neighbourly relations, of cooperation and/or opposition?" Were these the celebrated nassabs, the lineages at the base of citizenhood evoked by J. Berque? He further indicates that "a supplementary level of urbanity is reached when the territory of a lineage bears its name, becomes a quarter within an agglomeration." This agglomeration would then become part of an autonomous territory and be inserted within a network of neighbouring cities where frameworks of alliance and clientage are deployed to confirm its urbanity.[40] Certainly we see here some of the constituent elements for citizenhood seen in Sefrou and called by J. Métral urbanity. Was there reticence on his part to use the same concept? The London colloquium took the initiative in discussing this point. A presentation in the form of research on the archaeology of the concept showed the interest of this path for understanding the past and present transformations of urban societies.[41] However, even though the state of citizenhood might be a reality for those living it, or for those who make it a subject of research, the problem still remains: "What research strategy is the most appropriate for its analysis?"

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[38] *Introduction to Middle Eastern Cities in Comparative Perspective*, 10.

[39] Ilbert, "Méthodologie et idéologie." See also *Héliopolis, genèse d'une ville: Le Caire 1905–1922* (Paris and Cairo: Éditions du CNRS, 1981).

The diversification of approaches taken by the different disciplines and the confrontation of their methods proved to be necessary. The taking into account of sociolinguistics and literature, for example (and recalling, in this connection, the similar suggestions formulated in the twenties by G. Hardy), especially popular literature with all the representations, legends and myths it contains, provided a possible close knowledge of the complex processes of identifying individuals within the social body, or of rupture in the affiliation of identity to the community. "This sociology of the imaginary, of the symbolic, of the poetry of space, of the trace of collective memory, seems to us able to lead to original reflections on cities."[42] The exploration of Arabic literature might likewise constitute a field of research, as a mirror of the urban imagination, a domain expressing the gestation of changes affecting urban life. The setting up of a discussion panel on citizenhood by the Moroccan Union of Writers reflects the interest of citizen culture for literary creation. The theme of the old city is present in novelistic production. The writer Mohammed Berrada gives a special place in his novels to collective and historical memory in the organization of traditional urban spaces.

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[40] Jean Métral, "Citadinité au Proche Orient," in Middle Eastern Cities in Comparative Perspective, 271–282.

[41] Mohammed Naciri, "Regards sur la citadinité au Maroc," in Middle Eastern Cities in Comparative Perspective, 249–270.

[42] Jean-Paul Blais, "Recherches urbaines et villes françaises," in Middle Eastern Cities in Comparative Perspective, 53–58.

Urban actors: between powers, structures and culture

Ten years after the London symposium, the colloquium held in Casablanca in November 1994, on "social sciences and urban phenomena in the Arab world,"[43] constituted a new phase in reflection on Arab-Islamic cities with a view to following their evolution, to identifying their ruptures and continuities through the vicissitudes of time, and to understanding how Arab-Islamic traditions, from the physical structure of the city to social institutions and architectural forms, were perpetuated, evolved or were transformed; and how they appear today in contemporary cities, or are disappearing before the redoubled blows of modernization.

One of the problems at the heart of the debate was the difficulty in identifying the nature of the dominance of the different cultures that marked cities and acted on the management of their spaces. Indeed, the evolution of these influences over time renders their identification problematic. To what extent did the interpretation of law for a better adaptation to social practices, or the consequence of the management of religious foundations according to the norms of property, influence the mutations of private and public spaces, or favour mixing, or engender the segregation of social categories? From the house to the street and the quarter, how did the forms of organizing space become differentiated, and how are we to appreciate the effects of the interpenetration of populations of different origins on the evolution of these spatial configurations, and on the individualization of social groups beyond their confessions, origin or activities? Do the zawiyas and the corporations go across social bodies, irrespective of their status, hence attenuating their awareness of class, when it is known that the Maghreb medinas, or the Aleppo Mdineh, or the madina 'l-qadima in Damascus, for example, in the Mashriq, were not socially homogenous but had poor and rich quarters simultaneously. On the cultural level, that of citizenhood, it was possible to be perfectly well a citizen and also poor. Wealth was not necessarily a means of integration into citizen society. The length of stay in the urban entity, the nature of the activity undertaken, the alliances or affiliation to corporations or to a network of clientage, could facilitate access. The difference in status was not essentially one of money, but of culture. In Morocco, the authority of Makhzen, within the city, was represented by agents of rural origin, who were not regarded as citizens despite the prestige they had acquired through the exercise of power and through wealth.

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[43] Naciri and Raymond, *Sciences sociales et phénomènes urbains.*

These investigations did not solely concern the spatial reading of complex legacies from the past; they also sought to understand the social, cultural and political dynamics and the potential continuation of these into the present. What was the role of the State and/or of populations in the transformation of old cities, following displacements of centralities towards modern cities, and what were the consequences of this for policies geared to their protection, rehabilitation or renovation? Did the inhabitants of cities pass, like the State, "from culture-effect to appearance-effect,"[44] from the discretion of the traditional city to the ostentation that spreads through the modern city?

The explanation for this state of affairs lies in the major ruptures[45] citizen societies have experienced. The propositions advanced to identify the mutations in their culture had a double objective: to restitute the relations between groups and individuals that permitted social and cultural reproduction, while remaining conscious of the way their identity allowed them to form a united community—one which was not, nonetheless, free of internal contradictions, oppositions and ambiguous relations with the authorities. The other objective was to identify the processes that permitted the integration of individuals within the community of citizens. One of the essential conclusions of this search to identify the attributes of a citizen culture is the quite fundamental need to speak of *citizenhoods* rather than *citizenhood*, so as to grasp the specificities of articulation among spaces and societies characteristic of each urban ensemble. Citizenhood is a historical accumulation subject to transformations, erosions and even multiple mutations. It sheds light on the past culture of old cities; but can it be effective in facing up to present identities and in opening up to modernity?

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[44] Robert Escalier, "Élites, pouvoirs et villes dans le Monde arabe, éléments d'analyse de la citadinité," in *La citadinité en questions*, 21–32.

[45] Mohammed Naciri, "La culture citadine est-elle une culture citoyenne?" Preface to the French version of Brown, *Les Gens de Salé*.

The concept of citizenhood in the mirror of disciplines

Since the London symposium, the welcome accorded to the concept of citizenhood has varied according to the particular discipline involved. In the discussions that followed attempts to explore the concept in depth, the first reactions of geographers were to challenge its pertinence, on the grounds that the notion of citizen culture remained extremely hazy, all the more so in that it made no reference to space. And yet the perception of city territories lies at the heart of representations of the citizen. Space represents, for him, a place of anchorage and identity. The fact of being born and growing up in the same street, of having lived in the same quarter, creates for people, throughout their lives, complicities that go beyond political or ideological distinctions. Subsequent work has shown that citizenhood is consubstantial with space. "The citizenhood-object thus opens up another access to geographical space...a terrain where the various regulatory registers of the urban group are crystallized." The modern mutations of this group create conditions whereby the regulation is weakened, due to losses affecting the proximity of people and places. In these conditions, M. Lussault asks, "how can the individual link this violently divorced space within a homogenous material, appropriate it, organize it in a formal structure endowed with a meaning for himself and for others, i.e., something that, simultaneously, makes it conformable and distinguishes it?" Social practices may revalorize or de-categorize spaces by virtue of the mobility of men and products.[46]

During a panel discussion of the Union of Moroccan Writers, organized in Rabat in 1996, the geographer Mohammed Ameur conceded that citizenhood was a richly meaningful historical accumulation of a highly developed culture, permitting an accurate knowledge of old urban societies. He noted the pertinence of citizenhood in explaining the realities of the city of today. The heterogeneous nature of rural immigrant populations prevents all integration into the former citizen culture. This has been expressed by another geographer in his statement that "there has been a passing from the integrating city to today's segregating and fragmented city,"[47] for which citizenhood cannot be an operational concept. These arguments are not entirely false. However, they result from another sense of citizenhood, whose polysemy remains a constant stumbling block.

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[46] Jean-Charles Depaule and Franck Mermier, "Chroniques des années 1980," in Yémen, ed. Samia Naïm (Paris: Maisonneuve and Larose, 2001), 29–30. See also Michel Lussault, in La citadinité en questions, 44, 47.

[47] Escalier, "Élites, pouvoirs et villes," in La citadinité en questions, 27.

During the Casablanca colloquium, historians found that citizenhood provided a partial solution to their quest to identify the cultural influences on space in the traditional city, within the dynamic of their historical evolutions. There remained some objections that the debate failed to clarify. If the notion of network seemed pertinent to an understanding of the functioning rationales of urban societies, citizens' knowledge of filiations by virtue of lineage was contested, since lineage had too strong a rural connotation to be identified as a significant element of citizenhood. In the Rabat panel discussion, the same objection was advanced by a rural sociologist. For him, strategies of kinship and of matrimonial alliances were specific to the countryside. And yet, citizens' knowledge of the genealogy of families—and not just their own—permitted them to know the ramifications of networks and to identify the degree of kinship between one another. This was, he considered, a veritable grid for the analysis of individual behaviour and family strategies, and entailed the possibility of adopting, opposing, or simply understanding their rationales. The use of the term *bayt/buyut* or *buyutat*, which might be translated as "family lines," might remove this double objection.[48]

The disentangling of groups, on the level of the Arab world, by distinguishing an Andalusi integrative citizenhood, an associative Ottoman citizenhood and a Khaliji (from the term *khalij*, meaning Gulf) disparate citizenhood, likewise gave rise to a debate on the ambiguities of this representation of the Arab world on the basis of the urban cultures of these societies.[49] The distinction seems to have been founded on heterogeneous bases: reference to a culture, reference to an empire, reference to a territory—there were discrepancies in the historical levels used. Indeed, a cross-section would have been more suitable for the comparison. In all three cases, however, citizenhood was the product of a process of accumulation, though having neither the same nature nor the same historical depth. The first is marked by a specific culture of a society whose historical experience has demonstrated its integrative dimension well enough; the second is a rationale of empire, hence an associative one, one of communities, faiths and ethnic groups within the urban space. The third, for its part, is based on a territory where mobility favours an inclination to dispersal and monetary consideration, a propensity to prodigality; as such, it is dissipative. This is not to prejudge the worth of one at the expense of another. Each type of citizenhood has its own characteristics. In the Maghrebi sphere, Tunisian citizens, for example, opposed the power of the Sublime Porte, not the beys who governed them.[50] The case was different in Morocco, where Makhzen and urban cities had highly ambiguous relations. As such, they were urban groups with different historical experiences; experiences that still mark the contemporary societies more or less, according to the degree of development involved.

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[48] See the debate in Naciri and Raymond, *Sciences sociales et phénomènes urbains*, 156.

[49] Mohammed Naciri, "Le Rôle de la citadinité dans l'évolution des villes arabo-islamiques," in Naciri and Raymond, *Sciences sociales et phénomènes urbains*.

A historian—and a citizen, what's more—who intervened in the Rabat discussion panel wished to use not the term "citizenhood" (*al-tamadduniyya*), but rather the term *urban culture*—of which, he said, we did not know a great deal.[51] For that reason he proposed an analysis of citizenhood in terms of a triangular relation between rural world, Makhzen and cities; and, since these last had seen a regression since the Middle Ages, it was essential to take into account the periodization of their evolution, if we wished to avoid reducing cities to an a-historical model, viewed as valid regardless of the period considered. On the basis of these considerations, he inferred the need to tackle citizenhood on three levels—of social practices, of spatial forms, and of values and symbols—if we were to grasp, for example, the relations between the mode of housing, extended family, identity and familial networks. Rupture between the three levels in question produced mutations that caused the traditional city to lose its functionality, thereby reducing it to a refuge for identity and memory, without any possibility of passing from tradition to a new urbanity.

It was sociologists and anthropologists, especially those in urban anthropology, who were the most sensitive to the light that reflection on citizenhood might shed on their research into urban societies. Knowledge of behaviour, of citizens' attitudes as seen through their practical use of space, their frequenting of places for social purposes, and their relations on territorial levels accessible to the rhythms of daily life, will permit an understanding of their representations of space, an issue now common to anthropologists and historians. In trying to understand citizenhood in its historical dimension and in the way it is lived today, they were able to point out the passage from the heritage of the past, that of tradition, to its present practice open to change, even to modernity. For example: "When we speak of contemporary habitat and tradition, we are not talking only about architecture and architectural types, but also, of course, of usages, ways of living, i.e., of what Henri Lefebvre calls concrete space: gestures, paths, body and memory, symbols and meaning." It is thus possible to distinguish lasting traits of evolution and others that are less lasting.[52]

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[50] Abdelhamid Hénia, *Propriété et stratégies sociales à Tunis (XVI^{e}–XIX^{e} siècles)*, University of Tunis, IV Série Histoire, vol. 34, Faculty of Human and Social Sciences (Tunis, 1999).

[51] Abdelahad Sebti, "À propos de la culture citadine"; and Mohammed Ameur, "Observation sur la problématique de la citadinité et de la citoyenneté," *Afaq, Revue de l'Union des Écrivains du Maroc*, 1996–1998 [in Arabic].

In general, taking account of cultures as factors for explaining the evolution of old urban societies makes possible an intelligible reading of present societies in their socio-spatial interstices; a reading that makes sense. The meeting of historians and anthropologists in this field, especially in the interpretative anthropology of C. Geertz, not only allows advancements in the interpretation of the present world but also offers a renovation of "outworn paradigms which had inspired large sections of the research in social sciences from the end of the nineteenth century on."

4. The redeployment of a concept in the field of human and social sciences

The reticence of geographers and anthropologists, with regard to citizenhood, had been clear from the beginning; it was a hazy concept, they felt, belonging neither to space, nor to the class struggle, nor to citizenship. Its problematic scope could, at most, be of concern solely to the area of Arab-Islamic culture,[53] to the exclusion of other cities elsewhere in the world.

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[52] Jean-Charles Depaule, "Contribution au thème 'habitat traditionnel et traditions,' " in Naciri and Raymond, *Sciences sociales et phénomènes urbains*, 215–221.

[53] "Reflection on citizenhood does not pertain exclusively to the cultural area of the Arab-Muslim world, but is also of the greatest interest vis-à-vis western cities." Such a statement is a measure of the change in attitude towards citizenhood. [See the preface to *La citadinité en questions*, p. 6. For the relation of citizenship to citizenhood, see "La culture citadine est-elle une culture citoyenne?".]

Three factors seem to explain the resumption of reflection on citizenhood, twelve years after it appeared in the field of urban research: the first is the "spreading" of the theme by the multiplication of research in the social sciences, in particular in urban anthropology, about the thematic "citizenhood—urbanity—citizenship" applied to the study of cities in the western world. The second results from theses and research on urban subjects that have shown how citizenhood can provide an accessible "way in" for exploring, in an original fashion, the complexity of the urban phenomenon. Finally, there is the role of individual investment in the organization and undertaking of collective reflection on the wealth of meanings, and also of ambiguities—which is of some importance—in the concept of citizenhood. We should here cite Ridha Lamine[54] and Michel Lussault, both geographers. Their work testifies to the pertinence of their contributions in affecting a breathing space for citizenhood, beyond their discipline, in the field of the human and social sciences.

The interest of *La citadinité en questions*,[55] a collective work published in 1996 is that it specifies the content of the concept and its multiple meanings. Its objective was to "try to construct the object 'citizenhood,' " since it would be possible from then on to advance further with the concept. It was, first, about "practices of distinction allowing individuals to affirm their membership of a community," thus establishing a link between citizenhood and identity. Next was underlined the process of integration within the city and the appropriation of its culture and identity, by individual or collective practices that lead to a citizenhoodization (*istimdan* in Arabic). Finally, historical citizenhood, wherein the major difficulty lay in the "hiatus between the old order as presented by research [and also by memory] and the present order, this hiatus not having always been thought through with precision." These clarifications, despite their utility, merely formalize the current perceptions of anthropologists.

Starting from a reflection on the complex elements of the urban fabric encasing both individuals and groups, in "a subtle interlacing of correspondences allowing us to have a place on the social chessboard," Michel Lussault[56] affirms the irreducible identity of each of us and of each city. "Of this fundamental complexity, our disciplines—the human and social sciences—wish to discourse. And citizenhood might indeed well be an interesting instrument for clarifying the haziness of urban phenomena."

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[54] Ridha Lamine, *Villes et citadins du Sahel central* (Sousse: Faculty of Letters and Human Sciences; Tunis: Édition l'Or du Temps, 2001). R. Lamine was behind the initiative that led to the publication of the collective work *La citadinité en questions*.

[55] All quotes are from the text of Michel Lussault, "La citadinité: pour une approche problématique," in *La citadinité en questions*.

What then, he asks himself at the end of his itinerary, is citizenhood? His answer seems to arise obviously: "Simply the relation of a subject—i.e. a social actor whether he is an individual or these particular actors that are groups and institutions—to an object, in this case, the urban world." The latter is not "obviously reducible to the spatial dimension only."

Thanks to the wealth of his references, M. Lussault constantly amplifies the scope of the meaning of citizenhood he has developed, almost step by step, by trial and error. Referring to literature, he shows how the individual, before two different urban facts, finds himself facing the citizenhood of belonging with regard to two possible relations to the urban, "two ways of conceiving the city (his city), of understanding it, of acting in it, and of existing in it," and of doing the same for those of others; in sum, two modes of relations grasped within the framework of mental schemes of habitus. As such, citizenhood will be a highly complex structure of representations serving as a basis for practices. He attributes, to each social actor, citizenhood: a protean phenomenon engendering a way of life, a source for a way of acting, for practices that come into being and whose evolution acts, in its turn, on citizenhood. Hence the latter integrates technical and intellectual skills, constraints and collective rules, competences of individuals and institutions, allowing "the condensation of personal praxis in a coordinated societal and spatial structure."

Does this reduction of citizenhood to the sphere of individual, and therefore parcelled, competence risk dissipating it, diluting it in fragmentary behaviours, with no production of meaning or anchorage in society and space? However, the fragmentation of urban society, like the explosion of spaces in the city, poses a problem today for individuals who find themselves dissipated within a more or less extended area of mobility. The social networks of insertion and the spatial frameworks of inclusion are in fact sewn with considerable hiatuses: how do individuals take upon themselves such a scattering of the environments and places of co-existence within the urban? M. Lussault concedes to "representations constituting the immaterial face of citizenhood" the virtue of re-knitting social bonds and re-sewing the torn fabric of the citizen's individual space. Hence, a whole mythology is developed around the identity of space, patrimony and cultural action, in order to give a meaning to a dislocated territory. For him, "the overall citizenhood of a society at a given historical moment is deployed in the articulation of all the particular types of citizenhood, thus forming a meaningful, complex and dynamic system."

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[56] Dictionnaire de la géographie et de l'espace des sociétés, ed. Jacques Lévy and Michel Lussault (Paris and Berlin, 2003).

M. Lussault attributes the diversity of the environment for the production of citizenhood, which is a factor in the diversity of its meaning, to "engineers, urban planners, architects, geographers, sociologists, anthropologists, historians, and philosophers, each in their own way thinking they can account for urban reality." He seems, however, to miss one aspect: that of the ordinary citizen who does not take account of knowledge but rather acts daily through his practice. It is also by virtue of his action that citizenhood emerges into the political space. The role of citizen confers on citizenhood dimensions such that it acquires a power embracing the urban, regardless of localization. Hence citizenhood has found itself liberated from its supposedly exclusive land of validity, the Arab-Islamic cultural area. Comparisons with other places of urbanity in the world therefore acquire a meaning and permit the comprehension of the urban through literature, language, signs, accounts of action emitted by actors in the political game, and indeed through the media, along with billboards and their effective territorialization, as was the case between fighting factions in Beirut during the war.

Michel Lussault concludes: "True dynamic multi-national configuration, indissolubly linking practices and accounts, setting in motion the meanings, bodies, psyches of each and every one, so as to make one dizzy with its abundance, a maze whose least turning we should try to determine, citizenhood seems able to constitute one of the keys for understanding the social world and its spaces." M. Lussault goes far in his energetic reflection: he extends the multiple meanings of citizenhood to American cities. There is ground for doubting the pertinence of such a broadening of the concept to the urban realities of these cities. In fact, citizenhood proceeds from a culture of proximity and sociability, while, according to the work of Richard Sennet to which he refers, "the aspect of [American] cities reflects the great hidden fear of their inhabitants to expose themselves." Their urban spaces have the function of "dissipating the threat of social contact."[57] We are therefore far from the first meaning of citizenhood, which is a genuine construction of the social bond and that of places of co-existence thanks to the constant effort to maintain its continuity.

* * *

Here, then, are two authors, Georges Hardy and Michel Lussault, separated in every way, at the two ends of the century, but who are brought close together by their will to establish a knowledge constituted by means of a scholarly project on citizenhood. The motives of the former have been noted: "There will be, in this respect, a whole new discipline to create." We have also just indicated the scope of the latter's "problematic approach," aimed at constructing the object of citizenhood. The question posing itself concerns the context in which the desire, or rather the requirement, for the renewal of a social knowledge imposes itself. The path taken by this concept is curiously conjoined with the evolution of the social sciences in their approaches to the city; approaches made up of hesitations and certitudes, progress and regression, even crises, on the way to understanding the structures of space and the configurations of the social body, subjected in the past to slow mutations, but presently faced with a rapid growth that gives rise to transformations in every aspect of life and existence in the city.

Citizenhood (or citizenhoods) seems to become an active concept in moments of crisis. Crises of society? Crises of disciplines? Or both at once? Are these crises consubstantial with the concept? If the answer is yes, citizenhood will have permitted, throughout the course of a century, a rich and contradictory reflection on the urban, on the part of producers of knowledge from all disciplines. Is it not some merit for this concept to have helped, greatly, to promote the interrelation of specialists in the social and human sciences, and, therefore, the emergence of the inter-disciplinary approach? Has it not been, too, a way of consecrating citizenhood, to have placed it, for the first time, into a French dictionary, a specialized one at that: the Dictionnaire de la géographie et de l'espace des sociétés? Finally, might this consecration of a concept, in the wake of a secular evolution, not permit the understanding of the urban, in its infinite abundance throughout the world? Citizenhood has some fine days in prospect, to delve ever deeper.

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[57] Richard Sennet, The Conscience of the Eye: The Design and Social Life of Cities (New York, 1990). Translation from English entitled La ville à vue d'oeuil, urbanisme et société (Paris: Plon, 1992).

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HOUSE AND FABRIC IN THE ISLAMIC MEDITERRANEAN CITY

Attilio Petruccioli

Introduction

Due to its enclosed form that hides and protects the internal parts, the courtyard house is identified tout court with Islamic culture. This culture has put at the centre of its philosophy the protection of the family and the separation of women from public affairs. With a few exceptions, the large majority of traditional urban Islamic fabrics adopt a type related to the enclosure. Actually, a careful examination of the walled Islamic cities would record the presence of more elementary forms of dwelling next to the large and hairy dars. Those are simple one-room houses with a unique access on the main front that provides air and light to the interior. These elementary units are either the residual of rural types or abusive invasions of leftover public spaces of the city; they are in any case typological variations. They are called alwi at Algiers, for instance, where they rise two levels above the ground. These mono-cellular types once aggregated in series have generated the row house type in the western medieval cities. In the Islamic cities, on the contrary, they have always shown a marginal and disaggregated character.

Due to the limited space of this essay, these minimal types will be out of consideration.

Studies of the courtyard house rest on an ever-present ambiguity that tends to perpetuate the image of a generic and universal type, indifferent to the site and immutable over time. However, the work of Orientalists and Arabists, celebrating the courtyard as the heart of the dar, of the extended family, has muddied the waters in architectural terms. Satisfied with generic symbolic and functional virtues, they have omitted structural and typological components that are essential to the full appreciation of the courtyard house. They have failed to recognize the historical phases which mark the change of the type and its various translations in different geographical locations.

In the following passage Vittorio Gregotti underscores the tectonic importance of the courtyard as an architectural act par excellence, "the enclosure not only establishes a specific relationship with a specific place but is the principle by which a human group states its very relationship with nature and the cosmos. In addition, the enclosure is the form of the thing; how it presents itself to the outside world; how it reveals itself."[1] Given the fact that the archetype courtyard house represents a primordial act of enclosure and construction, it is senseless to establish primogeniture for something that is as essential to mankind as the wheel. Nevertheless, it is necessary to consider that every cultural region developed shelter and enclosure along different lines, through the choice of a specific elementary cell or by addressing the typological process in a specific direction.

This chapter seeks to describe the typological processes inherent in the evolution of the Mediterranean "Islamic" courtyard house with reference to the forces intrinsic to the building plot. It will also discuss the complex problems found at the level of the aggregation of building types and the accumulation of the courtyard house into the characteristic Middle Eastern city.

The Courtyard House

In the typological history of the courtyard house there was a critical moment when in a precursor an area around a mono-cellular unit was marked off by an enclosing wall. After that, the enclosing wall became a reference point, with an aggregation of more cells around a central space. Unlike the side-by-side placement of serial cells, the enclosure simultaneously suggests the final form of the courtyard house and emphasizes its inward looking content.

Much has been written about the sacred significance of the courtyard house. For example, it has been suggested that the courtyard of an Arab house evokes the Garden of Eden.[2] Gottfried Semper[3] associated the enclosure with a southern Mediterranean agricultural society that must struggle to coax a harvest from a grudging soil and protect it from the elements; G. Buti used linguistics to tie it to Indo-European nomadic people. The type is, however, a generic domestic form of residence which independently evolved in various places from the Egyptian-Sumerian civilization to the Mediterranean, Asia Minor, and right up to the Indus Valley.[4] The closed and reinforced courtyard house is, thus, a product of cultural polygenesis dating to the Bronze Age, and it has endured in the Mediterranean basin in the form of the classical Roman atrium and Greek pastas house.

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[1] V. Gregotti, "Editoriale," *Rassegna* 1 (December 1979): 6.

[2] J. E. Campo, *The Other Sides of Paradise: Explorations into the Religious Meanings of Domestic Space in Islam* (Columbia: University of South Carolina Press, 1991); P. Oliver, *Dwellings: The House Across the World* (Austin: University of Texas, 1987); G. T. Petherbridge, "The House and Society," in *Architecture of the Islamic World: Its History and Social Meaning*, ed. G. Michell (London, 1978), 193–204.

[3] G. Semper, *The Four Elements of Architecture and Other Writings* (Cambridge, 1988).

The kernel of the type is the concept of the organism or better, the specific balance between a serial and/or an organic attitude of putting together forms that is the genetic patrimony of every culture. A courtyard house in Jilin, China, a courtyard house in Fez and a domus in Italica, Spain are, however, deeply different in spite of a generic similarity. The Chinese house disposes its pavilions inside the enclosure in a scattered manner, scarcely related to the wall of the perimeter. The house in Fez lays out the elementary cells enmeshed along the border of the plot, while double symmetry controls the regularity of the patio, but without influencing the whole building. The domus in Italica disposes the cells around the peristyle in an organic way, ordered by a bi-axial symmetry that crosses the whole building from the entrance to the exedra. Spaces have different sizes and are hierarchically composed in a variety of ways in spite of their superficial similarity as courtyard houses.

In order to better understand the courtyard model in all of its guises it is useful to introduce the fundamental typological differences between the courtyard house and the row house. The row house always lies on a road, faces onto it, and is directly accessible to it from the outside. Its pertinent area is behind, to be covered in subsequent stages as the area is filled in. The pre-eminence of the building site and the high property value attached to its facing front determine the dimensions of the lot, the front of which is equivalent to the size of the elementary cell, usually around five metres. The courtyard, on the contrary, has a superior sense of the familial territory, so that the form coincides with borders of the same territory. The same strict relationship to the road does not apply in the courtyard type, so any side of the lot can face the street without interfering with the internal organization of the house. A first building is even conceivable in which the courtyard is in some distance from the road. The unbuilt area dominates the built area because the former must mediate between the inside and the outside of the enclosure as well as distribute the organism from within. Furthermore, the courtyard-house type lacks external openings: they appeared only recently in both East and West following a lengthy process and exclusively in urban areas. The fact that a room has only one source of light, that is, from the courtyard, limits its depth to six metres or less, depending on the size of the elementary cell used by a society. This depth can be extended by adding a ground-floor portico into the courtyard with a loggia on the upper level. The building bay can be doubled only by making an opening in the wall that faces the street, which then allows the portico to be enclosed.

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[4] G. Buti, La casa degli Indo-europei. Tradizione e archeologia (Florence, 1962).

Guy Petherbridge offers an overall explanation for the dispersal of the courtyard-house type by distinguishing two varieties: "The interior courtyard house, where the house encloses a courtyard, characteristic of urban areas; and the exterior courtyard house, where the courtyard borders the house, providing a protected area contiguous with the dwelling units but not enclosed by them."[5] Andre Bazzana finds that this distinction holds for the Iberian Peninsula; he calls the first "block-like" and the second "attached." According to Bazzana the difference between the two is a result of a difference in economies: the exterior courtyard was used by semi-nomads; the interior courtyard, patterned after the ksar of the Sahara, was originally inhabited by sedentary farmers.[6] Such a schematic analysis is doubtful since it is conducted at an insufficiently low level of typological specificity. Petherbridge's contrast between the two models assumes a stereotyped dichotomy between urban mercantile and rural society which does not allow for a plethora of intermediate positions. The contrast is artificial and is less the result of an Orientalist mentality than of the mind set of geographers, who focus on territory, and historians, such as Torres Balbas, who concentrate on exceptions, such as the opulent and lavishly decorated homes of merchants and city officials.

Furthermore, if we look closely at local typological processes in the Maghreb and Andalusia, we not only discover the inappropriateness of the closed and open models of the courtyard house as an explanation, but also that the Arab-Islamic city, whose fabric gives the impression of being frozen in time between the thirteenth and eighteenth centuries, is not monotypological at all. On the contrary, it is based on a wealth of variants which in no way jeopardize the fundamentals of the courtyard type. Misconceptions like Bazzana's result from the fact that the idea of an elementary courtyard lingers in the cultural memory long after its physical demise, and is replicated and reused in the same area even after a substantial lapse of time.

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[5] G. Petherbridge, "The House and Society," 176.

[6] A. Bazzana, Maisons d'al-Andalus. Habitat medievale et structures du peuplement dans l'Espagne orientale (Madrid, 1992), 169. For a more general discussion, see C. Flores, Arquitectura espagnola popular, 5 vols. (Madrid, 1973).

General Nomenclature and Typological Process

The approach here is to begin the analysis of typological processes with the study of the rural version of the courtyard house. The limited changes it undergoes allows for a clearer reading of the matrix type and early diachronic phases. Generally, there are two types of rural buildings in the same enclosure: the residence and the annexes which include stables and a shed for tools and farming equipment. Annexes are usually located on the side opposite the house. When the residential part of a structure in an enclosure is located on the side in front of the entrance, they either line up parallel to the entrance or on the perpendicular side. In North African Arab-Islamic urban houses, traces of these annexes coincide with the kitchen or *metbah*, the pantry area or *bayt el-hazim*, and the bathroom, and are grouped together on the side opposite the main *bayt*.[7] The dimensions of the enclosure are in no way restricted by the built area: such interdependence is a feature mainly of urban planning. In the Mediterranean, one finds it in both the ancient Greek *pastas* house, whose frontage varies between 9 and 18 metres[8] and the Roman *domus*, whose frontage measures between 12 and 18 metres.[9]

Two key factors determine in the first phase the whole growth of the house: orientation and access. The building unit is oriented to take the greatest advantage of direct sun, which in the Mediterranean basin corresponds to a south–southwestern exposure. Because choice of orientation relates more to production needs than to the building itself, this rule is rigid in rural areas but not so strictly adhered to in towns, although it is still prevalent in the majority of the town houses as well. Given the prevalence of a southern orientation, the built part within the enclosure is either parallel or perpendicular to the road. There are then only three possible access variants for the courtyard house. In the first case, when the building is parallel and adjacent to the route, entry is through the building unit, where in order not to limit the distributive possibilities of the building, it is pushed to a far end. In the other two cases, the building is either opposite or perpendicular to the road, and the entry lies in the centre of the free side.

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[7] J. Revault, *Palais et demeures de Tunis XVIII^{e} et XIX^{e} siecles* (Paris, 1971).

[8] More precisely, 9 m and 18 m facades are found at Priene in two different quarters; 15 m at Olinto and Kassope; 18 m at Dura Europos, and even 21 m at Abdera. The oversized facade of the last example can be explained by the fact that the courtyards there line up with the predominant side parallel to the route onto which the entrances open. W. Hoepfner and E. L. Schwandner, *Haus und Stadt im Klassichen Griechland* (Munich, 1994).

[9] On Roman metrology, see A. Martini, *Manuale di metrologia* (Turin, 1883).

The first figures demonstrate situations that produce different diachronic variations, their relative processes, and the most interesting transitions in these processes. These transitions, in turn, are capable of generating parallel processes of synchronic variants which, for reasons of space, are not represented in the various diagrams.

In the A 1–2–3 series the elementary courtyard is gradually transformed as more and more of its area is covered, so that activities that once took place outdoors begin to take place indoors. This is achieved through the addition of rooms on the opposite side of the initial cell; these new rooms are then consolidated with a portico, after which the two parts are unified by a covered passage, and the process ends by forming an enveloping courtyard around the centre. Because the example in this series is single family, mezzanines and other possible vertical additions typical of different processes are not included, although it is common to reserve at least one cell with an independent external entry for newlywed couples or house guests.[10]

In this first series, the house has a rather low level of specialization. The plot size even in an urban area is large enough to allow division of function on a single level. Further hierarchies occur when an addition is made on the upper level or by acquiring adjacent courtyards to form a larger building unit. This choice will not be an arbitrary one, but determined by cultural, political, and economic factors. An important step in the process of making a house more complex and specialized occurs when functions other than residential ones are introduced. This can take place whenever a residential area comes into contact with a strongly commercial outlying area. The B 1–2–3 series describes this development, which we shall refer to as a *taberna* process (from the Latin *taberna*, meaning shop), a term first used by the Muratori school to refer to the commercialization of residential property. The appeal of commerce leads to the transformation of the front part of the courtyard house into shops, which is achieved simply by creating a new and direct access from the outside to the existing cells of the house. The *taberna* develops independently to the point that it becomes a row house on the edge of the road, where it behaves like an independent elementary cell: it is doubled in height by introducing a staircase and is elongated on the sides to form the embryo of a row-type tissue, which recalls the evolution of the mono-cellular unit as in the diagram on figure. Where possible, the facade is doubled at the expense of the public road by adding a front portico.

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[10] A non-commercial use derived from the taberna process is found in the Maghreb in the annex to the dar called an ali in Tunisia and in Algeria and a masriya in Morocco.

This process determined the formation of bi-cellular rows that, once codified, became the basis in medieval Europe for all the expansions in extra-moenia villages. The phenomenon occurred at Ostia Antica, Rome's trade centre, and was identified and described in detail by Alessandro Giannini.[11] Further additions occur as public space is occupied, a universal and elementary anthropic behaviour.

This phenomenon was widespread in the Middle Ages, especially in those Arab cities where the classical foundations—the forum and agora—had been swallowed up, leaving a bare minimum of road. In the linear suq of Islamic cities a strip of tiny shops provides the background for a residential tissue of patio houses. In the case of spontaneous first settlement, if the tissue cannot accommodate bi-cellular shops on the street front, it will allow demolition and substitution inside the house, ultimately resulting in a change in use.[12]

This process of progressively filling in a courtyard, which we might call the "insula process," coincides with the transition into multi-family residences of the earlier *domus*.[13] The C 1–2–3 series describes this process: it begins at a side of the courtyard with a row of cells that doubles in height served by a balcony. The stairwell is strategically located in the portico of the original cell; by doubling the row on the side opposite, a single stairwell can efficiently serve another balcony.[14] In another version, the stairs are provided for every single unit. If the open courtyard is eventually fully utilized, then it is reduced to a linear passageway. However, if the process begins on the side opposite courtyard C1 and C2, the tendency is to maintain a small square enclosure. The two processes do not take place independently of one another. On the contrary, commercialization of residential space (the taberna process) and the apartment-block phenomenon (the insula process) often occurred concurrently.

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[11] A. Giannini, "Ostia," *Quaderno dell'Istituto di Elementi di Architettura e Rilievo dei Monumenti* 4: 36 ff.

[12] Alexandre Lezine notes that in a Tunisian block on rue de Tamis, three courtyard houses were transformed in this way after the seventeenth century (A. Lezine, *Deux villes d'Ifriqiya*, 160).

[13] Some classical archaeologists call any tall building an insula in order to distinguish it from the *domus*; others use the term to mean a block.

The insula process was triggered by two opposing tendencies. In a period of political or economic crisis, social upheaval causes a decrease in specialization; as the rich move out, their houses are occupied and subdivided by poor families. In a period of rapid economic growth, the city attracts new inhabitants, leading to land pressures and the need for major housing stock, which must be created by occupying the interior of existing houses. It should be made clear that building increment is a normal phenomenon that a society is able to control under normal conditions, but moments of heavy social imbalance could generate pathological phenomena like wild encroachment or speculative phenomena like demolition and substitution of the courtyard house with denser apartment houses.[15]

In the Arab or Ottoman pre-industrial city the insula process occurred mainly in the limited cases of great metropolises, such as Cairo during the Ottoman period, because it was connected to proletarization, which is much less frequent in a medina of merchants and artisans, because it leaves light marks in the fabric.[16] The deep changes that occurred in Muslim society in the second half of the last century have mined the roots of the patriarchal structure of the family and therefore constitute the main reason for the survival of the mono-familial courtyard house. The process of subdivision has assumed an exponential progression and no medina is exempted.

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[14] The balcony in a courtyard that has undergone the insula process gives the maximum result insofar as it allows a single staircase to provide access to many residences.

[15] On typological substitutions and their corresponding social features in old Cairo, see L. Christians, O. Greger, and F. Steinberg, Architektur und Stadtgestalt in Kairo (Berlin, 1987), especially the section on the Husayniyya quarter, 84 ff.

[16] A question that arises is that of family structure. The dar, especially in old cities, was associated with the extended family—a structure closer to the Latin idea of gens than to the modern nuclear family. The growth of a family generates new units, often producing building complexes. It is not unusual to find that over time an extended family grew so numerous as to generate its own neighbourhood.

Series D1, in which a whole module doubles, and D2, in which there is an increase of half a module, describe the fusion of two neighbouring units. The process is subject to any of five basic outcomes. First, an unhierarchized aggregation of heterogeneous courtyards; second, a simple joining of two plots by eliminating the dividing wall and making no further modifications; third, an unhierarchized aggregation of homogeneous courtyards; fourth, a union of two pre-existing organisms; and, finally, fifth, a closing of the courtyard on all four sides.

This overall process happens differently in cities in the Maghreb where the expansion of a house is achieved through the serial addition of another autonomous organism. For instance, a very large house may have three courtyards, but they would never be re-hierarchized as they were in the Italian Renaissance case of serial courtyard buildings being turned into a palace. Instead, the resolution of the whole is achieved by making an opening in one of the walls of the acquired unit which, if it is smaller, becomes a service unit, or by adding an elevated passage (sabat).

The E1, E2, E3, E4 series describes processes relating to the subdivision of a lot. Each new portion, if uniform in size, will behave like an autonomous type, taking into consideration the presence of a corridor that must serve the innermost dwelling without being disruptive.

The purpose of those first four figures is to reconstruct the principle phenomena tied to the typological processes of the courtyard house. The diagrams are not intended to serve as a universal model and are therefore subject to adjustment. It should be kept in mind that every building culture behaves differently and privileges its own itineraries within the universal scheme. For instance, the elementary cell may vary in shape and size with the aggregation of cells depending on the level of organicity of the culture.[17]

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[17] A more organic area will tend to organize along a central or dividing axis; the corner cell can be part of a larger rectangular cell (as in the Maghreb) or part of a unitary composition (as in Pompeii).

The Courtyard House: Structural Organization

The Islamic house displays structural complexity in the organization of the building. The composition of the building can be analysed through examples taken from the same cultural area. The “bourgeois” houses of Fez of the seventeenth–eighteenth centuries and their typological variants are the point of arrival of a long experimental route of the typological, technological, and functional components that are the result of a profound artisanal know-how. With reference to construction these houses are built of wood and masonry materials utilized in a fashion which simultaneously exploits structural and thermal properties.

For the purposes of organizational analysis it is necessary to leave out the accessory spaces that are unessential to our discourse, like minor partitions of rooms, encroachments that may close the courtyard, rooms acquired outside of the original plot, and hangings *tahal* or suspended passages *sabat*. For a detailed description of all domestic parts the reader should consult the exhaustive work of Jacques Revault.[18] The typical courtyard house at Fez is a two storey building with a patio closed on four sides with a double porch or external gallery. It is constituted of modular rooms called *bayt* or *byt* of elongated rectangular form and arranged along the edges of the plot. Secondary rooms like the kitchen, toilet facilities, and pantry are in the corners, sometimes served by a corridor. The stair is located in the corner opposite the entrance. In more wealthy dwellings the vertical arrangement is doubled: a stair leads to the quarters of the guests, another to the harem and the terrace. The arrangement of the *bayts* at the ground floor is replicated at the upper floor, where the spaces are served through an external balcony or through the rooms in succession.

The terrace, usually reserved for women and children, is closed by a high wall along the perimeter of the house, while a short parapet protects people from the void of the patio.

In the mutual collaboration of the rooms, the plan of each *bayt* deforms itself in trapezoid forms in order to absorb the external irregularities of the urban fabric, but it maintains the walls at 90 degrees along the courtyard in order to preserve the geometric regularity of the central courtyard or patio. The footprint of the patio tends to be rectangular or square and contains one or two axes of symmetry, marked by the position of the doors of the bayt facing themselves in the centre of the side of the courtyard. Sometimes a small fountain at the centre reinforces the virtual intersection of the two axes. The patio's symmetry does not involve the whole building (differently from the Roman domus or the Renaissance palace): the doors facing the courtyard are in asymmetrical relation to the single bayt.

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[18] A detailed description of the domestic architecture of Fez can be found in the exhaustive work of Jacques Revault: J. Revault, L. Golvin, and A. Amahan, *Palais et demeures de Fes: 1. Epoques merinide et saadienne* (XIV^{e}–XVII^{e} *siecles*) (Paris, 1985).

The relation of the house to the urban fabric is accommodated through the adaptation of the peripheral cells. The patio or Wast ad dar, on the contrary, with its elementary stereometry, its arrangement of the openings controlled by symmetry, is the centre of the composition and gives the essential light and air to the house. Moreover, the transition from the well of the patio to the sky, the special treatment of the overhanging attic with green painted tiles and the wood decoration bestow to the patio the value of an autonomous sub-organism with its own rules of arrangement and construction.[19]

In the courtyard house types of Fez a system of structures closed and heterogeneous is the elementary cell bayt, a tri-dimensional module of 220 cm of max width (equivalent to a kama or a double arm of 165 cm plus a dra or cubit of 55 cm), whose length extends itself up to 7–8 metres. According to some scholars, the width is determined by the ancient use of palm wood beams. Functionally, the bayt has the highest flexibility and autonomy: it contains either the master bed or the living room couches and is separated from the patio by a monumental door. It can be easily transformed into an independent dwelling unit for a nucleus of the extended family.

The gallery on pillars or columns is an open structure that architecturally enriches the houses of the wealthier families like at the Abu Helal house. The inferior order sits on posts of masonry that define a porch of minimal width that filters air and light to the more internal spaces. A dense decorative pattern of stucco covers the surface, reducing its weight and making it vibrant under the sun. The upper balcony has the same function as the patio and porch of arranging the routes, avoiding the passage in succession in the rooms. Rarely, the gallery runs along the entire perimeter of the patio, more frequently it is a loggia in front of the main entrance.

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[19] The archetype for the skifa is found in the so-called Door of the Spirits in the Chinese house; a wall recessed with respect to the external wall and perpendicular to the access axis of the courtyard. In addition to this example, the distributive element is also apparently found in Semitic regions.

The structural members are aggregates of elements that contribute to the formation of a system. The timber structure is constructed as a frame i.e. an open discontinuous structure that works with interlapsed supports; the masonry structure is closed and continuous and it stands as a permanent element. The system of mixed structures in the Fez houses reached a high level of integration that required the alternate presence of the mason and the carpenter on the site. The foundations of the houses are in continuous masonry made of bricks and stone laid in mortar. Three sides of the house are normally shared with the neighbouring houses, the fourth, the façade, has no relevant openings but the main entrance. The unitarian treatment of the surface of the facade with a plaster of lime and sand reinforces the sense of continuity of the masonry involucres. In the interior the wall is permeable to light via small high level openings and the façade is articulated by balconies. Normally, the door is realized with an arch, more rarely all the wall is cut away revealing the ceiling.

Of all the combinations of elements the ceiling received particular attention because it was the most visible manifestation of the building tradition in different cultural arenas. Conceptually the ceiling is the projection of the roof on a horizontal plan, therefore in the cultures that use gable roofs the ridge purlin will be transformed into a master beam.[20]

Timber horizontal structures in Fez have different levels of complexity. The simple ceiling of a *bayt* is made with joists *ga'iza* ranged with a span of 15–20 cm and enchased at both extremes. On this structure sit floorboards of 1 cm thickness on which is spread a bed of mortar.

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[20] The ceilings in Essaouira are very different from those in Fez. The beams are of thuja rather than rare wood, and are no bigger than 3.2 m. They support a secondary structure covered with a layer of tassuit branches. The floor is made by covering a layer of dry leaves with and a mixture of mortar and earth. The typological specificity of each area is confirmed by the fact that seemingly similar ceilings are in fact realized according to quite opposite concepts. The Neapolitan ceiling is described by Caniggia as follows: "In Naples . . . a tradition of structures vaulted in light stone (pumice, lapillus) results in an apparently wooden ceiling being constructed with small barely stripped beams . . . a ceiling which in and of itself does not support . . . it could do so statically if isolated. In reality it is not so much the wood frame that provides support as the mass of lapillus mixed with mortar that thickly covers it (up to a metre in places). The wood frame acts as a disposable mold for what is laid upon it: it is the authentic structure insofar as it forms a sort of natural vault resulting from the settling of the casting material when the lens is separated from it" (G. Caniggia and G. L. Maffei, *Composizione architettonica e tipologia edilizia. Il progetto nell'edilizia di base* [Venice, 1985], 160).

Above sits a stratum of rubble materials (50 cm for the ceiling and 30 cm for the roof) on which are fixed the ceramics or the waterproof mantle. This type of structure guarantees the uniform distribution of weights on both main bearing walls, but can span only 220 cm in width. To increase the span of the ceilings brackets was a common feature.

Galleries built on pilasters required a more complex structure of the ceiling in order to create a passage of 60–120 cm in width. In this case the joists are laid on a continuous beam that goes along the perimeter of the courtyard. The latter usually sits on two overlapping beams supported by the columns and cantilevered towards the centre to reduce the span. The beams are coupled with elements of the same section and assembled in the form of a box. The timber structure is faced with a cedar-wood strip with floral motifs turiq or cufic lettering qufi to improve its appearance.

In an alternative system the carpentry of the halqa touches the highest constructive level with a stratum of several overlapped beams and brackets. The stratum of joists then supports the parapet and the crown of tiles. Through repetition of supports, the first system has no theoretical limits of width, save those codified by the type of wood employed and in Fez is about 18 metres. The second system is restricted to courtyards no larger than 5 metres.

In spite of the fact that the contrast between the light colour of the masonry and the dark of the cedar timber produces tones of great visual effect, the attractive appearance of the traditional courtyard house should not hide the strict functionality of the structural methods employed. The sequence of masonry—timber—masonry is a defining feature of the house type.

Regarding the masonry construction, the method of building usually gives priority to decorative bricks laid with various types of textures: double header course, oblique, herringbone, or toothcomb-type, and built with courses of stones and wood to produce facade patterns. The three main textures: horizontal, oblique, and herringbone could appear in the same wall with alternate sequence. Externally the wall is covered with plaster, internally with stucco, ceramics, or plaster.[21]

The timber structures are composed of components always readable as separate entities by the tectonic deconstruction of the junctions. The openings within the arch are closed with a rectangular door of 350 cm hight which rotates on cylindrical pivots inserted in a hole in the floor and in the wooden frame rtej.

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[21] Some of the different patterns found in bricklaying include curtain, cross, oblique, herringbone, double herringbone, and stone and wood inlays. "Schema directeur d'urbanisme de la ville de Fes," dossier technique IV, 2, in Les techniques traditionnelles de l'architecture et du decor à Fes (Paris, 1980).

Is The Courtyard House A Universal Archetype?

The discussion so far has been of typological processes in more or less synchronic terms. The next question is whether or not the courtyard house is a universal archetype. A number of scholars have observed that while the courtyard house is the leading type in many regions, such as Padania (the Po Valley), the Maghreb, and the rest of the Middle East, it is not uniformly dispersed throughout the Mediterranean and North Africa. While it is reasonable to assume that the territories of the Roman Empire were influenced by the domus up to at least the fifth century, no trace of it can be found in parts of central Italy (including Rome), southern Italy (excluding the Naples area), and Provence. Climate is not the underlying reason for the courtyard house—for instance, Milan and Aleppo share the same building type but not climate.[22]

Perhaps the reason for the dispersed presence of the courtyard house lies in the continuity of Byzantine culture; in areas that had been abandoned by the empire, the revival of building was based on a relatively retrogressive type almost consistent with the elementary cell. Within the Islamic world the courtyard type, inherited from Byzantium also responded effectively to the essential Muslim requirements of secluding and protecting women. This explains the easy transition from earlier Yemenite models to the courtyard type by the Umayyads when they reached the shores of the Mediterranean.

In Europe the transformation of the domus led directly to the codification of the row-house type, while in pre-colonial Arab Islam this happened only sporadically. Thus in the Maghreb the insula type was reproduced imprecisely, and it was also always strongly resisted in North Africa whenever the core of the house, the wast ad-dar, was threatened by population pressure. Even when faced with a population density of 500 inhabitants per hectare, the house responds by growing in height and subdividing in an effort to preserve the integrity of the courtyard.[23] Although the courtyard itself lost its "cosmic" value (as Hassan Fathy called it) long ago in the transition from single-family to multi-family dwelling, it continues to represent in the mind of society an idea of unity that goes beyond its distributive function. The status of the row-house type provides the additional proof for Islamic resistance to the insula development in the Mediterranean. In the Islamic city, the row house was generally considered a lower-class house, while in medieval Europe it was the house of the urban middle class. The row house type nevertheless has a local history along the Arab Mediterranean coast, as the excavation of small bi-cellular row houses at Fustat attests, and is found in the form of the small cells built on top of shop fronts and lying in a protective screen on the border of a residential neighbourhood. Even today the row or terraced house is seen as alien in the region as the modern detached villa of western countries.

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[22] Theorists of sustainable technology claim that the courtyard is capable of thermoregulation. G. Scudo, "Climatic Design in the Arab Courtyard House," in "Technology: From Tradition to Innovation," ed. A. Petruccioli, special issue of Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1988): 82–91.

A type cannot be stretched beyond the limits of spatial and cultural geography. The metamorphosis of the courtyard house has, therefore, limits which are social rather than spatial. Recent surveying of some densely populated medinas of North African urban centres (such as Casablanca, where more than 1,000 residents were squeezed into a single hectare) has revealed that the subdivision of courtyard space is common. The tendency is to divide up the courtyard into thin access strips that can be covered when necessary. It has been speculated that, as these are the seeds of future row or apartment houses, the changes will bring with them subsequent modification in the Islamic idea of the house and the city itself.[24]

The Mediterranean lineage of the courtyard house

In order to navigate in the archipelago of the typological processes involved in the evolution of the courtyard house, it is useful to deepen the concept of cultural area. A residential type is an expression of a culture, anchored in a territory where a society has built its identity. To say that the residential type does not travel is a partial truth that cannot hide the osmosis and the interactions between cultures. The linguistic disciplines demonstrate that the more the frontiers are impenetrable, the more arduous are contacts and hence design transitions. Relationships are never linear but hierarchically ordered: in a region there are sub-areas economically and socially dominant, like the county town in the plains. It may happen that the "bourgeois" families of the latter form their building types based upon the models in the main city. The concept is relative, since it is enough to enlarge the scale from the region to a larger geographical area. Inevitably, the county towns will be cultural debtors of the superior area—the State capital. If in the eighteenth century the plateau of Medea, the piedmont of Blida, and the coast of Tipasa were dependent from Algiers, the regional capitals of Algiers, Damascus, Tripoli, and Baghdad were vigilant of the fashions of Istanbul, the capital of the Ottoman Empire. First discourses on the Mediterranean typological processes confirm a division between the Levant and the areas west of the Mare Nostrum. In Southern Spain and Maghreb prevails the patio house, well represented by the houses of Fez we have just analyzed. What makes them recognizable in the same family is the *taddart*, the elementary cell that is permanent in time and space all over the West Mediterranean. Recent ethno-archaeological studies such as E. Laoust's work on central Morocco[25] have allowed us to isolate the *taddart*, a long narrow cell that is fairly consistent from tribe to tribe. It could be argued that the *taddart* is the elementary type that in the Maghreb becomes a component of spatial structure, the *bayt*- on a par with the Eastern-imported T-shaped room—of both rural and urban homes. As the dwelling of transients, the *taddart* is nothing more than the stone version of a tent, placed along the perimeter of a courtyard, just as nomads would place their tents around the *douar* leaving room in the middle for their animals.

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[23] In Algiers a metal screen is ingeniously placed over the courtyard to act as both a surface to be walked on and a covering in case of rain. This creates two insulae, one on top of the other, while still keeping the courtyard as a global space inside the house.

[24] See figure 52, a survey of an Essaouira house on the rue de la Mellah by M. Accorsi and A. Petruccioli. See also M. Cote, *L'Algerie ou l'espace retourné* (Algiers, 1993).

On the other side, the fact that the Western Muslim areas have abandoned the quadratic 5 u 5 metres cell has cut them off the continuity of the Roman world. Houses in Venice, Lebanon, Turkey, and Cairo, will be used to trace typological processes because their evolution, taking up the thread of the discourses of centrality and tripartition of the rooms, can be reconstructed reasonably well from the beginning using archaeological evidence. Aside from its historic relationship with the eastern Mediterranean, Venice is a key area because it offers a clear reading of typologies and urban morphology. The work of Saverio Muratori, Paolo Maretto, and Gianfranco Caniggia[26] brings an unparalleled wealth of information to the subject, from a systematic survey of the city's tissues and buildings to a refined theoretical analysis of the data.

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[25] E. Laoust, *L'habitation chez les transhumants du Maroc central* (Paris, 1955). See also R. Riche, "La maison de l'Aures," *Cahiers des arts et techniques d'Afrique du nord* 5: 30–36.

The Venetian Courtyard House

A peculiarity germane to the layout of a Venetian house is that it tended to remain unchanged over time due to the special building techniques required by its unique foundations. The high cost of a foundation on wooden piles discouraged variations that involved moving the supporting walls. This and the natural resistance of property lines are the reasons why the so-called Byzantine layout has remained almost intact in spite of stylistic trends over time.[27] The first building type in Venice, the elementary *domus*, is identified in a room set against the northern wall of the enclosure and joined to a distributive element, the portico (*portego*). Planimetric location favoured this solution over two others, for these were houses belonging to fishermen, and the courtyards served as a transit point between water along one side of the plot and street along the other. The concern to connect the two sides of the plot determined the character and the peculiar typological solution in the Venetian house.

The type was at its most developed when a second story and a *squero* (a service space used to store and repair boats) were added on, and the front of the building was closed up. At this point, the *portego* lost its original function and was transformed into the *sala veneta*, open at either end: it then served a distributive function rather than providing light. The placement of street access was symptomatic and can still be read today in either the zone of the *portego* or the courtyard, which was later covered by successive building bays that were often open loggias. The original bay, however, always remained solid and can be easily recognized even from the outside elevation. This would explain the recurring asymmetry of many Venetian facades such as those in Campo Nazario Sauro, Lista di Spagna, and the San Stae area.

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[26] S. Muratori, *Per una operante storia urbana di Venezia* (Rome, 1959); P. Maretto, *La casa veneziana nella storia della città dalle origini all'ottocento* (Venice, 1986); G. Caniggia, "La casa e la città nei primi secoli," in P. Maretto, *La casa veneziana*, 3–53.

[27] P. Maretto, *L'edilizia gotica veneziana* (Rome, 1961).

An early development in the insula process established the mercantile type, a combination house-warehouse with a front loggia; its systematic occurrence led to the important development of the street-courtyard type. When considered an independent type, its use is evident in all of the city's major planned projects: the Rialto, the Cannaregio waterfront area, and the working-class housing financed by the Republic in the fifteenth and sixteenth century. This type is an extremely functional combination consisting of a street segment running from the water to the main overland route flanked on both sides by row houses. Once codified, it was used in all Venetian-influenced Mediterranean settlements, including Dubrovnik. The similarities between this tripartite layout with a central crossing hall and both the Venetian plan and the Byzantine triklinium are striking.

The Lebanese Courtyard House

F. Ragette conducted important parallel research on the Lebanese house (28) in the 1960s that allows us to reconstruct a typological process in that area. This work is important for its breadth—it covers numerous mid-nineteenth-century examples, the layouts of which betray an archaic substratum. In Lebanon, an elementary type with a vaulted square or elongated plan can be identified in many rural examples. Changes in the type are generated either by doubling the width or height. The first case can lead to a serial aggregation of up to five cells, with the addition of an optional front gallery.[28] The crucial point is where, even in rural houses, the intermediate cell became specialized and gave rise to the iwan, locally known as liwan. This is a room closed on three sides, and located either on the main level or on an upper story. It is an architectural element known throughout the Middle East and is possibly of Persian origin.[29] The iwan played a central role in the formation of the Lebanese courtyard house because access to the house did not depend on it. Instead an external or side staircase fulfilled that function, allowing the iwan[30] to become the ordering element for the whole house.

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[28] F. Ragette, *Architecture in Lebanon*, 25–27.

[29] H. De Beyle, *L'habitation byzantine* (Paris, 1903); A. Deroko, "Quelques reflections sur l'aspect de la maison byzantine," in *Actes du Congres International d'Etudes Byzantines, 1955* (Istanbul, 1955), 124–125.

There are two basic categories of liwan and cell combination: the first involves the association of elementary groups around the liwan arranged as a courtyard. As the point of departure for the geometrical axis, the liwan establishes hierarchy and scale: some variants have one, two, or three liwans, or two liwans and a portico. This category includes the Mamluk house in Aleppo studied by J. C. David, in which the iwan reaches monumental proportions.[31]

The second type involves the extension and modification of the iwan into a crossing hall. The iwan protrudes from the facade supported by a series of cantilevered and embedded arches. The room can be reached from either the front through a gallery or from the side by a corridor. This pattern of access results in two important variants—a T- or cross plan—both of which were common in the late nineteenth century. The front access creates a main room and liwan separated by a series of arches, up to twenty metres long in large residences. Side access allows the two free sides to accommodate the liwan and a loggia or bow window. The similarity with the Ottoman sofa house is noteworthy, but it is not the goal here to discover a comprehensive system of relations[32] or to answer the age-old question of the origins of the Turkish house. However, by referring to Sadat Eldem's research,[33] we can reach a limited conclusion with regard to the Ottoman Turkish house of what he calls the sofa type.

The Turkish Courtyard House

The Turkish house differs from other Middle Eastern houses in one important and determining way: the elementary cell or *oda* is consistently the ordering element and is formally and functionally autonomous. It establishes an extremely articulated planimetry in buildings which breaks up the envelope of the house by playing freely with the spaces. The sofa, a product of the predetermined disposition of the *oda*, is always expressed by a strong topological or geometric centrality and reinforced by symmetrical references. Given this, Eldem identifies the essence of the sofa type in its multifunctional mechanism and introduces an evolving classification. He begins with a *hayat* matrix type, and then follows with an exterior sofa type with the idea that an iwan can be placed between two *odas* to form a T-shaped sofa. Next a *kosk* (kiosk) is built opposite the sofa, with the latter becoming interiorized over time, and in the final phase there is both an interior and a central sofa. In these variants, Eldem argues that the courtyard continues to play a crucial role in house planning.[34]

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[30] There is considerable debate over whether the iwan is the product of an autonomous evolutionary process—a local interpretation of a pre-Islamic idea familiar throughout the Orient—or simply an imported model. A Persian term, iwan (liwan in Arabic), describes a space—dependent or independent—closed on three sides by walls and completely open on the fourth. It is usually vaulted. The form can be applied to a platform or an entire building. For a detailed discussion of the monumental iwan, s.v. "Iwan" in the *Encyclopaedia of Islam*, 2nd ed.

[31] J.-Cl. David. "Syrie: systèmes de distribution des espaces dans la maison traditionnelle d'Alep," *Les cahiers de la recherche architecturale* 20–21 (pages 38 and following).

[32] M. M. Cerasi, *La città del Levante* (Milan, 1986), 176 ff.

[33] S. H. Eldem, *Turkish House: Ottoman Period*, vol. 1 (Istanbul, 1984).

The similarities between the tripartite layout with a central crossing hall of the mature Lebanese house, of the Venetian *portego*, and the Turkish sofa house are striking. Excluding important cultural migrations in one direction or the other, it is reasonable to say that the three parallel typological processes have been elaborated autonomously from a common fundamental type, the Byzantine *domus*.

The Egyptian Courtyard House

Cairo provides another important case study, for the complexity of its urban structures results from the long stratification of the tissues and the specialization of the types. With the exception of some aristocratic houses and grand residential complexes the fabric of the city has been totally replaced. Although a reconstruction of the processes will inevitably be incomplete and in need of adjustment, the history of the Egyptian courtyard house can be traced back using the archaeological and documentary evidence of the suq. The relatively recent excavations at Fustat[35] led by Scanlon reveal a wide array of types that incorporate earlier discoveries made by Gabriel.[36] Gabriel offers the following description of ninth-century courtyard houses that appear to be based on a model from Samarra in Iraq.

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[34] Ibid., 26–31, for the planimetric drawings, in part reproduced in figure 68. Eldem vehemently rejects the idea of a marked Byzantine influence, arguing that no trace of the Byzantine house exists in Istanbul. Nevertheless the similarity with the Byzantine type called triklinium is striking.

[35] G. T. Scanlon, "Fustat Expedition: Preliminary Report 1965," *Journal of the American Research Center in Egypt* 5 (1966): 83–112 and 10 (1973): 11–25.

Most early houses are based on a composition of two perpendicular axes radiating from a central courtyard. A portico with three recesses lines one side of the courtyard: on the other three sides lie several iwans of varying depths; at times they constitute real rooms but in general are simply modest recesses or even flat niches. The triple-bay portico that leads to the main living quarters is usually oriented east; it never faces due south or north.[37]

Little evidence exists to help us shed light on the transition from the early courtyard houses of Fustat to the Mamluk *qa{a*: no archaeological remains of Fatimid-era houses exist, with the exception of the schematic plan Pauty published of the four-iwan courtyard of the Sayyidat al-Mulk palace. Although the proportions are grander, the same elements are present: a composition on two axes; portico and salon on one side; open iwan on the other three.

A relief on the reception hall of the Ayyubid palace (dated ca. 1240) on Rawda Island provides the plan of house of two T-shaped rooms joined to a courtyard. The dimensions of the room are relatively close to those of Fustat courtyards, and correspond to the *durqa{a* of fourteenth-century Mamluk houses. The *qa{a* of the palace at Dardir described by Creswell[38] as a closed rectangular hall illuminated from above by a cupola on the central axis could be interpreted as a later phase in which the courtyard was covered. The hypothesis is plausible and analogous to similar processes: for example, the derivation of the 3–6–3 m religious structure from the covering of the atrium of the *domus*, once thought to be an imitation of the model for the 6–12–6 proto-Christian basilica, the first to be codified.[39]

In the reconstruction of the *maq{ad*, we do not consider the north-facing upper-story loggia as an independent type because it is incapable of formal autonomy from the Mamluk *dar* with which it combines to make up a system. A combination of two qa{as and a maq{ad can be found on the uppermost story of the Manzil Zaynab Hatun, an affluent dar from the reign of Qaytbay (1468–96).[40] The structure has two entrances: they lead to two separate apartments of unequal size which face the same courtyard. If the reading of the plan is correct, this example represents an important stage in the rise of the bourgeois house. The annexes were intended as rental property.[41] As the durqa{a becomes more important to family life, the courtyard's importance decreases. Eventually it becomes little more than a passageway, along which various activities took place and different forms were imposed. During the Ottoman period, in particular, the dar was reduced to an informal composition of volumes centred on a void.[42]

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[36] A. B. Bey and A. Gabriel, *Les fouilles d'al Foustat et les origines de la maison arabe en Egypte* (Paris, 1921).

[37] Ibid., 276–279.

[38] K. A. C. Creswell, *The Muslim Architecture of Egypt*, 2 vols. (Oxford, 1959), 2: 208.

[39] That Santa Maria in Antiqua (located in the Roman Forum) is directly derived from a *domus* is evident when comparing the planimetry of the church with that of the so-called Surgeon's House in Pompeii. Similar analogies exist throughout the Mediterranean culture area, particularly in Syria.

The fact that there is a qa{a in every building confirms that the courtyard type was the leading model in the typological processes of Cairo. It is especially distinctive in a certain type of collective residence known in Cairo as a rab{. There were two types of collective residence in Ottoman Cairo: the hawsh and the rab{.[43]

The first was a large enclosure, sometimes as large as an entire block, given over to the poor where they can put up some sort of shelter. More a shantytown than anything else, the building tissue was easily reabsorbed in more recent times and reapportioned without leaving any obvious traces.[44] The second type was closer to the modern version of a middle-class residential apartment complex. It was formally structured and consisted of a series of apartments derived from the qa{a, distributed around a courtyard in duplexes or sometimes triplexes. Each apartment included a portion of the terrace, the only external outlet for the residence. Often a rab{ was next door to a wakala caravanserai, in which case the ground floor and mezzanine of the complex were used for storage and business transactions and the upper stories were purely residential. The apartments opened onto the landings of a series of stairways that led to the outside. In this way the autonomy of both areas was maintained. This layout is legible on the outside of the building through the surface punctured with windows and mashrabiyyas; it rested on a solid rustic stone base with a full-height monumental entrance cut into it.

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[40] J. Revault, "L'architecture domestique du Caire a l'epoque mamelouke XIII–XVI siecles," in Palais et maisons du Caire, 1. L'epoque mamelouke, ed. J. C. Garcin, B. Maury, J. Revault, and M. Zakariya (Paris, 1982), 108–109.

[41] Both Andre Raymond and Nelly Hanna discuss the important consequences this has for the urban whole. N. Hanna, "La maison Waqf Radwan au Caire," L'habitat traditionnel 1: 61–77.

[42] D. Behrens-Abouseif, "Alternatives to Cadaster Maps for the Study of Islamic Cities," in "Urban Morphogenesis, Maps and Cadastral Plans," ed. A. Petruccioli, a special volume of Environmental Design: Journal of the Islamic Environmental Design Research Centre 1–2 (1993): 92–95; and idem, "Notes sur la function de la cour dans la maison moyenne du Caire ottoman," L'habitat traditionnel 2: 411–418.

[43] In Grandes villes arabes, 323–326, Raymond describes the hawsh and its presence throughout the Ottoman Empire. According to Clerget (op. cit., 1: 312) each hawsh in Cairo was village-like and housed thirty or forty families. There were many hawsh in the city and suburbs of Aleppo according to the traveller A. Russell, who describes them as "a wide space surrounded by a certain number of low, mediocre dwellings of two or three rooms each. The common area is haphazardly paved, with the exception of the space in front of each house... There are no fountains but there are numerous wells" (A. Russell, The Natural History of Aleppo, vol. 2 (London, 1794), 36.

Despite differences in nomenclature, the ritual and sequences of use of the traditional qa{a were largely the same, whether located in palaces or more modest houses. The meeting of Ottoman culture and local customs at the time of Muhammad Ali, however, produced a new type, the fasha.[45] A combination of a central hall and grand staircase, it was used in large buildings and condominiums. The distributive hierarchy of the building began with a large courtyard from which a number of different stairways led to various fasha. These in turn acted as internal covered courtyards, onto which the individual apartments open, and in which the common service areas were located.

The layout of the apartment was similar to that of the rab{: an elongated living room was divided into a vestibule, reminiscent of the durqa{a, and an iwan with a projecting balcony. The niches of the qa{a were large enough to function as secondary rooms.

Perhaps the most important lesson of the typological process in Cairo is that it elaborates the parallels in the progressive specialization and hierarchy of the urban tissue and the complex growth and changes in the courtyard house. In the modern history of Cairo, the passage from the first Fatimid settlement to the Mamluk city and then the Ottoman metropolis is mirrored by the changes in the courtyard house. Adaptation based on variations of the courtyard house in the qa{a (a more compact residential type subject to insertion either in a house, or a palace, or a rab{, or even a modern condominium), joined to make Cairo a special place.

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[44] Jean Claude David located what is probably of series of Ottoman-period hawsh in the Qarleq quarter of northeastern Aleppo; J.-Cl. David, "La formation du tissu de la ville arabo-islamique: apporte de l'etude des plans cadastraux d'Alep," in "Urban Morphogenesis," 138–155.

[45] Olivier Blin, "Le Caire XIX–XX^{e} siecles. De la fasaha a la sala comme modeles," Les cahiers de la recherche architecturale 20–21 (1987): 96 ff.

Conclusion

As a synthesis it might be useful to begin by emphasizing that the terms "serial and organic" represent the premise behind any rigorous reading of the built environment. Every civilization has as part of its own cultural expression a different way of putting together objects or components of a set, which ranges from a maximum of casual seriality to a maximum of organicity. For this reason, whilst an archetypal form like the courtyard house, the product of polygenesis, is different in plan in the Maghreb and in the Roman atrium house, that should not disguise the universal nature of the type.

The domestic cell, the initial matrix in the evolution of the courtyard house, exists as a largely standard dimensional element irrespective of cultural origins. The basic cell can evolve through successive duplications to form a row house, apartment house or courtyard dwelling. The courtyard house, however, requires attention because it is the residential type which responds simultaneously to cosmic, cultural and climatic forces. As such it is the main residential type of the Arab region, although it enjoyed a form of parallel evolution beyond the Middle East. Of particular significance are the two processes of commercial specialization (the taberna process) and subdivision and fragmentation (insula process), which are at the root of any phenomenon of metabolization into the dynamic cities of the Arab world.

With regard to different cultures, the similarity in the courtyard houses of Syria, Lebanon, Turkey, and Venice, does not represent, as some suppose, a phenomenon of cultural osmosis, but the sharing of a common taproot in the Levant. Hence these houses share in the basic genetic type or substratum of the domus. On the other hand, courtyard houses of Cairo display different characteristics where the qa{a slowly evolves into the vestibule of the modern apartment. In the case of Algiers, an alien European culture violently combines with a local one to produce a radical change in favour of imported building types (the apartment) and aggregations (blocks) based on open streets as against closed courts.

From both Cairo and Algiers we can learn the important lesson that it is not the basic domestic cell that produces the courtyard house but how the cell is put together. The resolution of the public realm (street) and the private realm (cell) in designs which exploit both plan and section to produce shelter and privacy is the essence of the courtyard house.

(All surveys and drawings by the author)

THE GENDERED CITY

Lucienne Thys-“enocak

The early definitions of the “Islamic city” have been challenged over the past three decades by a range of post-modern methodologies emerging from several disciplines, among them urban studies, art and architectural history, Middle Eastern studies, geography, women’s studies, and most recently, the history of gender. The process of bringing together and then scrutinizing the more traditional theoretical frameworks that had often produced highly dichotomized discourses in these disciplines was a challenge to scholars engaged in the study of the complex identities and often elusive definitions ascribed to the Islamic city. By the end of the 1980’s scholars like Janet Abu-Lughod, working on Cairo as a case study, had begun to observe that urban space in this city, and the way it was utilized, shaped and produced by different genders was not a simple case of dividing public-private geographies and assigning them to males and females, respectively.

Initially gender was, for Abu-Lughod, among a “list of forces” which contributed to the identity of the Islamic city. “What Islam required,” she wrote, “was some way of dividing functions and places on the basis of gender and then of creating a visual screen between them. This structuring of space, “was different from what would have prevailed had freer mixing of males and females been the pattern. . . . Semiotics of space in the Islamic city gave warnings and helped persons perform their required duties while still observing avoidance norms.”[1] Implicit in Abu Lughod’s initial analysis of the semiotics of Islamic urban space was, first, a division of the concept of gender into male and female sexes, and second a vision of urban space as divided into public and private spheres. Yet, after watching the poor women of Cairo move through the familiar passageways of their neighbourhoods, less veiled but still following the strict protocols of gendered space, Abu-Lughod observed that certain behavioural patterns did not fit comfortably into a public or private category but required a third sphere, a “semi-private” space. In this tertiary realm, the accepted gendered behaviour was more fluid, the loyalties of family stretched beyond tribe or kin, and both women and men could move with greater ease through the spaces of the *harah*.[2] Abu-Lughod’s work was an important landmark in the late 1980’s, as it began to challenge the public-private dichotomization of space that had been so conveniently imposed upon the Islamic city. But in her reassessment of the public-private dichotomy as a methodological tool to understand the Islamic city, she perpetuated a definition of gender which neatly separated the sexes into male and female. Thus while allowing for additional space in the Islamic city for a semi-private sphere; there was still no room in Abu-Lughod’s Islamic city for a “third sex.”[3] A challenge to the traditional view of genders as falling into two neat categories of male and female was taken up by scholars of women and gender studies like Joan Scott who were grappling in the late 1980’s with the constraints and limitations of this particular methodological framework.[4] Against the background of Abu Lughod’s important postcolonial work and Joan Scott’s challenge to our traditional definition of gender, I would like to revisit the Islamic city in the light of more recent scholarship on gender and urban geography which has called into question this strict dichotomization of space into private and public and the division of gender into only the male and female sex.[5]

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[1] J. Abu-Lughod, “The Islamic City: Historical Myth, Islamic Essence, and Contemporary Relevance,” IJMES 19 (May 1987): 163.

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[2] Abu Lughod, 168; L. Thys-“enocak, “Space: Architecture, The Ottoman Empire”, *Encyclopedia of Women and Islamic Cultures*, vol. 4 (Leiden: Brill, 2007), 514–518.

[3] This term has been used by Judith Herrin to describe the role of eunuchs as vital “third sex” or “beardless male” members of the Byzantine court. J. Herrin, “The Imperial Feminine in Byzantium,” *Past and Present* 169, no. 1 (November 2000): 3–35. For work on eunuchs in the Islamic world see, S. Marmon, “The Eunuchs of the Prophet: Space, Time and Gender in Islam,” (Ph.D. dissertation, Princeton University, 1990); S. Marmon, *Eunuchs and Sacred Boundaries in Islamic Society* (Oxford and New York: Oxford University Press, 1995); D. Ayalon, “On the Eunuchs in Islam,” *Jerusalem Studies in Arabic and Islam* 1 (1979): 67–124.

[4] J. Scott, “Gender: A Useful Category of Analysis,” *American Historical Review* 91, no. 5 (December 1986): 1053–1075; S. Ardener, ed., *Women and Space: Ground Rules and Social Maps* (Oxford and Providence: Berg Publishers, 1993); Merry Wiesner-Hanks, “Women’s History and Social History: Are Structures Necessary?” in *Time and Space in Women’s Lives in Early Modern Europe*, ed. T. Kuehn, A. J. Schutte, and S. S. Menchi, Sixteenth Century Essays and Studies, vol. 57 (Kirskville: Truman State University Press, 2001), 3–16.

[5] L. Peirce, “Beyond Harem Walls: Ottoman Royal Women and the Exercise of Power,” in *Gendered Domains: Rethinking Public and Private in Women’s History*, ed. O. Dorothy Helly, and S. M. Reverby (Ithaca: Cornell University Press, 2000), 40–55; See also L. Thys-“enocak, *Ottoman Women Builders: The Architectural Patronage of Hadice Turhan Sultan* (Aldershot: Ashgate Press, 2007); H. Z. Watenpaugh, “Art and Architecture,”

The gendering of private and public spheres of urban life has been a topic of much debate for many early modernists working on architectural patronage and urban history throughout Europe.[6] The traditional approach which first dichotomizes public and private spheres and then assigns the former to the male and the latter to the female has been found to be an inadequate framework for the analysis of gender and urban space in early modern Europe, yet this model continues to find acceptance among many architectural and urban historians working on many of the geographies of the Islamic world. In her extensive work on the history of the Ottoman harem Peirce has noted that categorization of various types of space into bipolarities of male/female, public/private cannot adequately explain the complex processes that engendered space in many areas of the Islamic world, including the Ottoman Empire during the sixteenth and seventeenth centuries, an era when royal women played such prominent roles shaping and gendering the city of the empire.

Looking at the rich language the Ottomans used to describe different types and uses of space, Peirce has demonstrated the reductivist and essentialist nature of the public vs. private paradigm for the Ottoman case. "Ottoman society of the sixteenth and seventeenth century was dichotomized into spheres characterized less by notions of public/commonwealth/male and private/domestic/female than by distinctions between the privileged and the common, the sacred and the profane—distinctions that cut across the dichotomy of gender."[7] While I am not sure that we are ready, or should, do away entirely with the private vs. public model to help us in understanding the nature of urban geographies in the Islamic world, I want to push beyond the boundaries of Abu Lughod's third "semi-private" category to explore the complex ways in which gender has shaped certain areas of the Islamic city. To do this, I concentrate on several factors which shaped

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Encyclopaedia of Women and Islamic Cultures: Methodologies, Paradigms and Sources, vol. 1 (Leiden: Brill, 2003), 315–320; I. C. Schick, *The Erotic Margin: Sexuality and Spatiality in Alterist Discourse* (London and New York: Verso, 1999).

[6] The literature on this issue is extensive. Dorothy O. Helly, and Susan M. Reverby, eds., *Gendered Domains: Rethinking Public and Private in Women's History* (Ithaca: Cornell University Press, 1992) provides a good introduction to this debate.

[7] Leslie Peirce, "The Imperial Harem: Gender and Power in the Ottoman Empire (1520–1656)" (Ph.D. dissertation, Princeton University, 1988), 8–9.

and engendered the Islamic urban worlds, including architecture, trade, ritual, and urban ceremonial.[8]

The role of Islamic architecture has long been recognized as an important component in the gendering process of both imperial and non-imperial Islamic geographies. Abu-Lughod noted that, "along with customary practices and Islamic legal texts, architecture assisted this process. Not only the devices of *mashribiyya* screening, but the layout of houses and even quarters created the strangely asymmetrical reality that women could see men but men could not see women, except those in certain relationships with them."[9] In early modern Ottoman Istanbul, as in many of the urban areas of the Islamic world, access to various types of spaces, from the inner sanctums of the Topkapi Palace to the streets of Istanbul, was determined not only by gender but by several other factors such as social status, life stage, wealth, spectacle or ceremonial. Further, both male and female members of the Ottoman court could exercise control over different types of urban spaces and gender by manipulating the built environment through architectural projects and staged ceremonial. Finally, space in the Islamic city could be gendered by exercising the privileges of the royal gaze, a privilege that was recognized and implemented in the design and layout of Ottoman architecture, from the more secluded harem quarters of the Topkapı palace to large socio-religious complexes called *külliyes* that still dominate many post Ottoman cities today.

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[8] Most of my references are drawn from the early modern Ottoman past, and particularly seventeenth-century Istanbul, the city and century with which I am most familiar. Thys-"enocak, "Space: Architecture, The Ottoman Empire", 515–516.

[9] Abu-Lughod, 167; Access to certain Islamic architectural forms also had to be controlled for the opposite reason, as evident from the comments made by the seventeenth-century French traveller to Isfahan, Jean Chardin, who wrote about the problems that tall minarets could cause in confined urban spaces such as seventeenth century Isfahan. "…they do not let anyone who calls the prayer climb high because they will see the women in their mansions that are always open to the side or in their courts and their gardens. Thus, the minarets serve only as ornaments and they do not make any more in this day. They put in place of minarets, on the platforms of the mosque, a small room open on all sides from which they give the public call." Jean Chardin, *Voyages du Chevalier Chardin, en Perse…*, ed. L. Langles, 10 vols. (Paris: Le Normant, 1811), 9:194–95 and 7:112 as quoted and translated by S. Blake, "Contributors to the Urban Landscape: Women Builders in Safavid Isfahan and Mughal Shajahanabad," in *Women in the Medieval Islamic World: Power, Patronage and Piety*, ed. G. Hambly (New York: St. Martin's Press, 1998), 415.

The Harem: Only a feminine space?

The harem, while not of Islamic origins has often been associated with the Muslim sovereign's court or with the patriarch of the extended family. As such, in its palatial or domestic form, the harem has been portrayed to be among the most clearly gendered spaces of the Islamic urban world. Located in the inner sanctums of the palace, or the least accessible part of a household, the harem has been considered to be a well-defined private and highly gendered space which, in its imperial manifestation, operated on the edges, outside or somehow above the spaces of the cities in which it was located. Portrayed as inaccessible to all but a few privileged males and occupied predominantly by females, spaces like the harem quarters at Istanbul's Topkapı Palace complex have been regarded more as oases of feminine isolation, often described and frequently depicted by Orientalist painters such as Jean-L?on Gèrôme (1824–1904) as exotic women's prisons, rather than as institutions in which the residents' influence could reach far beyond the physical confines of the harem itself to shape the surrounding political and urban environment (figure 1).[10]

The early twentieth century paradigm of "the Sultanate of the Women," long used to study the impact of royal women in the Ottoman Empire, has only recently been challenged by the academy; textbooks in modern Turkey as well as popular literature still present the harem spaces, and their occupants, as active in myriad backstage intrigue, devoid of any legitimate intentions for furthering the more public (read: male) Ottoman enterprise.[11] Certainly, the imperial harem was an inaccessible space for most males and females living within and beyond the borders of the Ottoman empire, but it was accessible, frequently occupied, and in many respects administered by a host of other members of the court who were not concubines or female relatives of the sultan and the Ottoman princes: the court eunuchs. These "beardless males," members of the court that some Byzantinists have labelled the "third sex," were frequent visitors, if not permanent occupants of spaces within the harem walls. Bobovi, a page of Polish origin who served for twenty-seven years as a musician in the *enderun*, the inner sanctums, of the Topkapi palace, provided several accounts of the eunuchs and other male attendants, and described their accessibility to the harem quarters. To keep apprised of the important events both within the palace and in the empire, the sultan's mother, or *valide*, relied heavily upon the chief black eunuch and her steward; the latter, Bobovi claims, was "like the master of the house. He has authority over all the eunuchs and all the women of the suites and is like a squire because he accompanies the Valide Sultan everywhere and is always near her."[12]

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[10] S. Germaner and Z. Inankur, *Constantinople and the Orientalists* (Istanbul: I‘bank, 2002).

[11] The study of imperial Ottoman women and the bias that has carried into popular literature today was largely due to the writings of Ahmed Refik, an early twentieth century Ottoman historian, who periodized this early modern era as the *Kadınlar Saltanatı*, the Sultanate of the Women, with a book of the same title. A. Refik, *Kadınlar Saltanatı*, I–IV (Istanbul, 1913–23). Set within the paradigm of imperial decline that has long shaped the historical interpretations of the Ottoman Empire after the sixteenth century, Ahmet Refik Altınay attributed many of the Sublime Porte's misfortunes to the backstage machinations of its royal wives and mothers whom he claimed had exercised authority from the confines of the harem. According to Refik it was the illegitimate manipulation of power and wealth by self-serving imperial women which contributed to the empire's loss of political and economic supremacy after the so-called Classical Age. For more recent scholarship which has challenged the Kadınlar Saltanatı paradigm see C. Kafadar, "Women in Seljuk and Ottoman Society up to the Mid-19th Century" in *9000 Years of the Anatolian Woman*, Exhibition Catalogue (Istanbul: Turkish Republic

Therefore, if we take what is considered to be one of the most clearly gendered spaces in the Islamic world and reconsider it in the light of the highly influential presence of the "third sex," we must increase the variables on one side of the gender equation to account for those residing in the harem spaces who were located somewhere in the middle of a gender continuum, sexed between male and female. The other side of the equation then needs to be recalculated, as it is clear that the "private" space of the harem should not be considered a solely female space in the way that nineteenth century Orientalists like G?rôme chose to fantasize. Considering the possibilities of a more complex definition of gender, complicates things, indeed, particularly, if we wish to avoid falling into the essential categories of male and female critiqued earlier in this article.

Setting aside the eunuchs, access to the imperial Ottoman harem was also possible for a range of royal and non-royal males: from princes to court jesters, to musicians. In Bobovi's account of life in the Topkapı

Ministry of Culture, 1993), 192–201; L. Thys-"enocak, *Ottoman Women Builders: The Architectural Patronage of Hadice Turhan Sultan* (Aldershot: Ashgate, 2007).

[12] C. Fisher and A. Fisher, "Topkapi Sarayi in the Mid-Seventeenth century: Bobovi's Description," *Archivum Ottomanicum*, vol. 10 (1985–87), 22, 26.

Palace, he reports how one particular "dwarf," perhaps illustrated here in the miniature of *Mehmed IV as a Boy* from 1650, was "dressed in precious vests and was extended the favour of the sultan and the Queen Mother. He passed freely in all quarters of the Palace" (figure 2). Bobovi himself tells of his experience performing as a musician for the *valide* sultan within the harem quarters; as a palace page, he had an intimate knowledge of the harem interiors, as he had given many concerts in the apartments belonging to the queen mother and her retinue. He explained that the male musicians, "are introduced blindfolded to sing and play their instruments and, always and on all sides, the eunuchs observe them to prevent anyone from raising their head. They smack them when they budge even a little. I assure you that it is very tiring and uncomfortable to be a musician at this price and, in such privileged situation, be deprived of sight."[13]

In addition to the physical presence of various persons within the harem who did not fall clearly into the category of female concubines or female relatives of the sultan, certain architectural features of the harem quarters at the Topkapı palace in the late sixteenth century provided increased access for all genders residing in the harem to the world beyond the palace walls. As a result of the architectural changes that had been made in 1577–78 under the sultanate of Murad III to the Topkapı Harem, the residences of both the women and Black Eunuchs were located closer to the Council Hall where the official business of the Ottoman court was conducted.[14] Here they were able to listen to the political machinations going on below them from an aperture in the wall above the Divan. Thus, women in the harem and their close attendants were able to gain greater access to the heart of the Ottoman administration as a result of these architectural changes. Their behaviour began to emulate that of the Ottoman sultan, who observed the activities of the *divan* hidden behind a grated window above the Council Hall[15] (figure 3).

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[13] Fisher and Fisher, 56.

[14] See G. Necipoklu-Kafadar, *Architecture, Ceremonial and Power* (Cambridge: MIT Press, 1991) for a detailed study of the architectural changes in the first three centuries of the Topkapı Palace.

[15] Necipoklu-Kafadar, *Architecture*, 174.

The Islamic Cityscape

Beyond the harem of the imperial palace, the larger Islamic cityscape could be gendered in numerous ways and through a variety of institutions. Spaces clearly gendered in time or location as female geographies, such as the prostitutes' quarter, the rear section of the mosque, or the "women's day" or chamber at the bath, or *hamam*, are the most easily read, as they were often labelled with inscriptions or described by contemporary chroniclers.[16] Again, gender was certainly a prominent factor determining the degree to which an urban space was accessible to or prohibited for particular urban dwellers, but age, religion and social status were all important criteria defining the ways in which space within the city was used. Sections of cities, specific monuments or sites were also gendered temporarily and acts of re-gendering a space occurred frequently in urban quarters, particularly during times of ceremonial or spectacle.[17] It is the many intersections between gender and these other factors, which must be examined to fully understand the complexities of the gendered Islamic city, rather than just the category of gender alone.

Sixteenth century travelers to Istanbul such as Hans Dernschwarm noted in his journal of 1533 that only older women were to be found in the separated sections of the city's mosques, as younger, unmarried ones prayed at home.[18] Processions of elite Ottoman women making their way to the public baths of Istanbul with large retinues of children and servants must have been a fairly regular occurrence in the capital; this illustration in an album dating to 1586 has captured one such outing (figure 4).[19] Legal measures were frequently taken by city officials to keep women and men separated or away from designated urban spaces where honour could be compromised or approved gender roles subverted. These types of sources provide insight into how certain urban spaces were officially assigned to a particular gender, while others were continually tested and contested. The Maliki jurist Ibn xAbdun, recording a list of rules for proper behaviour of males and females in twelfth century Seville, proclaimed that “women should be forbidden to do their washing in the gardens, for these are dens for fornication; women should not sit by the river bank in the summer if men appear there; On festival days men and women shall not walk on the same path when they go to cross the river; no barber may remain alone with a woman in his booth.” Particularly treacherous were the lime stores of Seville, which, like the new coffeehouses of sixteenth century Istanbul, were entirely off limits to respectable women precisely because, “men go there to be alone with women.”[20]

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[16] The traveller Chardin, for example, describes at length a mosque quarter in Isfahan where the women were "unveiled and bare-headed". See J. Chardin, *Voyages en Perse et Autres Lieux de l'Orient* (Paris: Langles, 1811), vol. 2: 215–216, vol. 7: 417.

[17] This phenomenon of temporary gendering of space is not something unique to Islamic cities as Davis has pointed out in his study of early modern Venice. Of Istanbul's western Mediterrnaean neighbour he writes, "The gendered valence of urban space was not only defined through the edicts of male elites, but was also the result of an ongoing process, a continuing social interplay among the sexes and between social groups that helped to maintain, extend or challenge prevailing notions that certain areas of the city should be reserved for men and others for women." R. Davis and Robert Davis, "The Geography of Gender," in *Gender and Society in Renaissance Italy*, ed. Judith C. Brown and Robert C. Davis (NY: Longman, 1998), 20.

[18] See Hans Dernschwarm, *Istanbul ve Anadolu'ya Seyahat Günlüğü*, trans. Y. Önen (Ankara: Kültür ve Turizm Bakanlıǵı, 1987) as cited by Y. Seng, "Invisible Women: Residents of Early Sixteen century Istanbul" in *Medieval Islamic Women*, 265, note 2.

The urban administration and elite patrons intervened frequently not only to prohibit but also to provide urban spaces for women so that they could access in person markets, baths, or other welfare services available in the city. Certain mosques, such as Gülfem Hatun’s mosque founded in 1543 by the sultan’s manumitted slave in Üsküdar, were thought to have been built by female patrons specifically to provide prayer space for women.[21] The great double bath built on the grounds of Constantinople’s Byzantine Hippodrome by the Sultan’s favourite, Hürrem Sultan (Roxelana), had separate sections designated for males and females (figure 5). There were, of course, several other baths in Istanbul which, if the structure had only a single-chambered caldarium, women could frequent, either on particular days or during specified hours, a practice which continues today. The seventeenth-century chronicler Evliya Çelebi, however, recommended that the women of the city were best advised to go the Avrat (women’s) Bath when they wished to partake in this activity.[22]

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[19] This album has 185 folios with several illustrations and was created for Johannes Lewenklaw’s Codex Vindobonensis 8615 now in Vienna’s Austrian National Library. See M. And, *Istanbul in the sixteenth Century* (Istanbul: Akbank, 1994), 243.

[20] *Islam: From the Prophet Muhammed to the Capture of Constantinople, vol. II: Religion and Society*, ed. and trans. by Bernard Lewis (New York and Oxford: Oxford University Press, 1987), 157–165.

[21] L. Peirce, *The Imperial Harem: Women and Sovereignty in the Ottoman Empire* (New York and Oxford: Oxford University Press, 1993), 201.

[22] L. Peirce, *Imperial Harem*, 202; Thys-“enocak, “Space: Architecture, Ottoman”, p. 517.

While it was not deemed proper for elite women, non-elite women in Istanbul, much like their Byzantine predecessors, did frequent the markets of Istanbul.[23] As Yvonne Seng has pointed out in her study of sixteenth century court records from Istanbul, "...for all women of lower socio-economic status, Muslim or non-Muslim, physical mobility and access to public space were imperative. Access to the street meant more than a stream of space traversed on the way to the mosque or the bath house: access to the markets, for example, was necessary in the absence of servants and otherwise unemployed males who could serve as messengers."[24] While the majority of sellers in the large urban marketplaces of Istanbul were men, women were allowed to both consume and peddle goods such as linens, laces, and other items in the urban market quarters as long as they did not compete with the guilds or violate any of their laws (figure 6).[25] Attempts were made by Ottoman city officials to establish a special market, the Avrat Bazaar, where respectable women could buy and sell their wares without worrying about their safety, compromising their honour, or perhaps competing with the guilds. Located near the great mosque complex built by the famed Haseki Hürrem Sultan in Istanbul, the Avrat market was identified by the sixteenth-century English traveller John Sanderson as, "the market place of women, for thither they come to sell their works, and wares."[26]

Since antiquity women have emerged from their houses to perform funerary rituals, organize wakes, celebrate marriages, bring forth children as midwives, or chant the final prayers for the dead. On these occasions urban spaces, which were usually occupied and controlled by males, were temporarily re-gendered and became the ritual space for women performing their traditional duties of prayer and mourning (figure 7). Women in many cities of the Islamic world frequented certain tombs and shrines, and through these visits gendered specific sites and monuments that were closely associated with women's devotion. The tombs of the daughters and granddaughters of Khwaja Mu{in al-Din Cishti, in Ajmer, India, served as a shrine-complex specifically designated for women's prayer. The Begumi Dalan was built in 1643 by Jahan Ara Begumi Sahib, the daughter of Mughal emperor Shah Jahan, and became an important stop on the pilgrimage route of women in India.[27] Today, certain shrines in Istanbul, such as the tomb of Telli Baba, are visited by and associated with women hoping for a long marriage and many male children (figure 8).

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[23] For women in the Byzantine marketplace, see Ankeliki E. Laiou, "Women in the Marketplace of Constantinople (10–14 centuries)," in *Byzantine Constantinople: Monuments, Topography and Everyday Life*, ed. Nevra Necipo‡lu (Leiden: Brill, 2001), 261–273.

[24] Y. Seng, "Invisible Women: Residents of Early Sixteenth Century Istanbul," in *Women in the Medieval Islamic World*, 243.

[25] C. Kafadar, 193.

[26] John Sanderson, *The Travels of John Sanderson in the Levent 1584–1602*, ed. Sir W. Foster, Hakluyt Series no. 67, 2nd series (London: 1931), 77; L. Thys-"enocak, "Space: Architecture, The Ottoman Empire", p. 517.

Other urban spaces of the Islamic world that were temporarily gendered by the presence of women were the courtrooms of the judge or qadi. The poignant image of Ibn Battuta meting out justice to the half naked women of Mali was no doubt an exception more than the rule in terms of the gender (and dress codes) of the court attendees, yet the qadi's court was a place where the shari{a and the sultan's justice was implemented. As such, at least in the Ottoman world, it was a space frequented by male and, to a lesser but certainly not negligible degree, female subjects. Extensive research has been conducted over the past three decades concerning the use Ottoman women made of the courts and the presence they imposed upon their environs when they staked out and defended their legal rights. Contrary to earlier assumptions which held that women seeking justice were allocated a specific day in the qadi's court, there does not appear to have been any particular day that women went to the court to file a complaint against a neighbour or resolve a dispute with a spouse.[28] Rather, the evidence shows that women, like men, appeared in person, often with female witnesses, to have their cases heard.[29] Certainly, the majority of the cases the qadi heard were brought by males, or male agents representing women, but it is important to note that a public space once thought to have been solely a male dominion appears to have been accessible to all genders, at least during the early modern era of the Ottoman past (figure 9).

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[27] Gregory Kozlowski, "Private Lives and Public Peity: Women and the Practice of Islam in Muslim India," in *Women in the Medieval Islamic World*, 469–488.

[28] R. Jennings, "Women in Early Seventeenth Century Ottoman Judicial Records: The Sharia Court of Anatolian Kayseri," *Journal of the Economic and Social History of the Orient* 18 (1975): 53–114; For Ibn Battuta's experience in Mali see (www.fordham.edu/halsall/source/1354-ibnbattuta.html).

[29] Jennings, 59.

Architecture and the Gendered City

The patronage of architecture was yet another way in which women throughout the Islamic world shaped and gendered urban geographies. Contrary to the popular notion that women in Islamic empires were powerless because of cultural practices which restricted their physical access to the public sphere and forbade display of their persons, recent scholarship has demonstrated that many royal women in Islamic courts undertook quite ambitious building projects and actively engaged in ceremonial as a way to represent themselves, insure visibility among their subjects, and shape the surrounding urban environment.[30] There is a rich legacy of female patrons of Islamic architecture who undertook formidable building projects, from the imperial women of the early Islamic world such Zubayda, the wife of the Abbasid caliph, Harun al-Rashid, to Ottoman women of the early modern era such as Hürrem, Mihrimah, and Turhan Sultan. Changes during the mid-sixteenth century in various aspects of Ottoman policies concerning sultanic succession brought imperial women, and particularly the mothers of Ottoman princes, closer into the folds of the sultanate in Istanbul. In a process which Peirce has referred to as the "sedentarization of the Sultanate," the "royal family was gradually gathered in from the provinces and installed in the imperial palace in the capital of Istanbul."[31] This shift in the locale of members of the royal family impacted, in turn, the stage upon which imperial women set their patronage. Prior to the mid-sixteenth century, the major architectural foundations built by imperial Ottoman women had been realized in smaller urban centres outside the capital of Istanbul. The mothers of potential heirs to the sultanate, serving as guardians and advisors to their sons, directed much of the business of the princes' provincial courts in various regions of the empire. And in the royal households of the provinces it was often the mother of the prince, as the eldest member of the court, who stepped into the role of the patron of architecture. However, as the location of princely residences shifted increasingly to Istanbul, imperial women responded by focusing their building efforts more in the capital and less in the provinces. With the exception of the Sultan Ahmed mosque, built in the first half of the seventeenth century, most of the large mosque complexes built in the capital city of Istanbul, from the mid-sixteenth through the late seventeenth century, were built by women of the Ottoman court: the wives, daughters, and mothers of the Ottoman sultans.[32]

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[30] Gavin Hambly, ed., *Women in the Medieval Islamic World* (New York: St Martin's Press, 1998); Fatma Mernissi, *The Forgotten Queens of Islam*, trans. J. Lakeland (Minneapolis: University of Minnesota Press, 1993). L. Thys-"enocak, *Ottoman Women Builders*.

[31] Leslie Peirce, "Shifting Boundaries: Images of Ottoman Royal Women in the Sixteenth and Seventeenth Centuries," *Critical Matrix* 4, no. 61 (Fall–Winter 1988): 47.

Some of these imperial women patrons had founded large building projects which not only reshaped but also gendered the existing urban spaces in which they were located. Through inscriptions and elaborate foundation charters they proclaimed to all who entered these spaces that they were responsible for these monumental structures, these good deeds. In the Ottoman world, as in most parts of the Islamic world during the early modern era, the social and cultural norms did not allow for a more overt display of the royal female person, hence the greater emphasis upon architecture as a substitute for the presence of the royal Ottoman female. For the Ottoman woman builder, architecture and the ceremonial that surrounded it evolved as a powerful synecdoche, a symbol of her piety, power, and visible presence in the empire. Turhan Sultan's Yeni Valide Mosque complex of Eminönü, Istanbul, built in the commercial heart of the Ottoman Empire, was one such monument.[33]

Hadice Turhan Sultan and the Yeni Valide Mosque and Royal Pavilion: A gendered complex (figure 10)

From the vantage point of the Yeni Valide Mosque's *hünkâr kasrı*, an elevated royal pavilion attached to the eastern wall of Hadice Turhan Sultan's mosque, the surrounding world could be observed only by a privileged few like the queen mother, or *valide*, who had access to these exclusive imperial quarters. The pavilion had been designed to be a site for visual surveillance of its surroundings. The view it afforded was an active controlling gaze which provided the valide, who, because of her gender, did not have physical access to many parts of her complex, visual access to it. The view of the bustling customs docks of Eminönü could also be obtained from the side of the pavilion that faced the Golden Horn. The importance of the view from the hünkâr kasrı is emphasized in a section of its epigraphic programme. In the domed area of the imperial suite is a couplet of poem written by Asimi, the first line of which proclaims that, “The adjacent hünkâr kasr is a special viewing place (Yanında kasr-ı hünkârî aceb özge temââd ır).[34]

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[32] One author has calculated that in the mid-sixteenth century close to 37 percent of all foundations established in Istanbul belonged to women. See Gabriel Baer, "Women and Waqf: An Analysis of the Istanbul Tahrir of 1546," *Asian and African Studies* 17, nos. 1–3 (1983): 10.

[33] See L. Thys-“enocak, *Ottoman Women Builders*, chapter 5 for a detailed analysis of this complex and the patronage of Turhan Sultan.

As the drawing of the complex in figure 11 illustrates, the lines of vision from the kasr (B) intersect with several strategic points and activities in the complex: (q/Q) the southern congregational side entrance to the mosque, and (o) the private entrance for the imam where the mosque’s foundation charter indicates that sherbet was served to worshippers after the prayer time. These points in the complex were all visible from the side of the pavilion that faces the waters of the Golden Horn (K), as was any commercial or military activity that occurred at the entrance to the harbour and the customs houses of Eminönü. From the side of the kasr that faced the interior of the complex, several key locations could be seen from the vantage points in the elevated pavilion: the entrance to the immense tomb (F) that Turhan Sultan had built for herself, the eastern gate (E) of her bustling market, the entrance to the primary school (I), and possibly the school for the instruction of Hadith (J).[35] The large fountain (G) at the far eastern end of the complex is the only structure in the complex which was not visible from the interior of the pavilion, but it could have been seen easily from the private garden (C) that exists behind the crenellations of the Vasileus tower upon which part of Turhan Sultan’s pavilion sits.

Therefore, the layout of the Yeni Valide mosque complex was not a haphazard or “freely arranged ensemble,” as some scholars have claimed, but was organized to allow for its patron, the queen mother, to have visual access to the various components of the complex to which her physical access was restricted. Rather than representing deterioration in Ottoman planning principles in the post-Sinan era, as some architectural historians have suggested, the layout of the Yeni Valide mosque complex, revolving around the fulcrum of the *hünkâr kasrı*, represents an innovative architectural response to the changing status of royal Ottoman women, and particularly the valide sultan, during the second half of the seventeenth century.

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[34] For a discussion of the epigraphic programme of the Yeni Valide mosque complex see L. Thys- “enocak, “The Yeni Valide Mosque Complex at Eminönü,” Muqarnas 15 (1998): 58–70 and L. Thys-“enocak, “The Yeni Valide Mosque Complex of Eminönü, Istanbul (1597–1665): Gender and Vision in Ottoman Architecture,” in Women, Patronage and Self Representation in Islamic Societies, ed. D. Fairchild Ruggles (Albany: SUNY, 2000), 69–90; L. Thys-“enocak, Ottoman Women Builders, chapter 5 pp. 220–230.

[35] The primary school and school for hadith are no longer extant; a bank and road have replaced these structures.

The view of the complex afforded by the *hünkâr kasrı* was an active controlling gaze, which had its antecedents in the gaze of the Ottoman sultan who watched his subjects, hidden from view, behind the grated windows of the public council hall of the Topkapı Palace, the Divan-ı Humayun.[36] Since the latter half of Mehmed II's reign, Ottoman court protocol had increasingly moved the sultan out of the public's eye until he gradually became an inaccessible, but at the same time an omnipresent figurehead. This concern with sultanic seclusion persisted in varying degrees into the eighteenth century when the protocols enforcing the physical and visual inaccessibility of the sultan were abandoned.[37] Both male and female members of the Ottoman court could exercise control over different types of spaces by manipulating both the built environment through architectural projects and by exercising the privileges of the royal gaze, a privilege that was recognized and implemented in the design and layout of Ottoman structures, from the more secluded harem quarters of the Topkapı palace to Turhan Sultan's great Yeni Valide mosque complex of Eminönü.[38]

Recognized as an influential design component in Italianate Renaissance architecture, the power and the complex dynamics of the royal gaze has been assessed more recently as an important factor in how Islamic patrons of architecture exercised control over and perhaps engendered urban space.[39] As Hill has written, "Architecture is a tangible classifying system continuously inculcating and reinforcing the taxonomic principles underlying all the arbitrary provisions of a culture. This is particularly evident in early modern architectural practice, with its emphasis on social hierarchy as spatially performed through etiquette, processional ritual, and the conjuring of vistas and enfilades to evoke the distance conferred by power."[40] Within the Ottoman architectural complex, creating spaces where expansive vistas or specific views could be obtained by the royal patron was a frequent practice. A desire to create a place where the gaze and the view could be manipulated constituted one of the key design components at Turhan Sultan's Eminönü complex. The panoptic possibilities offered by the royal pavilion that adjoined the Yeni Valide mosque suggest that imperial women did not simply appropriate male iconography when constructing their works, but were as interested in the manipulation of the royal gaze as their male counterparts. Further, they used it to provide visual access for themselves when physical mobility was restricted.

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[36] For a comparative assessment of the role of the gaze see, Gülru Necipoklu-Kafadar, "Framing the Gaze in Ottoman, Safavid, and Mughal Palaces," *Ars Orientalis* 23 (1993): 303–342.

[37] Ibid., 306, note 18 for commentary on the changing image of the Ottoman ruler and comparison with contemporary French and Ottoman notions of kingship.

[38] L. Thys-"enocak, "...Gender and Vision in Ottoman Architecture," 69–90.

[39] A useful work and bibliography for the role of the gaze in the architecture and urban planning of the early Renaisssance is Marvin Trachtenberg, *Dominion of the Eye: Urbanism, Art and Power in Early Modern Florence* (Cambridge: Cambridge University Press, 1997). For work on the issue of the imperial gaze in the Ottoman Topkapı palace as well as other imperial settings in the early modern Islamic world, see Gülru Necipoklu-Kafadar, "Framing the Gaze in Ottoman, Safavid and Mughal Palaces," *Ars Orientalis* 23 (1993): 303–304; and D. F. Ruggles, "The Eye of the Sovereignty:

The visual and ceremonial vacuum left by the Ottoman sultan was gradually filled in the sixteenth and seventeenth centuries by imperial women whose presence was made manifest in their architectural projects, now placed in the centre of the empire, and their highly visible participation, even though veiled in the numerous royal progresses and spectacles staged by the Ottoman court. European travellers report that royal progresses in which imperial Ottoman women participated were grand indeed. Turhan Sultan's procession of 1668 was comprised of more than one thousand members of the Ottoman court. Among her imperial retinue were two hundred splendidly dressed members of the Ottoman cavalry, several hundred gardeners, descendants of the Prophet Mohammed, and numerous Janissaries. The valide's carriage was surrounded by black eunuchs who hid Turhan Sultan from the spectators' gaze but at the same time drew attention to it as the centrepiece of a three-hour long procession. The valide, while not visible in person, created an impressive presence. From the vantage point of the screened carriage window, she retained control of the enraptured

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Poetry and Vision in the Alhambra's Lindaraja Mirador," *Gesta* 36 (1997): 180–189; D. F. Ruggles, *Gardens, Landscapes and Vision in the Palaces of Islamic Spain* (University Park: Penn State Press, 2000).

[40] Helen Hills, ed., *Architecture and Gender Politics in Early Modern Europe* (Aldershot: Ashgate Press, 2002).

audience and held them in her royal presence for the three hours it took her entourage to pass.[41]

For the women on the side-lines who watched the imperial ceremonials staged by royal women like Turhan, the urban space they occupied was frequently contested and occasionally a cause for concern which prompted legal action (figure 12). In one such instance, the gathering of a large group of women for a royal wedding of 1758, was a source of alarm and the sultan proclaimed that "the desire of womankind to watch public spectacle is excessive and exaggerated...they have been banned from the vicinity of the *bedestan* and places where the crowds gather..."[42] Images of non-elite women do appear, albeit it in the margins, of Ottoman festival books depicting the great circumcision celebrations of the sixteenth, seventeenth, and eighteenth centuries, such as the *Surname-i Vehbi* which was illustrated by the court painter Levni in 1720 for Sultan Ahmed III (figure 12). The presence of women at these events was not entirely disapproved of, nor was it an anomaly, as we can see that the court painter has included several women spectators at the edge of the folio.

From the archival and material remains that we have available to us for the study of the early modern Ottoman city it appears that all members of the Ottoman world—all genders, elites and non-elites, urban and rural dwellers pushed continually at the boundaries of the spaces that their society had established as appropriate for their gender. In doing so they contributed, through architecture, trade, ritual, and ceremonial to an on-going process of redefining and re-gendering what were, in fact, the highly fluid spaces and geographies of the early modern Islamic city.

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[41] For a description by a European observer of this procession see J. B. Tavernier, *Nouvelle Relation de l'Interieur de Serrail de Grande Seigneur contenent plusiers singulairitez jusqu'icy n'ont pas ete mis en lumiere* (Paris, 1681), 158–161. See Peirce, *Imperial Harem*, 195. For a later procession of the Valide Turhan Sultan to Edirne on December 28, 1672, see Antoine Galland, *İstanbul'a Ait Günlük Hatıralar 1672–1673*, vol. 1, ed. C. Schefer, trans. N. S. Örik (Ankara: Türk Tarih Kurumu Basımevi, 1987).

[42] C. Kafadar, 200.

GUILDS IN RECENT HISTORICAL SCHOLARSHIP

Nelly Hanna

The present paper will concentrate on research on guilds in the last two decades. Nevertheless, it is important to identify some of the foundations that this research was based on. For this one needs to go back to the early seventies. It was then that many of the issues that form the basis of studies on urban guilds today started emerging. During the early seventies, the study of guilds moved from a study of institutions, often of a descriptive nature, to the study of guilds as history with a context in time and place and part of the process of change. The role of Andre Raymond was fundamental in bringing a new approach to the study of guilds. His book, *Artisans et Commercants au Caire au XVIII^{e} siecle*, became a model that many scholars used. He studied guilds in relation to their social context, to the groups in power. He showed the relationship between guilds and the ruling class to be a changing one. The guilds thus became part of a larger picture in which social and economic factors were at the fore. Raymond's book, moreover, used a variety of sources, notably the *Description de l'Egypte* which provides a detailed picture of guilds in 1800, the work of Evliya Celebi, the seventeenth century Turkish thinker and traveller, the anonymous work *Kitab al-Dhakhaxir*, a rare text datable to the seventeenth century, which seems to have been written by a craftsman. More importantly, he made extensive use of the court records of Cairo to reconstruct the guild history of this city.[1]

Subsequently, as court records were uncovered in many urban centres, this became a major source for the study of guilds in many other parts of the Arab and Ottoman world. Students and scholars have since then explored these records for studies on guilds in Jerusalem, Damascus and other Syrian cities, Bursa, and Balkan cities. In other words, a wide range of Anatolian, Arab, and Balkan experiences, albeit of differing depth and breadth, can now be used as a basis to write guild history.

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[1] André Raymond, *Artisans et commerçants au Caire au XVIII^{e} siècle*, 2 vols. (Institut français de Damas, 1973–4).

Thus, research is no longer limited to large urban centres or capital cities like Cairo and Istanbul. As a matter of fact, Amnon Cohen's book on the guilds of Jerusalem showed that a full-fledged study could be undertaken about a medium sized town which had less than 100 guilds (as compared to about 1100 in Istanbul and 260 in Cairo).[2] Even smaller localities, like Hama, with a population roughly estimated in 1780 at 4,000 by the French traveller, Volney, were shown to have guilds that could be studied by the use of court records.[3]

One consequence that this trend had for scholarship was to shift the focus from attempts to understand "Middle Eastern" guilds or "Islamic" guilds to monographs that concentrated on a specific city in a particular period. On the one hand, the trend resulted in a certain fragmentation, as in-depth studies lost sight of the larger picture. It also meant, on the other hand, that the generalizations contained in terms like Middle Eastern guilds and Islamic guilds that neither showed change over time nor the importance of local diversity between one region and the other, could be avoided.

These studies have shown that certain features of guild life were fairly common, regardless of where the guild was located. Functions like involvement in tax collection, features like their hierarchical structure, the leadership of the guild shaykh, seem to be shared among guilds in general. One can nevertheless observe a certain amount of diversity between one region and another, although little comparative work has actually been undertaken. With regard to the presence of women in guilds, for instance, {Abdul-Karim Rafeq, in his numerous studies of towns and cities in Bilad al-Sham, found that women were neither members of guilds nor did they have their own guilds, even though women were involved in a number of crafts like textile production and *husr* straw mats.[4] The court records of Cairo show a somewhat different picture, notably that women were part of certain guilds, apparently those linked to female activities, both as members of a guild and as guild heads. This is illustrated by the appointment of a woman to head the guild of women gypsy dancers (*al-ghajar al-niswa*) who performed in public festivals and *mulids*.[5] The diversity between the two regions was presumably the result of local traditions and the diversity of these traditions. A comparative approach is sure to yield significant results with regard to guild practice.

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[2] Amnon Cohen, *The Guilds of Ottoman Jerusalem* (Leiden: Brill, 2001), 5.

[3] James A. Reilly, *A Small Town in Syria: Ottoman Hama in the Eighteenth and Nineteenth Centuries*, 72–73.

[4] {Abdul-Karim Rafeq, "Mazahir min al-Tanzim al-hirafi fi Bilad al-Sham," 164.

[5] Bab Ali court, Cairo, register 167(b), case 202, dated 1092/1681, 61.

From early on, a number of debates have interested scholars working on guilds. The following pages will identify some of these trends. It will discuss the major themes in the study of guilds that have interested scholars in the last couple of decades, such as the relationships between guilds and the state, guilds and the economy, guilds and political life, guilds and the courts and religious law.

Guild Chronology and early guild history

Court records are only available as of the fifteenth century for some regions and the sixteenth for many other regions. As a result, recent scholarship on guilds is heavily concentrated on the period from the fifteenth–sixteenth centuries up to the eighteenth and in some cases the nineteenth centuries. Scholars who work on earlier periods dispose of few sources to help them understand the development of this institution.

For those who were nevertheless interested in a consideration of early guild history, the origins of guilds have remained a focus of attention. Much more research has in fact been devoted to the origin of guilds than to their historical development. There is no agreement among scholars as to how guilds originated, firstly because there is much conjecture about the subject and, second, because the conjecture often rests on the study of one particular region. One aspect of this question was whether or not guilds existed before the Ottomans. Ira Lapidus' view is representative of one trend. His study of the cities of Damascus and Aleppo in the Mamluk period (1250–1517) considered that there were no guilds in this period. He, nevertheless, presumed some organization to have existed for the training of workmen and the perpetuation of their skills, and that there was some solidarity within groups of people working in the same craft.[6] In Mamluk Cairo, likewise, craftsmen working on the same product could agglomerate in a single district or building. Abbas Hamdani more recently elaborated the same argument in an article tracing the existence of crafts associations in early medieval Baghdad. By an analysis of Rasaxil Ikhwan al-Safa, Hamdani enumerated some of the major functions that crafts organizations were fulfilling. He consequently suggested a broader definition of the word guild so as to comprise crafts associations about which early literary sources provided abundant mention.[7]

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[6] Ira Lapidus, Muslim Cities in the Later Middle Ages, 101.

For those who argued that guilds existed before the Ottomans, there was a variety of conjectures, such as a Byzantine or Seljuk origin for those studying Anatolia. Greek historiography, for instance, presents guild organization in Greek lands as a natural continuation of corporations that began to play an independent role during the declining period of the Byzantine.[8]

As a result, any chronology we now have for guilds is built on parts of a study here and there. There is actually no reason why we may suppose that the same chronology necessarily applies to all regions. Yet one cannot conclude that the absence of such studies or the shortage of source material really reflected the absence of change, or that guilds were static, as one scholar has put it, between Ibn Khaldun and Ilyas Qudsi (nineteenth century).[9] Although it is very possible that in many features guild life had a certain longevity, its hierarchical structure, for instance, being headed by a shaykh, its function of training apprentices, there is a methodological problem in the assumption of the absence of change until the modern period or until the spread of European capitalism.

There is a common agreement that in the sixteenth century the role of guilds was greatly developed. Thus, in many regions of the Islamic world the origins of the guilds were attributed to earlier local factors of that region. Whatever the origins of this organization, it clearly flourished as of the fifteenth or sixteenth centuries. Yet, the conditions that allowed this development still require some exploration. Therefore, one needs to give this subject special consideration by following up on the few leads that scholarship has undertaken. Among these leads is the relationship between the emergence of guilds and the decline of the muhtasib. This personage, appointed from among the religious scholars, was in charge of the urban market. In Mamluk Egypt, the position of muhtasib was a prominent and respected one, occupied by persons trained in religious institutions like the great historian al-Maqrizi. We have a number of hisba manuals dating from the thirteenth and fourteenth centuries detailing the functions that the muhtasib was supposed to undertake, such as controlling the quality of goods sold in the market, or making sure that buildings were not constructed on public thoroughfares. It is precisely these functions that become the responsibility of guilds. What this change entailed remains open to interpretation. Certainly, one should look for an explanation that goes beyond a mere change in the status of a state employee.

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[7] Abbas Hamdani, "The Rasaxil Ikhwan al-Safaxand the Controversy about the Origin of Craft Guilds in Early Medieval Islam," 157–173.

[8] Nikolai Todorov, The Balkan City, 111.

[9] Zouhair Ghazzal, L'economie politique de Damas durant le XIX^{e} siecle: Structures traditionnelles et capitalisme, 129–131.

One significant consequence was, according to {Abdul Karim Rafeq, a change in the religious dimension of the guilds; notably, that, as the ihtisab was a religious position, the muhtasib presumably followed religious law, but that once guild law was applied this was no longer the case. The craftsmen were not scholars; it was practice that they were concerned with rather than religious law. The diminishing role of the muhtasib in the affairs of the market during the seventeenth and eighteenth centuries was, according to his view, also linked to the economic power of the ta'ifas which was fully established by then.[10]

Guilds and the State

The issue of guild-state relations is a multi-sided and complex one. It has been in the forefront of much scholarship and continues to be a subject for debate. Guilds cannot be fully understood in abstraction of the context, more specifically the power structure, within which they functioned. Our understanding of guild-state relations is fundamental to the way that broader issues like the running of the economy, the role of guilds in political life, the idea of traditional versus modern, the role of guilds in the broader social scene, are perceived. Analysis of guild-state relations, thus, offers a channel by which to understand the socio-economic context of a particular period. It also implies an understanding of the way that these relationships changed, that is, the conditions that brought about such change. All these matters are still in need of much exploration.

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[10] {Abdul-Karim Rafeq, "Craft Organization, Work Ethics and the Strains of Change in Ottoman Syria," 496.

The range of opinions on this subject is wide. On the one side, we have views of a strong centralized Ottoman state during the sixteenth century which attempted to control the economy through the pricing of commodities, through restrictions, through a system of tariffs on the movement of goods and raw materials and, consequently, on the activities of guilds.[11] On the other side of the spectrum, scholars like Andre Raymond and {Abdul-Karim Rafeq considered state control of guilds to have been minimal. Certainly, links existed between the state and the guilds, through the shaykhs of the guild. Taxes on services and production could be collected through the guild heads. When the state issued orders regarding artisans or their work, this was also done through the guild structure. Finally, the state was directly involved with some guilds, either to undertake certain building projects, or for certain services such as the transport of state goods, for which the guild was required to provide men. They could be called upon to undertake repairs or maintenance work in state projects, such as the maintenance of the fortresses along the pilgrimage route. Nakhl and {Ajrud, important stops in the Sinai desert, for instance, underwent important repairs in 1004/1595 paid for by the Imperial Treasury of Egypt in which various construction guilds participated. Work on these projects was an obligation that they had to fulfil and for which they presumably received fees less than market fees.[12]

The divergence of views is the result of a number of factors. Firstly, there is the issue of sources. The state archives of the Ottoman state, like the *qanuname*, the *firmans*, have been an essential part of the work used by scholars like Robert Mantran in his study of Istanbul and Nikolai Todorov in his study of Balkan cities. By their very nature, state archives often consisted of orders that were issued and had to be obeyed. They did not provide a picture of a reality or of what actually took place. The use of state archives to understand guild state relations, as was done by Robert Mantran and Nikolai Todorov for instance, tended to lay great emphasis on the role of the state in the functioning of guilds and they assumed a strict government control of guilds and consequently of economic life. Todorov, in his study on Balkan cities, for example, considered that guilds were run by a set of Sultanic orders.[13] The study of crafts guilds through official regulations only has, moreover, sometimes tended to project a harmonious picture of the relation between state and society. On the other hand, studies that used court archives often reached a less state-oriented view. In fact, much of the data in these archives recorded disputes among artisans, between artisans and guild heads or the authorities. Consequently, a historian like Pascale Ghazaleh, in her work on Cairo, saw the relationship as being in a state of constant tension and movement, power struggles, compromises, rather than as a set or static relationship of domination. To understand how these relations worked, prevailing conditions had to be clarified.[14]

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[11] Nelly Hanna, *Making Big Money in 1600*, 4.

[12] Nelly Hanna, *Construction Work in Ottoman Cairo (1517–1798)*, 25–6 and 65–67.

Secondly, there is the issue of approach. Historical approaches in the last few decades have moved towards a history that gives more weight to social forces. We see this reflected in the study of guilds. The debate as to whether guilds were state-run organizations or not has, in more recent scholarship given way to a more nuanced approach. Suraiya Faroqhi explored some of the conditions leading the Ottoman state in the sixteenth and seventeenth centuries to mobilize the labour of artisans and craftsmen for state projects, either in times of military campaigns or for important construction projects. These were usually for a specific duration and in spite of the fact that coercion was used for this mobilization; the workers received wages for their work, albeit at a reduced rate.[15] It is clear to her, however, that there was no centrally imposed pattern of guild organization and that local arrangement diverged considerably.

Thirdly, there is the issue of time and place. There were in fact vast differences in this relationship according to the place and the time we are talking about. Because much scholarship on guilds between the sixteenth and eighteenth centuries was concentrated on Istanbul, where the state was very present and where the regulations which were issued regarding economic activity were more likely to be closely followed than in distant regions, Istanbul was occasionally used as a model from which one could generalize to other cities of the Ottoman Empire. A number of studies on the guilds in Istanbul focused on their close ties to the state. For the Turkish historian, Mehmet Genc, the state was closely involved in the functioning of certain guilds, notably with the aim of provisioning the capital with essential commodities and food stuffs, a policy that the historian called "provisionism," the maintenance of a steady supply so that all goods and services were cheap, plentiful, and of good quality. This could be done through pricing and through channelling of certain goods towards the capital and its 750,000 inhabitants. Genc was of course referring to Istanbul, the centre of the Empire and the most populated city. To which extent such "provisionism" was applied to other cities is another matter. With the methods of control that were available prior to the modern period, was it physically possible to have this kind of control over the guilds of towns and cities other than Istanbul?

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[13] N. Todorov, *The Balkan City*, 95.

[14] Pascale Ghazaleh, *Masters of the Trade: Crafts and Craftspeople in Cairo 1750–1850*, Cairo Papers in Social Sciences 22, no. 3 (Cairo: American University in Cairo Press, Fall 1999).

[15] Suraiya Faroqhi, "Labor Recruitment and Control in the Ottoman Empire," 24–25.

Suraiya Faroqhi's work suggests that there were large differences between guilds in Istanbul and those in other cities. She confirms Genc's statements about state control of crafts in the capital. Craftsmen in Istanbul never worked for interregional or international markets. Their product was intended for local consumption. The Ottoman authorities were "provisionist" in their approach to the distribution of goods, and the population of the capital had to be provided for. As a matter of fact a merchant or craftsman who removed his goods from the market of Istanbul was considered to be a troublemaker and his activities would be prohibited. This limitation was to affect the capital's guild structure.[16] Yet she shows that even in a city as close to Istanbul as Bursa, it appears that a looser relationship existed between the state and the guild than was the case in Istanbul.[17]

In other words, historians cannot automatically apply this model to other cities. In the study of guilds, as in other domains, there is a problem with generalizations based on research on Istanbul and applied to other regions of the Ottoman Empire without consideration of the different contexts and conditions. Yet, for scholars working on Egypt, Syria, or Algeria, it seems quite clear that the level of state control of guilds was higher in Istanbul than in most other cities. Historians of the Arab world, Andre Raymond and {Abdul-Karim Rafeq, for example, clearly do not share the view about state control of economic activities, most likely, because this control was much more diffuse once one was outside the capital.

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[16] Suraiya Faroqhi, "Ottoman Guilds in the late Eighteenth Century: The Bursa Case," 93–95.

[17] Masashi Haneda and Toru Muira, *Islamic Urban Studies: Historical Review and Perspectives*, 209–210.

Moreover, even at one particular moment in time at a specific place, the relationship between guilds and the state was far from uniform. Guilds were involved in production, in services, and in entertainment and, consequently, were quite diverse. In theory, the state could call upon any guild to undertake a project or to provide the state with a certain product. In practice, many guilds stood outside state concerns. One has only to peruse a list of guilds in Cairo dated 1801 that was prepared by the members of the French Expedition to Egypt to see that most of the 278 guilds mentioned in the list were unlikely to be closely involved with the state. The relationship between the state and some of the guilds involved in entertainment—for instance: the guild of musicians, of story tellers, of women singers, of dancers, of story tellers in coffee houses, of shadow players, of women dancers and the musicians accompanying them, and women dancers called Rakassin—was likely to be confined to tax collection.[18] Guilds producing basic food commodities were the most likely to undergo controls through pricing. In Cairo, price lists for basic food products were regularly announced in the sixteenth century and expected to be implemented. Subsequently, however, they were dropped. Textile production, a major industry in seventeenth and eighteenth century Cairo which employed more people than any other, most likely functioned independently of any state controls. Sugar, on the other hand, was a strategic commodity and the state was much more concerned in having some say in its distribution.[19]

One could explore the relationship between guilds and the authorities through a closer consideration of the nature of these authorities. Very often, one will find that what is roughly termed the "authorities" or the "state" may in fact consist of various bodies, which were sometimes competing with each other and had a level of power over guilds. Among these were the sultan or the state that issued certain orders; there were also the authorities that were expected to implement these orders, in relation to the payment and the collection of taxes, for instance. Between these and the guilds there could be a certain amount of negotiation, of give and take, of some forms of arrangement, rather than a straight issuing of orders by the one and their implementation by the other. One can, in other words, question, if the fact that a person was appointed in a position necessarily meant that he followed the official line. The evidence shows in fact often that middle ranking employees had their own interests, had their own alliances, and were consequently in an ambivalent position between their loyalty to the state and their own interests. Thus, they might implement regulations, but they might also implement them in the way they saw fit, or in the way that conformed to their interest, regardless of whether this entirely followed the letter or the spirit of the law.

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[18] Andre Raymond, "Une liste des corporations de métiers au Caire en 1801," 1–14 (nos. 126, 131, 137, 139, 147, 148, 192, 260 of the list).

[19] Nelly Hanna, Making Big Money in 1600, 95–97.

In this context, those representing the interests of the authorities included the qadi, who mediated in disputes between guilds and the authorities; the multazim, who collected taxes from guilds, or the mufti who could be asked to give a legal opinion on a particular case. The qadi could call upon "experts" ahl al-khibra, whose advice was sought in technical matters and usually followed in the decision-making. In addition to these two personages, the muhtasib, whose role had been considerably reduced since the fifteenth century, could claim certain prerogatives over the guilds, with variable success. One of his remaining functions was pricing of commodities, which he did in collaboration with the head of the guild. The muhtasib could also see that certain goods be sold only in set places so that they could be taxed. To see these various personages as one single body can sometimes be misleading. They did not all necessarily hold the same views or have the same interests. Neither was the relationship between them and guilds necessarily a stable one. Rather, it was subject to shifts in alliances, depending on prevailing conditions.

Thus, in one case involving a guild in a dispute with the state, the claims of the guild were supported by the qadi and the mufti. The subject of this case, dated 1060/1650, was a dispute regarding the sugar that Egypt was required to send to Istanbul for the Imperial Kitchen every year. Egypt provided a certain fixed amount of sugar every year for the Palace, paid for by the Imperial Treasury in Egypt. Sugar producers were held responsible to provide it before they could sell their product in the market. The dispute was not whether or not the sugar producers should follow the regulations set up by the state, but about the way the amount was to be calculated, whether the ratl was equivalent to 150 dirhams, a weight used in Istanbul, or 144 dirhams, the weight used in Cairo. On the one hand, there were those who represented state interests, in this case the muhtasib. On the other hand, there were the sugar producers and sugar merchants, with, on their side, the weighers of goods represented by the head of that guild. Finally, there were the persons representing justice and the shari{a, first the qadi, then the mufti, who was asked to give an opinion on the matter.[20] The case was settled to the satisfaction of the guilds with the support of the mufti.

At other times, we can see a shift of alliances with the guilds, on the contrary, asking for the support of state authorities against a tax collector. In 1057/1647, for instance, the guild of fishermen in the village of the Banub of Gharbiyya province in the Delta, complained that the multazim was supposed to collect ten percent of their product but that he had introduced a new tax called a ta{ma. The complaint was sent to Muhammad Pasha, Governor of Egypt, who asked the Qadi al-Qudat to see that justice was done and that no new taxes be imposed on the fishermen.[21]

In other words, these cases show the complexity of interests and concerns, from the high level regulations issued by the state, the lower level employee who was supposed to implement these regulations, the various guilds, the legal aspect in theory and in implementation, or from the political authority, the taxation authority, and the judicial authority. The approach that considers only two players, the ruler and the ruled, or a body that issues orders and another that obeys or implements them, does not show these complexities.

This kind of analysis also places emphasis on a dynamic relation, the elements that make up this relationship. The question is not whether guilds were tools in the hand of the state or, if they were autonomous organizations functioning independently of the state. Rather, it is a study of a constantly changing relation between the political authorities and various other social bodies. The implications that this analysis carries are that conditions in a large city are not necessarily identical to those in a small town, or those in the capital Istanbul identical to those in a city at a distance from the centre.

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[20] Bab Ali court, Cairo, register 127, case 1258, dated 1060/1650, 309; see also Bab Ali register 124 case 68, dated 1054/1644, 16.

[21] Bab {Ali court, Cairo, register 125, case, 4, dated 1057/1647, 2.

Guilds and the Law

Recent interest in the relationship between Islamic law and society has left its impact on the study of guilds. Mostly, this interest has circulated around the practice of the law and the close links between guilds and the judiciary. The courts were an important part of the guild history in the period from the fifteenth to the nineteenth centuries. Research on guilds has had to take into consideration not only guild/state relations but also guild/court relations, since guild members often dealt with the qadi in their daily affairs. Qadis confirmed the election or appointment of guild heads. They also looked into disputes among guild members, between guild members and their shaykhs, or between guild members and the political authorities.

Court rulings related to guilds bring to light some of the complexities of the relationship between this organization and the judiciary system. The qadi was expected to see that state laws or regulations issued by the administrative or political authorities were implemented, but he also had to see that the shari{a was implemented. That is not all. Court cases registered in the registers also show that when a dispute arose with regard to the violation of internal guild regulations, the matter was also brought to the attention of the qadi. The qadi was in fact called upon to confirm guild laws, which were independent of Islamic law except insofar as they represented an agreement between various parties in front of witnesses. A case could be brought to his attention because guild regulations, set up by guild members and independent of the shar{ia, were violated. The election of the head of a guild, for instance, usually contained certain conditions that the guild shaykh was expected to follow. If he violated these regulations, the qadi could be called upon to consider the case. For example, the guild of blanket makers accused their guild head because he was evil and corrupt, he beat guild members and confiscated their money and they chose another person, knowledgeable about guild law (qanun), to replace him; they submitted their accusation and their proposal to the qadi and the court confirmed it.[22]

This multiplicity of laws was potentially behind a certain amount of tension between guild law, Islamic law, and state law. The tension between guild law and Islamic law can be observed at many levels. At the theoretical level, guilds as such are not specifically mentioned in books of jurisprudence, yet, as {Abdul-Karim Rafeq has pointed out, the legal opinions of the Syrian muftis of the period between the seventeenth and the nineteenth century, notably Khayr al-Din al-Ramli, Hamid Efendi al-{Imad, and Muhammad Amin b. {Abidin, often ran contrary to guild practice.[23] There is great scope for scholarly work on the subject with all the complexities that it contains.

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[22] Galal El-Nahhal, The Judicial Administration of Ottoman Egypt in the Seventeenth Century, 59.

At the level of practice, one can also note certain contradictions between guild laws and the shari{a. In their business practice, for instance, some guilds either restricted membership in their guild or tried to monopolize the production of a certain good. The guild rules setting up these restrictions were often confirmed by qadis at the election of the guild shaykhs. Yet, strictly speaking, some of the cases brought to the attention of the court show that these regulations were not necessarily in keeping with Islamic law. Scholars have sometimes taken for granted the fact that a guild could monopolize a certain economic activity or a certain craft. And yet, Amnon Cohen's study of the guilds of Jerusalem shows tensions arising from this multiplicity of laws. In 1717, a complaint was launched against the head of the tailor's guild because he stopped another individual from selling sewn garments. The head of the guild's argument was that only tailors were entitled to sell these garments, an argument that was in keeping with guild practice. Tailors, he said, were the ones who paid the impositions levied on the guild. The claimant then produced a fatwa from the mufti of Jerusalem to the effect that the head of the guild could not interfere in the free sale of products since this would constitute a monopoly (ihtikar) which was forbidden by law.[24] The qadi followed the mufti's advice and ruled against the guild head. In other cases, he adopted the point of view of guild members and forbade non-guild members from exercising the activity that a guild monopolized.

What is more surprising is to see that such tensions should exist not only with regard to guild practice but also in relation to a religious institution such as waqf which was strictly regulated by Islamic law and controlled by the qadi. Waqf is a religious institution with clear rules and provisions with regard to the capacity of the founder and the private character of the endowed property, and was closely supervised by the qadi. A person could only endow a property which he privately owned. Yet one finds a waqf that the tailors of Cairo founded collectively (1157/1744) made up of a few hundred copper plates apparently collectively owned by the guild members. This case raises an important question, notably the supposed absence of the "corporate" personality in Islamic law. If books of jurisprudence did not specifically mention this "corporate" personality, its presence can, nevertheless, be confirmed in practice.

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[23] {Abdul-Karim Rafeq, "Crafts Organizations," 496.

[24] Amnon Cohen, 143.

The guild members moreover seem to have appointed their own waqf supervisor who was responsible for the maintenance of the property, and for seeing that the revenues from their rent were distributed among the poor guild members.[25] Thus, it seems that guild members were making their own rules rather than following the provisions of waqf law, as elaborated in works of jurisprudence. In other words, this not only confirms Haim Gerber's argument that guild law was not ordained from above but was elaborated by the guilds themselves; it goes even further and suggests the possibility that guild law was put on the same par or even above Islamic law as elaborated in works of jurisprudence.[26] Certainly, examples such as these suggest that the matter, far from being definitive, is well-worth pursuing because of the light it sheds on guild-court relations.

A close examination of court records reveals another dimension of the relationship between the qadi and the guilds. It shows a role that guilds played in the urban context, one which has not been sufficiently stressed and which requires further exploration, both in terms of its relevance to our understanding of the way that courts functioned and of our understanding of the relation of guilds to the broader community. Many a time, the qadi who presided over court cases was confronted with disputes or allegations based on matters of a technical nature. We know, for instance, that financial issues related to waqf expenditures were closely supervised by the qadi in order to avoid embezzlement of funds. Thus, when a waqf building required repairs, and the qadi had to approve the funds for them to be undertaken, he counted on the expert advise given to him by those whose expertise could be relied on to provide accurate information. These experts were called ahl al-khibra.

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[25] Bab Ali court, Cairo, register 229, case 292, dated 1157/1744, 147–8.

[26] Haim Gerber, State, Society and Law, 113–114.

When the problem was related to buildings, construction, repairs or maintenance, the ahl al-khibra who were called upon were architects (muhandis). But the recource to experts in fact went far beyond the domain of waqf and in fact touched upon any matter where expert advice was required. If, for instance, the inheritance of a deceased person was auctioned, members of the book sellers' guild were present, if the legacy included books. Likewise, a physician was called upon in a case of suspected murder, and a midwife was called upon to inspect a rape victim. Often, the qadi called upon the head of the guild in question, occasionally upon a member of the guild.

These records illustrate one of the ways in which guild presence was felt, both in relation to the legal system which gave the expertise of craftsmen great weight and in relation to the urban community at large. They also help to put into perspective the degree of state involvement in guild matters.

Guilds in the urban setting

A further dimension in the study of guilds has been the role of these associations in the urban context. We know that guilds undertook such functions as regulating the craft, the provision of raw material, possibly the pricing of a commodity. We also know that guilds sometimes performed social functions for their members. The poor were helped, those who fell sick were compensated and, occasionally, the revenues of an endowment were used to support the less fortunate guild members. In recent years, scholars have shown a certain interest in the broader urban, social, and political functions that guilds played. This welfare system was sometimes put on paper, when a shaykh was appointed or if it consisted of an endowment, and sometimes not.

In addition to these functions guilds were occasionally called upon to undertake urban functions. Andre Raymond has explored the role guilds and other organizations, like the residential organizations, played in the urban context. In the absence of a governing body like the municipal administration of European cities, residential and guild organizations undertook some of the functions which, in European cities, would have been undertaken by the municipality. The fact that guilds were hierarchically organized and were geographically based in certain districts of the city, meaning, that those practicing the same profession tended to be located in close vicinity to each other, made it relatively easy to organize them. Guild members, for instance, could participate in such public functions as fire-fighting, or in providing security in their district.[27]

Guilds were the most important organization in the city. Because they had a structure and leadership, in other words the potential for organization, scholars have debated whether the various guilds did in fact have links with each other and use this potential or whether they were autonomous bodies, each guild being autonomous from other guilds. The real issue behind this question is whether the numerous guilds in any one town or city, each of which had its own organization and leadership, each its own rules, was able, in a time of crisis, for example, to get together under a single leadership, to speak in one voice and undertake common action. Most cities did not, in fact, have a structure holding all guilds together with a common leadership. There are some exceptions, in nineteenth century Damascus where a Shaykh al-Shuyukh was at the head of all guilds, and in seventeenth century Algiers, where in addition to the guild heads, two *shaykh al-balad* were a link between the guild heads and the *bey*.[28] Such structures being absent from most other cities, the question is whether or not each guild was a closed unit, with its own hierarchy and leadership, whether or not guilds had urban concerns that went beyond their own guild, and whether or not they could organize themselves collectively for political action. Put in other words, were the guilds static entities, whose existence continued uninfluenced by events around them, or did they form part of the historical process, participating in changes, influenced by and taking part in the major transformations of a given period; what were, at any particular moment in time, the prevailing conditions that allowed guilds to emerge. In other words, their voice in the political scene was itself the result of certain conditions.

For Robert Mantran, in his study of seventeenth century Istanbul, guilds were not political organizations; their role in the urban context was only economic and social, their links to government were through delegated professionals with the objective of regulating with government agents their activities and defending their material interests.[29]

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[27] Andre Raymond, "The Role of the Communities (Tawa'if) in the Administration of Cairo," 34.

[28] Houari Touati, "Les corporations de métiers a Algier a l'epoque ottomane," in *Melanges Professeur Robert Mantran* (Zaghouan, 1988).

[29] Robert Mantran, *Istanbul au siecle de Soliman le Magnifique*, 125.

A number of scholars have since then disputed these assertions. Both Andre Raymond and Robert Olson considered guilds in the context of class conflict in eighteenth century Cairo and Istanbul. In a couple of articles published in the *Journal of the Economic and Social History of the Orient*, Robert W. Olson explored the socio-economic and political conditions of the first half of the eighteenth century in Istanbul that gave rise to an active political role to guilds (*esnaf*). The opening years of the eighteenth century had brought about increased taxes, rising food prices and a scarcity of food supplies. Olson analyses the rebellion which took place in Istanbul in 1730 as a reaction to these conditions and especially against the campaign tax the government was imposing at the beginning of its wars against the Persians, in which *esnaf* or guilds played an important part. Ultimately, after a protracted period of disorder and the execution of the leaders of the rebellion, some of the demands that had been made were implemented. The hated vizir, Ibrahim Pasha, was executed and the Sultan was deposed, an indication of the power of the rebels.[30] Olson's article showed that groups on the margins of the power structure, like guilds, were able to make their voices heard in the higher political spheres. It mattered whose side they were on because their support could tip the balance to one side or the other. Thus, the guild organization had provided in terms of a structure, of leadership, and of a certain discipline within this structure, the impetus for political action, and a political force could emerge with leadership that could bring together the guilds into one organization, even if this was on a temporary basis.

Parallel conditions occurred in Cairo in the eighteenth century when control of the power structure and of economic resources fell from the representatives of the Ottoman state into the hands of the Mamluk Beys. In his study on urban networks, Andre Raymond suggests that the urban population was not devoid of means to resist the oppressive measures of the ruling class. A series of urban networks linked the professional guilds, religious brotherhoods, and local neighbourhoods, giving the urban population a structure. Through this structure, common action could be undertaken against the Mamluks. Raymond traced a direction connection between the first riots at the end of eighteenth century and the exactions of Ibrahim Bey, Murad Bey, and their Mamluks.[31]

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[30] Robert W. Olson, "The Esnaf and the Patrona Halil Rebellion of 1730," 340–341. See also his "Jews, Janissaries, Esnaf and the Revolt of 1740 in Istanbul."

Both scholars were writing about the eighteenth century. The question, thus, arises, if a more general transformation was taking place in different regions that resulted in these political acts of guilds, or if broader economic trends, more perceptible through the observation of guilds than through strictly economic phenomena, were taking place. If that is the case, research may be able to demonstrate similar trends in cities other than Cairo and Istanbul. Finally, was political action only an eighteenth century phenomena or did it have other manifestations in earlier periods. Prior to the takeover by the Mamluks, taxation on guild activities was much less abusive, allowing them a certain level of material comfort. One would want to know how their relationship to the ruling class was defined at such times, too.

Guilds and the economy

The importance of guilds for the urban economy is undisputed, since the major urban crafts and production were in the hands of guild members. Yet, there is a certain amount of scholarly debate as to whether or not the very nature of guild structure and guild organization was such that it could be an impediment to economic change or to the progress of capitalism. The fact that guilds did not encourage competition, since they set restrictions on obtaining raw materials and on prices, and that they could set rules of admission limiting rather than encouraging new membership has led scholars to some debate as to whether these restrictions were an impediment to change or to the expansion of an economic activity. Mehmet Genc in an article entitled, “Ottoman Industry in the Eighteenth Century,” argued that one of the characteristic features of the economy was its traditionalism. Instead of looking for new models, the economy was based on time-honoured traditions.[32] This article expressed a view that several other historians held. Some time earlier Robert Mantran had likewise argued in his study of seventeenth century Istanbul that the conservatism of the guilds was an obstacle to "progress."[33]

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[31] Andre Raymond, “Urban Networks and Popular Movements,” 223–224.
[32] Donald Quataert, “Ottoman Industry in the Eighteenth Century,” 60.

Yet, there is room for debate on this issue. In court cases, guilds often supported their demands by a reference to the old custom al-{awayid al-qadima. Precedent was a major argument they presented in case of a dispute. Certainly, the repeated use of "the old custom" reflected an attachment to tradition, to doing things the way they were always done. But could it not also be used as a method of legal justification since tradition, accepted practice, or {urf was recognized as a basis for a legal decision? Therefore it is important to analyse such cases in relation to a broader context.

As a matter of fact, a number of scholars have explored the relationship between guilds and the economy in such a way as to examine the process of change of the early modern period. This has entailed a reconsideration of a number of givens regarding the guilds themselves, both internally and in their relations to outsiders, notably to other guilds and to merchants. Among these givens are certain guild rules that could be an impediment to change. Guilds upheld the various restrictions on their activities and their members. Some guilds, for instance, limited the number of persons who could be admitted to the guild. Other guilds controlled the raw materials allowing only the guild head to distribute it. Others yet tried to ensure that non-guild members did not exercise their profession or produce the same product. Yet in reality, if we are to judge from the court cases that enumerate these regulations, it is clear that, first of all, no single rule applied to all the guilds, that each one of the guilds set up its own rules. Secondly, even when guild rules prescribed the conduct to be followed by members, writing down rules was one thing and carrying them out another. Thus, even though some guilds tried to limit membership, in reality, we do not dispose of the number of members of any guilds or of the way that they evolved. {Abdul Karim Rafeq does not believe that they remained stable. Guilds were subject to changes, to expansion or to disappearance, subject to such conditions as change in fashion. In Damascus, a noticeable increase in the importance of the tobacco guild emerged when Shaykh {Abdul-Ghani al-Nabulsi, Mufti of Damascus, issued a fatwa (legal opinion) declaring that smoking was permissible. In fact, there is much room for exploration about the ease with which a guild could expand by opening up its membership, or about the possibilities of being associated with more than one guild, and even the possibility of working independently of the guild system.

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[33] Robert Mantran, Istanbul dans le seconde moitie du XVII^{e} siecle, 388.

Finally, the fact that we can observe an expansion in certain products, like sugar and textiles in Cairo, for instance, important export items as of the seventeenth century, must be put in context with guild activities. Either the guild allowed an expansion of their membership to confront growing demand, or production was not fully monopolized by guilds. Andre Raymond thought that, in relation to Cairo, all the working population was associated with guilds. In his study of seventeenth century guilds in Bursa, Haim Gerber found that not all the working population belonged to guilds. Women, for instance, who worked at home, perhaps in a putting out system, did not belong to a guild, but were salaried workers who did not pay tax. Itinerant peddlers and merchants in international trade were also, according to Gerber, functioning outside of the guild system.[34]

There has, consequently, been a reconsideration of the neat picture of guilds each functioning according to its rules which they set up in order to protect the interests of the guild itself and of its members. This has given way to a more dynamic approach considering the way that stronger guilds attempted to dominate the weaker ones. In a recent article, {Abdul-Karim Rafeq explored the relationship of different guilds to each other showing that, in the seventeenth–eighteenth century, when guilds had become fully established in the local economy, those which were more influential began to challenge the traditional regulations that limited their resource and prevented the expansion of their businesses. These guilds began to attach themselves to smaller but related guilds through a relationship called yamak, or tabi{in, ensuring additional resources to the major guild by having the junior guild work and market its by-products and participate in tax payment. The guild of makers of headgear (tawaqiyya) for instance was yamak to the guild of tailors (khayyatin). The tailors supplied them with cloth and made them share in taxes. Through the yamak, the dependent guild could supply the major guild with raw material as in the case of slaughterers supplying butchers to whom they were *yamak*.[35]

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[34] Haim Gerber, "Guilds in Seventeenth-Century Anatolian Bursa," 63.

To understand guild history in a changing economic context has also entailed an exploration of relations with the large-scale merchants searching to procure themselves with the items they needed for their international trade and the producers of these items. There have been attempts to explore the putting out system, which was very current in many parts of Europe between the sixteenth and eighteenth centuries, and its consequences on guilds. We know that it was identified in some parts of the Ottoman Empire. It is difficult to estimate how widespread this system was whereby merchants, first in order to get around guild rules and second to get better wage levels, had the items they needed for trading produced not in the city where guilds were strong, but in rural areas where they were not and where cheaper wages were available. This practice would in theory weaken the guild by circumventing it.

Recent work is showing that in some parts of the Ottoman Empire, in the Bursa silk trade notably, merchants were involved in production, hiring labour either in the city or the countryside or making use of slaves. The degree of control of the merchant over production is not always clear. Much work is still needed in various urban centres before we know whether a craftsman would be employed by a merchant while still doing some work for himself independent of the merchant; if this control meant that the merchant actually owned the tools with which the craftsman worked, or if he advanced the capital only. The Bursa merchants owned the silk, that is the raw material, but not the tools which the artisan used.[36] The relationship of merchants to guild members had various shapes and forms, depending on the product in question. In early seventeenth century Cairo, for instance, when sugar became a major export commodity, merchants were investing in sugar production. They owned sugar presses in the city, hiring the labour necessary to make them function; they invested in the sugar pressing process in the countryside.[37] It is particularly important for our understanding of guilds to find out if such practices were commonplace elsewhere and if they involved certain activities, presumably those with high demand. Most important is the issue of the consequences that such practices may have had on guilds. In seventeenth century Cairo, the involvement of merchants in the production of sugar did not drive the guild of sugar producers out of the picture. Thus one needs to attempt to understand, if and how some kind of balance was achieved between merchants and producers. Here again, the tensions between them may have been resolved differently than in Bursa or elsewhere since local conditions would have an important bearing. A comparison with European guilds, strongly affected by merchant control over crafts and production, can be a fruitful exercise.

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[35] {Abdul-Karim Rafeq, "Making a Living or Making a Fortune in Ottoman Syria," 105–106.

[36] Suraiya Faroqhi, "Merchant Networks and Ottoman Craft Production (16th–17th centuries)," page 187 of the Isis edition.

[37] Nelly Hanna, *Making Big Money in 1600*, 83–84, 90–95.

The importance of exploring these dimensions of guild history is multiple. They provide us with an important aspect of economic history. On a broader perspective, such an exploration can help put into perspective the period as a whole. Changes in the relationship between guilds and between guilds and merchants, or between production and trade not only show a dynamic socio-economic process at work, but they also provide a possible background for later developments. In view of the scholarship that still considers conditions to have been unchanging from medieval to modern times, the exploration of these aspects, in spite of its difficulties, remains an important channel that requires much to be done.

The developments that guilds underwent in the course of the nineteenth century, their erosion as a result of the spread of European capitalism and their control by expanding nation states has inspired a number of studies developing along different lines. One major theme is to show that the process of the reduction in the role of guilds both in urban life and in economic life was far from being part of a simple one and that an interplay of numerous factors requires consideration in order to understand the changes of the nineteenth century.

Scholars agree that the flow of goods from an industrialized Europe, encouraged by new means of communication like the steamship, the establishment of railway systems, led to the impoverishment of guild members whose products could not compete with the price of a rapidly growing volume of imported goods. The result was an impoverishment of local craftsmen. Literary sources confirm this picture of impoverishment. In a study of popular proverbs current in the nineteenth century, Husam {Abdul-Dhahir found many references to those who were out of jobs and the skilled craftsman who was forced to undertake menial work rather than sit at home.[38] These increasingly difficult conditions created severe tensions between these producers and entrepreneurs and local middlemen who promoted the sale of European goods.[39] Thus, rather than consider guilds during this period crushed by adverse conditions, some scholars have preferred to place them in a different relationship with other groups, albeit one that was to their growing disadvantage.

Changing conditions also clearly show that the developments were neither the same everywhere nor, if they were parallel, did they follow the same chronology. In this domain, as well, a nuanced approach characterizes much of the scholarship. In Egypt, the industrialization policies of Muhammad {Ali (1805–1848) and his attempts to centralize major economic activities meant that, at a fairly early date, numerous craftsmen and artisans, especially those working on textiles, a major economic activity, were incorporated into state factories. Attempts to control economic activities led to a greater control of numerous aspects of guild life.[40] Yet, these policies did not immediately bring about the demise of the guild system. The documents related to one of Muhammad {Ali's newly created factories, the Khurunfish textile factory, showed that the factory in fact adopted both the guild system and other forms of labour organization like sub-contracting, day labour, and workers paid by the piece.[41]

Likewise, in relation to Anatolia, Donald Quataert shows that the picture in the first half of the nineteenth century is not a simple one. He considers the various modes of production of textiles, free labour in textiles spun in village homes, a putting out system run by merchants involving spinners in both towns and villages, and the continued work of guilds, in Istanbul, for instance. State factories, for instance, employed paid labour, often children.[42]

In conclusion, scholarship on guilds during the last two decades has developed along a number of lines. It is more broadly based; it has brought to light the diversity and complexity of the guild institution in its various forms. At the present time, with the wealth of studies that have come out, the issue of guilds needs to be thought out in terms of the larger context to understand where the guilds, as social and economic organizations, stood within the larger picture of change, expansion, crisis or retraction. It may, moreover, be time, now that numerous monographs about different urban centres exist, to write a larger history of guilds. This is not an easy task. It implies asking, if there was a single model of guilds, or if we have to discern more than one pattern or model and try to understand the reasons behind the differences; if, likewise, guilds had one or several chronologies. In other words, we can attempt to see guild history with some of the depth and complexity that it deserves.

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[38] Husam {Abdul-Dhahir, "Al-Amthal al-sha{biyya masdar li-dirasat al-a'{mal wal-hiraf al-Misriyya fil qarn al-tasi{-xashir," 219–220.

[39] {Abdul-Karim Rafeq, "Making a Living or Making a Fortune in Ottoman Syria," 107–108.

[40] {Abdul-Salam {Abdul-Rahim {Amir, Tawa'if al-Hiraf fi Misr, 63–74.

[41] Pascale Ghazaleh, "Manufacturing Myths: Al-Khurunfish, A Case Study," 129–133.

[42] Donald Quataert, "Ottoman Manufacturing in the Nineteenth Century," 94.

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THE WAQF IN THE CITY

Randi Deguilhem

What is a *waqf*?

Omnipresent in both inherited and founded cities within the Islamic world, *waqf* endowments literally touched every socio-economic sector within urban centres as well as, to a certain extent, within rural environments.[1] Often discussed, but rarely defined, a *waqf* endowment gives an individual or a group of individuals[2] the opportunity to finance a given beneficiary or a set of beneficiaries with a specific amount of proceeds accruing from revenues generated by properties owned by the endowment founder which he or she designates as *waqf* assets. Both the *waqf* properties and the beneficiaries are specifically defined within the *waqf* foundation charter according to formulaic criteria. The appointed revenues for the beneficiaries are accorded on a continuing basis by the *waqf* administrator, who is also appointed or designated by the endowment founder, and who distributes a fixed amount of the *waqf*'s property's revenues to the beneficiaries on a regular basis, usually on an annual rhythm.[3]

When the endower chooses beneficiaries associated with religious, societal or charitable objectives such as a mosque, a religious school, a health clinic, a public thoroughfare (bridge, steps), a drinking fountain, irrigation works, the care of orphans or widows, etc., this type of foundation is referred to as *waqf khayrî* (translated as religious, charitable or public waqf). Endowments created with the purpose of supporting specified individuals, usually members of the founder's family but also other persons, including the endower's manumitted slaves or those of his or her family, gives rise to a waqf dhurrî or waqf ahlî (private or family waqf). In a third variation, when beneficiaries of an endowment are simultaneously a combination of both types of recipients, i.e. where explicit portions of waqf revenues are jointly distributed to specifically designated individuals as well as beneficiaries in the public, religious or charitable sector of society, this structure whose recipients fall within both public and private domains results in a waqf mushtarak (shared or mixed waqf).

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[1] See the *Encyclopaedia of Islam* articles (new version) on *waqf* in Islamic lands by Rudolph Peters, David S. Powers, Aharon Layish, Randi Deguilhem, Ann K. S. Lambton, Robert D. McChesney, M. B. Hooker, and J. O. Hunwick, published in 2000. The articles include studies on *waqf* in Iran, the Ottoman Empire, Southeast Asia, Muslim India, and sub-Saharan Africa.

[2] In certain cases, several individuals acted together to establish a *waqf* such as, for example, with guild *waqf*s.

[3] Randi Deguilhem, "Presentation," in Deguilhem, ed., *Le waqf dans l'espace islamique: Outil de pouvoir socio-économique* (Damascus: Institut Français d'Etudes Arabes de Damas [IFEAD], 1995), 15–26.

It is, therefore, the type of beneficiary which defines the nature of the foundation. In all cases, however, the final beneficiary of every endowment is of a public, charitable or religious disposition. In the situation of waqf dhurrî where foundation revenues are apportioned to individual persons as the first unit of beneficiaries in an endowment, a shift inevitably occurs afterwards in the latter stages in the life of the waqf away from the payment of revenues to the individual beneficiaries towards religious or public ones which had also been previously designated by the endowment founder in the original foundation charter. This shift in the nature of the beneficiaries occurs when the persons named as the recipients for the waqf revenues pass away as well as their descendants in the case where they were also mentioned as future beneficiaries by the endower at the moment of the establishment of the foundation. At that point, the revenues which had formerly gone to the individuals as waqf beneficiaries are thereafter distributed to the designated public or religious beneficiary so named by the endower in the foundation charter. In this way, the final beneficiary of the endowment effectively renders the former waqf dhurrî or waqf ahlî into a waqf khayrî.

Information about the types of beneficiaries is clearly stated in the foundation charter, but this document neither refers to the reasons nor to the context behind the choice of beneficiaries. This is precisely where other sources show their value such as historical chronicles written contemporaneously with particular waqf foundation documents. Since historical chronicles usually record human and societal activities in a specific locale at a particular point in time, they may reveal political, social and religious dynamics concerning information which is only otherwise sketchily indicated in the waqf foundation document relating to, for example, individual or family associations with a particular mosque, religious school, madhhab, health clinic (bîmâristân),[4] etc., in the case of a waqf khayrî. Chronicles may also mention personal links between individuals, thereby elucidating reasons why waqf endowers chose certain persons as the beneficiaries of their foundations in the situation of a waqf dhurrî or mushtarak.

In Ottoman times, waqf documents (hujja) which were written after the original founding of an endowment and which were registered with the Ottoman tribunal (mahâkim shar{iyya) or bureaucratic system (awâmir sultâniyya) and, therefore accessible, to present-day researchers, constitute another important source of information about specific waqfs. Whereas the waqf foundation charter (waqfiyya, kitâb al-waqf) gives important data about original choices made by an endower pertaining to the internal infrastructure of his or her waqf (choice of waqf assets, waqf beneficiaries, and waqf administrators), the hujjas written after the original foundation reveals the evolution of that particular endowment since these documents recorded changes in the life-cycle of a specific waqf. For example, the hujjas contain information about endowment administrators who went to the courts to register, for instance, new properties which were added to the original assets of an endowment, the removal of old ones which presumably no longer produced adequate revenues for the waqf and which were replaced with more profitable ones through the process of istibdâl[5] or mu{âwada,[6] changes in endowment beneficiaries when, for example, an individual beneficiary died at which point his or her portion of the revenues then would pass on to the next beneficiary in line or when a madrasa, for instance, no longer functioned and its apportioned revenues would then go to the next beneficiary designated by the waqf endower, etc.

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[4] Medical services in traditional health clinics (bîmâristâns) depended nearly exclusively on endowment revenues. The administrator of waqf properties belonging to a clinic has been recently compared with a modern hospital's director especially in his financial capacities: Salîm al-Hasaniyya, Min al-bîmâristân ilâ al-mustashfâ. Dirâsâ tahlîliyya muqârana li'l-nizâm al-idârî [in Arabic: From the Bimaristan to the Hospital: A Comparative Study in the Administrative System] (Damascus: Ministry of Culture, 1998), 25.

[5] See, for example, Muhammad Qadrî Pâshâ, Qânûn al-{adl wa'l-insâf li'al-qudâx{alâ mushkilât al-awqâf (Cairo, 1928), 58–61, and Muhammad Abû Zahra, Muhâdarât fî awqâf (Damascus, 1959), 172–173.

[6] Tal Shuval, "La pratique de la mu{âwada (échange de biens habûs contre propriété privée) à Alger au XVIII^{e} siècle," Revue des mondes musulmans et de la Méditerranée (REMMM) 79–80 (1999), 55–72.

In the City

The endowments are simultaneously a societal and a personal statement, reflecting characteristics of both, permeating the public and private spheres in cities in the Islamic world since the earliest centuries of Islam. From the highest and most powerful echelons of the social order to the most modest levels of society, waqf endowments concurrently affected the daily lives of both ordinary and extraordinary persons living and working in cities. Leading personalities created large, influential, and long-lasting foundations by endowing valuable built real estate to their waqfs in addition to agricultural properties situated in urban or peri-urban areas or by the endowment of entire villages to their foundations in addition to sums of money owned by a waqf which, during Ottoman times, were lent for profit for the foundation. On a more modest level, persons of more humble status created small endowments, often with only one simple room or a tiny vegetable patch which they endowed as the asset by which they established their foundations. The ubiquitous presence of the endowments and the intertwined waqf networks within urban centres took on another role, however, at the close of the colonial period towards the middle of the twentieth century when, in many predominantly Islamic countries (keeping in mind that waqf were also used by Christian and Jewish communities in the Middle East, North Africa, and Mesopotamia), foundation assets were nationalized with their properties being incorporated within state administrations; in Republican Turkey, this occurred of course at the end of the Ottoman era.[7]

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[7] As an example of waqf in post-colonial Syria: Randi Deguilhem, "Le waqf en Syrie indépendante (1946–1990)," in *Le waqf dans le monde musulman contemporain (19^{e}–20^{e} siècles)*, ed. Faruk Bilici (Istanbul: Institut Français d'Etudes Anatoliennes [IFEA], 1994), 123–144; ibid., "On the Nature of Waqf: Pious Foundations in Contemporary Syria: A Break in the Tradition," in *Les fondations pieuses (waqf) en Méditerranée: enjeux de société, enjeux de pouvoir*, ed. R. Deguilhem and A.-H. Hénia (Kuwait: Fondation Publique des Awqaf du Kuwait, 2004), 395–430. Also see the forthcoming collective publication based on the symposium entitled, "Breaking with the Past: New Directions for Pious Waqf Foundations in Post-Colonial Middle-Eastern Societies," organized by R. Deguilhem (Damascus: French Institute of the Near East (IFPO), 24–26 September 2004), jointly sponsored by the Islamic Legal Studies Program, Harvard Law School, and IFPO.

Prior to the period of waqf nationalizations and especially from Ayyubid[8] and Mamluk[9] times and then in the Ottoman periods, the endowments, both large and small, played a fundamental role in the development, articulation, and continuity of infrastructural elements within urban centres in the Islamic world, particularly regarding the construction and/or financial support of mosques, religious schools, hospitals, clinics, public drinking fountains, the care of the poor and underprivileged, etc. In order to provide for the finance of these infrastructural elements, income for the endowments were mostly generated from the rent of newly constructed or existing built and agricultural properties.

From the outset, it is important to underline the fact that waqf foundations were not, by any means, solely restricted to the Islamic world, they were also widely used by members of the Christian and Jewish communities living in Islamic lands. Christians and Jews created waqf that they dedicated to religious and public objectives within their own communities as well as endowments that had clear familial goals despite the ban during Ottoman times on creating this type of waqf by *dhimmîs*. Research has shown that this interdiction was circumvented in various ways. For instance, the Maronite Mohasseb family created *mushtarak* waqf foundations for the Mar Chalitta Mouqbès convent in early seventeenth-century Mount Lebanon which was mostly controlled by family members for around four centuries; about a century later, the Maronite Khâzins also created endowments for similar reasons in the same general vicinity for the Sayyidat Bkirkî convent.[10] Individuals from

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[8] Joan Elizabeth Gilbert, *The Ulama of Medieval Damascus and the International World of Islamic Scholarship*, Ph.D. dissertation (Berkeley: University of California, 1977); Abd al-Razzaq Moaz, *Les madrasas de Damas et d'al-Salihiyya depuis la fin du V/XI^e siècle jusqu'au milieu du VII/XIII^e siècle. Textes historiques et études architecturales*, doctoral dissertation (Aix-Marseille I: University of Provence, 1990).

[9] Examples from the Mamluk and especially the Ottoman period are treated further along in the present contribution.

[10] Even though *dhimmîs* were theoretically banned from establishing family waqf during Ottoman times, research shows that this was eluded in various ways: Sabine Saliba, "Une famille, un couvent: Deir Mar Chalitta Mouqbès 1615–1878," *Chronos* 3 (2000): 93–137, who studies the waqfs of the Mohasseb family in relation to the Mar Chalitta convent. For a similar phenomenon in relation to the Khâzin family: Richard van Leeuwen, "The Maronite Waqf of Dayr Sayyidat Bkirkî in Mount Lebanon during the 18th Century," in Deguilhem 1995, 259–275; Zouhair Ghazzal, "Lecture d'un waqf maronite du mont Liban au XIX^e siècle," in Deguilhem 1995, 101–120. Both van Leeuwen and Ghazzal analyzed the waqfs of the Khâzin family and their creation and familial control, partly through the use of waqf, over the Dayr Sayyidat Bkirkî convent. For a detailed study of properties belonging to Christian waqf in Mount

Jewish families likewise established waqf foundations for both community and family objectives during the Ottoman period in Palestine.[11]

A Glimpse at Different Types and Uses of Waqf in the City

Waqf increasingly influenced and shaped numerous infrastructural aspects in cities in the Islamic world as well as in the daily lives of individuals living in the cities from the early Islamic centuries up through the medieval period to modern and contemporary times. Along with the expansion of Islam in newly-founded settlements and cities or its advent within already-existing inherited urban centres, the endowments played a major role in determining the physical configuration of cities due to the addition of Islamic edifices and complexes in the urban landscape or the adaptation of existing ones in the form of mosques, madrasas, dârs al-hadîth, dârs al-qurân, zâwiyas, ribâts, bîmâristâns, soup kitchens, etc., the great majority of which were financed by waqf revenues. This income accrued to the endowments mostly by the rent of commercial buildings which belonged to the endowments such as boutiques, bakeries, artisanal workshops, caravanserai, coffeehouses, bathhouses, etc., or plots of agricultural land such as orchards, vegetable gardens, etc. Since the foundations touched nearly every level of life within the different socio-economic strata of society, from individuals who established the endowments to those who transacted rent contracts on waqf-endowed properties to those persons who actually worked in the buildings or tilled the plots of land owned by the foundations, the waqf also thereby contributed towards shaping the economic, religious, political, and social landscape of urban areas in the Islamic world.

By the Fatimid years in the tenth and eleventh centuries and, certainly, by Ayyubid times in the twelfth and thirteenth centuries, large numbers of waqf endowments had been established in the various cities in the Islamic world for both public and private purposes. For example, on the government level, endowments were used in Ayyubid Damascus

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Lebanon, see Joseph Abou Nohra, Contribution à l'étude du role des monastères dans l'histoire rurale du Liban: Recherches sur les archives du couvent St. Jean de Kinshara 1710–1960, thèse d'état, 2 vols. (University of Strasbourg, 1983).

[11] Ron Shaham, "Christian and Jewish Waqf in Palestine during the Late Ottoman Period," Bulletin of the School of Oriental and Asian Studies (BSOAS) 54, no. 3 (1991): 460–472.

as a way to create and reinforce religious and, thereby, political bases for new ruling elite groups in the city whose members created waqf foundations with the purpose of subsidizing the building and maintenance of Sunni mosques and madrasas as a societal bulwark against the influence of their predecessors, the Shi{ite Fatimids, as well as a means of anchoring their power within the Islamic community. Creating these religious/educational institutions and the salaried positions in them (imam, *khatîb*, *muhaddith*, etc.), which were likewise financed by the endowments, was also a way to build local support networks and power bases among religious scholars working in Damascus, many of whom originated from outside of the city, thus contributing to the cosmopolitan aspect of the city.[12] Moreover, one should say that waqfs were also used by individual persons as a method of establishing and sponsoring influential teaching posts in specific mosques, madrasas, *dârs al-hadîth* and *dârs al-qurxân*.[13] In other words, waqf foundations not only provided the means to physically intervene in the configuration of urban spaces by building new religious complexes and the commercial infrastructure which supported these edifices, but it was also the principal way to alter and reorient, to a certain extent, the religious and social fabric of cities in the Islamic world.

In the thirteenth and fourteenth-century Mamluk domains and then, subsequently, in the Ottoman world, waqf practices continued to diversify and multiply as they adapted to societal and personal needs. Along with the expansion of Islam in newly-founded settlements and cities such as Fustat, an Islamic city founded in the mid-seventh century on the eastern bank of the Nile,[14] or within inherited cities such as in Istanbul,[15] the waqf institution was often used as a means of subsidizing the building of infrastructural religious and cultural elements in the form of mosques, madrasas, khânqahs, zâwiyas as well as hospitals and health centres such as bîmâristâns. As noted above, commercial edifices such as qaysariyyas (caravanserai), khâns, bedestans (long enclosed buildings for costly merchandise),[16] boutiques, coffeehouses, and other buildings were constructed or existing ones were used in order to generate revenue to support these Islamic components in the city.

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[12] Gilbert 1977; Louis Pouzet, *Damas au VII^e/XII^e s: Vie et structures religieuses dans une métropole islamique* (Beirut: Dar el-Machreq, 1991); Moaz 1990; Michael Chamberlain, *Knowledge and Social Practice in Medieval Islam, 1190–1350* (Cambridge: Cambridge University Press, 1994).

[13] For details about waqf supporting educational institutions in the Mamluk world: Ulrich Haarmann, "Mamluk Endowment Deeds as a Source for the History of Education in Late Medieval Egypt," *al-Abhath* 28 (1980): 31–47.

[14] For details concerning the urban growth of a section of Cairo: *Le Khan al-Khalili: Un centre commercial et artisanal au Caire du XIII^e au XX^e siècle*, dir. Sylvie Denoix, Jean-Charles Depaule, Michel Tuchscherer (Cairo: Institut Français d'Archéologie Orientale, 1999); Sylvie Denoix, *Fustât-Misr d'après Ibn Duqmâq et Maqrîzî* (IFAO, 1992).

[15] Faruk Bilici, "Support économique de l'islam orthodoxe: le wakf de {Atâ-llah Efendi (XVI^e–XX^e siècles)," *Anatolia Moderna/Yeni Anadolu* X (Istanbul and Paris: Institut Français d'Etudes Anatoliennes (IFEA), 2004), 1–51.

The Islamization process of the infrastructural sector also occurred in some cities of al-Andalus such as in Grenada with the construction of a madrasa in that city (the only one in Muslim Spain) in addition to the building of mosques, caravanserai, etc., in other urban centres during the eight Umayyad centuries in the Iberian peninsula from the eighth to the end of the fifteenth century.[17] During these centuries, several churches had been transformed into mosques by way of habous.[18] Upon the expulsion of the Muslim community in the late fifteenth century, the mosques were then retransformed into churches.

This is not to say, however, that the development of the endowments followed a linear progression throughout the fourteen centuries or more of their existence. Rather, the extent of endowment usages along with their legal framework and practices (ahkâm al-awqâf, relevant fatwâs, qânûns, etc.) varied significantly throughout the centuries in response to the fluctuating needs of society, taking on different and distinct forms around the Islamic world, often assimilating local customs which frequently preceded the advent of Islam or were contemporaneous with it. Practices related to waqf endowments also varied in relation to the madhhabs followed by different population groups within specific areas. In other words, despite its name which implies a cessation of activity (in Arabic, the word, "waqf," literally means "to stop"; the North African equivalent, "habs" means "to confine, withhold"), the pious endowments were far from the mainmorte "immobilized" properties described by nineteenth-century European colonial administrators on post in North Africa. Several of these Europeans living in North Africa[19] did, however, also describe the legal and customary mechanisms used by waqf endowment administrators at that time who, like their counterparts in other areas of the Islamic world, regularly rented and exchanged waqf assets in local real-estate markets as well as selling, buying, and mortgaging them—despite legal restrictions on this activity. Theoretically, the intention behind this economic and commercial activity was to ensure a profit for the waqf, but corruption also played its role here as some administrators eliminated or confiscated lucrative waqf assets for their own benefit, assets which otherwise would have brought in hefty gains for the endowments.[20]

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[16] Halil Inalcik, "The hub of the city: The Bedestan of Istanbul," International Journal of Turkish Studies 1 (1980): 1–17.

[17] Ana Maria Carballeira Debasa, Legados Pios y Fundaciones Familiares en al-Andalus (Siglos IV/X–VI/XII) (Madrid: Consejo Superior de Investigaciones Cientifica (CSIC), 2002).

[18] Some studies show that the historical origins of habs, widely referred to as habous, differed from waqf as well as some of its subsequent development. Nonetheless, waqf and habs shared many characteristics: Jean-Claude Garcin, "Le waqf est-il la transmission d'un patrimoine?" in La transmission du patrimoine. Byzance et l'aire méditerranéenne. Travaux et mémoires du Centre de Recherche d'Historie et Civilisation de Byzance, ed. J. Beaucamp and G. Dagron (Paris, 1998), 101–109.

Among abundant examples of founded cities where waqf played a leading role in shaping the Islamic character of the urban infrastructure, the following may be cited: Fustat, an Islamic city founded in 643 A.D. on the eastern bank of the Nile by {Amr b. al-{Âs who led the conquering Islamic armies into Egypt;[21] Cairo (al-Qâhira) which was founded several kilometres away from Fustat a few centuries later in 970 A.D. by the Fatimid caliph al-Mu{izz[22] and Baghdad which, at the beginning of Abbasid rule in the middle of the eighth century A.D. was established by the caliph al-Mansûr, as the City of Peace, Madînat al-Salâm. Although these cities were founded by Islamic rulers as urban centres of the Muslim world, they had, in fact, been inhabited in former times but, at the moment of their establishment as Islamic cities, good portions of many of them were in ruins. At the start, the major characteristic which qualified these cities as Islamic was the construction of the Friday mosque (*jâmi{*) subsidized by the revenue of waqf properties, followed by the building of other edifices associated with Islamic cities mentioned above.

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[19] Such as, for example, Louis Milliot, *Démembrements du Habous, Manfa{a, Gza, Guelsa, Zina et Istighraq* (Paris, 1918).

[20] It was very common to find waqf properties on the real-estate market via specific contracts. Analyses of this include Randi Deguilhem, "The Loan of Mursad on Waqf Properties" in *A Way Prepared: Essays on Islamic Culture in Honor of Richard Bayly Winder*, ed. F. Kazemi and R. D. McChesney (New York: NYU Press, 1988), 68–79; Zouhair Ghazzal, *L'Economie politique de Damas durant le XIX^e siècle* (Damascus: IFEAD, 1993), 101–117; Shuval 1999, 55–72.

[21] As shown by Nelly Hanna, *An Urban History of Bûlâq in the Mamluk and Ottoman Periods* (Cairo: Institut Français d'Archéologie Orientale (IFAO), 1983).

[22] For details concerning the urban growth of a section of Cairo partly due to waqf practices: Sylvie Denoix, Jean-Charles Depaule, Michel Tuchscherer, dirs., *Le Khan al-Khalili: un centre commercial et artisanal au Caire du XIII^e au XX^e siècle* (Cairo: Institut Français d'Archéologie Orientale, 1999).

Inherited cities in the Islamic world also contained the same structures that were largely subsidized by waqf endowments which identified them as being inhabited by Muslim populations. Some striking examples of this include the city of Constantinople, former capital of Christian Byzantium, invaded by the Ottomans in 1453 whereupon the city immediately took on typical urban characteristics of the Islamic city, i.e. a Friday mosque and other Islamic features financed by waqf endowments.[23] Prominent Muslim personalities also used the institution of waqf in the city to shape and influence the religious landscape of Ottoman Istanbul.[24]

Analogies are found in other inherited cities of the Ottoman Empire. Aleppo is but one example where the endowments were utilized to create Islamic space where, in the middle of the seventeenth century, the governor of the city, Ipshir pasha, created a large waqf with revenue-producing commercial properties in the form of a khân, a qaysariyya, a bread furnace, a dye workshop, a coffeehouse, and boutiques situated in the Christian quarter of the city in Judayda, but whose revenues went towards Islamic religious sites situated in other quarters in Aleppo.[25] The inherited cities of Cairo[26] and Mosul[27] in Ottoman times constitute other examples where endowment assets and beneficiaries span inter-religious neighbourhoods. It should be strongly underlined that such non-denominational intermingling of commercial and economic activities in Islamic cities was often the norm, with members of different religions frequently renting or using property endowed for a waqf by an individual of another religious community.

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[23] Suraiya Faroqhi, "A Map of Anatolian Friday Mosques (1520–1535)," Osmanli Arastimarli 4 (1984): 161–173; Halil Inalcik, "Istanbul: An Islamic City," Journal of Islamic Studies 1 (1990): 1–23.

[24] For an example of this over several centuries, see Faruk Bilici, "Support économique de l'islam orthodoxe: le wakf de {Atâ-llah Efendi (XVI^{e}–XX^{e} siècles)," Anatolia Moderna/Yeni Anadolu X (Istanbul and Paris: Institut Français d'Etudes Anatoliennes (IFEA), 2004), 1–51.

[25] Jean-Claude David with Bruno Chauffert-Yvart, Le waqf d'Ipsir Pa'a à Alep (1063/1653): Etude d'urbanisme historique (Damascus: IFEAD, 1982); for an overall view of waqf in Ottoman Aleppo and Cairo: André Raymond, "Les grands waqfs et l'organisation de l'espace urbain à Alep et au Caire à l'époque ottomane (XVI^{e}–XVIII^{e} siècles)," Bulletin d'Etudes Orientales (BEO) 31 (1980): 113–128.

[26] André Raymond, Artisans et commerçants au Caire au XVIII^{e} siècle, 2 vols. (Damascus: IFEAD, 1973; repr. 2 vols., Damascus: IFEAD and Cairo: IFAO, 1999); Nelly Hanna, Construction Work in Ottoman Cairo (1517–1798), 2 vols. (Cairo: IFAO, 1984); Nelly Hanna, Habiter au Caire aux XVII^{e} et XVIII^{e} siècles, 2 vols. (Cairo: IFAO, 1991).

[27] Dina Rizk Khoury, State and Provincial Society in the Ottoman Empire: Mosul, 1540–1834 (Cambridge: Cambridge University Press, 1997).

Going east, one may cite the commercially and politically important Central Asian city of Balkh (Bactria) which housed the Islamic {Alid shrine financed by numerous endowments from the late fifteenth century to the present time.[28] The importance of waqf here though seems largely contingent upon the fact that the {Alid shrine was the focus of endowment revenues rather than part of the urban infrastructure of Balkh itself. Usages and, sometimes, non-usages of endowments as a technique for developing and sustaining urban services may become clearer by looking at the practice of waqf in other Central Asian cities. For example, a recent interview in June 2004 with the deputy imam of the mosque in the Western Kazakhstan city of Uralsk, located not far from the current-day south-eastern border with Russia, revealed that the endowment of urban properties as a revenue-generating asset for creating or maintaining religious, charitable or public infrastructure was a largely undeveloped practice in recent times in the Uralsk area and, according to him, in Kazakhstan itself. On the other hand, the deputy imam of the Uralsk mosque emphasized that tracts of agricultural land were habitually endowed for waqf, but the extent of these endowed assets as well as the destined beneficiaries of their revenues remain unclear for the moment for lack of documented studies.[29] This practice of using extensive agricultural properties as revenue-generating assets for waqf endowments instead of endowing built real-estate is also traditionally the situation in Iran.[30]

Moving towards the Indian peninsula, one sees that charitable, public and religious institutions in urban centres with a large Muslim population as well some agricultural areas in India were extensively organized around waqf revenues; this was also the case for Muslim family foundations in India.[31] Since these endowments possessed large amounts of urban property and important tracts of land in peri-urban areas, but also in rural regions, the British colonial administration exerted huge efforts in the nineteenth and first half of the twentieth century in the attempt to bring these assets under state control. In this manner, the British followed a similar pattern of behaviour in Palestine as did the French colonial powers in Syria and Lebanon concerning efforts to control wealthy waqf properties and their revenues.[32] Continuing further eastwards, one sees similar conditions with the use of waqf endowments for charitable and religious objectives as well as for private familial use by Muslims in urban areas in Malaysia and Singapore.[33]

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[28] Robert D. McChesney, *Waqf in Central Asia: Four Hundred Years in the History of a Muslim Shrine, 1480–1889* (Princeton: Princeton University Press, 1991).

[29] Interview (Uralsk, Kazakhstan, 28 June 2004), Randi Deguilhem with the deputy imam of the Uralsk Mosque who based his answers concerning current and past waqf practices in Kazakhstan on his own observations as well as on surveys which had been carried out under early Soviet rule in the region. Also see the 2003 issue of *The Religious Board of Kazakhstani Muslims*, Almaty, Kazakhstan, for information on Islamic practices in Kazakhstan.

[30] Ann K. S. Lambton, "Wakf in Persia," in *Encyclopaedia of Islam* (2000).

[31] Gregory C. Kozlowski, *Muslim Endowments and Society in British India* (Cambridge: Cambridge University Press, 1985); Kozlowski, "The changing political and social

Waqf Practices and the Organization of Urban Space: The Aleppo Example[34]

A closer look at several large endowments established by influential personalities in cities within the Islamic world brings to light the huge impact that waqf foundations played in the urban infrastructure.

The northern Syrian city of Aleppo provides a notable example of the utilization of waqf for fashioning and changing a city landscape and for leaving an indelible mark upon the urbanized area. Several decades after the Ottoman conquest of the city in 1517, the surface area of Aleppo enlarged considerably from its Mamluk version with the

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contexts of Muslim endowments: The case of contemporary India," in *Le waqf dans l'espace islamique: Outil de pouvoir socio-politique*, ed. Randi Deguilhem (Damascus: IFEAD, 1995), 277–291.

[32] Randi Deguilhem-Schoem, *History of Waqf and Case Studies from Damascus in Late Ottoman and French Mandatory Times*, Ph.D. dissertation (New York University, 1986), 117–143.

[33] Murat Cizakça, *A History of Philanthropic Foundations: The Islamic World From the Seventh Century to the Present* (Istanbul: Bogazici University Press, 2000), 210–234.

[34] Although only Aleppo is considered in the present article, studies have been published for other Syrian cities, especially Damascus: for example, Jean-Paul Pascual, *Damas à la fin du XVI^e siècle d'après trois actes de waqf ottomans* (Damascus: IFEAD, 1983); James Reilly, "Rural Waqfs of Ottoman Damascus: Rights of Ownership, Possession, and Tenancy," *Acta Orientalia* 51 (1990): 27–46; Randi Deguilhem, "Waqf documents: a multi-purpose historical source. The case of Damascus in the nineteenth century," in *Les villes dans l'Empire ottoman: Activités et sociétés*, ed. Daniel Panzac (Paris: Éditions du CNRS, 1991), 67–95, 191–203; Astrid Meier, "Waqf Only in Name, Not in Essence. Early Tanzîmât Waqf Reforms in the Province of Damascus," in *The Empire in the City: Arab Provincial Capitals in the Late Ottoman Empire*, ed. Jens Hanssen, Thomas Philipp, and Stefan Weber (Beirut: Orient-Institut der DMG, 2002), 201–218.

establishment of a number of large endowments.[35] Khusrû pasha, one of the first Ottoman governors in Aleppo, permanently transformed the city space with the construction in 1544 of his mosque, al-Khusrawiyya, to the southeast of the citadel and the Mamluk-era city. The Khusrawiyya was supported by the construction of a large series of commercial buildings established over an area of four to five hectares, including a qaysariyya of fifty shops, a khân containing ninety-five shops, a suq, and other boutiques erected around the mosque or in its vicinity and whose rent went towards financing the Khusrawiyya. These constructions, both the mosque and the commercial infrastructure which supported it, fundamentally changed the face of the city, bringing the urban surface well outside its former Mamluk limits.

This building synergy continued with the next group of Ottoman governors and notables in Aleppo whose waqfs also greatly contributed towards profoundly modifying Aleppo's city landscape with the construction of religious and commercial complexes on which had previously been nearly empty land in late Mamluk times. Just a few years following the construction of the Khusrawiyya and its accompanying commercial infrastructure, Muhammad pasha Dûqakînzâda, an influential personage related to the Ottoman sultan's family, built an important group of commercial buildings whose purpose was to support the {Adliyya mosque, established in 1555, located to the west of the Khusrawiyya mosque. The buildings constructed for the {Adliyya mosque were located on an area of about three hectares around the west, north and east of the mosque and included four suqs of 157 boutiques.

Some twenty years later, Muhammad pasha Ibrâhîm Khânzâda kept up this trend of large waqf construction to the west and south of the citadel with the establishment of his endowment in 1574. Although most of the enormous commercial revenue-generating infrastructure for his waqf was situated in Aleppo, likewise outside of the former Mamluk precincts of the city contributing thereby to the enlargement and transformation of the urbanized area, including, in particular, the imposing and beautiful khân al-Jumruk with a total of 344 boutiques, part of the waqf's properties was also located in other Ottoman cities. This once again shows the intertwined nature and large networks of waqf assets dispersed over large areas where income for a waqf is partly generated in regions far away from the waqf's beneficiary.

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[35] The following is based on Raymond 1980, 115–117.

To complete the picture of the large sixteenth-century endowments founded in Aleppo which profoundly changed the face of the city, Bahrâm pasha, governor of Aleppo in 1580, also left his mark within the infrastructure of Aleppo via the construction of his mosque, the Bahrâmiyya, also located to the west of the citadel, erected within the framework of his waqf founded in 1583. The construction of the Bahrâmiyya mosque and its activities were financially supported by two suqs containing twenty-nine boutiques and a qaysariyya of thirty-five rooms located to the north of this mosque. Other properties situated elsewhere in the city, such as a bathhouse (hammâm) in the largely Christian Judayda quarter, also contributed to the finance of the waqf.[36]

These remarks about the large waqfs established in early Ottoman Aleppo would be incomplete without moving into the next century to take a look at Ipshîr Mustafâ pasha's waqf whose constructions also transformed the city's landscape.[37] Most of the surface area towards the west and south of the citadel having been urbanized during the preceding century, largely as a result of the waqfs mentioned above, Ipshîr pasha, governor of Damascus in 1649 and then of Aleppo in 1651, decided to locate the majority of the commercial infrastructure of his endowment, founded in 1654, in the eastern part of a newly-developed section of the city, that of Judayda (the name itself refers to the recentness of the quarter), mostly populated by Christians. His mosque was equally located in this quarter, in the southeast part of Judayda, once again pointing to the fact that structures and activities of different confessional communities routinely rubbed shoulders with one another in cities in the Islamic world. Although the mosque itself was quite modest, it was supported by an important commercial infrastructure which included the suq al-Nawwâl containing a qaysariyya which bordered the eastern side of the mosque as well as the khân al-{Arsa (for the selling of grain) located to the north of the mosque. Two qaysariyyas, a boutique, and an oven were situated to the west of the mosque in addition to an enormous coffeehouse, described as having fourteen windows and seven marble columns, to the south. Finally, there was also a very large qaysariyya located adjacent to the mosque; this qaysariyya contained two stories with twenty-seven rooms, sixteen boutiques, and a workshop for the manufacture of silk, velvet, and satin cloth. All in all, a very large commercial infrastructure which played an enormous economic role in the Christian quarter of Judayda in Aleppo.

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[36] André Raymond, who has studied the urban impact of this waqf in detail as well as other large sixteenth-century Ottoman endowments in Aleppo, as mostly based on a local chronicler's account, that of Nahr by al-Ghazzi who had access to the waqfiyyas while writing his Nahr, has localized these enormous changes on the map of Aleppo: Raymond 1980, 115–117 and the maps at the end of his article.

[37] Raymond 1980, 117–120; David 1982.

Having said the above, it is nonetheless important to realize that most waqfs entailed much more modest endowments. It is rather these smaller waqfs which were established with assets of only a few small properties and with lower profile objectives in society than the large waqfs which reveal the routine characteristic of the institution in ordinary people's lives and the use of the institution by small property owners as a way of participating and intervening in everyday operations of society. Waqf was also a means for providing financial security for commonplace people's progeny through the establishment of family waqf as referred to in the earlier and subsequent sections of the present contribution.

Waqf in the City: A Personal or a Societal Statement?

At first glance, one would assume that the creation of an endowment and the choices made for establishing it are the ultimate essence of individual expression and one which outlives the endower since a waqf continues to function after the founder's demise, bestowing a sort of immortality both upon the endowment itself as well as upon its founder. Personal initiative is undoubtedly exercised by the founder of a waqf at the moment of establishing the endowment, irrespective of whether the endower is a man or a woman since the waqf is a gender-blind institution,[38] but closer examination of the choices taken by the endower regarding the assets, the beneficiaries, and the administrators of the foundation almost always reflect the founder's familial socio-economic position, consciously or unconsciously influencing the choices made in the endowment.[39]

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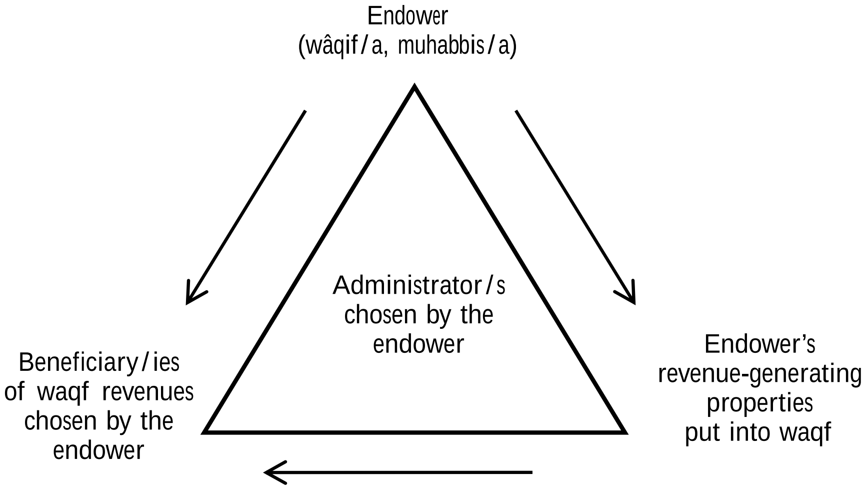
[38] Randi Deguilhem, "Gender Blindness and Societal Influence in Late Ottoman Damascus: Women as the Creators and Managers of Endowments," HAWWA: Journal of Women of the Middle East and the Islamic World 1, no. 3 (2003): 329–350.

[39] Randi Deguilhem, "Centralised Authority and Local Decisional Power: Management of the Endowments in Late Ottoman Damascus," in Hanssen, Philipp, and Weber 2002, 219–234.

The following triangular schema situates the endower of a foundation at the pinnacle from whom emanates the choices concerning the assets and the beneficiaries of the foundation as well as the choices concerning the initial administration of the waqf. The witnesses who inscribe their names at the bottom of the endowment charter obviously play a vital role in the substantiation of a waqf since they vouch for the integrity of the endower and the decisions that he or she takes in establishing it. As a general rule, the more important the waqf, the larger the number of witnesses who testify to the soundness of the endowment and who sign the foundation charter of the waqf. But the witnesses do not figure in the below diagram since they have a role which is only performed one time, namely, during the establishment itself of the waqf and, therefore, exceptions aside, they do not occupy an ongoing and continued function in the operations of the waqf as do the elements contained in the schema.


Endower
(wâqif/a, muhabbis/a)
Administrator/s chosen by the endower
Beneficiary/ies of waqf revenues chosen by the endower
Endower's revenue-generating properties put into waqf

The waqf, a self-contained and, in theory, a self-perpetuating autonomous unit as illustrated by the above triangular diagram, turns round upon itself "forever." The schema visualizes the relationships, affiliations, and bonds between the founder of a waqf, the revenue-generating properties and the waqf beneficiaries in a series of relationships that were continuously repeated and renewed every time the waqf administrator distributed revenues to the waqf beneficiaries generated from the properties belonging to the waqf; distribution of revenues usually occurred on an annual basis. According to the formulaic phrase traditionally cited in the waqf foundation charter, these triangular bonds were theoretically established "for eternity" (ilâ abad). But, in reality, there were continuous changes made within the triangle.

For example, the endower personally mentions, by name or by indication, the beneficiaries designated to receive a prescribed part of the revenues generated from the properties that he or she possesses and which are specifically intended to produce income for the foundation. The waqf endower likewise names the administrator who will supervise the foundation's activities (in Ottoman times, for purposes of controlling the endowment, the first administrator of a given foundation was often the endower of the waqf). Even future changes in the relationships between the waqf endower—the property/ies endowed—the waqf beneficiary/ies—and the waqf administrator are anticipated by the endower in the foundation document by the nomination of replacements in the foundation charter.

In other words, these components of the foundation will inevitably change over time since, at some future point following the establishment of the waqf, the administrator of the endowment will die and will have to be replaced, the beneficiaries—if they are persons—will also die and others will take their place. If the waqf beneficiaries are institutions (religious or public buildings, health centres, etc.), they may cease to function or they may be ruined at some future time either by overuse of the buildings which did not receive proper attention for their maintenance or else they may be damaged by a catastrophe (fire, flooding, earthquake) to the degree where either they no longer function and, therefore, no longer fulfil the waqf's goal. These beneficiaries will then also need to be replaced. Finally, the revenue-generating properties endowed to the waqf (real-estate such as buildings or agricultural land which are rented out, etc.) will eventually become over-exploited such as in the case, for instance, of an agricultural plot which, through over-use of its soil, will become damaged to the point where it will no longer bring in the desired income and will require replacement. These future changes are foreseen and stipulated by the endower, as far as possible, and mentioned in the foundation charter of the waqf by the nominative mention of persons or institutions to replace the first set of administrators, beneficiaries, and revenue-generating properties. This, theoretically, ensures the endower's personal hand and vision in the future configuration and management of the waqf.

To say it differently, a precise amount of proceeds accruing from specific portions of the endower's personally-owned property (milk),[40] which mostly resulted from revenues coming from rent contracts transacted on assets such as buildings or agricultural land belonging to the waqf, but also moveable property, including sums of cash which, in some of the Anatolian and Arab provinces of the Ottoman Empire, were loaned for profit. The finances of the waqf were usually calculated on an annual basis with the administrators, designated by the endower, distributing the specified portions of the waqf's revenues to the beneficiaries explicitly indicated by the endower in the foundation document.

Because the endowment revenues were distributed on a cyclical basis to the foundation's beneficiaries, the endower thus created and left a personal and self-renewing imprint in the fabric of society by "permanently" associating his or her name with a specific component in society, i.e. the beneficiary/ies, the focus of the endowment's raison d'être and the recipient of its revenues. This triangular configuration, as schematized above, represents literally hundreds of thousands of waqf units which functioned in Islamic cities as well as in rural areas in the dâr al-islâm, operating within a larger framework as regulated by several sets of law. Richard van Leeuwen has produced a study of this phenomenon for nineteenth-century Damascus showing the relationships of several waqf foundations as they functioned with regard to Islamic religious law (sharî{a), Ottoman state law (qânûn) as well as traditional practices ({urf).[41]

Although this triangular configuration corresponds to the norm, there were, however, several variants on the theme. For example, even though a waqf foundation was, as a rule, created by an individual, as seen in the schema, in some rare cases, two individuals jointly established a single endowment such as the waqf created in Damascus in 866/1461 by a Mamluk couple, Gömüshbugha and his wife Aq Malak bint {Abdallâh. The revenues of their endowment went to themselves and their children.[42] At the extinction of their direct family line, the two endowers of this waqf stipulated that part of the proceeds accruing to their foundation should go to the poor associated with the Umayyad Mosque in Damascus while other parts of the revenues should go to a soup kitchen in the city as well as to the poor living in the rîbâts in the city of Madina (a popular choice for ultimate beneficiaries of family waqf). A section of the proceeds were also designated for the manumitted slaves of the couple who had founded the waqf. In Ottoman times, endowers continued this custom of including manumitted slaves among their waqf beneficiaries as part of the extended family as seen in the endowment established in 1880 in Damascus by Hafîza khânûm al-Mûrahli, wife of a prominent hajj official (surra amînî) in Damascus,[43] some four centuries after the founding of Gömüshbugha and Aq Malak bint {Abdallâh's waqf.

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[40] There are, nonetheless, numerous exceptions where endowers established waqf in the nineteenth-century Ottoman Empire with assets from mîrî (state) property held with a sanad al-tâbû contract which gave proprietary rights over mîrî assets: Deguilhem 1991, 70–74; or with irsad (also a form of state property): Kenneth Cuno, "Ideology and Juridical Discourse in Ottoman Egypt: The Uses of the Concept of Irsad," Islamic Law and Society 5, no. 3 (1998): 1–28.

[41] Richard Van Leeuwen, Waqfs and Urban Structures: The Case of Ottoman Damascus (Leiden: Brill, 1999).

Guild waqf in the Ottoman Empire is another variant on the triangular configuration since this type of endowment was not established by an individual per se, but rather by guild members as an ensemble. The assets of guild waqf were mainly cash and accessible for distribution to the needy among the guild members or their families. In the event that the guild was multi-confessional, this collective waqf was available to all guild members, regardless of religion. Outside of the guild structure, cash from these waqfs belonging to the guild was lent out with an interest rate as a revenue-producing venture to produce income for the guild.[44] This type of cash waqf as well as others used in parts of the Ottoman Empire was a controversial, but apparently widely-used manner of generating revenues for endowments, not only those belonging to the guilds. In the attempt to make the practice official, in the sixteenth century, the Ottoman shaykh al-islâm, Ebü es-Suud, sanctioned cash waqf[45] and, by the mid-sixteenth century, according to some studies, cash holdings already represented a substantial part of Ottoman waqf assets.[46]

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[42] Michael Winter, "Mamluks and their Households in Late Ottoman Damascus: A Waqf Study," in The Mamluks in Egyptian and Syrian Society, ed. Michael Winter and Amalia Levanoni (Leiden: Brill, 2004), 297–316, 314 quotes Atatürk Library Defter fol. 93a.

[43] Randi Deguilhem, "Naissance et mort du waqf damanscain de Hafîza hânûm al-Mûrahlî (1880–1950)," in Le waqf dans l'espace islamique. Outil de pouvoir socio-économique, ed. Randi Deguilhem (Damascus: IFEA, 1995), 203–225, 221–222.

[44] Suraiya Faroqhi, "Ottoman Guilds in the Late Eighteenth Century: The Bursa Case," in Making a Living in the Ottoman Lands 1480–1820 (Istanbul: Isis Publishers, 1995), 93–112, especially, 97, 102–108.

[45] One of the first publications on the cash waqf is Jon Mandaville, "Usurious Piety: The Cash Waqf Controversy in the Ottoman Empire," International Journal of Middle

Finally, one should also mention the multiplicity of individual foundations that were established by different endowers for the same recipient. Such a situation often occurs with local as well as with internationally known or important religious sites. For example, a small neighbourhood mosque or religious school located in a city or a village was often the recipient of numerous endowments established by different individuals living nearby, creating, in this way, a permanent link between themselves and the beneficiary of their waqf's revenues. This was also, of course, the case with the most renowned sites in the Islamic world such as the Two Holy Cities in Arabia (the Haramayn), the al-Aqsa Mosque in Jerusalem, al-Azhar in Cairo, the Great Umayyad Mosque in Damascus, etc., all of which receive revenues from almost an unlimited number of waqf foundations, some of them being administered together. It should be underlined that these latter monuments, constantly visited and used by worshippers, require continuous repair work which is largely subsidized by endowment funds.

Returning to the question: is the waqf foundation a personal statement or does it hinge upon the societal microcosm of the endower's family? Keeping in mind the relationships between waqf endower, properties endowed, waqf administrator, and waqf beneficiaries, to what extent do the relationships indicated in the above schema actually represent personal choices and decisions on the part of the waqf endower? How does the immediate religious community and larger socio-political society affect an endower's choice? Finally, what is the room for manoeuvre and free choice for the endower regarding the assets, the beneficiaries, and the administrators designated for the endowment? To what extent is a waqf founded "for eternity"?

East Studies (IJMES) 10, no. 3 (August 1979): 289–308. Subsequent studies based on archival research from the Ottoman tribunal records followed among which: Bahaeddin Yediyildiz, *Institution du Vakf au XVIII^{è} siècle en Turquie—étude socio-historique*, Société d'Histoire Turque, Türk Tarih Kurumu (Ankara, 1985), 116–120; Murat Cizakca, "Cash Waqfs of Bursa, 1555–1823," *Journal of the Economic and Social History of the Orient* (JESHO) 38, no. 3 (August 1995): 247–261; Faruk Bilici, "Les waqfs monétaires à la fin de l'Empire ottoman et au début de l'époque républicaine en Turquie: des caisses de solidarité vers un système bancaire moderne," in *Le waqf dans le monde musulman contemporain (XIX^{e}–XX^{e} siècles)*, ed. Faruk Bilici (Istanbul: IFEA, 1994), 51–59.

[46] Ö. L. Barkan and E. H. Ayverdi, *Istanbul Vakiflari Tahrir Defteri, 943 (1546) Tarihli* (Istanbul: Baha Matbaasi, 1970).

This eternity is largely an ideal in that many small family foundations endowed with simply one revenue-generating property or several of them only functioned, in reality, over a limited amount of time (i.e., several years, several decades) at which point the assets no longer produced the desired revenues and were, therefore, no longer viable despite possible exchanges of their properties for more profitable ones by the waqf administrator using *istibdâl*, *mu{âwada*, or other arrangements. This was not, however, the case with influential and large waqfs which continually received an influx of new properties either directly endowed to the already-established foundations or by the creation of new endowments which were then added to the originally constituted waqf. These types of foundations frequently lasted for many centuries, some of them continue until today.

The Khasseki Sultan waqf in Jerusalem founded in the first half of the sixteenth century by Hürrem Sultan, wife of Sultan Suleiman the Magnificent (Sulaymân al-Qânûnî), is one of the better-known examples of a long-lasting foundation in the Middle Eastern world and one which functions today.[47] This waqf was originally established to provide food and shelter for needy persons, but subsequent documents from the endowment show that prominent families in the city were also nourished from the foundation's soup kitchen along with persons in need. This endowment received annual revenues generated from both urban and rural assets not only in the city of Jerusalem and its immediate environs, but also from properties situated further away in Palestine. On another level, even this waqf which has continued to operate for four and one-half centuries and is one of the wealthiest foundations in the Middle East is not necessarily eternal although the endowment's assets are so extensive and wealthy that, presumably, even if the soup kitchen, for example, no longer existed, the waqf's revenues would then pass on to the next level (*daraja*) of beneficiaries. The waqf would continue to exist, however, its revenues would be distributed among the second set of beneficiaries named by the endower in the waqf's foundation charter.

Yet, some waqfs are, indeed, virtually eternal when considered in their entirety. The example, *par excellence*, of such eternity is the endowments established for the Haramayn, the Two Holy Cities of Arabia. Two principal reasons account for the eternal quality of these foundations. New waqfs are constantly being created all over the Islamic world with their assets being added to the overall revenue-producing endowment properties for Mecca and Medina, the core and focus of the Islamic world itself and, therefore, the very reason for the creation of these endowments. The organization of the endowments, however, which were established for the Haramayn and the distribution of their revenues to the Two Holy Cities, varied in different locales and time periods.[48] The second reason for the eternal aspect of the Haramayn waqf is attributable to the fact that many endowers of family or mixed waqf named the cities of Mecca and Medina as the final unit of beneficiaries for their foundations when the familial line of personal beneficiaries or other individuals named as recipients of the waqf revenues expired.

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[47] Amy Singer, *Constructing Ottoman Beneficence: An Imperial Soup Kitchen in Jerusalem* (Albany: State University of New York Press, 2002).

Christian and Jewish Waqf in the City in the Islamic World

Muslim endowments, both Sunni and Shi{ı, developed and defined the Islamic city in many ways. But, the Islamic city was also shaped by Christian and Jewish foundation properties and beneficiaries. Far from being restricted to use within Muslim communities, the foundations were likewise an important instrument for organizing society amongst Christians and Jews living in the dâr al-islâm. As with Muslim waqf endowers, Christians and Jews in various socio-economic strata established large as well as small waqfs in different cities in the Islamic world. But these foundations, especially the Christian ones, have not been the focus of intensive study until quite recently and they are, therefore, less well known, at least for the moment, than Muslim waqfs. However, in the last twenty years, Christian waqf foundations and the history surrounding them, both in urban and rural settings, have been the object of valuable research which uncovers their complex role in the daily lives of individuals and in the shaping of society within the religious community as well as between communities.

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[48] For the Haramyan waqf created and managed in Algiers during the Ottoman period: Nacereddine Saïdouni, "Les liens de l'Algérie ottomane avec les lieux saints de l'Islam à travers le rôle de la fondation du waqf des Haramayn," Awqaf (June 2004): 37–76; Miriam Hoexter, Endowments, Rulers and Community: Waqf al-Haramayn in Ottoman Algiers (Leiden: Brill, 1998); Tlili Ajili, Biens habous au nom des Haramayn: La Mecque et Médine en Tunisie (1731–1881), (Zaghouan: Fondation Temimi pour la Recherche Scientifique et l'Information (FTERSI), 1998); Abdeljelil Temimi, Un document sur les biens habous au nom de la Grande Mosquée d'Alger, Publications de la Revue d'Histoire Maghrébine 5 (Tunis: Revue d' Histoire Maghrébine, 1980); Colin C. Heywood, "The Red Sea Trade and Ottoman Waqf Support for the Population of Mecca and Medina in the Later Seventeenth Century," in La vie sociale dans les provinces arabes à l'époque ottomane, ed. Abdeljelil Temimi, tome 3 (Zaghouan: CEROMDI, 1988), 165–184.

Although most certainly used by Jewish communities in the dâr al-islâm prior to medieval times, it is the famous Geniza documents, written in medieval Egypt and found in a synagogue in Fustat, which contain the earliest known set of Jewish waqf documents related to life in the Islamic city.[49] These documents which refer to Jewish endowments by different terms (ahbâs al-yahûd, habs, heqdêsh, qôdesh, waqf) record information about Jewish foundations in medieval Cairo, revealing that individuals in the Cairene Jewish community used them in ways that were very similar to Muslim use of waqf. In other words, medieval Cairene Jews endowed their homes and other real-estate in the city for subsidizing beneficiaries of both public foundations with revenues going towards the maintenance and functioning of religious space (synagogue, religious teaching) and social services (revenues going to widows, to the poor) in the city as well as for private and family beneficiaries.

Management practices and the daily running of Jewish endowments were also similar to those used for Muslim waqf. For example, a Jewish endower of a waqf appointed the administrator (nâzir, mutawallî) of his or her endowment as well as specifying the means to generate revenues for the foundation, i.e. the type of lease to be transacted on the endowed assets in the same manner as Muslim endowers of waqf. Several centuries later, Jewish and Christian waqf in late Ottoman Palestine also provided revenues for ensuring religious, charitable, and public needs for these communities.[50] As with Muslim waqfs where individuals of any religion leased properties belonging to endowments founded by Muslims, documents from early nineteenth-century Syria mention properties belonging to Jewish waqf in the village of Jawbar, located outside of Damascus, that were leased by members of other religious communities.[51] This was also the case in Ottoman Algiers, for example, where Jews rented shops, homes, plots of agricultural land and other urban property belonging to Muslim waqfs[52] as it was in nineteenth and early twentieth-century downtown Beirut.[53] Leasing of waqf assets by individuals of different religions was, indeed, an ordinary occurrence, a fact that should be underlined in order to understand the religious permeability of the economic geography in Islamic cities.

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[49] S. D. Goitein, A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza (University of California Press, 1971) [repr. version used here: 5 vols., 1999], passim, especially vol. 2: 99–103, 112–121, 413–469 and vol. 4; Moshe Gil, Documents of the Jewish Pious Foundations from the Cairo Geniza (Leiden: Brill, 1976) have abundantly treated this question.

[50] Ron Shaham, "Christian and Jewish Waqf in Palestine during the Late Ottoman Period," Bulletin of the School of Oriental and Asian Studies (BSOAS) 54, no. 3 (1991): 460–472.

Christian waqf endowments were also a permanent feature in the Islamic city. Recent studies based on local documentation from churches and convents as well as from the Ottoman tribunals attest to their prevalence not only in urban areas, but also in rural regions. The Coptic community in Egypt made widespread use of the waqf endowment system as a way of fortifying their religious and social institutions in the city and to bolster their infrastructural presence there.[54] This was similarly the case during the Ottoman period, especially, according to recent research, during the nineteenth century, when the Greek Orthodox and Maronite communities in the Syrian cities of Aleppo,[55] Damascus,[56] and Beirut[57] strengthened and diversified their urban endowments. Waqf was also used by the Maronite community as a way of putting down roots in rural Mount Lebanon, particularly in the form of waqf for a family convent.[58]

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[51] Yûsuf Na{isa, Yahûd Dimashq (Damascus: Dâr al-Ma'arifa, 1988), 14–15.

[52] Akael Nomeir, La fonction économique et culturelle des fondations pieuses des Villes Saintes d'Arabie à Alger au XVIII$^{\grave{e}}$ siècle, Ph.D. dissertation (University of Provence, 2002).

[53] Aurore Adada, "Les relations islamo-chrétiennes à travers l'exploitation des biens légués en waqfs entre 1843 et 1909 à Beyrouth," in Les relations entre musulmans et chrétiens dans Bilad al-Cham à l'époque ottomane aux XVII^{e}–XIX^{e} siècles. Apport des archives des tribunaux religieux des villes: Alep, Beyrouth, Damas, Tripoli, Balamand Lebanon, ed. Souad Slim (University of Balamand, 2004, 291–310). Aurore Adada is currently writing a Ph.D. dissertation at the University of Provence on Christian waqf in late Ottoman Beirut.

[54] For waqf usages among Egyptian Copts: Magdi Girgis, "Athâr al-arâkhina {alâ awda al-Qibt fî'l-qarn al-thâmin {ashar," Annales Islamologiques 34 (2000): 23–44; ibid., al-Qadâ' al-qibtî fî Misr (Cairo: Mîrît Publishers, 1999); Muhammad Afifi, "Les waqfs coptes au XIX^{e} siècle," in Le waqf dans le monde musulman contemporain (XIX^{e}–XX^{e} siècles), ed. Faruk Bilici (Istanbul: Institut Français d'Etudes Anatoliennes (IFEA), 1994), 119–122.

[55] Jean-Claude David, "Les territoires des groupes à Alep à l'époque ottomane. Cohésion urbaine et formes d'exclusion," REMMM 79–80 (1996): 225–254.

[56] Randi Deguilhem, "La gestion des biens communautaires chrétiens en Syrie au XIX^{e} siècle. Politique ottomane et ingérence française," REMMM 79–80 (1996): 215–224.

[57] May Davie, La millat greque-orthodoxe de Beyrouth, 1800–1940: structuration interne et rapport à la cité (Paris IV: University of Paris/La Sorbonne, 1993), especially 236–255, 264–269; Souad Slim, The Greek Orthodox Waqf in Lebanon during the Ottoman Period, Ph.D. dissertation (University of Birmingham, 2002), especially chapter four: Expansion of urban waqfs in Beirut during the nineteenth century.

Waqf: Not Just an Urban Phenomenon

Widely recognized for its indispensable role in creating and maintaining multi-layered infrastructural aspects in the Islamic city, the waqf foundations also occupied an important place in rural areas for reasons similar to the waqf's existence in the city. Exercising a double role in both the Islamic city, but also in rural areas of the dâr al-islâm, the foundations financed and promoted religious and educational networks within the endowers' specific religious communities as well as having provided the bases for social and other public services for members of the overall society as a whole. Such widespread intervention in society is rendered possible by the extensive amount of revenues accruing to properties which had been endowed to waqf foundations.

A vital infrastructural component in rural villages and hamlets in the very same way as in urban settings, namely, as an instrument to support religious, public, and social services in the form of waqf khayrî as well as its use as a way to provide for financial support of individuals in one's private and family circles in the expression of waqf dhurrî/ahlî, the waqf foundations also played another important role in the rural environment: they provided an institutionalized link between urban and rural worlds. Endowment properties situated in rural areas created and maintained ties between rural and urban communities because endowed agricultural lands in outlying villages and in the hinterlands generated revenues for beneficiaries located in urban locales. In other words, the sale of agricultural produce or the rent of endowed lands situated outside of cities, sometimes deep into the countryside far from urban centres, provided regular income to urban beneficiaries such as important mosques, tombs, zâwiyas, etc., thus forging liaisons between the rural and urban environment on a regular basis, usually annually, i.e. every time when rural-generated revenues were distributed to the urban waqf recipient. Studies on this relationship have been carried out, for example, for the southern Syrian regions for the early Ottoman period.[59]

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[58] Richard van Leeuwen, Notables and Clergy in Mount Lebanon: The Khâzin sheiks and the Maronite church (1736–1840) (University of Amsterdam, 1992), especially chapter 5, 129–150; Zouhair Ghazzal, "Lecture d'un waqf maronite du mont Liban au XIX^e siècle," in Le waqf dans l'espace islamique: Outil de pouvoir socio-économique, ed. Randi Deguilhem (Damascus: Institut Français d'Etudes Arabes de Damas (IFEAD), 1995), 101–120. Sabine Saliba, "Une famille, un couvent: Deir Mar Chalitta Mouqbès 1615–1878," Chronos 3 (2000): 93–137; Saliba, "Waqf et gérance familiale au Mont Liban à travers l'histoire du couvent maronite de Mar Chalitta Mouqbès (XVII^e–XIX^e siècles)," in Les fondations pieuses (waqf) en Méditerranée: Enjeux de société, enjeux de pouvoir, dir. Randi Deguilhem and Abdelhamid Hénia (Kuwait: Fondation Publique des Awqaf du Kuwait, 2004), 99–129; Sabine Saliba, Dualités, pouvoirs et stratégies dans le Mont Liban à travers l'histoire du couvent maronite de Mar Chalitta Mouqbès (17^e–19^e siècles), Ph.D. dissertation, University of Provence, 2006.

The extent of endowed agricultural landholdings obviously varied across the Islamic world and it is nearly impossible to quantify the holdings for specific regions at the present state of research. Nonetheless, on-site observers' reports give an idea regarding the magnitude of endowed agricultural assets before the era of nationalizations of waqf property which mostly occurred towards the middle of the twentieth century at the close of the colonial period (at its inception in the early 1920s, Republican Turkey had already nationalized the former Ottoman-era waqf holdings within its new borders). For example, Louis Milliot, a turn-of-the-twentieth century French administrator working in North Africa[60] has estimated the following: three-quarters of the cultivated agricultural land in Ottoman Anatolia were endowed properties, including those belonging to the sultanic waqfs,[61] this was the situation for half of the agricultural lands in Algeria in 1850 (no doubt, calculated by Milliot according to the French survey of foundation assets in Algeria),[62] one-third in Tunisia in 1883[63] and one-eighth for Egypt in 1925. These estimates are obviously vague, but they give an idea of the wide breadth of waqf-owned agricultural lands in the dâr islâm which generated revenues, often for beneficiaries situated in distant urban centres.

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[59] W.-D. Hütteroth and K. Abdulfattah, Historical Geography of Palestine, Transjordan and Southern Syria in the Late 16th Century (Erlangen: Mitteilungen der Fränkischen Geographischen Gesellscahft, 1977).

[60] Jean-François Rycx, "Règles islamiques et droit positif en matière de successions: présentation générale," in Hériter en pays musulman. Habus, Lait vivant, Manyahuli, dir. Marceau Gast (Paris: Centre National de la Recherche Scientifique (CNRS), 1987), 33 who cites Louis Milliot, Introduction à l'étude du droit musulman (Paris: Sirey, 1970).

[61] John Robert Barnes, An Introduction to Religious Foundations in the Ottoman Empire (Leiden: Brill, 1986), especially 87–153.

[62] For a recent study on the endowments in Algeria: Dirassat Insania [Études Humaines]: "Le waqf en Algérie (18e et 19e siècles). Sources, problématiques et thématiques, ed. Nacereddine Saidouni, Ali Tablit, Zakia Zahra, and Maouia Saidouni (Algiers: Presses de l'Université d'Alger, 2001–2002).

[63] Abdelhamid Hénia, Propriété et stratégies sociales à Tunis, XVIe–XIXe siècles (Tunis: Publications of University of Tunis I, 1999), especially chapter ten: "Pratique habous et stratégies sociales," 346–374.

Conclusion: The Resilience Factor

On an empirical and analytical level, the study of waqf foundation documents yields an intimate window into the daily practices of endowments in the Islamic city and the ways by which individuals used them for personal or public objectives. The types of properties used to create revenue-producing assets for the endowments and their geographical location in the city as well as in rural areas reveal ownership patterns by individuals who belonged to different socio-economic levels in specific cities in the Islamic world. The beneficiaries chosen by the endowers often reflected cultural, religious, political and social trends, and concerns of the day. Waqf therefore provided both the infrastructure of many aspects of daily life as well as the means to maintain and to subsidize it.

Even the end of the traditional waqf system at the close of the post-colonial period did not spell the demise of the institution since the endowments once more adapted to the exigencies of the day.[64] To give an example concerning water, a precious resource in the Mediterranean Islamic city: water fountains (sabîls) were traditionally one of the most common urban beneficiaries of waqf revenues in the Islamic city. Maintained by the endowments, public fountains customarily provided drinking water to passers-by in the city and they continue to do so. New waqfs are founded for this goal such as the fountain maintained by foundation revenues in the Buzûriyya section of intra-muros Damascus. This fountain, which had recently been repaired in 1996 by Shaykh Ribâh al-Jazâxirî as part of his waqf, carries the inscription stating al-Jazâxirî's name in this regard, mentioning him as the recent endower of the repairs on the fountain.[65] In a transformed usage of this traditional means of providing drinking-water service to the community, waqf endowments now provide cold drinking water, which is kept in refrigerators in cemeteries in Lebanon for persons visiting graves.[66]

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[64] See the conference and publication mentioned in note 7 of the present contribution.

[65] Personal observation, Damascus, September 2004.

Urban renewal and the restoration of buildings in the Islamic city represent another continued usage of waqf practices in vogue today for maintaining the viability of buildings, but also as a means for preserving patrimony and cultural heritage. An example of this is found in the southern Lebanese coastal city of Sidon where the beautiful Ali Agha Hammoud Ottoman era mansion located near the Khan al-Franj is currently being restored by funds from the Debbané waqf foundation established in 1999. In a move to prevent the destruction of this mansion which had been continuously inhabited for nearly three centuries since its founding in 1721–1722, first by its builder, Ali Agha Hammoud, who lived there with his family and then, by the Debbané family whose members had subsequently acquired the mansion in the early 1800s, individuals from the Debbané family established a waqf endowment in order to generate funds to repair damage to the house caused during the Lebanese War in the late 1970s and 1980s as well as by the 250 refugees who lived in the house for a period of five years during this time. The Debbané waqf is not only financing the repair of this important urban habitation, but it is also preparing the mansion to be a museum of an Ottoman period house and to receive concerts and artistic exhibitions.[67]

These two examples show that waqf endowments in the Islamic city continue to be a favoured means of intervening in the urban fabric to maintain and safeguard social services for the community but also as a way to preserve urban real-estate within the urban centre in the Islamic world.

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[66] Interview, Randi Deguilhem with Mohamad Nokkari, director-general of Dâr al-Fatwâ and head of the Cabinet of the Mufti of Lebanon (Beirut, 28 May 2004).

[67] Stefan Weber, "An Âghâ, a House and the City: The Debbané Museum Project and the Ottoman City of Saida," *Beiruter Blätter* (Oriental Institute of Beirut) 10–11 (2002–2003): 132–140; *Welcome Brochure to the Debbané Palace* (Sidon, 2004), 1.

PART FIVE

THE MODERN AND CONTEMPORARY CITY

A. TRADITION AND MODERNITY IN THE NINETEENTH CENTURY

MODERNIZATION OF THE CITIES OF THE OTTOMAN EMPIRE (1800–1920)

Jean-Luc Arnaud

From the beginning of the nineteenth century, when only a small portion of the Ottoman Empire's population was living in an urban environment, cities came to be affected by an unprecedented movement of growth. Within a few decades, tens of thousands of people born in a rural environment, or in nomad zones, settled in the cities. The process of transformation accelerated, and modalities of development changed, at every level of apprehension within the urban reality. Although this movement was not a synchronous one—some cities took off before others—it nonetheless constituted a new phenomenon: it was not simply a matter of growing re-composition but represented a break with regard to modes of administration, to the division of social groups and activities within space, and to architectural and urban forms.

A new context

This movement should be viewed within the framework of a far larger set of transformations extending beyond the Empire's borders. The Mediterranean of the nineteenth century was marked, first of all, by the rapid rise of western imperialism attested to by an intensification of the exchanges, especially economic ones, between the two shores. In this period, too, the Ottoman Empire lost numerous provinces to the colonial expansion of the great powers and to the building of new independent nation states.

Intensification of exchanges, new dynamics

From the 1830s on, the progress of steam navigation, which accelerated exchanges and lowered the costs involved, led to an increase in the volume of merchandise transported by sea. By virtue of this development, the Ottoman shore of the Mediterranean became, at one and the same time, a source of raw materials to supply the new European factories and a vast potential market for the production of these. The cities primarily affected by this movement were the ports: Salonica, Istanbul, Smyrna, Mersin, Beirut, Haifa, and Alexandria. A fierce competition developed between these establishments; on the Palestinian and Syrian coasts in particular, real battles for influence sprang up between them. In this context, the moving of foreign consulates, between 1840 and 1860, from Acre to Haifa or, further north, from Tarsus to Mersin, testified to the re-composition and downgrading involved, to the benefit of ports that had the means to absorb agricultural surplus and attract foreign ships.[1] Communications between these ports and the cities of the interior played a crucial role in such re-compositions. In Egypt, Muhammad {Ali Pasha, who, from the first years of the nineteenth century, thought to distance himself from the Sublime Porte, understood well enough the issues at stake in the development of the ports. At the end of the 1810s, he ordered the digging of the Mahmudiyya canal, which would shorten the time for the journey between Cairo—then the chief city of the Egyptian province—and Alexandria.[2] These works paved the way for the creation of a military dockyard in this city. On the Syrian coast, the silting up of the port of Sidon, in the first half of the nineteenth century, deprived Damascus of its maritime outlet.[3] Accordingly, consulates and western trading houses installed themselves in Beirut. Even so, the ninety-kilometre journey between the two cities took no less than three days on horseback via the Lebanese highlands and the Biqa‘ plain. At the beginning of the 1860s, a private company opened a road for coaches between Beirut and Damascus.[4] Thanks to this arrangement, wagons needed only thirteen hours to go from one city to the other.[5] It was at this moment that steam navigation imposed itself for good on the ports of the Levant; sailing ships were downgraded and condemned to coastal redistribution.[6] A few years later, railways guaranteed the penetration of western markets from the ports into the interior. In 1866, the inauguration of two railways from Smyrna to Aydin (to the southeast) and Casaba (to the east) testified clearly to this new dynamic.[7] It was also illustrated by the lively competition that developed, during the 1890s, between the different western companies aiming to equip Syria and Palestine with railways.[8] The ratification of port-cities was contemporary with the development of these railways. During the last thirty years of the nineteenth century, Smyrna, Salonica, Istanbul, and finally Beirut, acquired quays and equipment facilitating loading and storage operations, together with customs checks.[9]

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[1] Mahmoud Yazbak, "Immigration and Integration: Haifa The Port City of Nineteenth Century Palestine," in *Mersin, the Mediterranean and Modernity: Heritage of the long Nineteenth Century* (Mersin, 2002), 51–52; Meltem Toksöz, "An eastern Mediterranean Port-Town in the Nineteenth Century," in *Mersin, the Mediterranean and Modernity*, 15.

[2] Michael J. Reimer, *Colonial Bridgehead: Government and Society in Alexandria 1807–1882* (Cairo, 1997), 111.

[3] John Bowring, *Report on the Commercial Statistics of Syria* (London, 1840), 52.

[4] Leila Fawaz, "The Beirut-Damascus Road: Connecting the Syrian Coast to the Interior in the 19th Century," in *The Syrian Land: Process of Integration and Fragmentation. Bilad al-Sham from the 18th to the 20th century*, ed. Thomas Philipp and Birgit Schaebler (Stuttgart, 1998), 19–28.

[5] Eleuthère Elleftériadès, *Les chemins de fer en Syrie et au Liban, étude historique financière et économique* (Beirut, 1944), 37–39.

Ships transported men as well as merchandise. Following the treaty of Balta Liman, signed in 1838 between the Porte, France, and Britain,[10] more and more foreign contractors came to settle in the Empire. Two years later, a spinner from the Drôme settled in Beirut with some forty French women workers.[11] In Egypt, in Alexandria, and then in Cairo, there were abundant cases; at the beginning of the 1870s, not a week would go by without Khedive Isma{il Pasha receiving a request for the setting up of a factory or the development of some new activity. The foreign presence in the Empire was also fostered, finally, by the expansion of tourism, reflected in the multiplication of travel guides from the 1860s on, and in the setting up of services (luxury hotels, travel agencies, and so on) that accompanied this development. This should not, however, mask a reverse movement, smaller in scale indeed but equally significant. From the mid-1820s on, Muhammad {Ali began sending a scholastic mission to France. The expedition's 43 grant-holders were designed to become senior public officers in his administration.[12] For their part, Ottoman officials multiplied their trips to Europe, where they drew the ideas underlying the first reforms. In 1846, Ahmed Bey, the governor of Tunisia, spent a month in Paris, where he visited not only the museums but also some manufacturers and the polytechnic.[13]

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[6] Boutros Labaki, Introduction à l'histoire économique du Liban. Soie et commerce extérieur en fin de période ottomane (1840–1914) (Beirut, 1984), 58.

[7] Paul Dumont, "La période des Tanzîmât (1839–1878)," in Histoire de l'empire ottoman, ed. Robert Mantran (Paris, 1989), 496.

[8] Eleftériadès, Les chemins de fer en Syrie; Jacques Thobie, Intérêts et impérialisme français dans l'empire ottoman (1895–1914) (Paris, 1977), 163–166 and 318–330.

[9] For Smyrna, see Elena Frangakis Syrett, "The Dynamics of Economic Development: Izmir and Western Anatolia, Late 19th/Early 20th Centuries," in Mersin, the Mediterranean and Modernity, 65–72; for Salonica, see Meropi Anastasiadou, Salonique, 1830–1912. Une ville ottomane à l'âge des Réformes (Leiden, New York, Cologne, 2000), 141–145; for Istanbul, see Zeynep Celik, The Remaking of Istanbul: Portrait of an Ottoman city in the Nineteenth Century (Washington, 1986), 75; for Beirut, see C. Babikian, La Compagnie du port de Beyrouth: Histoire d'une concession 1887–1990, thesis, 2 vols. (Beirut, 1996).

[10] This treaty eliminated monopolies and customs protection from the Empire and authorized the French and British to carry out commercial activities. See Dumont, "La période des Tanzîmât," 496.

[11] Thobie, Intérêts et impérialisme, 493.

Independence and reforms

The nineteenth century was also a time of slow dismantlement of the Ottoman Empire. The chronology of secessions was inaugurated by Serbia at the very beginning of the nineteenth century (1804), and the Greeks, Valaks, and Moldovans followed suit in the years that followed. The Balkans, where separatist regions contained more Christians than Muslims, were not the only scene of secessionist movements. Two years after the Serb revolt, the Wahhabis, settled in Saudi Arabia since the eighteenth century, seized the cities of Mecca and Medina. Thereafter, the 1830s were decisive, with the frontiers of the Empire threatened on several fronts. The troops of the Russian Czar entered Anatolia in 1828; then, three years later, France occupied Algeria, while the Egyptians seized the opportunity provided by the Sultan's relative weakness to occupy Syria. The British, for their part, seized Aden. It was within this framework that the Porte set up the first administrative reforms (tanzimat) at the end of the 1830s. In its attempts to regain power over the remaining parts of the Empire, it relied especially on the cities' role as staging posts in guaranteeing a more efficient control over the territory.

The role of the state might be affirmed in a number of different ways. Following the riots, in 1819–1820, by the chief men of religion in Aleppo against the representatives of the Porte, the governor ordered the destruction of the district gates that had impeded his reconquest of the city.[14] A decade on, Istanbul reinforced its power in Iraq by eliminating the Georgian Mamluks, former slaves who had been governing the region, in the Sultan's name, since the mid-eighteenth century.[15] Some years later, in the wake of the conquest of Algeria by the French, the Porte exiled the members of the family that had been in power in Barbary Tripoli for more than a century, replacing the Pasha by an appointed governor more easily subject to its own control.[16] In both these cases, large cities—Bassora, Baghdad, Mosul, and Tripoli—were the chief places for a renewed installation of the Ottoman administration.

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[12] Anouar Louca, "La médiation de Tahtâwi 1801–1873," in *La France et l'Egypte à l'époque des vice-rois 1805–1882*, ed. Daniel Panzac and André Raymond (Cairo, 2002), 60.

[13] *Histoire de Tunis par J. J. Marcel,... précédée par une description de cette régence par L. Franck* (Tunis, 1979), 210–14; Noureddine Sraïeb, "Le voyage d'Ahmed Bey à Paris, en 1846," in *Itinéraires de France en Tunisie*, ed. D. Jacobi (Marseille, 1995).

[14] Jean-Claude David and Gérard Degeorge, *Alep* (Paris, 2002), 297.

1. Modes of administration, management, and legislation

A new legislation

Even before the first text of the administrative reforms was promulgated, the Ottoman authority concerned itself with the organization of the Empire's cities. In 1836, Mustafa Reshid Pasha, regarded as the founding father of the tanzimat, proposed to the Sultan a series of measures aimed at improving the layout of the city and avoiding the spread of fires.[17] His suggestions were substantially taken into account some years later in a ruling—the ilmubaher—prohibiting the use of flammable material in construction, regulating the width of streets according to their role in the road network, and prohibiting cul-de-sacs.[18] This legislation was subsequently the subject of further specific rulings (1848). In 1863 it was extended to all the cities of the Empire, then, in 1882, the numerous regulations were assembled in a code of construction.[19] However, these texts were often only partially applied. They set up a general framework, a kind of objective in the field of urbanization, but a number of factors impeded their implementation.

First, the legislation was prepared in Istanbul, though designed for all the cities of the Empire. It was produced by writers who resided in the capital and whose main objective was to control construction there, and especially to reduce the risks of fires.[20] However, these wooden constructions, largely open to the exterior by means of panelling, were quite different from most of those erected in the Arab provinces, which were rather made out of stone, brick or cob. Hence, the imperial regulation was applied in variable manner, according to local particularities. This was the case in Damascus, for instance, where the legislation corresponded poorly with the practical knowledge of construction professionals.[21] In Egypt, the first general texts of urban legislation appeared later; they go back to the beginning of the 1880s.[22] However, the Commissione di Ornato, established in 1834 by Muhammad {Ali Pasha in Alexandria, put together a detailed regulation with a view to ensuring its control over the city's development and over new buildings.[23]

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[15] Pierre-Jean Luizard, *La question irakienne* (Paris, 2002), 17.

[16] Nora Lafi, *Une ville du Maghreb entre ancien régime et réformes ottomanes. Genèse des institutions à Tripoli de Barbarie (1795–1911)* (Paris, 2002), 185.

[17] Alain Borie, Pierre Pinon, and Stéphane Yérasimos, *L'Occidentalisation d'Istanbul au XIX^e^ siècle*, research report (La Défense, 1989), 5; Dumont, "La période des Tanzîmât," 492.

[18] Ilhan Tekeli, "Nineteenth century transformation of Istanbul area," in *Villes ottomanes à la fin de l'Empire*, ed. Paul Dumont and François Georgeon (Paris, 1992), 38.

[19] Tekeli, "Nineteenth century transformation," 39.

Besides, it was difficult to define *a priori* the administrative structure most apt to obtain the results anticipated by the law. As is indicated by the multiple sharp reminders, and the modifications in the organization of public services, reforms were implemented by trial and error. Moreover, during the last years of the *tanzimat*, administrative decisions were highly centralized. At the end of the 1850s, following the Crimean war during which the stationing of troops in the cities demonstrated these latter's poor management; reformers began to consider the advantages of developing power on the local level.[24]

Local power/central power

Up to the mid-1850s, city management had been left to the services of the provincial administrations. From then on, we witness the creation of the first municipal bodies, of which the first of all saw the light in Istanbul in 1855. Opinions are divided as to the results obtained within the framework of this initial experience. Nonetheless, municipal commissions multiplied thereafter in the large cities: in 1863 in Beirut, in

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[20] I. Tekeli clearly shows how the great fires in Istanbul—750 buildings destroyed in 1856, 3,500 in 1864, and so on—determined the successive reinforcements of legislation regarding building. See Tekeli, "Nineteenth century transformation," 38–40.

[21] Jean-Luc Arnaud, *Damas: Recompositions urbaines et renouvellement de l'architecture, 1860–1925* (Arles, 2005), 3rd part.

[22] Jean-Luc Arnaud, *Le Caire—mise en place d'une ville moderne, 1867–1907. Des intérêts du prince aux sociétés privées* (Arles, 1998), 231–241.

[23] Reimer, *Colonial Bridgehead*, 73–75.

[24] Tekeli, "Nineteenth century transformation," 35.

1869 in Salonica, the following year in Barbary Tripoli, and so on. In 1877, the parliament extended the municipal regime to all the cities of the Empire.[25] By law, these new administrations were responsible for a long list of tasks, from the supervision of new buildings to the establishment of shelters for the destitute, along with the policing of markets and the keeping of civil registers.[26] However, the meagre means made available to them did not permit most of these tasks to be carried out.[27] Moreover, in those cities that were also provincial capitals, or in future capitals of those countries in the process of becoming free, the creation of municipal bodies was not achieved without difficulty: the central authority always had reservations about the emergence of strong local powers. In Istanbul, the "experiment" was limited to districts inhabited by Europeans and situated on the left shore of the Golden Horn, away from the palaces and State offices.[28] In Tunis, it was the seminal pact of 1857, adopted under pressure from European representatives—particularly France and Britain—that imposed the creation of a municipal commission. The Bey resigned himself, the following year, to the establishment of such a commission, but, in order to maintain control over it, reserved for himself the right to appoint the president and his deputy; and he reduced its resources to the point that, from the moment it assumed its functions, the commission was incapable of fulfilling its tasks. Finally, it often covered the same ground as older bodies, whose roles had not been redefined when the commission was created.[29]

In the other cities of the Empire, local powers received no better treatment from the central authority. In law, the respective competences of the governor and the local assembly (*majlis*) were clearly defined.[30] In reality, things were not so clear. In Damascus, for example, there was apparently regular interference. In view of the frequent changes of governors, and the varying degrees of competence they accorded themselves, the local power and its technical services could have very different means at its disposal.[31] Aleppo, for its part, did not seem to be subject to the same pressure from governors. The municipal authority established in 1868 provided services more developed than those of its counterpart in Damascus.[32] However, the interventionism of the Ottoman power in local affairs was by no means limited to Damascus. In Salonica, thirty years after the creation of the municipality, it was the Porte that issued a concession for the building and exploitation of a local transportation network.[33] In contrast, despite the multiple projects and propositions established since 1870, Cairo had no autonomous municipal services before the end of the 1940s. The central power, Egyptian, then (after 1882) British did not wish for the development of a local force in a city that had national administrative services. These reservations on the part of the authorities to some extent demonstrated that, since 1870, Cairo had no longer been a provincial capital within the Ottoman Empire, but rather the capital of an Egypt already possessing a high degree of independence.

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[25] Dumont, "La période des Tanzîmât," 492.

[26] "Attributions générales de l'administration municipale," in Georges Young, *Corps de droit Ottoman* (Oxford, 1905), 1:70–71.

[27] The exception that proves the rule was the municipality of Mersin. Levying a tax on merchandise passing through its port, it seems to have been endowed with somewhat comfortable budgets. See Toksöz, "An eastern Mediterranean Port-Town," 16–17.

[28] Tekeli, "Nineteenth century transformation," 35–36. For the municipal legislation of the sixth circle (Pera and Galata), see also Young, *Corps de droit*, 6:149–67.

[29] Mohammed Abdelaziz Ben Achour, *Catégories de la société tunisoise dans la deuxième moitié du XIX^{e} siècle. Les élites musulmanes* (Tunis, 1989), 299 et seq. On the attributes of this majlis al-baladi, see Jelal Abdelkafi, *La médina de Tunis, espace historique* (Paris, 1989), 24.

[30] Moshe Maoz, "Syrian Urban Politics in the Tanzimat Period Between 1840 and 1861," *Bulletin of the School of Oriental and African Studies* 29 (1966): 280 et seq.

Despite the difficulties they encountered, despite the constraints imposed by the central powers, except in Cairo, the largest cities all had municipal services by the end of the nineteenth and the beginning of the twentieth centuries. In general, these bodies and their mode of functioning (on the basis of annual budgets) were a novel feature in the cities and in the management of their civic services, even though in Barbary Tripoli the first municipal commission, established in 1870, apparently took up once more the prerogatives of the old *mashiyakha al-bilad*.[34]

Ad hoc interventions

Prior to the nineteenth century and the reforms, Ottoman cities did not lack administrative structures; civic tasks were, however, divided among a number of civil and religious bodies of local or central origin.[35] These institutions provided a "public service" in daily life, but were not responsible for more substantial planning. According to this system, tax revenues were divided between the imperial treasury and that of the governor. There was no "budget" for the city.[36] Hence, major works were always carried out on the basis of necessity, urgency or the decisions of governors. The financing of these operations was then provided either through the exceptional raising of taxes, as happened in Barbary Tripoli in 1827 for the repair of part of the surrounding wall,[37] or, in Damascus in 1743, by the governor himself.[38] The first reforms, and the local assemblies (*majlis*) established by virtue of the reforms' recommendations, did nothing to improve such practices. In the mid-1840s, the Damascus *majlis* had no source of revenue whatsoever. It was more of an intermediary between the central administration and the people than a municipal establishment.[39] Hence the exceptional nature of large-scale civic work persisted. For instance, in Bursa, in 1861, a visit by the Sultan led to the widening and improvement of a number of entrance roads to the city.[40] Such practices continued even after the creation of municipalities. Visits by important personages, inaugurations, or even the decisions of a governor or a sultan, were reasons for partial improvements that did not result from planned operations. It should be noted, however, that the need to improve road networks was a preoccupation for civic officials.

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[31] Franck Fries, *Damas (1860–1946), la mise en place de la ville moderne. Des règlements au plan*, doctoral thesis (Marne la-Vallée, 2000), 77 et seq.

[32] Bruce Masters, "Power and Society in Aleppo in the 18th and 19th Centuries," in "Alep et la Syrie du nord," *Revue du Monde Musulman et de la Méditerranée* 62 (1991): 157–58; Fries, *Damas*, 83.

[33] Anastasiadou, *Salonique*, 168.

[34] Lafi, *Une ville du Maghreb*, 228.

In most cities of the Anatolian plateau and the European provinces, houses were built of wood. Hence, they were regularly affected by fires that sometimes destroyed entire quarters. These disasters were all the more devastating in that streets were narrow and the density of land occupation was high. As a preventive measure, and in addition to rules related to construction material and the size of buildings, legislation, from 1863 on, also laid down measures for the re-grouping of land in destroyed quarters, so as to regulate the layout of streets and widen them according to how heavily they were used. The regulation provided for no fewer than five categories, with a width from 4.50 to 11.40 metres, and it also indicated maximum heights authorized for buildings alongside these.[41] In Istanbul, for instance, where fires were particularly violent—that of 1864 destroyed more than 3,500 houses—a special commission was placed in charge of fixing the new layout of roads and distributing the remaining pieces of land.[42] These operations resulted in squared pieces of land whose forms differed from that of the older fabrics.[43] They also led to an improvement in the local road network. Extension zones of the city were subject to a similar regulation. For new land divisions, however, and for those replacing burned-down quarters, the intervention perimeters corresponded to the land available in such a way that road layouts established in accordance with this principle did not always connect in a satisfactory manner (figure 1). Hence, the improvements introduced by this legislation were always sporadic; sometimes they even turned out to be contradictory vis-à-vis the general planning for each city.[44]

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[35] André Raymond, *Grandes villes arabes à l'époque ottomane* (Paris, 1985), chapter 3, "Les fonctions urbaines," 118–167; Stéphane Yérasimos, "La Réglementation urbaine ottomane (XVI^{e}–XIX^{e} siècles)," in *Proceedings of the Second International Meeting on Modern Ottoman Studies and the Turkish Republic*, ed. Emeri van Donzel (Leiden, 1989), 1–14.

[36] Antoine Abdel Nour, *Introduction à l'histoire urbaine de la Syrie ottomane* (XVI^{e}–XVIII^{e} *siècles*) (Beirut, 1982), 188.

[37] Lafi, *Une ville du Maghreb*, 155.

[38] Abdel Nour, *Introduction*, 192–193.

[39] Elizabeth Thompson, "Ottoman Political Reform in the Provinces: The Damascus Advisory Council in 1844–45," *International Journal of Middle East Studies* 25 (1993): 458–461.

[40] Béatrice Saint-Laurent, "Un amateur de théâtre: Ahmed Vefik pacha et le remodelage de Bursa dans le dernier tiers du XIX^{e} siècle," in Dumont and Georgeon, *Villes ottomanes*, 103.

In Egypt, and despite the magnitude of activities launched in Cairo by Isma{il Pasha at the end of the 1860s with a view to promoting the development of the city—in five years he delivered more than 200 hectares of new quarters to the property market—the chronology of projects and works reflected several changes in attitude regarding interventions, in the old fabric in particular; they demonstrate a process of trial and error rather than one of programmed organization.[45]

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[41] Law of October 20, 1863, Borie et al., *L'Occidentalisation d'Istanbul*, 72–80. This law incorporated a category "cul-de-sac", which had not been mentioned in the 1861 regulation (Grégoire Aristarchi, *Législation ottomane ou recueil des lois, règlements, ordonnances . . . de l'Empire ottoman. Troisième partie. Droit administratif* [Constantinople, 1874], 200), and which was eliminated by the law of August 22, 1891 (Young, *Corps de droit*, 6:137).

[42] Tekeli, "Nineteenth century transformation," 40.

[43] Borie et al., *L'Occidentalisation d'Istanbul*, 97–109.

[44] Stéphane Yérasimos, "La planification de l'espace en Turquie," *Revue du monde musulman et de la Méditerranée* 50 (1988): 109–110.

[45] Arnaud, *Le Caire*, 33–183.

2. New urban functions and new forms of segregation

New urban functions

The new models for the exercise of power, and the development of services by the State in various fields, such as civil status, public works, or even post and telegraph communications, contributed to fostering the roles of cities, which became, especially following the reform of the provinces from 1864 on, real staging posts for the central administration.[46] However, the Sublime Porte did not limit its activities to management administration. Following the tanzimat, a wave of secularization—in the fields of justice, education, and health—involved the public authorities in the development of new activities mostly concentrated in the cities. Transformations in the production sector and strong growth in the tertiary sector also contributed to the diversification of activities. After the first endeavours by Muhammad {Ali, at the beginning of the nineteenth century, to industrialize Egypt began to bear some partial fruit,[47] the opening of the Empire to foreign capital in 1838 facilitated the setting up of establishments of an industrial or pre-industrial character.[48] Western capitals did not only invest in the production sector; on the basis of new legislation permitting loans against a mortgage, and the acquisition of property by foreigners, investment turned towards new categories of activity: banking, brokerage and a whole higher tertiary sector bound up with overall administrative and economic supervision. During the same period, a general decline was noted in the craft sector.[49] The development of maritime and land transportation and the resulting decrease in costs strongly affected local production of goods for current consumption. Industrial products made in Europe (especially cloth) reached the countries of the south at prices often lower than those of local craftsmen. The latter were obliged to adapt, either by altering the kind of work they did or by making, at a lower price, products of inferior quality. Simultaneously, merchants in the import sector were pushed to develop and diversify their activities. Nor was the secondary sector affected only in what it produced for a local destination. In order to supply its industry with raw materials, there was a strong tendency for Europe's imports to become primary ones. For instance, while Syria, at the beginning of the nineteenth century, exported the greater part of its silk in the form of fabric, around 1830 the volume of exported fabric had decreased while that of thread had increased; by the end of the century, Syria was exporting less and less thread and more and more untreated cocoons. These transformations diminished the added value of exported products and led to the dismantling of local industries, which did not have the means to mobilize the capital necessary for their modernization.[50]

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[46] Dumont, "La période des Tanzîmât," 483.

[47] Ghislaine Alleaume, "Muhammad {Ali, pacha d'Egypte (1771–1849)," in Pascal Coste, toutes les Egypte (Marseille, 1998), 49–70; Linant bey de Bellefonds, Mémoires sur les principaux travaux d'utilité publique exécutés en Egypte depuis la plus haute antiquité jusqu'à nos jours (Paris, 1872–73), 363–365.

[48] Dumont, "La période des Tanzîmât," 493.

[49] Charles Isawi, "Economic Change and Urbanization in the Middle East," in Middle Eastern Cities, ed. Ira Marvin Lapidus (Berkeley and Los Angeles, 1969), 110; François Georgeon, "Le dernier sursaut (1878–1908)," in Histoire de l'Empire Ottoman, ed. Robert Mantran (Paris, 1989), 551–552.

The new urban functions were also determined by the development of services related to the dissemination of communication and transport techniques. The second half of the nineteenth century was that of telegraph, roads, railways, and, within cities, of tramways, water supply, drainage networks, and the provision of energy through gas and electricity. These activities were diverse and not always related directly to cities, but the headquarters of the companies bringing these things about were set in the urban centres. Numerous employees in this sector and its shadowy surrounding elements—especially all the brokers, whether dealing in paper assets or merchandise—had higher than average incomes. The new consumption practices bound up with this difference also constituted a development vector of new service activities: the great cafés, restaurants, cinemas, and all the rest, multiplied to meet with the specific needs of this new social group.

Renewal of social organization

For the populations of the cities of the southern Mediterranean, the second half of the nineteenth century was a period of growth. This movement was fairly disparate. In general, maritime cities were quicker to advance (figure 2). Some, like Beirut and Alexandria, were affected by substantial migratory movements from the first half of the nineteenth century on. Their growth was still more spectacular in that each of these cities had, around 1800, only between 3,000 and 5,000 inhabitants. The more massive movement, however, happened later and marked a true break. While the beginning of the nineteenth century was marked by very different mutations—Cairo lost inhabitants while Alexandria began its growth—the second half of the century witnessed the development of all the cities; the urbanized part of the population increased in every region of the Empire (figure 3). This growth, mainly resulting from migratory movements, thus constituted the main generator of the renewal of urban societies.[51] The transformation in the activities and functions of cities also played an important part in this movement. Craft declined in favour of another mode of production: the factory, where large numbers of workers were salaried. On another side, the service sector recruited a growing number of employees. The introduction of a salaried class, the resultant formation of a working class, and the increase in the number of public sector employees and tertiary sector employees gave rise to substantial imbalances that led to a progressive loss in the power of traditional bodies. The disappearance of these last was, it is true, a lingering one;[52] nevertheless, a mass proletariat and a middle class of employees had appeared in most cities by the end of the second half of the nineteenth century. These were new social classes. The former were completely destitute, and their marginalization was stigmatized by the latter through the multiple charitable societies that came into being. In Egypt, the list of "principal inhabitants" and other notables, privately published, well reflected the dichotomy whereby the two worlds were separated. Those mentioned in such publications were first and foremost qualified by virtue of their professional activity. The tertiary sector was heavily over-represented. For Cairo, for instance, an 1896 index shows an exhaustive list of lawyers of foreign nationality, while mentioning only 11 out of the 1,340 grocers then in existence.[53] During this period, the creation of literary circles, historical societies or indeed clubs also reflected the emergence of new social classes distinguished by their practices of sociability and consumption.

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[50] Labaki, *Introduction*, 325.

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[51] Kemal Karpat, "Ottoman Population Records and the Census of 1881/82–1893," *International Journal of Middle East Studies* 9 (1978): 237–274.

[52] For Egypt, see Gabriel Baer, *Studies in the Social History of Modern Egypt* (Chicago and London, 1969), 149–160 and chapter 12.

[53] Jean-Luc Arnaud, "Artisans et commerçants dans les villes d'Egypte, à la fin du XIX^{e} siècle, une source peu exploitée: les annuaires," in *Etudes sur les villes du Proche-Orient, XVI^{e}–XIX^{e} siècle. Hommages à André Raymond*, coordinated B. Marino (Damascus, 2001), 205–206.

Recompositions

In general we may note, during the century under consideration, an overall correspondence between growth in the surface area of cities and growth in their population. This relation does not, however, mean that the new inhabitants—migrants or children—resided in the new quarters. On the contrary, periods of growth corresponded to acceleration in the recomposition of social groups and in activities within agglomerations. From the middle of the nineteenth century on, these recompositions were all the more important in that the modalities of the development of the urban fabric were changing. As the traditional Ottoman city grew in dense and continuous fashion, the opening up of its walls, and, later, the establishment of public means of transportation provided greater growth than ever before, with a far wider extent of land to be urbanized.

In Alexandria and Aleppo, in Bursa and Salonica, the traditional urban fabric comprised a juxtaposition of blocks and parcels, whose size might vary according to a ratio of one to 100. Hence, in one block—between its heart and its periphery—or in one parcel—between its façade and its deepest point—we might find pieces of land with diverse surface areas, values and returns which gave rise to a tight overlapping of activities and to different social groups (figure 4).

From the mid-1830s, and especially from the 1860s on, the importance of the supply of land with a potential for urbanization, and thus of property values, brought about by the obsolescence of the surrounding walls—Ankara did not have one after 1840[54]—resulted in another mode of organization. Lands were no longer divided ad hoc according to the wishes of those who might be able to build. In order to optimize the return and reduce the portion occupied by the road system, property owners pre-empted buyers by dividing their lands into geometrical and regular plots (figure 5). According to this mode of production, the variety and overlapping that had characterized the old fabric no longer existed: each land division targeted a selected, fairly homogeneous category of clients. Whereas, before, difference in the means of candidates to build had been expressed by the size of the parcel—the houses of the rich had been more spacious than those of the poor—rather than by the parcel's location, the abundance of the supply on the property market, higher than the demand, now allowed the development of new residential strategies: the location of plots—with respect to the centre, communications, activities, and so on—was a determining factor in making choices. In this context, social groups organized themselves into new quarters in a manner far more discriminating than in the old fabric.

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[54] François Georgeon, "Du poil de chèvre au Kalpak, l'évolution d'Ankara au dernier siècle de l'Empire ottoman," in Dumont and Georgeon, *Villes ottomanes*, 117.

The property market and the obsolescence of surrounding walls were not the only factors behind these changes. The second half of the nineteenth century was also marked by a movement of industrialization. Factories, sometimes bringing together several hundred workers along with huge machines, could not find, in the old centres, land extensive enough for their purpose or providing sufficiently easy access. They were therefore obliged to settle on the periphery, in zones where property values were relatively low, either because of their distance from the centre or because they were already occupied by activities driving the value down. The Little Sicily quarter in Tunis had multiple inconveniences. It was far from the centre, and it was near the lake, which then served as an outlet for the city's sewage, often making the air in this zone unbreathable. Workshops and warehouses related to port activities settled there at the end of the nineteenth century. It was also a popular quarter, inhabited mainly by a community of Italian origin. Moreover, legislation promulgated during the same period supplemented the tendency to arrange the city by functional zones. Prohibitions on certain practices or certain populations in particular places multiplied. Establishments classified as "unhealthy and dangerous," cafés and drinking places, beggars, prostitutes, etc.—all these were obliged to exercise their activities in restricted zones determined by the legislator.[55] This interventionism probably found its most extreme expression in 1920 in Alexandria, where the municipality decided to deny Bedouins access to the city.[56]

In order better to ensure the management of the city at the end of the nineteenth century, the public authorities (local or national) divided, classified, measured and plotted its various elements. The categories set up by all these things also contributed to reinforcing the phenomenon of segregation, or at least, in the same way as legislation, they determined the use to which each place was put. The setting up of new administrative intra-urban divisions often took the form of an outright takeover by public authorities. Each quarter was subjected to minute scrutiny; after which the administration categorized it according to its morphological, social and economic characteristics, and then accorded it the corresponding rights, means and services. It is noteworthy, for instance, that the drainage project in Cairo at the end of the nineteenth century provided conduits of different capacities for similar volumes of populations, depending on the quarters involved. The inhabitants of the old urban fabric (regarded as indigenous) were supposed to be smaller consumers of water than the inhabitants of more recent quarters.[57]

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[55] For Egypt, see Philippe Gelat, *Répertoire général annoté de la législation et de l'administration égyptienne* (Alexandria, 1908), 2:622–641; for Tunisia, see *Législation communale de la Tunisie. Recueil des décrets et arrêtés municipaux par Joseph Valensi* (Tunis, 1897), 894 et seq.; for Istanbul and other cities of the Empire, see Aristarchi, *Législation ottomane*, 53–54.

[56] Robert Ilbert, *Alexandrie 1830–1930: Histoire d'une communauté citadine* (Cairo, 1996), 504.

Hence, due to the mode of land division, and to legislation and administrative activity, a new form of relation was developed between the composition of the urban space and the division of society. Although old cities were not isotropic—far from it—there was a development from a marked mixing of activities and social groups to specializations that were the outcome of new forms of segregation, even exclusion.

This segregation was first and foremost economic. A testimony to this is the way Jews profited from the new extensions of the cities to leave the quarters to which they had been confined for centuries. By the end of the nineteenth century, there were numerous Jews in the new quarters. It was the rich ones, though, who left the old urban fabrics, abandoning the poor to their original quarters and moving to reside close to other inhabitants, and other national or religious communities, who enjoyed incomes comparable to theirs. It is noteworthy that in Cairo, in the mid-1940s, the Jewish community was fairly dispersed among several quarters of the agglomeration, but that its poorer members still occupied, closely packed and almost exclusively, the quarter of the old city which, a century earlier, had gathered the whole community together.

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[57] Ghislaine Alleaume, "Hygiène publique et travaux publics, les ingénieurs et l'assainissement du Caire (1882–1907)," *Annales Islamologiques* 20 (1984): 151–82.

3. Renewed urban and architectural forms

In all the cities of the Empire, the forms of urban extension changed. There was a development from the city built step by step, in the context of property and real estate markets showing little dynamism, to more open cities and more discontinuous urban fabrics, whose layout led to a network following new rules of organization. Extensions constituted the most visible phenomenon of mutation, but the nineteenth century was also a period of reconstruction of the city itself. If fires were responsible for the destruction of wooden houses in the northern part of the Empire, the southern cities also witnessed an acceleration of renewal in the overall nature of their building, especially with regard to domestic architecture. In Cairo, as in Damascus, most houses were the subject of transformation, heightening, and even reconstruction.[58] Urban landscapes were recomposed through several kinds of intervention; seen in the introduction of new architectural forms on the one hand, and the arrangement of layouts on the other.

New centralities

From 1826, following the military reform and the dismantlement of professional janissary bodies (which, in Aleppo for example, had been at the origin of a number of riots and had turned against the government at the beginning of the nineteenth century), the state built barracks to house the new army bodies raised by conscription. At first the troops were sometimes dispersed among a number of buildings taken up and/or fitted out within the cities. However, depending on the means available, new establishments, and huge four-square buildings arranged around a central yard,[59] were established in the immediate surroundings. In leaving the old urban fabrics and the difficulties of access that had characterized them, these barracks were directly linked to the new roads (and sometimes also railways) in a way that improved the mobility of troops. This position also permitted, simultaneously, the control and defence of agglomerations.[60] By the end of the century, the development of railway networks also had a strong impact on the organization of city suburbs. Railway stations, often monumental, were their most visible expression, but the workshops for machine maintenance, the warehouses for coal and those of establishments whose economic activities were based on opportunities offered by this new means of transportation, often occupied considerable areas at the gates of the agglomerations. Nearer to these old centres, governors' palaces, schools, judicial courts, etc., played an important role in the organization of recent quarters and the designation of new centres of gravity. The development of the higher tertiary sector, reflected in major buildings like big hotels and banks, were also a mark of the new quarters.

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[58] S. Weber has noted that three-quarters of the houses of the old urban fabric in Damascus were partially or totally rebuilt in the mid-19th century and the first decades of the following century. This renewal reflects a strong dynamic. See Stefan Weber, "Images of Imagined Worlds. Self-Image and Worldview in Late Ottoman Wall Paintings of Damascus," in *The Empire in the City: Arab Provincial Capitals in the Late Ottoman Empire*, ed. Jens Hansen, Thomas Philipp, and Stefan Weber (Beirut, 2002), 163; for Cairo, see Olivier Blin, "Le Caire XIX^{e}–XX^{e} siècles. De la fasaha à la sala comme modèles," *Espace centré. Les cahiers de la recherche architecturale* 20–21 (1987): 96.

[59] The seventh regiment of the reformed Ottoman army was stationed in Beirut. In 1853, the first level of a huge barracks (the serail) was built, comprising several thousand

In the old fabrics, the percentage of urbanized area allotted to the road system was very small; generally not higher than a fifth. This small portion was made up of two complementary types of ways: streets and cul-de-sacs (figure 6). The percentage of cul-de-sacs was greater in Arab regions; even so, road networks in Ottoman cities were more disjointed than those of western cities.[61] In the new quarters, streets were not only broad and rectilinear; they were also laid out in such a way as to cross one other, thereby producing a full-scale grid utterly unlike the old fabric, where the number of potential routes from one place to another was always fairly limited. These quarters were often organized around squares that ensured a connection with the older ones. At the end of the 1860s, the municipality of the Pera-Galata quarter in Istanbul launched the initial project of a great square following the recent dismantlement of the walls of the Genoese period, and the opening of a new road in the old fabric, designed to provide passage for the first tramway (with animal traction). This arrangement took the Paris Place de l'Etoile as its model.[62] Some years later, the

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square metres of flooring. It was the first construction of this type in Beirut. See May Davie, *Beyrouth 1825–1975: un siècle et demi d'urbanisme* (Beirut, 2001), 40.

[60] On this subject, see the comments of David, *Alep*, 299.

[61] Pierre Pinon, "Essai de définition morphologique de la ville ottomane des XVII^{e}–XIX^{e} siècles," in *La culture urbaine des Balkans* (Belgrade and Paris, 1991), 147–155.

[62] The places in question are Chichhane Square and Okçu Musa Street. See Zeynep Celik, *The Remaking of Istanbul: Portrait of an Ottoman City in the Nineteenth Century* (Washington, 1986), 72.

municipality headquarters was build at one end of this square, whose perspective it closed off.

Sometimes, gardens supplemented these arrangements, as was the case in Cairo with the laying out of the Azbakiyya Park at the beginning of the 1870s, or in Aleppo with the opening of a large public garden in 1900. In other cities, these walking places and the setting up of new activities adopted more linear forms; such was the case in Salonica, where the embankment, built at the beginning of the 1870s, was more than a kilometre long and brought together most of those establishments symbolizing modernity, such as large shops, cafés, theatres and hotels.[63] In Tunis, too, there was a long avenue which, in the mid-1880s, brought together the same establishments. It did not follow the lakeside, but led to it from one of the main gates of the medina (figure 7).

Connections between recently founded quarters and other quarters were also ensured by the opening up of new roads and by the improvement—widening and alignment—of the older ones. This practice was inaugurated in Cairo by Muhammad {Ali Pasha, who, around 1845, ordered the opening of a street from the west side of the city towards the business centre. This road complemented the one laid out at the beginning of the century by the French army of occupation, between the port (Bulaq) and the city. Succeeding examples were of later date, but, in this sphere too, civic leaders profited from natural disasters. In Bursa, following the 1855 earthquake, the governor ordered the opening of two perpendicular streets designed to connect the commercial and religious centres (the bazaar and the great mosque) with the centre of civil and military power (figure 8).[64] In Salonica, the authorities also profited from the 1890 fire, which destroyed not fewer than 3,500 houses at least, to make the road layout more regular in the ravaged zones.[65] In the cities of the Arab world, where stone buildings resisted fires better than those of the north of the Empire, new streets created by destruction in the old quarters were always the exception.

These various urban and architectural operations resulted in the creation of new centres bringing together most of the administrative services and economic activities linked to modernity. By contrast, important religious sites (around the great mosques) and the traditional trading suqs became old centres, to some extent obsolete.

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[63] Anastasiadou, *Salonique*, 192 et seq.
[64] Saint-Laurent, "Un amateur de théâtre," 103.
[65] Anastasiadou, *Salonique*, 121.

Making property values profitable

The new quarters were not only occupied by establishments of the authorities or those of the economic sectors; the development of urbanization also stemmed from growth of the population. Regardless of how they were produced, recent quarters designed for housing presented, in their turn, strong differences to the old ones. The growth of demand for land in the new centres, on the part of the higher tertiary sector, led to a general rise in property values. It drove proprietors to rationalize the zonal division delivered to the market so as to avoid the formation of enclaves harmful to the optimal realization of these values.

The {Amara al-Barraniyya suburb in Damascus is a good example in this respect. In this quarter organized along one of the city's main exit roads towards the north, the progressive patterning of plots became increasingly regular between the limit of urbanization reached in 1860 and that reached at the beginning of the 1920s. As we move further from the centre, access ways to plots bordering the road became wider and more rectilinear. For each operation parcels followed the same tendency to regularization. They were still divided in such a way as to avoid enclaves (which was not the case in land division prior to 1860), and their width became ever more regular.

The optimization of property revenue was not effected solely through land division. The construction of the first collective blocks was also an important testimony to this. Although this form of dwelling had long been known in Egypt,[66] it had not existed in other cities of the Empire except for travellers, foreigners, and single men. Imposed by the high price of land close to central zones, this type of architecture was at first sometimes hesitant in nature; it was the result of development, by trial and error, on the basis of older types (the khan) rather than stemming from any western influence.[67] However, whatever the mode of housing distribution and division, the first examples of these buildings presented some noteworthy features, being monumental and profusely ornamented. It was as though the features of their composition were intended to compensate for the less valorising nature of the architectural type in question.[68]

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[66] Jean-Claude Garcin, Bernard Maury, Jacques Revault, and Mona Zakariya, *Palais et maisons du Caire, époque mamelouke (XIII^{e}–XVI^{e} siècles)* (Paris, 1982), 175.

[67] Jean-Claude David, with the collaboration of Fawaz Baker, "Élaboration de la nouveauté en architecture en Syrie," in "European Houses in the Islamic Countries," *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1–2 (1994–1995): 50–73.

When interventions were made into the old urban fabric, the economic necessity of reducing the hearts of blocks also led to the formation of new architectural types that were set in place with a view to eliminating unprofitable parts of the land (figure 9), without occupying it more densely than other types. A new division of non-constructed spaces appeared: public spaces were introduced into the hearts of blocks so as to optimize property value. The new generic toponymy—passage, cité, etc.—statutory in Tunis, provided a good reflection of these new forms and new practices.

Quite apart from the architectural interest of these buildings, the construction dates of the first specimens in each city testify to their integration into the new economic and social system developing in the cities of the Ottoman Empire at the time. Coastal cities and, a fortiori, port cities started before the others. Alexandria was probably the earliest in this respect: apartment blocks were being put up there from the mid-1870s on (figure 10). Damascus, on the other hand, was clearly later to develop. The first examples of collective dwellings did not appear before the beginning of the 1920s. Between these extremes, it is noteworthy that the first blocks in Aleppo date from the very beginning of the twentieth century.

From house to apartment block

During periods of accelerating re-composition, the gap between the life span of buildings and transformations in demand in the property field is aggravated. By the turn of the twentieth century, the market was evolving so rapidly that the time spent in constructing buildings could represent a handicap for investors: by the time the work was finished, the architectural type identified six months or a year earlier turned out to be obsolete or maladapted to the market. In this context, those thinking to build, and attentive to possible re-conversions of their property, included particular architectural features. Hence, the new types of building did not aim solely at making property profitable; they also had to be able to adapt to the rapid transformations of the market.

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[68] It is worthy of note that the monumental character of the staircases marks the first blocks in each city: in Alexandria at the beginning of the 1880s and in Damascus forty years later.

The most frequent expression of this was the house-block; it was characteristic of a market subject to sudden and violent variations. This architectural type spread widely in all the cities of the Empire. There were buildings set on parcels whose surface area was no more than 500 square metres. Most often constructed on a base, it comprised two, sometimes three storeys, each arranged in such a way as to form a complete dwelling unit. Stairs opening to the outside on the ground floor serviced each floor. Contrary to the usual design of buildings, the entrance was on the side. On the façade, a few steps and a flight of steps gave direct access to the first level. This double arrangement of features allowed the building as a whole to be used as a villa. Doors separating the stairs of each floor also allowed their attribution to independent family units, or their renting to different families.

Such an organization was, to say the least, ambiguous; thanks to the double entrance from the street and the functional and distributional independence of each floor, it was possible to transform a house into a block and so swiftly adapt the construction to the market and/or social demand. This new architectural type, which appeared in Egypt and in Istanbul at the end of the nineteenth century, was later developed in Aleppo (beginning of the twentieth century), in Beirut a few years later and in Damascus at the start of the 1920s. It corresponds to a short period in which changes in property values, in the demand on real estate and in social practices did not follow the same rhythm, rather presenting major discrepancies. The building's double distributional principle allowed such discrepancies to be managed and arrangements to be made as and when necessary.

Conclusion

With the exception of Egypt, which launched reforms long before other regions of the Empire, the period of large-scale urban change did not begin before the mid-nineteenth century. Hence, in less than three-quarters of a century, cities under the authority of the Sublime Porte were affected by an exceptional wave of transformations. This essay has attempted to demonstrate the point through examples in three fields only. It should be pointed out, however, that changes were no less significant in all other potential fields. During this period, there was a passing from the traditional Muslim city, as defined by A. Raymond,[69] to the modern city. Despite the unity of legislation and of the main modes of exercising power, cities were not affected simultaneously by the reforms. Gaps and accelerations are to be noted. Those cities that played the role of entrance point for merchandise, and for western influence, started before others. Nevertheless, other cities swiftly caught up with them and even passed them. Hence, despite noticeable differences in the potentiality of cities, and in the way reforms affected them, we might consider that, by the eve of the Empire's dismantlement at the beginning of the 1920s, a wave of modernization had passed though the greater part of its agglomerations.[70]

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[69] Raymond, *Grandes villes arabes*.

[70] The Arabian Peninsula constituted an exception to this picture. Even though this region of the Empire was so very extensive, it contained few large cities. In 1950, the most important, Mecca, had fewer than 100,000 inhabitants. See François Moriconi-Ebrard, *Géopolis, pour comparer les villes du monde* (Paris, 1994), 216.

MEDITERRANEANISM: FRENCH AND ITALIAN ARCHITECTS' DESIGNS IN 1930S NORTH AFRICAN CITIES

Mia Fuller

The concept of a typically Mediterranean architecture was first formulated only at the end of the 1920s, by a handful of European architects in colonial North Africa whose notion of Mediterranean architecture was entirely specific to the colonial context, both aesthetically and politically. Evoking North African vernacular architecture rather than European architectural models, they proposed an aesthetic of whitewashed cubes with flat rooftop terraces. Furthermore, their debates were intrinsically political, as the architecture they described was predicated on, designed for, and built in a milieu of unequal relations between European colonizers and subjugated North African populations. In this essay, I describe how French and Italian architects in 1930s Algeria and Libya justified incorporating ornamental and structural aspects of North African architecture into their designs—ostensibly borrowing from "inferior" colonized populations—by attributing "Mediterranean-ness" to these design elements, thus casting their architectural appropriations as a mere continuation of a long history of shared traditions in a common geographical environment.[1] I then discuss the broader historical and political context within which architects made this discursive turn, namely French and Italian national sentiments and policies vis-à-vis the Mediterranean Basin and its territories. I conclude with some considerations of how understanding "Mediterraneanism" as a European invention stemming directly from the colonial experience

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[1] Spanish colonial authorities in North Africa faced the same architectural and rhetorical dilemmas as French and Italian ones, and they resorted to similar design solutions in many instances; but they were less inclined to employ a rhetoric of 'the Mediterranean'. See Antonio Bravo Nieto, *Arquitectura y urbanismo español en el norte de Marruecos* (Junta de Andalucía, 2000). Thanks to Caterina Borelli for obtaining this volume for me.

broadens our understanding of Euro-centric analyses of the city in the Islamic world.

French architects' Mediterraneanism

From its initial occupation of Algiers in 1830, and well into its protectorate in Tunisia beginning in the 1880s, the French government reiterated hallowed forms from the metropole, installing imposing and foreign representative structures such as post offices in colonial cities' centres.[2] In Béguin et al.'s useful distinction, this has come to be known as "conqueror's architecture," in contrast to the more apparently colonized-friendly "protector's architecture" which began to take its place around the turn of the twentieth century.[3] This "protector's architecture," which denoted the (rather specious) difference between outright colonial occupation in Algeria and the protectorates over Tunisia and Morocco, was deliberately syncretistic, making a show of incorporating local decorative elements in European structural models. In the 1920s, then, an ill-defined "neo-Moorish" style of decorating public as well as private-sector European buildings had prevailed in the French Maghrib's major coastal cities for roughly two decades.

Such superficial syncretism reached its fullest development (and greatest critical success) in protectorate Morocco, beginning in 1912. Governor Lyautey's team of architects and planners extended the theretofore-uncoordinated adaptation of local architectural heritage into a sophisticated and well-funded program of government construction.[4] In 1928, one member of the team, architect Albert Laprade, described the "new style" emerging there as a "synthesis of our Latin spirit and love for autochthonous art."[5] His description epitomized many of his late-1920s colleagues' statements regarding both their "Latin" (i.e. European) sensibilities and their decisions to inflect designs with local (i.e. Arab) tonalities; more significantly, it also pointed to a dilemma they all faced, namely, how far to incorporate the non-European into their colonial works?[6] The new name of "Mediterranean architecture," coined very soon thereafter, would encompass both the "Latin" and "autochthonous" architectural traits favoured by European architects—while simultaneously excluding other aspects of the local vernaculars, and relegating those to the category of "Arab" architecture.

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[2] See François Béguin, Gildas Baudez, Denis Lesage, and Lucien Godin, *Arabisances: décor architectural et tracé urbain en Afrique du Nord 1830–1950* (Paris, 1983); Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* (Cambridge and London, 1989); Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism* (Chicago and London, 1991); Zeynep Çelik, *Urban Forms and Colonial Confrontations: Algiers Under French Rule* (Berkeley, 1997).

[3] Béguin et al., *Arabisances*, 11–30.

[4] Following the lines of Janet Abu-Lughod's work, one could view these architectural works as having merely cloaked a politics of apartheid in the guise of an integrated colonial society. See Janet Abu-Lughod, *Rabat: Urban Apartheid in Morocco* (Princeton, 1980).

Modernist architects' theorizations, meanwhile, were gaining a foothold in the French metropole and elsewhere in Europe. Most famously, Le Corbusier's *Vers une architecture* [Towards an Architecture] of 1923 reflected the new ideas of many architects while giving them a distinctive voice. Modernists opposed the re-cycling of historical forms for their own sake; this view applied to Renaissance façades, for instance, but most especially to classical (or neo-classical) styles. Yet they proposed learning "lessons" from Hellenic monuments on account of their "spirit," which they described as perfectly modern in its streamlined simplicity, functionalism and aesthetic purity. While early on, Le Corbusier wrote of the "Hellenic" rather than the "Mediterranean," he had in mind the very same white-washed cubes and rooftop terraces, against backdrops of blues skies and seas and craggy landscapes, to which colonial architects in Algiers began to refer at the end of the 1920s—under the rubric of "Mediterranean." In other words, architects in colonial North Africa were interested in the same formal models, but instead of emphasizing classical referents in their writings, they drew on other aspects of "Mediterranean-ness": history, but also a purported geographic determinism underpinning a timeless universality (a point to which I return below).

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[5] Albert Laprade, "Souvenirs du temps de la guerre, contribution à la future histoire de Casablanca et de Rabat," *Le Maroc Catholique* (September–December 1928): 599, quoted in Jean-Louis Cohen and Monique Eleb, *Casablanca: Mythes et figures d'une aventure urbaine* (Paris, 1998), 150.

[6] For a source advancing the position that architectural syncretism could only benefit French colonizers, see Joseph Marrast, "Dans quelle mesure faut-il faire appel aux arts indigènes dans la construction des édifices?" in *L'urbanisme aux colonies et dans les pays tropicaux*, ed. Jean Royer, vol. 2 (Paris, 1935), 24–25. Also see Émile Bayard, *L'art de reconnaître les styles coloniaux de la France* (Paris, 1931).

To be sure, French architects in Algeria faced a more practical dilemma than theorizers in the metropole. For them, the question of whether to incorporate vernacular features in their colonial architecture was of immediate pragmatic relevance, in a very active building market and a situation of heightened political sensitivity. In any event, they were less inclined than their northern counterparts to discuss architecture in terms of its "spirit." In articles titled "Vers une architecture méditerranéenne" [Towards a Mediterranean Architecture] and published in an Algiers journal for architects and engineers in 1929 and 1930, two different authors acknowledged Le Corbusier's importance by adapting the title of his famous book, but discussed their Mediterranean architecture, in the Algerian context; what its relation to "Moorish" or North African vernacular architecture ought to be; and its differences from Modernist architecture in northern Europe. The first author, R. Du Puy-Lacroix, perpetuated the increasingly obsolete emphasis on neo-Moorish ornamentation and dismissed the "modern" aspects of the local vernacular which some of his colleagues would, on the other hand, praise in short order—summarizing, in effect, the views of "neo-Moorish" designers of the 1910s and 1920s. J. Cotereau, in contrast, set the pattern for appreciative discussions of North African vernacular simplicity, at the same time bringing questions of colonial architecture into dialogue with contemporary Modernist debates.

The "Mediterranean style" Du Puy-Lacroix called for in April 1929 was "an updated descendant of Moorish buildings, the heir to an aesthetic of indisputable charm," yielding "the truly ideal 'home'."[7] In his depiction, this "aesthetic of indisputable charm" stemmed from the decorations typical of opulent, "high" Moorish architecture, rather than the fundamentals of vernacular houses in North Africa, which he did not promote as a useful model for colonial architects to emulate. In fact, although he described his ideal "Mediterranean style" as a "descendant of Moorish buildings," it more closely resembled a familiar French provincial house, with added exotic decorations. The house he proposed should provide for "today's necessities with respect to comfort and hygiene…for, really, our Muslim predecessors [in the colony] understood nothing of the thousand details that make life enjoyable."

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[7] R. Du Puy-Lacroix, "Vers une architecture méditerranéenne," *Chantiers nord-africains* 2, no. 4 (April 1929): 245–247; quotation is from p. 247. I thank Laura Wittman for obtaining articles from this journal on my behalf.

"Comfort" would require added ventilation: the vernacular habit of wrapping the house around a courtyard blocked ventilation, creating "a fetid atmosphere" by allowing humidity to settle. "Comfort" would also necessitate greater privacy than the typical Algerian house could offer, as opening all the rooms onto one courtyard imposed "a promiscuity that is incompatible with our sensitive habits," and increased openness to daylight, as "almost all the [Algerian house's] rooms are dark."[8] In this last connection, he seems not to have been concerned with insulating interiors from the strong sun; instead, he wished for more windows. "[N]othing is more aesthetically pleasing than the dazzling, white [vernacular] house," he conceded, admitting to "admiration in the presence of the Moorish dwelling," but, he added, "the Moorish house is blind. It soon gives a painful impression of infinite sadness, of a hostile mystery, which spoils the pleasure of the eye."[9] To correct this, architects should "animate the face of the Moorish house; great bays, beautiful windows framed by colourful mosaics, will produce the best effect."[10]

Eight months later, Cotereau began publishing a series of articles under the same title, but opposite in orientation: his "Mediterranean architecture" drew directly from the local vernacular. His various discussions of historical styles throughout the Mediterranean Basin ultimately served his specific design agenda, namely that incorporating cornices, porticoes, and flat rooftop terraces—all elements identified with vernacular architecture in Algeria, and having the advantages of protection from strong daylight and heavy rains—was both essential and appropriate for French architecture in the North African colony.[11] Cotereau acknowledged elsewhere that up to a point, some decorative features were worth quoting, such as ceramic tiles and boxed exterior window-seats [*mashrabiyyas*],[12] but these remained secondary, for him, to the local vernacular's structural features.

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[8] Ibid., 246.

[9] Ibid., 245.

[10] Ibid., 246.

[11] Jean Cotereau, "Vers une architecture méditerranéenne," *Chantiers nord-africains* 3, no. 1 (January 1930): 19–21; and 4, no. 4 (April 1931): 381–383.

[12] Jean Cotereau, Jean Murat, Albert Seiller, and Marcel Lathuillière, "La maison mauresque," *Chantiers nord-africains* 3, no. 6 (June 1930): 533–652, described in Cohen and Eleb, *Casablanca*, and in Sherry McKay, "Mediterraneanism: The Politics of Architectural Production in Algiers during the 1930s," *City and Society* 1, no. 1 (2000): 79–102. For this particular point, see Cohen and Eleb, *Casablanca*, 146 and 167.

In addition to the local vernacular's adaptability, Cotereau had another axe to grind: the idea that despite using similar architectural forms (such as white cubes), colonial architects' works were distinct from Modernists' comparable ones. After all, colonial architects' shift from sampling superficial local elements into their designs towards structural syncretisms appeared to be in tune with the views of Modern Movement architects in Europe, who were promoting functionalism, an aesthetic of volumes rather than decorations, and unadorned surfaces. And in a sense, the vernacular turn in colonial architecture drew some validation from its formal correspondence to current theoretical developments. But Cotereau insisted that the new colonial style was anything but derivative, asserting that colonial architects' new works were more appropriate to their setting than Modernists' designs were to Europe—for instance, that flat rooftop terraces made sense for houses on Mediterranean shores, but not throughout Europe. In effect, Cotereau cited Le Corbusier's well-known title only to take the position that despite resemblances between vernacular-inspired colonial architecture and functionalism-dictated northern European Modernist structures, the two architectures stemmed from distinct inspirations.[13] Colonial architects were not only independent from the northern Modernists; they were also more entitled to make use of white, streamlined cubes, as these echoed the local vernacular and were climate-appropriate.

Although Du Puy-Lacroix and Cotereau proposed markedly different interpretations of "Mediterranean architecture," their premises regarding the Mediterranean itself, rather than architecture, were virtually identical. Forecasting descriptions that would continue in this debate through the 1930s, their explanations for the appeal of local architecture (whether in its decorations or Modernist simplicity) rested on self-serving theorizations of the unity of the Mediterranean, based on historical narratives and sometimes, on geographic determinism as well. Du Puy-Lacroix privileged the historical ascendant, broadly invoking Europeans' unfailing admiration for classical ruins anywhere on Mediterranean shores. Cotereau repeated the same tropes, but also noted the history of the Mediterranean Basin's populations, rather than only mentioning the vestiges of their artefacts. For him, the entire history of the Basin could be recapitulated as one of power struggles between

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[13] Jean Cotereau, "Vers une architecture méditerranéenne," *Chantiers nord-africains* 3, no. 3 (March 1930): 219–223; p. 221.

"Aryan" and "Semitic" races.[14] He also described the colonial situation of his day as follows: "the Mediterranean peoples, under the aegis of the Latin [European] nations, now know a condition not unlike that of Roman times."[15] Notably, neither author discussed the recently collapsed Ottoman Empire, despite its five-century-long hegemony; instead, the historic landmarks they alluded to were inevitably classical. Yet, neither leaned toward imitating classical styles; they only made use of them rhetorically to demonstrate the historical and cultural—and Europe-heavy—unity of the region. The appropriations performed by these texts, in other words, extended beyond the architectural: implicitly, they claimed rights over the Basin by excluding from its history any specific genealogies besides the "Latin" one. Cotereau, meanwhile, also turned to geographic determinism, whereby the physical landscape and climate had been decisive in shaping the vernacular models he admired. Generalizing from this notion, he postulated the unavoidable existence of an "architecture of climatic zones." The Mediterranean basin, including all of its shores, was one such identifiable zone: "There is a Mediterranean zone; there must be…a 'Mediterranean architecture'."[16]

Whether they were rooted in historical narratives or geographical generalizations, such theorizations all purported to root colonial designs in ahistorical factors, blurring the intricate and contingent power relations between the French and the Algerians, Tunisians, and Moroccans who had come under French domination. Describing the Mediterranean as a uniform place whose historic and geographic laws determined an essential type of architecture, architects sidestepped discussions of the fact that they were appropriating the vernacular architecture of subjects who were supposed to be less "civilized" than themselves. In sum, the practical question of selecting architectural preferences was relatively simple, but the political question of justifying using certain architectural approaches required rhetorical innovations to rename the "Moorish," or North African, vernacular architecture as "Mediterranean." In the series I have described thus far, Cotereau downplayed the "Arab-ness" of the local vernacular, emphasizing instead the traits that made it more generically "Mediterranean." But in mid-1930—as his series on

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[14] Jean Cotereau, "Vers une architecture méditerranéenne," Chantiers nord-africains 3, no. 2 (February 1930): 117–120; p. 117.

[15] Jean Cotereau, "Vers une architecture méditerranéenne," Chantiers nord-africains 2, no. 12 (December 1929): 679–681; quotation is from p. 681.

[16] Ibid.

Mediterranean architecture was being issued—he also published an article on "the Moorish house," in the same journal. Making exactly the same design point, namely that the local vernacular was adaptable to modern sensibilities, his vocabulary here acknowledged that the praiseworthy usefulness and simplicity of the local vernacular was tied to its immediate source, the Arab population of Algeria:

> The Arab villa presents the most curious similarities to the modern villa. The desire not to display wealth [among Arabs] has produced the same results as the taste for simplicity [among architects]. Both types of villa amount to juxtaposed white cubes… In both cases, a terrace crowns the building.[17]

Even more significantly, he asserted: "what we [architects] can imitate in the so-called Moorish house is what it has retained of [its] Roman [heritage]."[18] In clear evidence here is the slippage in Cotereau's (and subsequent architects') historico-ethnic arguments, splitting the local vernacular into desirable traits to be appropriated—and renamed as "Mediterranean," i.e., Roman or Latin—from the residue of this split, namely the traits of "Arab" houses that French architects did not wish to imitate, such as humidity or lack of privacy. The semantics of "Mediterraneanism" were especially powerful insofar as they disguised this appropriation, making it seem a mere reclamation of something that belonged to Europeans a priori, by virtue of its ultimate "Romanness" or "Latinity." In Cotereau's other line of argument, the geographic, architects' appropriations were bolstered by the further claim that in any case, it was not the Arabs who had made such pleasing houses; it was the climate. Both the historical and geographical lines of this two-pronged argument allowed architects, in Laprade's terms, to synthesize "[their] Latin spirit and [their] love for autochthonous art," while eliding the Otherness of the Arab vernacular. In the succinct words of Sherry McKay, "What had once been the indigenous house had become its opposite, the Mediterranean house seemingly liberated by modern techniques."[19]

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[17] Cotereau et al., "La maison mauresque," 538, as cited in Cohen and Eleb, Casablanca, 195.

[18] Cotereau quoted in Jean-Jacques Deluz, "Quelques réflexions sur Le Corbusier et l'Algérie," in La Méditerranée de Le Corbusier: Actes du colloque international 'Le Corbusier et la Méditerranée' à Marseille, les 24, 25, et 26 Septembre 1987 (Aix-en-Provence, 1991), 23–48; p. 38. Deluz does not provide the source, but I presume that he draws here on Cotereau et al., "La maison mauresque."

Shortly after these publications, Le Corbusier visited Algiers for the first time, in 1931. He met with cold or ambivalent responses on the part of local architects[20]—who, after all, built far more than he did, and probably did not relish outsiders' instructions on Modernism. Nonetheless, it was on this occasion that Le Corbusier "discovered" the Mediterranean generality of the white cubes he had been describing, and his later theorizations would lean more toward "the Mediterranean" and less toward the strictly Hellenic or "Latin."[21] Notwithstanding Cotereau's arguments that Mediterranean architecture was distinct from Modernist architecture, some Modernist architects would continue to claim through the 1930s that Modernism was ultimately Mediterranean.[22]

Italian architects' Mediterraneanism

Italian Modernist architects' theorizations of their architecture in Libya resembled French architects' discussions of colonial styles in Algiers in nearly every detail. Tripoli and Benghazi had acquired numerous constructions in a reckless neo-Moorish idiom since the beginning of Italian occupation in 1911–1912. A handful of Italian architects began to theorize a Mediterranean, modern, colonial architecture based on the local vernacular only shortly after their French counterparts did, in 1931.[23] They, too, described the local "Arab" vernacular as fundamentally "Roman" or "Latin," consonant with the most modern of sensibilities, and shaped by the climate.[24] In some respects, their arguments differed from those of the French; they did not, for instance, always deny the role of Ottoman architecture in shaping the local architecture they wanted to emulate.[25] But regardless of these occasional differences, like the French architects of Algiers, they used claims of historical precedent and geographical, climatic unity to affirm their right to use local vernacular models without acknowledging any intellectual or aesthetic debt to the colonized populations.

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[19] McKay, "Mediterraneanism," 88.

[20] Deluz, "Quelques réflexions."

[21] Le Corbusier eventually included "Latin" tropes in his discussions, as in Le Corbusier, "Esprit grec Esprit latin. Esprit gréco-latin," *Prélude* 2 (15 February 1933): 1–2. On a different note, the encounter between this Modernist architect and North African colonial territory is but one instance of an observation that has not been made often enough: that the development of 1930s modernism cannot be fully understood without taking into account Modernist architects' awareness of colonial vernaculars. For a discussion of such connections, see Brian L. McLaren, "*Mediterraneità* and *modernità*. Architecture and Culture during the Period of Italian Colonization of North Africa" (Ph.D. dissertation, Massachusetts Institute of Technology, 2001).

[22] For example, see Erich Mendelsohn, "Il bacino mediterraneo e la nuova architettura," *Architettura* 11, no. 2 (1932): 647–648.

[23] Government-commissioned ornamental syncretisms continued for the rest of Italian rule, however: see Krystyna von Henneberg, "Imperial Uncertainties: Architectural Syncretism and Improvisation in Fascist Colonial Libya," *Journal of Contemporary History* 31 (1996): 373–395.

At first glance, one might wonder whether Rationalist (i.e., Italian Modernist) architects simply plagiarized their French counterparts, so closely did their writings parallel the ones already described. But their texts were derivative precisely because Italian architects were intent on reclaiming what they saw as Italy's architectural "primacy" in the Mediterranean Basin from the French, who had usurped it. Especially in light of the accentuated nationalism that dominated Italy under Fascist rule (1922–1943), French appropriations of "Romanity" or "Latinity" in their architectural rhetoric rankled some Italians. In their view, Gauls and Franks— ancestors of the French—had merely been absorbed by the Roman Empire through conquest, whereas Italians were its direct descendants. Following this train of thought, Italian architects were more entitled than French ones to appropriate "Mediterranean" architecture. Italian architects' elaborations on the subject were thus intended to reply to those of French colonial architects by reiterating their same arguments, but in an Italian key. Rationalist architects sometimes collaborated with French Modernists;[26] but they were always in competition with them, aiming to re-appropriate the rubrics (Roman,

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[24] See Silvia Danesi, "Aporie dell'architettura italiana in periodo fascista—mediterraneità e purismo," in *Il razionalismo e l'architettura in Italia durante il fascismo*, ed. Silvia Danesi and Luciano Patetta (Milan, 1976), 21–28; Mia Fuller, "Building Power: Italian Architecture and Urbanism in Libya and Ethiopia," in *Forms of Dominance: On the Architecture and Urbanism of the Colonial Enterprise*, ed. Nezar AlSayyad (Aldershot, 1992), 211–239; Brian L. McLaren, "Carlo Enrico Rava—'mediterraneità' and the Architecture of the Colonies in Africa," *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 15–16, nos. 1–2 (1994–5): 160–173; and McLaren, "*Mediterraneità*."

[25] E.g., Pietro Romanelli, "Vecchie case arabe di Tripoli," *Architettura ed Arti Decorative* 3 (1924): 193–211, see p. 193.

[26] Benedetto Gravagnuolo, "Les liaisons indicibles—Le Corbusier et les intellectuels italiens," in *La Méditerranée de Le Corbusier: Actes du colloque international 'Le Corbusier et la Méditerranée' à Marseille, les 24, 25, et 26 Septembre 1987* (Aix-en-Provence, 1991), 187–199.

Latin, Mediterranean) under which the French had already begun to assimilate various aspects of the Arab vernacular into their designs. The scope of colonial-architectural rhetoric, in other words, extended well beyond the colony itself: it served nationalist rivalries among colonizing nations as well.

While French architects identified with a putative Latin spirit, then, Italian Rationalists strained to make a claim to prior rights over this "spirit." The most prolific of Italian colonial-architectural theorists, Carlo Enrico Rava, initiated the position thus in 1931:

> We are the fated, centuries-old vessels . . . of this Latin spirit that Le Corbusier cannot get away from, this eternal Latin spirit that is returning to invade Europe: from our Libyan coasts to Capri, from the Amalfi coast to the Ligurian riviera, a whole vernacular architecture that is typically Latin and belongs to us, that is without age and yet is extremely Rational [functional, modern], that is made of white, smooth cubes and large terraces, that is Mediterranean and solar, seems to be showing us the way to retrieve our most intimate essence as Italians. Our race, our culture, our civilization both ancient and new, are Mediterranean: thus it is in this "Mediterranean spirit" that we should seek the characteristic of *italianità* [Italian-ness] that is still missing in our young Rational architecture, especially since this spirit certainly warrants re-conquering [our] primacy.[27]

This compact passage corresponded to the tropes of French architects regarding the "Latin spirit," climatic determinism, and white, cube-shaped houses. But it also made the point that "this eternal Latin spirit"—as embodied in vernacular "Mediterranean" architecture—was typical of North African *and* Italian shores, adding further weight to Italian architects' claim over "Mediterranean architecture" as inherently theirs.

Architectural Mediterraneanism in Context

Given that Italian architects' Mediterraneanist theorizations resembled those of their French counterparts as much as they did, it may hardly seem worth discussing them. But examining them against the backdrop of Italy's Mediterraneanist policies highlights the political depths of debates that might otherwise appear to have concerned architecture alone. In comparison to those of French colonialists, Italian nationalist views of the Mediterranean were strikingly self-referential and over-determined: torn between a belief in Italy's inferiority vis-à-vis other European nations and a self-imposed pressure to make it "great" once again, Italian nationalists sought redemption in the prospect of imperialism, no matter how late Italy entered into the "scramble for Africa." Italy had only recently become a unified independent state, in 1861. Shortly after unification, some modest expansionist activities had begun on the shores of the Red Sea, in what is now Eritrea. In the 1880s, Italian politicians had already stressed their goal to expand in the Mediterranean—or as they sometimes referred to it, *mare nostrum* [our sea]—the Mediterranean of their Roman ancestors.[28] This explains, for instance, why some politicians described imperialism in the Red Sea as the principal means to expansion in the Mediterranean, as in the Minister of Foreign Affairs' remark in 1885 that "the key to the Mediterranean . . . is to be found in the Red Sea."[29] Since the opening of the Suez Canal, Italians had an opportunity to carve out some of the Red Sea shores in order to prevent becoming isolated by French and British hegemony. Still, even the Red Sea was not an end unto itself, but a means to self-protection in the Mediterranean.

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[27] Carlo Enrico Rava, "Svolta pericolosa. Situazione dell'Italia di fronte al razionalismo europeo," *Domus* 4, no. 1 (January 1931): 39–44; p. 44.

At century's end, renowned Italian physical anthropologist Giuseppe Sergi elaborated a theory of "the Mediterranean race," setting it apart from the "Aryan," and implicitly granting Mediterraneans (i.e., Italians) equal standing with the northern peoples.[30] As Italians prepared to colonize Libya, comments regarding the inevitability of Italians' "return" to the area proliferated. Most famous, perhaps, is the remark by renowned poet Giovanni Pascoli in a speech he delivered in 1911:

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[28] On Italians' rhetoric of "prior possession" in Libya, see Mia Fuller, "Preservation and Self-Absorption: Italian Colonisation and the Walled City of Tripoli, Libya," in *The Walled Arab City in Literature, Architecture and History: The Living Medina in the Maghrib*, ed. Susan Slyomovics (London, 2001), 121–154; and Mia Fuller, *Moderns Abroad: Architecture, Cities, and Italian Imperialism* (London, 2007).

[29] Camera dei Deputati, "Tripolitania e Cirenaica, parte prima: Precedenti parlamentari (aprile 1881–luglio 1911)," in *La XXIII Legislatura 24 marzo 1909–29 settembre 1913* (Rome, 1913), 1031. Italian interest in "the Mediterranean" did not suddenly emerge in the late nineteenth century; rather, it took on a new character. See, respectively, arguments that the Mediterranean had been at the core of ancient Roman geographies, but that subsequently Italian self-conceptions veered toward "Europe": Roberto M. Dainotto, *Europe (in Theory)* (Durham, 2007); and that the Mediterranean had begun to stand as an Italian allegory for temporality and historical consciousness as early as the sixteenth century: Stephanie Hom Cary, "The Metaphorical Mediterranean: Rhetorics of Temporality in Ariosto and Thevet," unpublished ms., 2003.

[30] Giuseppe Sergi, *Origine e diffusione della stirpe Mediterranea* (Rome, 1895); and his more widely-circulated work, idem, *The Mediterranean Race: A Study of the Origin of European Peoples* (London, 1901).

> We are close [to this land]...[we] have been there before; we left signs that not even the Berbers, the Bedouins and the Turks have succeeded in erasing; signs of our humanity and civilization, signs that indeed, we are not Berbers, Bedouins and Turks. We are returning.[31]

For Italians, then, the Mediterranean was more than a means to conquering distant Mediterranean shores; it was portrayed as a means of (re-)gaining some measure of national pride.[32] The rhetoric of 1930s Italian colonial architects—in a political climate in which design and Fascist institutions were intertwined, and architects fought among themselves for the patronage of the regime—must be seen in this light.[33] It was virtually inevitable that Rava would frame his argument in terms of the re-conquest of primacy—an architectural "re-conquest" that echoed, derived from, and shored up a political one. The (re-)appropriation of architectural tropes—from the colonized and from the French to boot—was but one facet of Italians' struggles to (re-)appropriate parts of the colonial world, making Italy all the more legitimate as a modern state.

Long before Italians had the opportunity to do the same in Libya, French scholars and politicians had ideologically appropriated Roman remains in Algeria, imbuing themselves rhetorically with the aura of Empire.[34] Typical is a comment Lyautey made in 1924:

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[31] Giovanni Pascoli, *Patria e umanità. Raccolta di scritti e discorsi*, 3d ed. (Bologna, 1923), 234–248; quotation is from p. 243.

[32] A political scientist drew this same contrast in the late 1930s, specifying that Italians alone (among European powers) saw the Mediterranean as an end unto itself: Elizabeth Monroe, *The Mediterranean in Politics* (New York, 1938), 1, 90, and 143.

[33] The literature on the "Fascistization" of 1930s Italian architecture is vast; see especially Diane Ghirardo, "Italian Architects and Fascist Politics: An Evaluation of the Rationalist's Role in Regime Building," *Journal of the Society of Architectural Historians* 39, no. 2 (1980): 109–127; Giorgio Ciucci, *Gli architetti e il fascismo. Architettura e città 1922–1944* (Turin, 1989); Fabrizio Brunetti, *Architetti e fascismo* (Florence, 1993); and Paolo Nicoloso, *Gli architetti di Mussolini. Scuole e sindacato, architetti e massoni, professori e politici negli anni del regime* (Milan, 1999).

[34] Patricia M. E. Lorcin, "Rome and France in Africa: Recovering Colonial Algeria's Latin Past," *French Historical Studies* 25, no. 2 (Spring 2002): 295–329. For the complementary move of envisioning the Algerian desert as an invitation for colonial intervention, see Diana K. Davis, "Desert 'Wastes' of the Maghreb: Desertification Narratives in French Colonial Environmental History of North Africa," *Cultural Geographies* 11, no. 4 (2004): 359–387. It is also worth noting that before non-Italian powers

> [H]ere, in North Africa, we find everywhere the traces of Rome beneath our feet: which proves that we belong here, in the front lines of civilization.[35]

Yet although military and commercial activities had brought the French to the Mediterranean over the centuries, it was not until the nineteenth century that a notion of the "Mediterranean" as defined by a specific historical configuration as well as climatic unity, came into discursive and ideological play, "becom[ing] a stake that gives rise to enterprises of appropriation."[36] Rather, it had served as a means to an end, yielding colonial acquisitions and trade possibilities.[37] Only in the early decades of the twentieth century did the Mediterranean—or the "Latin sea," in French parlance—begin to appear in French intellectual life as an object per se, leading, for example, to the establishment of an *Académie méditerranéenne* in Nice in 1926.[38]

Architectural "Mediterraneanism," therefore, points to far more than a set of design solutions or a haphazard discovery of local vernaculars. In the colonial context in which it was formulated, "Mediterranean" stood for imperial ambitions that competed to recuperate a pre-Ottoman past and legitimize territorial appropriations in a post-Ottoman world, collapsing temporal differences, divergent histories, and current oppressions into an essentialized and determinant place. Just as this ideological "Mediterranean" was a new colonial creation in the modern era,[39] "Mediterranean architecture" was a gloss in French and Italian architectural texts, for colonial-modernist design. In this connection, it is worth noting that the notion of the "Mediterranean," connoting a

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appropriated the legacies of Roman Empire in the nineteenth and twentieth centuries, foreign interlopers had already imbued themselves with the legacy of Rome as the seat of Catholicism: see, for instance, Thomas J. Dandelet, *Spanish Rome 1500–1700* (New Haven and London, 2001).

[35] Hubert Lyautey, preface to Prosper Ricard, *Les merveilles de l'autre France. Algérie—Tunisie—Maroc. Le pays—le monument—les habitants* (Paris, 1924), 2.

[36] Anne Ruel, "L'invention de la Méditerranée," *Vingtième Siècle* 32 (1991): 7–14; quotation is from p. 11. Also see Jean-Robert Henry, "La France et le mythe méditerranéen," in *La Méditerranée en question: Conflits et interdépendances*, ed. Habib El Malki (Paris, 1991), 191–199.

[37] As noted in Monroe, *The Mediterranean*, 90.

[38] Ruel, "L'invention," 12.

[39] As I have remarked briefly elsewhere: Mia Fuller, "Mediterraneanism," in "Presence of Italy in the Architecture of the Islamic Mediterranean," *Environmental Design: Journal of the Islamic Environmental Design Research Centre*, 1990: 8–9.

similar slippage, has operated in Israeli discourses of national origins and architectural debates as well.[40]

Finally, with respect to scholarly analyses of cities in the Islamic world, it is especially worth pointing out that French architects' formulations of "Mediterraneanism" in architecture arose almost simultaneously with French urban historians' original formulations about "the Islamic city," which began in 1928—formulations, one might argue, that amounted to "inventing" "the Islamic city," at least as an ideal-type, in the same way that "the Mediterranean" and "Mediterranean architecture" were coined as modern constructs, respectively, in the nineteenth century and in 1929. At the same time that French and Italian colonial architects—practitioners—were turning to "the Mediterranean" as a way to locate European Selves amid colonial Otherness, scholars developed a new apparatus attempting to isolate the specific aspects of Otherness that made a city "Islamic."[41] Of course, Europeans' understanding of this Otherness devolved from their deep-set beliefs about their own classical and medieval pasts, the latter in particular being used frequently to describe "Islamic" urban elements, such as the importance of guilds or confraternities. Thus here too, it could be argued, Europeans' definition of what was "Islamic" (much like categories of "Arab" or "Mediterranean") was predicated on a complex process of parsing that with which Europeans could identify from that with which they could not. As I have argued elsewhere, in any case, the genealogy of the "Islamic city" debates can be traced in French colonialists' earlier appropriation and adaptation of the Arabic term *al-madînah* (in French, *la médina*). The semantic slippage operating in *la médina*—standing, in turn, as a definition of a morphological unit defined by walled perimeters, and an alternating definition based on the ethnicities of inhabitants—has survived throughout the "Islamic city" debates; in my view, this ambiguity has made it especially difficult to define "the Islamic city" to general satisfaction.[42]

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[40] These authors do not describe Israel as a colonial power, but their works are directly relevant nonetheless: Yaacov Shavit, "The Mediterranean World and 'Mediterraneanism': The Origins, Meaning, and Application of a Geo-Cultural Notion in Israel," *Mediterranean Historical Review* 3, no. 2 (1988): 96–117 and Alona Nitzan-Shiftan, "Contested Zionism—Alternative Modernism," *Architectural History* 39 (1996): 147–180. On the mobilization of "Palestinian" tropes in architectural analyses regarding Israel-Palestine—which are akin to Europeans' discussions of "Arab vernacular"—see Ron Fuchs, "The Palestinian Arab House and the Islamic 'Primitive Hut'," *Muqarnas* 15, ed. Gülru Necipoglu (Leiden, 1998): 157–177.

[41] The *locus classicus* for these debates' initiation is William Marçais, "L'islamisme et la vie urbaine," *L'Académie des inscriptions et belles-lettres: compte-rendus* (Paris, 1928), 86–100.

Today, the idea of Mediterranean architecture is hardly unfamiliar. Coffee-table books on the subject abound, usually portraying rustic villas with curved red roof tiles, climbing vines, and patios—houses closest to a southern European-provincial type, in other words. This stereotypic image appeals to consumers at large as a return to a time-honoured formula for building and "lifestyle," revolving around afternoon siestas and a guilt-free diet. Thus what we now commonly recognize as "Mediterranean architecture" is often different from what those who coined the expression had in mind, namely white-washed cubes with flat rooftop terraces, and vernacular architectures on rocky shores. But on the other hand, many of the terms and categories we take for granted in our scholarship remain deeply rooted in the context of colonial relations.

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[42] I summarize my proposed genealogy of French formulations of "the Islamic city" in Mia Fuller, "The Medina and the Islamic City: Colonial Terms and Postcolonial Legacies," Public Affairs Report 43 (2002), 4:4–6 (http://www.igs.berkeley.edu/publications/par/winter2002/mia%20fuller.htm).

ALGIERS: THE COLONIAL CITY

Attilio Petruccioli

The thirty years that followed the Algerian war have definitely eased the relationship between the two different civilizations that have inhabited the Algerian territory. The new generations consider all of the civil and historical patrimony they have inherited on a same par, without posing themselves any epistemological question, according to a historically distorted way that privileges a certain historical period over another one. Those who are further inquiring into the legitimacy of such an attitude have realized that not only the language, scientific knowledge, the political organization, and everyday habits constitute a civil patrimony, but that a heritage is as well constituted by the physical form of its society, agreeing on the concept that "architecture is the highest expression of civilization."

Far from being a mere "war result," the colonial town is part of collective memory, an important patrimony for its quantitative and qualitative substance to be studied and evaluated in order to define the methodologies for its adequate protection. Such studies should be inclusive, being of fundamental importance to consider not only the noblest historical and artistic heritage, but the house of the majority of Algerians as well.[1] Such patrimony is today in danger for several different reasons, and in need of major and urgent interventions of maintenance and rehabilitation, before the ever-increasing degradation calls for more radical and expensive restoration works. The recent collapses in the Place des Martyrs and in rue Bab Azzoun, and the hurried upkeep interventions in reinforced concrete that have imposed a different technology and distribution, should be sufficient reason for a broader reflection upon the tools and methodologies with which to intervene in the whole historical and architectural patrimony. It must be hereby clarified that it is not possible to promote a rehabilitation strategy extended throughout the city at the expenses of the whole society; consequently, the proposal of the preparation of a typological and technological atlas that both operators and proprietors could easily consult and utilize, seems to be the more coherent solution: the atlas would list and describe the appropriate solutions to a given problem in continuity with the typology and technology of the structure at hand.[2] The study we are proposing would be limited to the task of studying, defining, and cataloguing the complex articulation of the residential types of Algiers, a city that, for its importance, dimensions, and range of constructions, can be considered exemplary for the whole state of Algeria.

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[1] The following notes were prepared during the Course in "Typo-Morphological Analysis" taught by the author in 1989 for the Postgraduate Program "Historical Sites" of EPAU, Ecole Polytechnique d'Architecture et d'Urbanisme d'Alger.

As for the history of urbanism in Algiers, we should refer to the fundamental studies of Lespes,[3] Cresti,[4] Malverti and Picard,[5] reconstructing the evolution of the urban form starting from 1830. The present article will try to outline its most remarkable events and to mention the urban plans that had been most important in the making of the city of today.

We can divide the evolution of Algiers into four principle phases corresponding to important transformations in building types and urban fabric. The first phase started right after the occupation and lasted until 1846, the year of the economic crisis that caused the departure of one fourth of the colonialists from Algiers, and that continued in inertia until the year 1854. Interventions were limited to a restructuring of the existent urban fabric, with its climax in the remodelling of rue Bab Azzoun, rue Bab el Oued, and rue de la Marine, all converging in a place that, adequately enlarged, became Place du Gouvernement (today's Place de Martyrs). Rue de Chartres and the homonymous square are planned to host part of the commercial activities suppressed in the above-mentioned square. The construction of new walls to surround the city started in 1841, and was completed in 1847. Still in 1841, the military camps were built along the coast. This period is also characterized by the first planning of the suburbs: along rue d'Isly, towards the actual Place Abd el Kader and, more slowly, near Bab el Oued, where we should also remember the Bugeaud quarter. The Isly neighbourhood now squeezed between the sea and the new military camps reaching rue de Constantine can but expand on the steep hillsides reproducing the Casbah's typical morphology. It is worth mentioning the Guiauchain project of 1848, that was planning further demolition of the Turkish citadel (unrealized), and the two Boulevards along the ditch, opened one after the other. During a period of inactivity from 1846 to 1854, some of the main institutional and public structures are built, such as the Préfecture, the Théâtre de l'Opéra (architect Chasseriau), and the Cathedral. Place du Gouvernement is finally completed after the demolition of the Djenina.[6]

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[2] Examples of typological atlases do not exist. Cfr. R. Panella, ed., Prontuario del restauro. Indicazioni per gli interventi di restauro edilizio nel Centro Storico di Pesaro (Pesaro, 1980). For technological aspects only, yet with obvious typological implications, see the more recent: Ufficio Speciale per gli Interventi sul Centro Storico, Manuale del recupero del Comune di Roma (Roma: DEI, 1989).

[3] See: R. Lespès, Alger: Etude de Géographie et d'Histoire urbaines (Paris: Alcan, 1930); for a description of the city in the first 25 years of the nineteenth century, see also: P. Boyer, La vie quotidienne à Alger à la veille de l'intervention française (Paris: Hachette, 1963).

[4] F. Cresti, "Algeri dalla conquista francese alla fine del Secondo Impero," Storia Urbana 35–36 (April–September 1986): 41–76; F. Cresti, "Alger 1830–1860: l'affrontement entre les deux villes," Urbi 6 (1982): 22–23.

[5] See: X. Malverti and A. Picard, "Dalla città indigena alla città europea: il servizio del genio e la ristrutturazione degli insediamenti in Algeria (1830–1870)," Storia Urbana 35–36 (April–September 1986): 3–40.

The second phase, from 1854 to 1881, is characterized by a new wave of building activity, especially in the area of the Mustapha (to be mentioned are the two projects for Napoléonville by Chasserieau, and the new development by Vigoroux and Caillat). The Casbah's fabric is cut by the opening of rue de la Lyre that will remain unfinished. The two visits by Napoleon III in 1860 and 1865 fostered the construction of major infrastructure, in particular along the seafront with the colossal work of the Arcades opened onto the new Boulevard de l'Impératrice. From 1870 to 1881, a period of building inactivity coinciding with the European wars, the blocks begun during the preceding phase were finally completed. The Plan d'Alger of 1880 already shows the ramp of rue de Constantine (now Boulevard Ben Boulaid), and the two Boulevards Gambetta (today's Ourida Meddad) and de Verdun (now Hadad Abderrezak) to be constructed on the ramparts, except the first still not surrounded by buildings. Place de la République was finally completed; construction was started in the neighbourhood around the Palais de Justice, and two blocks in the neighbourhood around rue d'Isly have reached past Place Abd-el-Kader up to rue Pélissier (today's rue K. Khaldoun); rue Joinville (now Oulhadj Amrouche) becomes a real "urban canyon" perpendicular to rue d'Isly until it meets the sea.

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[6] On the colonial politics of Napoleon III, see: A. Julien, *Histoire de l'Algérie contemporaine* (Paris: PUF, 1979), chapter 8: 388–452; on Boulevard de l'Impératrice, the most important infrastructure, see: F. Cresti, "The Boulevard de l'Impératrice in Colonial Algiers," in "Maghreb, from Colonialism to a New Identity," *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1 (1985). On the influence of the project of Chasseriau on the Plan Obus by Le Corbusier (1930) see: R. Cozzolini and A. Petruccioli, "Algiers. Le Corbusier. Algiers," ed. Giancarlo De Carlo, *Spazio e società* (Milano) 4, nos. 15–16 (1981): 104–115.

Among the most interesting works of "Embellissement," the waterfront of the Arcades des Anglais in Algiers, designed by the engineer Charles-Frederic Chasseriau in 1860–66, is the most representative project of the French city; it is also the most representative of the way to solve the first of the differences in level on which the city lies. The project, stemming from the need to connect the urban fabric to the new port that had been recently enlarged, definitively modifies the image of the seaside city, creating a new image through which the significant heights and the overall form of a city strongly bound to the place on which it rises come together. If the Turkish city, placed on a higher level, had until this time defined for those who arrived from the Mediterranean a closed and quite austere image of Algiers, the European intervention changes the relationship of the city to the sea, completely opening up the main views with the introduction of views on different levels.

Of the three important jumps in level that define the orographic change of Algiers (those of +20 m, +50 m and finally +100 m), that of the Arcades des Anglais is the first and most important for its dimension and project resolution, which resolves the city's connection to the sea and its direct confrontation with the port and maritime life. The Arcades des Anglais, in fact, define the new base of the city that evolves with different forms at +50 m, the height of the Turkish city and that of +100 m, location of the fortified kasbah.

The waterfront of Algiers, shaping an orographic jump of 24 m, connects the administrative and institutional city with the area of the port and rail infrastructures of the port toward which it faces, constituting the visual and mediating support between the nineteenth-century colonial city placed on a higher level, and the maritime city at sea level.

The theme of the base is resolved through an open series of arcades of a giant order and singular organization on various levels. This is both a road at the level of the coverings, a dwelling for fishermen at the intermediate level, and commercial activity at the level of the port. One of the most interesting aspects of this intervention is in fact that of moving back the new sea level of the city higher through the raising of the road level up to the level of the official buildings.

Along that elevation, realized almost as if it were an important urban "aqueduct," is the most important vehicular artery of the city: the Boulevard de l'Imperatrice, thus named only temporarily, becoming after 1870 Boulevard de la République and finally Boulevard Che Guevara. This, defined by Morton Peto, in the original drawing connected Bab Azoun to the Gate of France, which corresponded to the antique gate of the Turkish city. This is an important connection road today for the city, but it is also the site of the administrative buildings and the headquarters of the most important institutions of the city, and also the junction in which the various urban and extra-urban transports are conveyed. This route, continuous for almost its entire length, has some points of discontinuity, like that of the area of the Mosque of the Fish Market, realized through monumental flights of steps and the interruption of the continuity of the arcades. The project of the Arcades, in addition to constituting a foundation of forms and measurements proportional to the length of the sea-front of the city, is not only "façade," but also a building, a container of different functions. This, if need be, contains monumental stairs, like elevators that connect the level of the port with the level of the Boulevards, as well as the houses of the fishermen, distributed according to a gallery typology and located at an intermediate level.

The building, in all its complexity of levels, was a clear formal archetype for the design of the Obus plan drawn up by Le Corbusier in 1932. Even if such a relationship has been little scrutinized, in reality it is very strong, particularly if one thinks of the building-aqueduct highway, introduced by Le Corbusier and always considered an original idea, but that, in fact, finds its direct reference in the work of Chasseriau carried out about seventy years before.

During the third phase, from 1881 to 1915, the Casbah is connected to the French city; the Quartier d'Isly is completed until the Forum, a vast space cleared from fortifications; the neighbourhood around the Préfecture is finished. In the Plan of 1895, all the urban fabric around Champ de Manoeuvres seems to be filled all the way to the Jardin d'Essai; the low end of rue Michelet (now Didouche Murad) is now under construction; the city reaches the first slopes of Telemly.

The last phase includes recent history: Algiers develops along the sea-front (its real development axis) and on the hills, especially along the ridges and the sides, before filling the bottom of ravines, such as rue Franklin (now Frères Derraoni) or rue des Frères Khalel.

At this point it is necessary to introduce some fundamental concepts for the understanding of the notion of typological process: the essential element underlying any reading of the urban fabric is the type, definable as a set of features common to a series of buildings of the same function, in a defined cultural area, and built in a defined time. These parameters are fundamental in establishing a general classification a posteriori organized by classes and families, just like in botany, allowing to distinguish a residential building from a special one, or a twelfth century house from one of the fifteenth. But its most important potential lays somewhere else: on one side—in fact, contrary to botany—it is rooted in the civilization that produces it or, in other terms, it is the product of the spontaneous conscience of its people—in the sense that everybody in that particular geographical area shares the same knowledge of what a house is, and what its features and construction technologies should be; in fact, we could say that type "doesn't travel," if not with its people's migration. On the other side, it continuously varies with time, producing a slow layering of its historical strata, as well as with space, through its adaptation to specific contextual/topographical conditions. Thus, the reading of type and its variations goes under the name of "typological process."[7]

The interpretation (or de-stratification) of the process result—the building—is not a simple operation: the layering of successive interventions has encroached and consolidated itself in the same place according to a process that is more similar to a chemical reaction (thus producing a new whole made of singular atoms and molecules) than to the pages of a book (an entity constituted by the union of preordered sub-elements, such as the pages). Therefore, the task at hand is a "reading-project capable to define and classify the main types of a certain historical period: the types that have consolidated and diffused their meteorological, distributional, and technological features, and that are different from those of the preceding types: the study and definition of the domus, for instance, or of the medieval house, or of the linear house (and how the multiple transformations of the row-house in the long-term produced the linear house), as well as the reading of the infinite synchronic variations that are the result of the transformations of the type, the block, and the urban fabric."

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[7] These concepts were systemized by Gianfranco Caniggia; see: G. Caniggia, "Dialettica tra tipo e tessuto nei rapporti preesistenza-attualita', formazione-mutazione, sincronia-diacronia," Studi e documenti di Architettura 11 (June 1983): 25–38. See also: S. Malfroy, L'approche morphologique de la ville et du territoire (Zurich: ETH, 1986), and in particular the chapter: "La notion de processus typologique."

These succinct conceptual definitions are only to explain that the reading of typological processes is an analysis of the evolution of structures considered as a hierarchical ensemble of parts, and how it plays a fundamental role for the understanding of the evolution of built forms. If the city grew in continuity through a series of successive organic developments in order to absorb its population increase, the typological evolution would happen without shocks, and the transition from one main type to another would be accomplished without breaking the continuity. But in reality, the growth of cities resembles more a series of gestations and childbirths: for instance, almost all Italian cities suddenly stopped their development after the plague of the first half of the fourteenth century. Therefore, the growth of the new town over the historical centre and the necessity to adapt construction types to new densities of population, yet without enforcing revolutionary variations in the building activity. In fact, we acknowledge a whole series of synchronic variations in which the type "suffers," adapting itself to an inadequate urban fabric. The studies accomplished on Genoa and Marseille,[8] as well as the ones on the eighteenth-century Parisian fabric such as Les Halles,[9] show a whole set of overhauls of the lots, of vertical additions, of doubling of buildings towards the inside of the lot, of moving of stairways to adjacent vacant lots or in the courtyards. At the same time, the necessity to operate a mediation between users' necessities and the different types brings, starting from the seventeenth century, the new figure of the project designer, who starts stressing the importance of the project on its form: for example, all building remodelling was now designed according to a modular alignment of windows. In the nineteenth century, when towns started growing again, designers were not prepared to face the problems brought by the new dimensions of the urban project. On one side, they referred to former typological repertoires, while on the other they imported foreign types according to the fashion of the time (therefore, according to our preceding definitions, they did not adopt "types," but "models").[10] This new dimension, starting after the French Revolution, made the city expand according to different phases: not capable to understand and reinterpret the complexity and articulation of the local architectural heritage, the nineteenth century architect limits himself to the formal design of the "checkerboard" (yet without any specific orientation) or to the radial plan, and established some extremely elementary hierarchies, such as the location of the main public structures in the city centre. Later on, even the formal layout of the main street network disappears, being reduced to a total abstraction of numbers and standards. The building cluster, once parallel to the street and continuous along the whole perimeter of the block, gradually tends to detach its components, separating them into different independent units. Type, as a consequence, becomes more and more anonymous and undifferentiated. The combination of local features (synchronic variations) and imported models leads to the development of different forms in each European city, in spite of the similarity of their planning methods, construction technologies, and architectural styles, usually referring to the classical repertoire.[11]

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[8] See: G. Caniggia and G. L. Maffei, Il progetto dell'edilizia di base (Padova: Marsilio, 1984); see also: M. Morozzo, Tipologia edilizia, tipologia architettonica: Genova, Marsiglia, Firenze, Roma (Geneva: ECIG, 1988); J. L. Bonillo, Type urbain et types domestiques: analyse architectural des trois fenêtres marseillaises (Marseille: INAMA, 1978).

[9] See: F. Boudon, A. Chastel, H. Couzy, and F. Hamon, Système de l'architecture urbaine. Le quartier des Halles à Paris (Paris: CNRS, 1977).

It is on these general yet fundamental concepts that we are trying to construct a first general hypothesis of Algiers' urban evolution according to phases starting with the conquest of the city.

First of all, we have to take into account an evident hysteresis in its planning and building, which in certain circumstances causes a partial overlapping of different phases: the case of Boulevard Gambetta, started in the 1840's and completed only fifty years later, is symptomatic.

During the first phase, up until 1854, the dominant building activity was limited to the restructuring of the existent fabric. Despite the appearance, French interventions reproduced the functional logic of the old *medina*: the second building on the right-hand side of Place des

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[10] The renown definitions of type and model given by Quatremère are subject to interpretation. See: Quatremère de Quincy, *Dizionario storico di architettura* (Padova: Marsilio, 1985), 273–276.

[11] See: C. Aymonino, G. Fabbri, and A. Villa, *Le città capitali del XIX secolo: Parigi e Vienna* (Rome: Officina, 1975). For the building activity in Paris at the end of the seventeenth century and beginning of the eighteenth, a very important reference is: C. Daly, "Maisons de Paris," in *Revue Générale de l'Architecture et des Travaux Publics* (1859). Daly establishes three categories according to their social function: 1) buildings for the high bourgeoisie; 2) buildings for the medium bourgeoisie; 3) buildings for the wealthier working class and the lower bourgeoisie; for each category he reports the location, distribution, and the principle features in their construction and decoration.

Martyrs, built in the 1850's, is a covered commercial gallery—a common type in nineteenth-century European cities—which reinterprets the layout of an older Turkish bazaar. The new developments aimed to the maximum exploitation of the suburban areas: the block before Bab Azzoun is a real sampling of connections between levels by means of ramps, and corner solutions trying to maintain the status quo; it presents only one formal facade with a portico facing the street—missing a detailed project of the interior distribution, the only restriction was then given by the modularity of the portico—whereas the interior facades were often maintaining the typical aspect of the masonry patio house.[12] The relative flexibility of the "indigenous" house (a succession of aligned rooms without any particular hierarchy distributed around a central court) made the restructuring works easier, while preserving a considerable part of the original typological features. The trapezoidal lots resulting from the cutting out of the original blocks, were now characterized by tiny courtyards along the median wall or more often at the end of the lot, where was also placed a stairway. The building types on rue de Chartres were particularly small, at the limit of any possibility of actually being inhabited: quickly, the small courtyards were filled up, turning into stacked-up rooms without air or light. The situation seemed to be better in Place de Chartres, a perfect square cut out of the former fabric, surrounded by free-standing porticos on three sides. The new urban quarters are built according to a regular grid of dimensions no larger than 20–25 m u 30–40 m, and parallel to the port—today's Boulevard Che Guevara—or rotated of 90 degrees such as in Place du Gouvernement. The functional hierarchy is perfectly defined: the large institutional buildings—such as banks, administration, etc.—are located on the seafront, whereas the Square maintained more of a commercial aspect. The rectangular lots are dominated by the linear building type, organized in four modules with double or triple bodies, and an asymmetric access and vertical distribution directly deriving from a type much diffused in Marseille during the preceding century, although the topography and taxes on real estate were often imposing simpler and more archaic solutions, such as three-module types like the ones of Rampe Rovigo (now Debbih

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[12] It is interesting to compare the facades on rue Bab Azzoun with the facade schemes of Durand. See: J. N. L. Durand, *Leçon d'architecture* (Paris, 1815; reprint Uhl Verlag, 1975).

Cherif) or the redevelopment around rue de Tanger (now rue Chaib). The fabric ending at rue d'Isly was strongly influenced by the local topography that imposed a different articulation of the path system: rue Joinville, for instance, is a pedestrian ramp, whereas rue Mogador (now Hariched Ali), rue Dupuch (Mouzaoui Abdelaziz), and rue Saint Augustin (Ikharioune Tayeb), parallel to the topography lines, and were permitting vehicular traffic. Furthermore, this peculiar condition was requiring a great variation in building types: the sloped ground was impeding the organization according to several bodies, leading to the adoption of more serial schemes with the first two floors against the slope to their back.[13]

Both restructured and new blocks were built according to the French building regulation of 1784; it was prescribing precise proportions between the width of the street and the height of the building calculated at the cornice: 14.62 m for a 9 m width, and 17.54 m for 12 m.[14] Masonry continued to be widely used, usually perpendicular to the direction of the street according to a module of 3.50 m—a small dimension derived from local types reinterpreted by the French construction techniques, as used for the first time in the rehabilitation of small Turkish palaces.[15] The modular grid of the openings is still the main characteristic of the facades—otherwise almost completely sheer—with windows and portals distributed symmetrically and in even number: a horizontal hierarchy indeed, with a strong differentiation between the porticoed base and the rest of the facade. The roof is generally pitched or presents an attic.

The second phase, coinciding with the Haussmanian transformation of Paris, starts in 1854 and lasts for twenty-five years. The developments definitely tended towards the radiocentric form, especially starting from Forum Boulevard Lafarrière (now Boulevard Khemisti), and symmetrically on the other side, north of Boulevard Guillemin (now Boulevard Taleb Abderrammahne). The radial plan increasingly detached itself from the urban block. Large triangular shapes—unusual in the past—started to appear, and were generally characterized by small commercial activities located at the corners (one of the best examples is the small restaurant at the intersection of rue Rovigo and rue d'Isly, a remarkable architectural solution to a level change), or by the lower quality of their construction (such as the Cognon building between rue Dumont d'Urville and rue de Constantine, a composition based on the triangular theme that has a famed precedent in a building by Alessandro Antonelli in Turin, Italy). The cadastral lots divided according to the bisetrice rule[16] took trapezoidal or triangular shapes; yet, what was particularly important is less the shape but the dimension, definitely increased compared to the buildings of the preceding phase. However, it is necessary to underline that we are already in a time of decreased building activity: buildings designed in this period were often constructed during the succeeding phase, therefore according to different standards and codes. During this period, the width of the street is determined according to the Paris building regulations of 1859, confirming the widths of the previous laws but now preferring the 45 degree diagonal in the case of grand boulevards wider than 20 m. In the rectangular blocks around Place de la République (now Port-Said), in the Palais de Justice neighbourhood, along Boulevard Zirout Youcef, etc., "L" or "T" shaped lots are now most frequent, presenting a whole set of variations of triple, quadruple or quintuple bodies depending on what was the best solution for a maximum exploitation of the lot, thus usually leaving a very small ventilation court adjacent to the central stairway. It was not until very late that deeper lots and their variations (such as blocks constituted by only a single lot) appeared for the first time.[17] The interior distribution of the apartments was suffering of arbitrary complications, such as the introduction of the interior design along the

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[13] The organization in double and triple bodies derives from the increase in the depth of the medieval row-houses. Gothic buildings in Bologna reach five successive doubling on the lot, the third generally being devoted to a lighting and ventilation well.

[14] L. Hautecour, "Le permis de construire," Académie des Beaux Arts, 1957–58; for building regulations, see: Recueil des Lettres Patentes, Ordonnances Royales, Décrets et Arrêtes préfectoraux concernant les voies publiques de la Ville de Paris (Paris: Deville and Hochereau, 1960).

[15] See: F. Cresti.

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[16] See: J. Castex, J. Ch. Depaule, and Ph. Panerai, *Formes urbaines: de l'îlot à la barre* (Paris: Dunod, 1980). "The dimensions of the triangular lot—the most frequent ones, indeed—sensibly vary and seem to exclude an optimum subdivision which would have been valid more or less everywhere [...]. On the other hand, that the lot be maintained compact and tends, by its triangular shape, towards minimum width." And furthermore: "As for the rationalization and its corollary—regularity—they must be correctly understood. The triangular contour obviously does not produce inequalities: there will necessarily be acute angles that are very difficult to design, especially for apartments. Finally, whatever one does, the lots will always be different. The idea is not to attain a good English-style uniformity. In many cases one finds large lots in the corners and in the centre of the block. One finds lots crossing through and opening on two streets in the narrowest parts and, beyond widths approximately exceeding 30 m, normal lots opened only on one side towards the street" (31–32).

[17] See: *Recueil des Lettres Patentes*..., op. cit.

45 degree diagonal, and the multiplication of the stairwells, as if the new type aimed to recuperate the lost complexity of the old fabric.[18] All structures are in masonry with stairway at the centre, whereas in totally built-up lots rooms are organized in a line, and the staircase is directly lit from the street. In the triangular lots, the symmetry axis is determining a cut corner, later replaced by bay-windows or balconies. The cut corner plays an important role in the rectangular lots as well, as for example in the case of Place de la République, and especially in rue Boumendjal Ali. The composition of the modular facade shows the symmetry axis, besides an odd number of bays that led to the central location of the portal, and the division in two equivalent parts. At the same time the building type started to detach itself from the urban block. In fact, since it was not advisable to divide the central room in half only because of the symmetry axis, this space was indifferently assigned to one or the other of the apartments on each floor, therefore presenting on each level differences in size that were not perceivable from the outside. The horizontal hierarchy has now became stronger: on one side the moulding artifice strongly separated the mezzanine from the rest of the facade, now even more articulated by the presence of rows of balconies with wrought-iron parapets usually on the third and fifth floor.[19] Decoration is now heavier due to the use of the giant order, cornices, and caryatids that emphasized the bays, creating for the first time very articulated facades. Architectural styles are often mixed with great ease, from the Greek-Roman to the Renaissance, from the seventeenth to the eighteenth century.

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[18] See: F. Boudon et al., Système de l'architecture urbaine. Le Quartier des Halles à Paris, op. cit.

[19] It is interesting to compare the facades on rue d'Isly (now rue Sadaoui M. Seghir) and on the first part of rue de Constantine, with the ones on Boulevard de Sebastopol in Paris. On the new design of the tenement house facades, Hautecoeur writes: "the facades of the tenement houses change during the second half of the nineteenth century. Continuing the 18th century tradition, architects wanted to provide the building of a monumental aspect, and used the ground floor and the mezzanine as a sort of base on which to raise two or three floors of decreasing heights in order to build a rhythmic composition made of pillars and crowned by a heavy cornice supporting the balcony of the last floor. The social transformations and economic necessities determined a shift in the organization of the different floors and in the dimensions of the apartments: since the building now had the same social destination at every level, differences in the design of each floor were no longer necessary. The architects were no longer designing according to vertical orders, but according to horizontal elements: the facade finds its rhythm in the balconies, cornices, etc. often continuing in the adjacent buildings." See: L. Hautecoeur, Histoire de l'architecture classique en France, tome 7 (Paris: V. Freal, date unspecified), 249.

The third phase, after 1881, coincides with the radial developments on the hillsides, presenting an articulated path system to connect different altitudes. Diagonal cuts are frequent, like rue Addoun Ahmed, rue Arezki Hamani, rue Ferroukhi Moustapha, and Boulevard Mohamad V, generating large triangular and trapezoidal lots. Their size became even larger, yet often because of arbitrary irregularities. The building type is characterized by two rows of aligned rooms on the two facades, and two rows of secondary rooms towards the interior, lighted and ventilated through the central body where light-wells and stairways were also provided. One of the more interesting buildings of this period is at the intersection between rue Chaib Ahmed and rue Boumenjel: a trapezoidal lot with at the centre a small courtyard covered by a skylight where a complex vertical system made of cantilevering ramps was leading to the first level, from which normal stairways were then taking to the upper floors; on each landing there were two apartments with rooms distributed along a corridor, thus favouring the location of the largest apartments on the street side; its extremely rich decoration suggests the high bourgeois origin of their first inhabitants.

This phase was following the French building regulations of 1884 that, without changing the maximum height of the cornice, were allowing gaining two floors thanks to a much steeper pitched roof.[20] A remarkable change was represented by the possibility of extending out of the facade: the cut corner is replaced by any sort of rotunda or bay-window (corresponding to the most important room in the apartment) that, with its plastic effect on the facades, were simultaneously increasing the view onto the street, and the volume of the building. Very long facades were designed emphasizing hierarchy in the composition—for instance the rectangular bay-windows in the middle of the facade, establishing a peculiar rhythm that was decomposing the sheer surface otherwise only characterized by the regular grid of the windows. Its examples are innumerable: enough to mention the building near the Saint-Augustin church and the building at the intersection between Boulevard Khemisti and rue Emir el Khettabi. The horizontal hierarchy is now attenuated, being all floors of the same height, and a strong vertical modulation made of cornices and plastic decorations starts to appear. After 1884, the simple grid of the openings is not in use anymore, and after 1902 we can observe a modular division of the windows, now protruding out of the facade announcing the upcoming of the Art Nouveau. In this period the separation between type and facade is definitively accomplished: from the outside it is not possible to recognize the apartments' distribution, nor their rooms or functions. Finally, towards the end of the century it is important to mention the ever-increasing adoption of stylistic elements borrowed from the "Arab" architectural language and freely mixed with the colonial vocabulary. Sometimes discrete yet interesting designs are borne out of such combination, especially in corners' solutions: enough to mention the corner building at the intersection between rue Ben M'hidi and Boulevard Ben Boulaid, and the Garcia building in front of the Aletti Hotel.[21] With the exception of certain elements drawn from the Modern Movement, the twentieth century architecture shows constant typological references to the former century; nonetheless, it accelerated the process of desegregation of the continuous fabric through the ever-increasing detachment of its architecture, now become object alienated from its context, and the reduction of urbanism to a set of standards. In fact, the separation between building and street continued for twenty years thereafter, coinciding with the "revolutionary" battle of the Modern Movement and Le Corbusier.

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[20] See: Aymonino, Fabbri, and Villa, op. cit.

Thus, during the fourth building phase, the suburbs of Algiers were more and more based on a natural fabric, on curvilinear paths, and on irregular lots in which curves were interrupted by segments which made buildings parallel to the street more and more difficult to construct, and favoured the detachment and isolation of the row-houses in different units. Every element took its novel independence as a chance to differentiate itself from the others, starting a never-ending game resulting in the invention of the banal. Paradoxically, to the most absolute typological uniformity derived from the universal adoption of the linear type, the modern architect reacted with a free treatment of the facade that bordered on anarchy. Bay-windows, balconies, loggias, protruding and receding sections became totally detached from the type they were applied to, and became merely part of a composition game in the best of cases to be seen in relation to urban décor.[22]

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[21] In general, see: F. Beguin, *Arabisances* (Paris: Dunod, 1983); on Algiers see: X. Malverti, "Alger, Méditerranée, soleil et modernité," in *Architectures Françaises Outre-mer* (Liege (Belgium): Mardaga, 1992).

[22] On modern architecture in Algiers, see: J. J. Deluze, *L'urbanisme et l'architecture d'Alger. Aperçu critique* (Algiers: OPU; Liege: Mardaga, 1988).

The proposed scheme, summed up in the last table, is a first attempt of a work in progress in which building types will progressively find their place. It can also be modified in order to receive the variations and the complexity of a corpus of buildings which count among the most fascinating of the Mediterranean area.

Postscript

The scheme allows to reconstruct the typological process of Algiers' tenement houses starting from 1830, being the chronological function on the x axis divided in four phases (nos. 1.2.3.4) and the scale function on the y-axis (letters A.B.C.D.E.F.). Variations and the relationships between the different scales are to be easily interpreted following the text.

All surveys, drawings, and photographs by the author.

B. THE MODERN CITY

CASABLANCA: THE CITY IN THE ISLAMIC WORLD

Jean-Louis Cohen

Casablanca lies outside the polygon of centres in which Morocco's destiny was played out up to the nineteenth century. Places of trade like Tangier, Tétouan, or Mogador, and imperial cities like Fez, Marrakesh, Rabat, or Meknès, formed a network whose configuration and hierarchy were transformed by the rise of Casablanca. The meeting of populations and the fruitful cooperation of businessmen, speculators, professionals and enlightened bureaucrats made it the melting pot of a modern culture. At the same time, it has remained a constant theatre of conflict between national groups, social classes, and political forces. Casablanca shows the contradictions of its position as the main port of modern Morocco, the luxury and refinement of its bourgeoisie existing side by side with the wretchedness of those transplanted from the countryside. It has remained the cradle of insurrections and popular movements, just as it was during the struggles for Independence, and control of it is the subject of sharp political confrontations. It is the centre of mass culture, beginning with its written and audio-visual media. In the field of contemporary architecture—and despite the vigour of the scenes in Rabat or Marrakesh—it is the recipient of the abundant production to which industries, banks, and private promotion give rise.

The very name of the city preserves the legendary resonances of the first times of the French conquest. A city of adventures—"strange and troubling," according to a popular song, and almost disreputable in literature—colonial propaganda marked it down as a place of innovation. The work of historians has validated this dimension, to the point of creating from it a kind of second or third generation myth.[1] Its development has been contemporary with the rise of a major illustrated press and of the cinema, and this explains its rapid celebrity. From 1907 on, with the operators of Lumière, the cinema was to endow Casablanca with a fame it positively snatched when Michaël Curtiz made (in Burbank) his politico-sentimental film.[2] In the novels set there, though, the city is presented rather as a perilous field of manoeuvres in the fields of real estate and finance.[3] In accounts published since 1980, it has tended to become once more a place of hard-edged intrigue or a theatre for reminiscence.[4]

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[1] This essay is based on research conducted with Monique Eleb and essentially brought together in Jean-Louis Cohen and Monique Eleb, *Casablanca, mythes et figures d'une aventure urbaine* (Paris: Hazan, 1998); English version, *Casablanca: Colonial Myths and Architectural Ventures* (New York: Monacelli Press, 2002). In a more contemporary perspective, a concentrated treatment may be found in *Casablanca, portrait de ville* (Paris:

Casablanca's literary fortune is just one aspect of its lustre over the first half of the twentieth century, when the modernization of colonial policy, and of French society, began to make its appearance there. The military conquest was, it is true, followed by plundering of the land, economic domination and a repression continuing up to the end of the Protectorate that was in place from 1912–1956. Yet, at the same time, Casablanca condensed all the experimentation brought about by Hubert Lyautey, the inspiring force behind the conquest and the first French Resident-General. To the Algerian model, which was based on extensive destruction of the pre-colonial culture, he opposed the preservation of old cities and support for crafts. Above all, he gathered around him the most advanced experts in the juridical, economic and cultural fields, with a view to making Morocco, and Casablanca, a "school of energy" able to serve as a model for a French renascence.[5]

Institut français d'architecture, 1999). Finally, a detailing of the contemporary city, quarter by quarter, constitutes the main thread of *Les mille et une villes de Casablanca* (Paris: ACR Édition, 2003).

[2] To Curtiz's film *Casablanca* (1942) may be added the parodies *A Night in Casablanca* (Archie Mayo, 1946) and *My Favorite Spy* (Norman Z. McLeod, 1952), and also *Le Roman d'un spahi* (Michel Bernheim, 1936), *Les Hommes nouveaux* (Marcel L'Herbier, 1936), *La Môme vert de gris* (Bernard Borderie, 1953) and *Casablanca, nid d'espions* (Henri Decoin, 1963).

[3] The chief best-seller would be Claude Farrère, *Les Hommes nouveaux* (Paris: Flammarion, 1922). See also: Émile Nolly, *Le conquérant, journal d'un 'indésirable' au Maroc* (Paris: Calmann-Lévy, 1915); Marcel Frager, *La ville neuve, odyssée d'un écumeur* (Paris: Ollendorf, 1924).

[4] The first of these is exemplified by Tito Topin's novels *55 de fièvre* (Paris: Gallimard, 1983) and *Piano Barjo* (Paris: Gallimard, 1983). The second may be found in Michel Chailloux, *Mémoires de Melle* (Paris: Seuil, 1993), and, indeed, in François Salvaing, *Casa* (Paris: Stock, 2003).

[5] Alfred de Tarde, *Le Maroc, école d'énergie* (Paris: Plon, 1923); Paul Rabinow, "Techno-Cosmopolitanism: Governing Morocco," in *French Modern, Norms and Forms of the Social Environment* (Cambridge, MA, and London: MIT Press, 1989); "France in Morocco: Technocosmopolitanism and Middling Modernism," *Assemblage* 17 (April 1993): 52–56; Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism* (Chicago: University of Chicago Press, 1991).

Urbanism, developing practice, was naturally one of those disciplines to which Lyautey turned and on which he based his propaganda. In 1929, the Parisian publicist Léandre Vaillat, there by invitation of the Protectorate, pointed out that "what is not allowed according to Parisian proportions, on Parisian soil, is here on a vast scale on the rock of Casablanca," where regulations and projects were actually ahead of these things in the metropolis.[6]

The image of the "new French city," attached to Casablanca for 45 years, shatters when we examine the reality of its population—this makes it quite different, for instance, from Algiers. When Morocco regained its independence in 1956, Casablanca was, half a century after the 1907 landing, still characterized by the presence, alongside the French (the majority Europeans), of populations of highly varied origin—Spaniards, Italians, and, to a lesser extent, Portuguese, Russians, Poles, Swedes, British, Swiss, and Americans, especially after the Second World War. The French, already acclimatized to North Africa, the Sicilians, and the Andalusians passed on new tastes and habits to the ex-metropolitans. A city-wide construction site opened up that was common to European professionals (engineers, architects, or landscapers) and to Moroccan master-craftsmen (masons, carpenters, tilers, sculptors, or gardeners). To those cultures transplanted from Tunisia, Algeria, Spain, and Italy would be added an Americanization brought into being by the landing of the Allied Forces in 1942.

Foreigners attracted by a "Far West" where anything seemed possible, and Moroccans torn from their roots by rural misery, were to converge. At every stage in the construction of the new city, spatial and social differentiations re-formed, persistently belying official forecasts. Population growth was around 3% per year before 1900, when the population reached 20,000. In 1914, however, it was already 78,000, 40% of these being Europeans. In 1927, the census revealed that, out of a total of 120,000 residents, half were Muslim Moroccan, a third European (half of these French), and a sixth Jewish. With industrialization the proportion of Moroccans would rise constantly. Unique among the colonial cities of the Maghreb, this presence swiftly gave cause for anxiety on the part of the urban authorities.

By 1952, the Europeans, always in a minority in Casablanca, represented no more than 19% of the total of 682,000 inhabitants. Muslims now comprised 69%. In 1960, when the city's population was touching a million, it actually had close to 13 times the number of inhabitants it had had in 1914. This demographic increase—which, between 1950 and 1960 was due exclusively to the arrival of Moroccans from the countryside or the small towns, attracted by jobs in industry—continued after Independence, while Jews emigrated between 1956 and 1970, going from 11% of the total to 2%. The city then had 1.5 million inhabitants. The 1982 census was to give the figure of 2.2 million, and that of 1994 3.25 million—not including unofficial residents.[7]

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[6] Léandre Vaillat, *Le visage français du Maroc* (Paris: Horizons de France, 1931), 6.

The city's discontinuity is doubly written into its history. Its division into quarters derives from the Moroccan urban tradition, whereby cities grow by successive additions, and from the attention devoted, first by the French and then by the authorities of contemporary Morocco, to the military surveillance, which explains the disproportionate nature of the roads that separate the quarters and allow them, should the need arise, to be isolated and divided into units. The French who landed shortly after the First World War settled cautiously, at first, in the small central apartments. When they had grown richer, they constructed villas in the elegant quarters close to the centre, like Mers Sultan or the Boulevard d'Anfa. Those groups with a modest income went into quarters further off, but accessible, like the Roches Noires, peopled by French and Italians. The density of the European quarters remained low, but it quickly became excessive in the sectors inhabited by Jewish or Muslim Moroccans. The Spanish, living in particular pockets in the centre, comprised the largest foreign population after the French. Moroccans, newly arrived from the countryside, carried on minor trades at first, and when they first arrived, they lived in villages of huts before finding more long-term habitation. Poor Moroccan Jews from coastal towns ruined by Casablanca, then, after 1945, from the south, first lived in the millah. More prosperous Jews settled in the new city.

With the early eruption of cafés, bars, and cinemas, Casablanca, bustling and busy, was a city where spectacles, the epic of air travel, and leisure sports, held an essential place. It would find its heroes in the aviators Jean Mermoz or Antoine Saint-Exupéry, then, after 1945, in the footballer Just Fontaine or the boxer Marcel Cerdan, of whom traces are religiously preserved to this day. Casablanca was adventurous, and it was experimental, too. Its building went forward on the basis of a double spectacle: that of permanent construction site provided for the great European public, from the time of the conquest on, by the newspapers and newsreels; and that of new regulations and new forms, provided for urban planners, architects, and critics. Twenty years apart, the debates of the Paris Congress for Colonial Urbanism (1931) and the Aix-en-Provence International Congress for Modern Architecture (1953) dealt extensively with Casablancan policies and projects.[8] On the ground, to this day, building and speculation have remained the city's primary activities, leaving the inhabitants fascinated. Operating as a counter-cycle vis-à-vis France, especially after each world war, this intense production would attract European architects, some of whom would carve out for themselves careers unthinkable north of the Mediterranean.

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[7] On the make-up and spatial distribution of the Casablancan population, see André Adam, *Casablanca: Essai sur la transformation de la société marocaine au contact de l'Occident* (Paris: Éditions du CNRS, 1968).

With the shock of Independence past, Casablanca had lost none of its economic pre-eminence. It remained the prime seedbed for the country's industrial and commercial modernization. Over more than forty years it also became, within the Moroccan urban network, source of the major social movements and home to the chief intellectual activity. A key university centre since the 1970s—whereas the Protectorate, in contrast to French policies in Algiers, had never set in place any education above lycée level—it now contains close to 100,000 students and has welcomed the main publishing houses and newspapers. It features in Moroccan literature, having inspired poets, dramatists and novelists.[9]

The development of Casablanca was carried out patchily along a shoreline of seventeen kilometres and over an area ten or so kilometres deep. It has none of the appearance of a city growing regularly out from an old nucleus. In the twentieth century it was developed, quite simply, in points of multiple intensity. As such, only a double historical and topographical reading can make its structure intelligible. The old city centre occupies a location peopled long since; when Casablanca began to feature in the pages of European dailies, at the time of the French landing in 1907, nine centuries had already shaped its site.

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[8] On the 1931 congress see Jean Royer, ed., L'Urbanisme aux colonies et dans les pays tropicaux (La Charité-sur-Loire: Delayance, 1932), 81–93. On Aix, see Jean-Louis Cohen, "Le Groupe des Architectes Modernes Marocains et l'habitat du plus grand nombre," Gli ultimi CIAM, Rassegna 52 (December 1992): 58–69; Monique Eleb, "An Alternative to Functionalist Universalism: Ecochard, Candilis and ATBAT-Afrique," in Anxious Modernisms: Experimentation in Postwar Architectural Culture, ed. Sarah Williams Goldhagen and Réjean Legault (Cambridge, MA: MIT Press, 2000), 55–73.

[9] See the collection assembled by Alain Bourdon and Didier Folléas, Casablanca, fragments d'imaginaire (Casablanca: Institut français de Casablanca/Éditions Le Fennec, 1997).

The founders of the large village of Anfa were the Zanata Berbers of the eleventh century. The activity and lustre of a city that has sent out scholars and soldiers are attested, and it survived the Almoravid and Almohad invaders, becoming a modestly important local capital under the Marinids between the thirteenth and fifteenth centuries. Around 1469, the Portuguese Infant Don Fernando razed the city walls and largely destroyed the city itself.[10] Thereafter, it entered a cycle of melancholic stagnation, and, in the sixteenth century, Leo Africanus noted "the temples, the very beautiful shops, the lofty palaces" of a "city highly organized and highly prosperous, because its territory was excellent for cereals of all kinds."[11]

The lime-washed buildings going beyond the ruins of the wall gave the city its Arab name of Dar al-Beida, used up to 1860. Around 1770, the Alawi sultan Sidi Mohammed ben Abd {Allah rebuilt the walls, and, so as to create a resistance point against European incursions, armed them with a battery, or sqala. He placed the city within the economic ambit of the Atlantic and linked it to Spain. A permanent customs post was set up in 1836, when the European presence was increasing within a large village of around 1,000 inhabitants. In the 1850s, exports of grain and wool to Europe became more extensive, and a degree of architectural revival emerged in the decade after that.[12] The city's population brought together Moroccans of varied origin: wealthy Fassi families, tribes from the Chaouïa, growing numbers of Jews from the coastal towns, and Europeans, among whom the Spaniards were, up to 1907, to form the most numerous colony, despite the presence of strong French, German and British contingents. In 1886, geographer Élysée Reclus likened this "most unhealthy and desolate" town to "a small maritime town in Europe."[13]

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[10] André Adam, Histoire de Casablanca (des origines à 1914) (Aix-en-Provence: Ophrys, 1968); Ramón Lourido Diaz, "Documentos ineditos sobre el nacimiento de Dar-al-Bayda' (Casablanca) en el siglo XVIII," Hespéris-Tamuda 15 (1974): 119–146.

[11] Joannes Leo Africanus, Description de l'Afrique, edited or compiled by G. B. Ramusio, Venice, 1550, new edition translated from Italian by A. Épaulard (Paris: Adrien-Maisonneuve, 1956), 1:160.

[12] Jean-Louis Miège and Eugène Hugues, Les Européens à Casablanca au XIX^{e} siècle (1856–1906) (Paris: Librairie Larose / Institut des Hautes Études Marocaines, 1954).

[13] Élysée Reclus, Nouvelle géographie universelle, la terre et les hommes (Paris: Hachette, 1886), 11:753.

In 1900 the city occupied a polygonal area of around fifty hectares, surrounded by a crenellated wall punctuated by square towers; those of Bab al-Mersa on the sea front and Bab Marrakesh to the west still survive.[14] The enclosure of Sur al-Jdid, built in 1892 by the sultan Moulay Hassan to accommodate European settlement, and still empty at the beginning of the century, has, since 1907, provided a site for military installations. The three constituent entities of Casablanca, almost totally blurred today, reflected the divisions of the population. The Muslim quarter, which occupies two thirds of the area, was largely inhabited by Europeans. On the side facing the shore, the millah, or Jewish quarter, was more extensive than in other Moroccan cities. Finally, the ensemble of the Tnaker was a maze of alleyways lined with reed huts, where the poorest among the latest arrivals were crammed together. Cemeteries and gardens surrounded the enclosure, to the east of which stood the main market, on the bottom of the wadi Bouskoura. The main street of the medina diagonally linked Bab al-Souq, where was to be found the qisariyya, the covered cloth market, and Bab al-Mersa. The most important of the mosques was the Jama{ al-kabir, in Dar al-Makhsen Street, and the most elegant the Jama{ uld al-hamra, alongside the rampart parallel to the sea. The tomb of Sidi Belyoût, protector of the city, occupies the southeast angle of the wall.

The fabric of the medina combined several generations of buildings, cube-shaped Moroccan houses built from the first third of the nineteenth century, tucked in around their patios and close to Andalusian constructions. Traders' houses appeared, with their storage areas on the ground floor, then small blocks with balconies, and hotels, still identifiable along present-day streets, though the low houses have completely disappeared. The perception of travellers of the time is contradictory. The condescending picture of an "outcast harbour" or "wretched little town," stagnating alongside, would prove opportune, by contrast, for underlining the French contribution.[15]

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[14] Dr Félix Weisgerber, "Études géographiques sur le Maroc, 1. La province de Chaouïa, 2. Casablanca," *Bulletin de la Société de Géographie de Paris* 1, 1st semester (1900): 437–448.

[15] Charles Penz and Roger Coindreau, *Le Maroc: Maroc français, Maroc espagnol, Tanger* (Paris: Société d'éditions géographiques, maritimes et coloniales, 1949), 126. See details of contemporary accounts of the conquest in the bibliography to Cohen and Eleb, *Casablanca, mythes et figures*.

It was not by chance that the artillery and troops of the cruiser Galilée intervened in August 1907, thus, allowing France to take control of Casablanca and the Chaouïa region. The pretext for the landing was a riot against modernization works in the port, but the French action eventually led to a general revolt of the tribes. Since 1905, the creation of a bridge-head on the Atlantic had been under consideration by the military in this connection. The fact that, by 1906, the traffic of Casablanca had come to exceed that of Tangier, thus making it the chief Moroccan port, could only reinforce this design, and, with a pretext found for their presence, the French troops took firm control of the city.

Restored security, and the sudden fame of Casablanca, led to the immediate influx of a motley population of investors and adventurers. The new municipal services of Captain Dessigny created means of access to the port and of waste disposal through the ramparts, and a public garden of two hectares. In 1910, on the rampart was built the Clock Tower, a new minaret that adapted Casablanca to the rhythms of the European period. Until its destruction in 1948, the tower would symbolize the founding episode of the French presence. A vast camp of tents and reed houses rose to the south of the city, and two sturdy campaign fortresses were set up on the Médiouna and Marrakesh roads.

Maritime access, however, remained problematic. Only the naval dock, a trapezoidal basin about fifty metres wide, permitted, up to 1906, the beaching on the sand of small boats transferring goods and passengers from ships remaining out in the sea roads. In opposition to the Navy, which favoured locating the chief port of Morocco at Mazagan or Fédala, Lyautey turned it into the economic capital of the Protectorate, to the detriment of older ports (and of Rabat). Initiated in 1914, the works for the great breakwater would be completed in the 1930s. This construction site would cut the medina off from the sea, the beach to the east becoming the principal point of contact between the new raised ground and the new quarters. The retention of a large Muslim cemetery backing on to the Sidi Belyoût marabout meant that the city's maritime access was practically closed off, thus compromising the unification of the urban structure.[16]

A turbulent, jumbled agglomeration grew up around the ramparts. Lacking any guiding principle, it assembled, in a curved formation, quarters of contrasted morphology. Along the narrow parallel streets of Bousbir, Muslims built, to the west of the medina, modest habitations with courtyards. Jews settled in the millah and on the roads leading to the new city. The "first layer" of diffuse urbanization, which they occupied along with the Europeans, was made up of one-storey houses with flat roofs. From this ground plan rose more prosperous houses, hotels, and a few commercial blocks with arcades, sometimes in concrete. The funduqs extended southeast along the Médiouna road, the backbone for the services designed for agricultural development. A first overall plan was prepared in 1912 by the surveyor Tardif, with a circular boulevard circumscribing a piece of land a kilometre deep around the old city, and a residential quarter in the above-mentioned Mers-Sultan, next to the Médiouna road. This quarter would very soon see the first large villas on an airy, well-exposed hill. The commercial nature of the new city was symbolized by the two most ambitious construction sites, brought into being by the architect Hippolyte Delaporte on the edge of the suq, which had become the Place de France (now des Nations-Unies). The Paris-Maroc stores, inaugurated in 1914, were devised and built by the Perret brothers, pioneers of concrete architecture who established a subsidiary in Casablanca. As for the Excelsior Hotel, it took up the neo-Moorish decorative themes spread through Algeria and Tunisia, but was set up in concrete by the firm of Coignet.

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[16] Georges Vidalenc, *Une oeuvre française, le port de Casablanca* (Casablanca: Librairie Faraire, 1928).

The innovative legislation of the Protectorate made it possible for "plans for embellishment and extension" to be set up for the cities, and for proprietors to be brought together into syndicates to negotiate the re-allocation of pieces of land.[17] The landscape designer Jean Claude Nicolas Forestier gave recommendations as to the layout of promenades and parks in the new cities, and he invited Lyautey, in 1914, to entrust to Henri Prost a "Special Department for Architecture and City Planning"—the first specifically urban planning administration in French history. Between 1915 and 1917, Prost drew up a plan designed not to create a new city ex nihilo, but rather to re-sew, link up, order and extend a disparate ensemble of streets and blocks. The regulation and re-arrangement for the plots in question was effected, first of all, through the creation of a hierarchical system of boulevards linking the nodal points. Taking account of infrastructural and industrial problems still unappreciated in the metropolis, the plan was further innovative in taking cars into consideration. Thanks to this forward-looking sense, the city's traffic remained (relatively) free flowing until the late 1990s.

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[17] On the role of Morocco in the constitution of French urbanism, see Hélène Vacher, *Projection coloniale et ville rationalisée: le rôle de l'espace colonial dans la constitution de l'urbanisme en France, 1900–1931* (Aalborg: Aalborg University Press, 1997). On the administration set in place by Lyautey, see Daniel Rivet, *Lyautey et l'institution du Protectorat français au Maroc 1912–1925*, 3 vols. (Paris: L'Harmattan, 1988); William A. Hoisington, *Lyautey and the French Conquest of Morocco* (New York: St. Martin's Press, 1995).

Prost traced the outlines of large functional zones, echoing the work undertaken in 1905 by his friend Léon Jaussely in his plan for Barcelona. In Casablanca there were two types of zoning. The first, morphological, made a distinction between three zones: "central," "industrial," and "pleasure"; this last, given over to the building of villas or individual dwellings, specified the "strict conditions to be imposed on proprietors in the interest of hygiene, traffic and aesthetic." The second, concerned with salubrity, defined six zones with respect to protection against pollution or the inconvenient nature of establishments.[18]

Complementing the Place de France which was devoted to commerce and trade was the Place Administrative (Mohammed V), programmed in the light of the researches of Tony Garnier or Jaussely and affirming the presence of the Protectorate's justice and administration. Replacing the former military camps, and set in an ideal spot between the business quarters and the medina, its overall layout was drawn up by Joseph Marrast. Prost's team broke with the precedents of Algerian and Tunisian eclecticism, espousing instead a joint viewpoint with Lyautey, who was very much attached to the notion of "external sobriety," to "simplicity of outlines and façades," to the "Arab building art," and also to the unity of the "great architectural arrangements of France in the 17th and 18th centuries," like the Place Stanislas in Nancy. Prost would induce the architects of the Post Office, the Palais de Justice or the military headquarters to devise a modernized arrangement for the central parts and more abstract walls for the subsidiary parts.[19] Between the cathedral, located to one side, and the Place Administrative, as far as the ring boulevard, Laprade designed the "central park," still to this day the only green space in Casablanca, along with the public garden of the medina and Murdoch Park laid out in 1912. A cruciform composition, it harmonized the disparate elements of the pre-existing subdivisions. Two parkways extended it to the south (the Boulevard Claude Perrault) and to the west (the sumptuous Boulevard Moulay-Youssef, leading to the sea).

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[18] Henri Prost, "Le plan de Casablanca," France-Maroc, 15 August 1917, 5–12.

[19] Henri Descamps, L'architecture moderne au Maroc (Paris: Librairie de la Construction moderne, 1930), 1 (public buildings), plates 32–46.

Around the double focus of the Place de France and the Place Administrative, the quarters for business and collective habitation occupied a dense ensemble of pockets with roads of differentiated personality. It was through variation of the buildings' bulk and the creation of porticoes, and through the rhythm of crossroads, that Prost contrived to give a sense of unity within the characteristic diversity of Casablanca's centre. He devised strict "architectural rules," specific to each street. Thus, a subtle hierarchy and continuity was discernible, despite the speed with which work on the sites was carried out (sometimes leaving, to this day, unexpected "gap teeth"). The "strict rules" for the porticoes set in place in 1915 were supplemented by a concern for "unity of layout" (dahir of 1 April 1924), the City Planning Department devising specific designs for façades and special regulations for more than a dozen roads in the centre.

Highly dissimilar roads were the focus for ambitions reflected in the extension plan. The Boulevard du IVe-Zouaves (Houphouët-Boigny) linked the Place de France with the port. Conceived by Prost, in 1914, as the "Canebière" of Casablanca, the boulevard ran alongside the eastern edge of the medina, whose ramparts were replaced by galleries of shops, and widened out towards the shore, where Prost envisaged the creation of huge landfilled areas, "to embank and to keep out the ocean." These, though, never saw the light of day. The central railway station was set far off to the east of the city, and it was the linking of this to the Place de France (des Nations-Unies) that made necessary the opening of the second major road, the Boulevard de la Gare (Mohammed V). The pragmatic fashion of re-allocating the pieces of land affected by the passage of the boulevard illustrates the original property strategies that were implemented. The joining of the Boulevard de la Gare with neighbouring streets entailed a negotiated division into large parcels able to accommodate monumental corner blocks. The boulevard widened to the right of the central market, and followed a winding course to the station, whose tower was one of the minarets of the modern city, along with the Clock Tower and the El Hank lighthouse. Crossing points were of contrasted design: they might entail a simple crossroads, a roundabout or a large square enclosing a garden. In its most animated part, it branched out into galleries of shops set along extended arcades: a compromise between the Moroccan qisariyyat and the nineteenth-century Parisian boulevards.

Contemporary with the birth of the motorcar and the cinematograph, Casablanca was probably more distinctive in its garages and cinemas than in its public buildings. Hard working, trading, and hedonistic, it was endowed with a dense network of mechanics' workshops, warehouses, wholesale outlets, a web of bustling activity linking the Place de France and the industrial quarters to the east. From the time of the apéritif and late into the night, there was an intensely vibrant scene, with brasseries, kémia cafés, and bars. Close to the military camps at first, the life of festivity mobilized a large part of the centre, attracting both those passing through, tourists and the colonial settlers of the interior.

Till today, the architectural landscape of Casablanca demonstrates the dichotomy introduced by Prost, between the two types of quarter necessary for a city both "practical and healthy." There was a "business centre," a notion still without precedent in France, and there were quarters with individual houses. Along the central streets, an exceptional collection of apartment blocks came into being from 1915 on, the result of the meeting of ambitious businessmen clients—whether European (especially French and Italian), or Moroccan (Muslims and Jews)—with architects drawn into a kind of creative competition. Derived, initially, from experiments conducted in Paris since the beginning of the century, these blocks, nonetheless, quickly took on their own distinctive characteristics. The tall masses, reflecting a cultural hybridization in distribution and décor, punctuated the streets and squares. Forming large blocks of building, with central courtyard, open courtyard, or jutting out at the base, they were sometimes topped by ceramic domes. They were spread over huge parcels bordered by several streets.[20] Alongside acclimatized metropolitan models, new types of "hygienic" tall block appeared. The buildings raised by Marius Boyer between 1920 and 1939 constituted a noteworthy set of answers to the problem of collective habitation in the big city, realizing the ideas Henri Sauvage had been unable to put into practice in Paris, given the limits on height imposed in the regulation of 1902.[21] The central blocks occupied by the dominant groups within the Casablancan bourgeoisie became the reference points for a city that had lacked them. Implementation of the modernization projects of the Place de France and the port quarter began in 1935, with the building of the first high-rise blocks.

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[20] An insight into the ensemble formed by these blocks may be found in "Le Maroc en 1932," *L'Afrique du Nord illustrée* (1932, special issue).

[21] Marius Boyer, *Casablanca, travaux d'architecture* (Strasbourg: Edari, 1933). On this production see also the numerous articles published by the journals *Chantiers nord-africains*, published in Algiers, and *Réalisations*, published in Rabat.

Two less dense ensembles, situated on the city's outer edges, allowed the businessman, according to Prost's intention, "to relax in his family home, surrounded by greenery." Mers-Sultan, the residential quarter close to the centre and the Sultan's palace, which was marked by a social mix, was partly inhabited by families of Muslim merchants. Anfa, the most ostentatious residential quarter, became an island of greenery and peace, but a place, too, where a degree of hybridization had successfully taken place, not between populations or social classes but between North and South, between Europe and Africa. Palatial villas rose there. The more central quarters were dotted with often sumptuous houses, many of which have been torn down in the past fifteen years. In the petit-bourgeois quarters, the spread of detached houses expressed French provincial themes, overlaid with Moroccan elements. Between the business quarters and the quarters for villas, and profiting no doubt from lack of attention on the part of Prost's successors, the Maârif quarter began to take firm shape from the mid-1920s. Long occupied by Spanish or Italian blue-collar workers, it was made up of small blocks with courtyards, close to the Andalusian models of the first European houses in Casablanca.

After the 1907 landing, Casablanca never again departed from world modernity. The actions of Lyautey and the city's phenomenal growth went on making it a place all the more attractive to news reporters in that the Protectorate spared no effort to subsidize writers and journalists. With the Second World War, however, the political dimension returned to the forefront. Casablanca became caught up in the complex game played out between Vichy France, the Axis powers, and the United States, matters coming to a head following the landing of 8 November 1942. In January 1943, with the Anfa conference, Casablanca was the scene of negotiations on the post-war world, which would see the Americans, by virtue of their military, commercial and cultural presence, fashion the most important French port in Africa. The idea of a new "California," lovingly endorsed by the Protectorate and implemented, on the level of agricultural policy, with the launching of the label "Orange du Maroc," took on substance from the affinities between Los Angeles and Casblanca, underlined by the villas of the 1950s.[22]

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[22] Will D. Swearingen, *Moroccan Mirages: Agrarian Dreams and Deceptions 1912–1986* (London: I. B. Tauris, 1988), 59–77.

Critical gazes at the Prost plan did not wait for the end of the conflict: in 1943, Alexandre Courtois initiated a revision of the 1917 document. He revealed "a city too extended, giving, in certain aspects, the illusion of a capital" and providing "unfortunately, in many other aspects, the appearance of a veritable deserted zone." The influx of Moroccans from the countryside had caused an explosion of the borders arbitrarily laid down for the habitation of the "natives." Courtois put together a new overall design, reinforcing the Moroccan "Oceanic Gate" business-centre with a set of skyscrapers. He proposed a reduction in the surface area of the medina which should be essentially transformed into a tourist market. A new infrastructural concept emerged, with the notion of a tangential motorway linking up with a "central area for transport," on the edge of the centre, in Rabat.[23]

Eirik Labonne, progressive Resident-General in 1946–47, entrusted the administration of urbanism in the Protectorate to Michel Écochard, back from Syria and Lebanon, where he had developed the plan for Beirut. A man with a close knowledge of Islam and supporter of the notion of a functional urbanism, Écochard worked on the design for Casablanca from 1949 to 1951, incorporating a number of Courtois' ideas, but proceeding, in practice, completely to overturn the ambitions, doctrine and techniques in force. The territorial basis of the plan was fundamentally different, being geared, from then on, to regulating the growth of a large coastal strip integrating the whole suburban part of Casablanca and taking in the petroleum port of Fédala (Mohammédia) to the east.

Struck by the experiment of the Tennessee Valley Authority, unfolded in 1945, Écochard shared the ambitious viewpoint of the Navy, which wished to create a single "combinat" by the side of the ocean. The linear solution agreed on placed together, parallel to the shoreline over 35 kilometres, lines of factories, workers' dwellings, parks and traffic facilities. To bring in the work force needed for an ambitious industrial development of the ensemble and to tackle the housing crisis particularly affecting the European popular strata and the poor Moroccans, whether Muslim or Jewish, Écochard took in hand the organization of the periphery, forming a ring of large ensembles separately allocated to each social group. A latent social and racial segregation, thus, became the basis for a reasoned project, not entirely lacking in generous intention, but incapable of transcending the mindsets of the Protectorate's officials.

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[23] Edmond Pauty, "Casablanca et son plan," *Revue de géographie marocaine* 4 (1945): 3–9.

The ensembles for the European middle class in the west (CIL, Beaulieu, Plateau) were supplemented in the east by a large ensemble for popular families of the same origin (Bournazel), and by a low-density residential quarter (Aïn Sebaa). Proletarianized Jews arriving in growing numbers from the small towns of the interior were quartered in a series of operations focused on the least salubrious part of the coast, between the TSF quarter and the El Hank headland. As for the poor Muslims crammed into blocks in the old and new medina, peopling the vast shanty towns near the Roches-Noires factories, and flowing in constantly from the rural zones, they found themselves, for the first time, being promised a substantial response, on an industrial scale, to the expectations that official political procedures had done so little to meet.

The young urban planners, landscapers, economists, and jurists in Écochard's team were in contact with sociologists like Robert Montagne, who were doing work on the living conditions and customs of the Moroccan populations. Thus, the team was working not for inhabitants in general but for people about whom they had precise knowledge; and it made inquiries in the existing quarters. This decision to show a degree of loyalty vis-à-vis Moroccans had its inevitable effect on Écochard's relations with conservative forces, especially the industrialists and large landowners of Casablanca, who controlled the municipality and a large section of the press. As such, polemic raged, in 1951–52, against the spectre of a "red belt" promised by the design, and the freeze on building proposed in the suburbs, with a view to preventing "shabbiness."

Critical use of the model of the "three human establishments" developed by Le Corbusier led to a crucial change in terms of method, and with regard to the overall vision for the Casablancan agglomeration—conceived, now, as the assemblage of a "linear city for industries and workers," an extended "business city," and a "residential area surrounded by its woodland belt." Setting store as he did by the development of infrastructures, Écochard was bound to follow up on the tangential motorway for which the site was opened in the first half of the 1950s. He envisaged the creation of green spaces, the "liberating" of the soil from large ensembles—another Corbusierian article of faith—and, above all, the creation of a small belt of parks enclosing a section of the city to the southwest.

In the centre, Écochard at last let matters move forward on the vertical "business city" awaited since 1930. He finished the through route of the Avenue de la République on the site of the Sidi Belyoût cemetery, so linking the Place de France with the seashore. In morphological terms, he abandoned the alignment form of building used for the first post-war blocks, designing instead a road—the present Avenue des Forces Armées Royales—lined with a "comb" of cross-wise forms, conceived especially for hotels and for the tourist and travel industry. Alongside the medina, for which Écochard had little regard (though his modernizing drive was more moderated in the other cities of Morocco), he continued the new avenue across the former millah as far as the Place de Verdun, and designed the first version of a block intended to be a large hotel. However, pressure from conservatives and colonialists led him to tender his resignation at the end of 1952.[24]

After 1945 a second modernity blossomed in the streets of the city, one open to architectural references less centred on France, and turning on programmes that were sometimes unexpected.[25] Its echo in the metropolis and in Europe was all the stronger in that production north of the Mediterranean continued to bear the stamp of the strictest urgency and utility. A new generation of garages and service stations also appeared beside the boulevards, accompanying the rise of a kind of car park more modern than in the metropolis. The present skyline of Casablanca is punctuated by vertical emphases, many of which were created at this time. Set in a ring around the centre, between the commercial quarters and the zones of villas, new high-rise blocks appeared, combining habitations and offices on variable principles. Blocks for well-off Casablancans, often spectacular in their form, exhibited a new formal ambition after 1945.

In an urban landscape dotted with multiple-owned blocks, public enterprises constituted identifiable enclaves, their collective or serial rationales contrasting strongly with the ostentation of private programmes. Alongside the Boulevard Circulaire (Zerktouni), the useless Office for the Habitat, originally set up by the Protectorate, built, beginning in 1946, the garden city of the Bourgogne quarter, the largest public enterprise ever undertaken for the Europeans of Casablanca, made up of "quality" blocks reserved for civil servants, the military and European former combatants. Among the ensembles constructed at that time, the Cité Beaulieu stands out for the quality of its landscaping. For a modest clientele of employees, departmental personnel or minor industrial officials, the Franco-Moroccan Real Estate Company devised (1954) the Cité Bournazel, which was to become the largest ensemble in Casablanca.

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[24] Michel Écochard, *Casablanca, le roman d'une ville* (Paris: Éditions de Paris, 1955).

[25] A number of monograph journal issues treat the subject of post-war production: *L'Architecture d'aujourd'hui* 35 (May 1951); "Maroc," *L'Architecture française* 95–96 (May 1950); "Maroc," *L'Architecture française* 131–132 (April 1953).

The Anfa villa quarter, developed back in the 1920s, remained set apart from the centre till it was linked up by collective programmes. The prosperity of the second post-war period was reflected there in the building of dozens of ostentatious or experimental residences filling vacant plots. If some of these houses persisted in expressing a degree of nostalgia for the French provinces, or for a kind of fictional Spain, the bolder ones referred to more distant ways of life, Californian for instance. Flexible inventiveness and the quest for comfort came together in projects luxurious beyond anything seen in the metropolis.

Social divisions within the Casablancan space were to remain, over time, quite remarkably stable. Indeed, though Lyautey and Prost had had the illusion of creating a city above all European, an unexpected Muslim agglomeration became swiftly established at multiple points. Systematically considered after 1945, the question of housing the Moroccan "protégés" had in fact been posed from the beginnings of colonization, meeting the response of unplanned arrangements, or measures tightly controlled by the Administration, or scattered responses on the part of particular enterprises. At the time they were created, the first quarters of the new city had been, de facto, inaccessible to the vast majority of humble Muslims, even though no regulation forbade them to reside there. Ever more crammed and stifling, the medina brought together the popular classes who worked there or were employed by the enterprises appearing in the east of the city. Nuclei of Moroccan habitat were created in 1914, notably at Derb Ghallef.

Attempt succeeded attempt to adapt Casablanca to the immigration of the Moroccan population. In 1917, Prost proposed that "a new indigenous city should be created, with everything included," but on a very modest scale. On the Médiouna road, the lands of the Jewish landowner Haïm Bendahan were offered, to this end, to the administration of the Habous. In 1917, on a parcel of 4 hectares, Laprade conceived a first programme for Muslims of modest income, on the basis of his surveys of Fassi and Andalusian architecture. In his composition, the Habous quarter would combine the distinctive rhythms of the commercial arcades with the blind walls of the habitations, which were not accessible from the principal roads. He aimed to recreate all the habitual urban practices and the places perpetuating the traditional sociability and the rites of Muslims: mosque, hammam bath, squares, and shops separate or grouped together in a *qisariyya*, caravanserais, market, and bazaars. Permanent and travelling markets did indeed confirm the success of the quarter, which, by 1932, already housed 3,000 inhabitants, with the initial humbler inhabitants swiftly being replaced by well-off families.[26]

In addition to this first nucleus, the "Cité Municipale," or derb al-Baladiya, stretched over 10 hectares to the south of the railway track, and marked the beginning, from 1920, of another urban policy. It was no longer a matter of a project predetermined and drawn up in detail by architects, but of a less formalized arrangement. Bought by the municipality, the plots were leased for a period of 99 years and built on by the Moroccans, obeying fairly simple rules of dimension and hygiene. In the 1920s, to the south of the new medina, there would be created the controlled prostitution quarter of Bousbir, a district specially displaced from the centre. The urban fragments of the new medina were far from sufficient to house the population still constantly flowing into Casablanca. Moroccan labourers found a place to the south of the planned extensions in a vast encampment of shanties made from flattened petrol cans ("bidons") and named, at the end of the 1920s, Bidonville, a term subsequently used throughout Africa, then in Paris. Right throughout the 1930s, the Casablanca municipality would be constantly concerning itself with the improvement of the "insalubrious derbs" and the tearing down of the shanty towns. Its actions would be geared to the cleansing of quarters and seeing them set within strict boundaries, salubrious and controlled, but geared, too, to the improvement of their buildings. Despite periodic campaigns of resettlement, undertaken regularly from the 1950s on, this form of makeshift housing would be reproduced with each wave of immigration and would endure in the city's interstices, ineffectively hidden by palisades from the gaze of the outside world.

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[26] Albert Laprade, "Une ville créée spécialement pour les indigènes à Casablanca," in Royer, *L'Urbanisme aux colonies et dans les pays tropicaux*, 94–99; Anna Pasquali and Gaetano Arcuri, "Casablanca: the Derb el Habous by A. Laprade or how to Build in the Arab Fashion," in "Maghreb, from Colonialism to a New Identity," *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1 (1985): 14–21.

The industrial quarter of the Roches-Noires was the scene of the first cities for workers to be endowed with a degree of architectural ambition, these being followed by the more elaborate one of the Moroccan Sugar Company, which began to be built in 1932. As in the Habous, its squares were lined with shops, and the inhabitants had the benefit of a mosque and multiple facilities (a Quranic school, a common oven, a *qisariyya*). The creation, in 1939, of the Society of the Indigenous Workers' City of Casablanca, designed to solve the housing problem "not at the stage of the individual business but at that of the organized profession," would relieve the most up-to-date industrialists of a task they found burdensome. To the south of the motorway laid out in the 1950s, major roads divided the sets of white houses in Aïn Chock, an autonomous entity created from 1945 on by the Office for the Habitat, in response to the plan formulated by the Protectorate in 1936, to found a "model city" to re-absorb the shanty town of Ben M'Sick. The city marked a stage in the development of a habitat "adapted" to Muslims in its scale and in the building of individual habitations, but on more than one floor or placed one above the other.

It is difficult to see today, walking through the bustling streets of the Hay Mohammadi quarter, with their profusion of cafés and shops, that the area it covers is that of the former shanty town of the Carrières Centrales: the largest and most politically turbulent shanty town in Casablanca, where, since the 1920s, the term *karyan*, or quarry, had been used to describe makeshift quarters.[27] In 1951, the Department for the Habitat, along with Écochard, proposed its replacement through the building of the first of a series of "satellite towns" with an average of 30,000 inhabitants each, in conformity with the standards then discussed by the CIAMs, and comprising neighbourhood units with facilities. On the basis of lots 8 m by 8 m, the "standard small units" were, as in most of the cities already built, made up of one or two rooms opening out on to a patio, with a closed-off kitchen and a WC. In the midst of the Hay Mohammadi streets, three buildings dominated the 8-by-8 metre framework. Conceived by Georges Candilis, Shadrach Woods and Vladimir Bodiansky, these collective blocks derived from observation of the Berber habitat in the Moroccan south to give new expression to the "adapted" habitat. This reflection on the "habitat of the greatest number" was taken into account by the CIAMs in 1953, and it converged with the reflections of Aldo van Eyck and Peter and Alison Smithson about the identity and specificity of city habitat.[28] The reflection would continue, following Independence, with the quarters of Derb Jdid and the satellite town of Sidi Bernoussi, to the southeast of Aïn Sebaa, as envisaged in Écochard's plan.

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[27] André Adam, "Le bidonville de Ben Msik à Casablanca," *Annales de l'IEO de la Faculté des Lettres d'Alger* 8 (1949): 61–199.

Casablanca's coastal strip is occupied, tangentially to the centre, by harbour installations, virtually out of bounds to common mortals. Like so many harbour cities disinclined to gaze on the sight of the labour in the docks, it turns its back to the sea. The open gates in the rampart of the medina lead to a boulevard, held in, on the ocean side, by a long concrete enclosure, while, towards the east, the railway tracks form an effective boundary. The extension of the port has pushed, as far as the popular quarter of Aïn Sebaa on the Rabat road, the beach which at the beginning of the century had stretched to the very edge of the medina, in front of the marabout of Sidi Belyoût. By contrast, the westward spread of resort installations has become ever more pronounced since the creation of a beach in the TSF quarter, on the western rim of the medina. The existence of available land led the municipality, at the start of the 1930s, to build the largest swimming pool in Africa into the sea, filled in at the beginning of the 1980s to make way for the building of the Hassan II great mosque.

The Casablanca of today conceals the traits of the walled city of the beginning of the twentieth century. The initial 50 hectares or so have since been swallowed up in an agglomeration now totalling 86,000, 15,000 of them urbanized—i.e., 300 times more than a century ago. For a time the frameworks set in place by the Protectorate, with regard to zoning, and the large-scale building of inexpensive housing, remained effective. The programmes of Écochard's team were pursued, the templates remaining essentially identical. The departure of most of the Europeans and practically all the Moroccan Jews left vacant large sections of the quarters built under the Protectorate. In the centre, the apartment blocks were occupied by large families who are still to benefit to this day, paying moderate rents insufficient to cover the blocks' basic upkeep, from the maintenance of lifts to the lasting refurbishment of the façades. The quarters of detached residences saw a progressive change of inhabitants, with the rising Moroccan bourgeoisie settling in the plots of the Oasis or the Polo.

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[28] Alison and Peter Smithson, "Collective Housing in Morocco," *Architectural Design* (January 1955): 2.

The completion of the eastern part of the Avenue des Forces Armées Royales (initially de la République) finds a counterpart in its continuation from the Place de France (des Nations-Unies) to the Place de Verdun (Oued el-Makhazine), alongside which the Casablanca (Hyatt) Hotel, in the 1960s, crystallized the notions formulated forty years earlier. The industrial and tertiary centre of the new Morocco, Casablanca has become the focus of a rural exodus larger than ever. The constant influx of new urban dwellers has led to the creation of new shantytowns following on from the earlier ones at Ben M'Sick or Sidi Othman. There are also barely perceptible "pocket" shantytowns, tucked away in quarters closer to the centre. As their inhabitants become more prosperous, the Urbanism Department's houses with patio on an 8-metres-by-8 grid have become transformed into small blocks whose overhanging on to the streets allows precious square metres to be gained. Thus, a new urban landscape appeared, featuring a monotonous façade rhythm, but fairly varied and extremely animated on the ground floor.

Modified by successive adjustments up to 1974, the functional division developed by Écochard in 1952 would, despite demographic growth, permit the maintenance, after a fashion, of a fairly clearly defined urban perimeter.[29] Over the same period, the infrastructures calibrated for a city of a million inhabitants were not modernized to correspond to the rhythm of the demographic growth. The tension latent within the popular section of Casablanca was to issue in the riots of June 1981, an expression of violent public blame and understood as such by the authorities. Thereafter, a new way of doing things was put into place, one that sanctioned, finally, a decisive break with post-war solutions.

The creation, in 1984, of an Urban Agency charged with implementing the blueprint for organization and urbanism put forward for consideration in 1981 was simply the technical expression of an overall re-division of the agglomeration.[30] A new political and institutional articulation came into being, with the creation of twenty-nine urban and six rural communes, organized within nine prefectures under the overall authority of a Greater Casablancan Wilaya. It would remain in effect, till the municipal reform of 2003 joined up the agglomeration under the direction of a single mayor.

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[29] On the situation in Casablanca 15 years after independence, see "Les grandes villes d'Afrique et de Madagascar, Casablanca," *Notes et Études documentaries*, 14 June 1971.

Approved in 1985, the General Scheme for organization and urbanism or SDAU, developed by the team of architect Michel Pinseau, turned on a perimeter broadening Écochard's plan and taking in Mohammédia and the suburban communes. It inclined towards reinforcing the existing coastal links and towards a recomposition of the relations between habitation and activities. On the more global level, the SDAU proposed the modernization of road and rail infrastructures and substantial zoning modifications that would allow, notably, the building of collective blocks in the quarters. A system of new polarities came into being, with the network of new prefectures and the seats of urban communes.

In the 1994 census, 22% of the urban population of Morocco—12% of the total population—resided in Greater Casablanca, which then, officially, numbered 3.25 million inhabitants, including neighbouring rural zones. The rate of population growth was 3.3% per year in 1982, and fell to 2.2%, indication of a possible stabilization in migration. The port remained one of the most important in Africa, with traffic of 16 million tons—45% of the national total—shaping the destiny of the eastern quarters, given all the warehouses, the factories and the wholesale depots. The region's economic strength was imposing, if there was added the traffic of Mohammédia to the east of the agglomeration: namely 6.8 million tons—a further 16% of the Moroccan total. As for industry, this, in 1997, concentrated 43% of the units and 46% of the manpower of Morocco in the city (respectively 59% and 60% within the region), exporting chiefly textile and leather products, but also agro-industrial, chemical and mechanical products.[31]

Infrastructures had not been modernized to correspond with the rhythm of urbanization, and the drainage deficiencies became evident after each heavy rainfall, added to those regarding the collection of rubbish.

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[30] Rahal Moujid, *L'Agence urbaine de Casablanca* (Casablanca: Afrique-Orient, 1989).

[31] Abdelkader Kaioua, *L'espace industriel marocain de Kénitra à Casablanca* (Tours: Urbama, 1984); idem and Jean-François Troin, *Atlas de la wilaya de Casablanca* (Tours: Urbama, 1986–89).

The demographic pressure was to be seen in the over-populated blocks of the old medina, but also in the persistent crisis of the rental housing market, where the maintenance of social regulation completely froze the occupation of blocks. Moreover, public intervention favoured accession to property and led to the springing up of innumerable new cities, whose density did not preclude urban characteristics. These last were, however, quite unable to meet needs, even in terms of diminishing cohabitation and re-absorbing the makeshift habitat.

In present-day Casablanca, some quarters have changed in their usage and nature; take, for example, the case of the Maârif, transformed by the moving in of the middle class and the questionable raising, within it, of the Twin Center skyscrapers, inaugurated in 1999. The link of the city to its shoreline remains highly problematic. The corniche has witnessed a degree of stagnation, despite the installation of fast-food restaurants and a multiplex cinema. To the right of the port, projects have followed one another constantly, with a view to creating the cluster of towers awaited since 1930, and leading, inevitably, to the mobilization of major European tourist groups.

Set tangentially to the old medina, the Avenue Royale ending at the Great Mosque is one of the major layouts of the SDAU of 1984. 60 metres wide in the first section planned, lined by buildings 26 metres high, it has led to initial demolitions, those expelled being re-housed in the great completed ensemble of the Cité Nessim, to the southwest of the city. It is linked, by virtue of a polygonal geometry set around the medina, to the Place des Nations-Unies (de France) and the Avenue des FAR. An ensemble of partial arrangements likewise figures in the SDAU. Set at a tangent to the Habous quarter and the royal palace, the Médiouna road (Avenue Mohammed-VI) is the subject of a refurbishment programme and bound by an architectural order specifically stipulating arcades, thereby echoing the techniques developed by Prost. The organization of the 15 kilometres of the ring road linking up the prefectures has likewise been initiated, ending in a more vigorous axis between Hay Mohammadi and the ocean.

However, the organization of today's extended Casablanca is also determined by regional factors. Now stretched out over 80 kilometres of shoreline, the agglomeration is susceptible to increasingly marked centrifugal forces. The constantly rising price of land is paralysing the growth of industrial enterprises. It does little, on the other hand, to prevent either the steady spread of luxury sites in California, or the Crêtes, or the same process with the new ensembles of popular habitation springing up at Dar Bouazza, Bouskoura, Aïn Harrouda, Sidi

Moumen, or Lahraouyine, the latest makeshift city to emerge. Served by rail and motorway links, the Mohammed V Airport, which deals with 52% of the country's aerial movement, is becoming a focal point for growth, just as the port had been in its time, with the creation of a zone of activity.

At the same time, serious problems remain with regard to urban facilities. Casablanca has 36% of Morocco's vehicles, and car traffic fills the roads to saturation point at peak periods, while buses struggle to meet the demand. The 1984 SDAU prescribed a first metro line of 15 kilometres linking the centre to the southern suburbs, via the Médiouna road, then laid out parallel to the motorway, which will probably be transformed into a light rail line. Moreover, one of the chief negative aspects of colonial Casablanca continues, namely, the mediocrity, quantitative and qualitative, of the public parks and gardens. There is also a clear wish to gear the agglomeration to the needs of tourism, seen in the creation of a 75-hectare ensemble at Dar Bouazza and a marina in Casablanca's fishing port. With close to a million nights in 1997, tourism is a developing sector.

The problems of the heritage are as pressing as they are complex. The SDAU of 1984 envisaged the "rehabilitation" of the medina and the refurbishment of the Habous quarter, and this led to a number of improvements.[32] However, the protection of the most noteworthy ensembles, being historical monuments, remains symbolic. The land use plans adopted in 1989, close to the ones conceived in France, prompting the owners of villas in the west to replace them by blocks, has often led them to tear down, without further ado, some of the most noteworthy villas of the inter-war period, despite the growing associated movement in favour of defence of the modern heritage.

Before 2003, the rising power of the decentralized communes had made clear the remarkable disparities between the richest and poorest among them, the transfer of State competences hardly being sustained by that of the equivalent resources. The reunification of the Casablanca municipality, completed in 2003, has proved to be a stimulus for reform. However, after the alternative democratic arrangement initiated in 1997, the new ministry for the Development of the Territory, Environment, Urbanism and Habitat still lacked authority over the vital Urban Agency, which continued to be under the direction of the Interior Ministry. The circumstances of the initiation, in 2004, of the revision of the land use plans (lapsed since 1999, but crucial for mutation of the urban fabrics) are, thus, extremely problematic. Also, the new developments planned on the grounds of the former Anfa airport, in the West, and in the Zenata area, risk to consume the capital investments directly needed for the modernization of the city centre. Shaped over a century by the permanent opposition between market and public regulation, and tightly controlled by the monarchy during the reign of Hassan II, the city is on the threshold of potentially radical transformations.

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[32] Casablanca à l'horizon 2000 (Casablanca: Agence urbaine de Casablanca, 1989).

C. TRANSFORMATIONS

IDENTITY, GLOBALIZATION, AND THE CONTEMPORARY ISLAMIC CITY

Hasan-Uddin Khan

The phenomenal growth of cities in the Islamic word in the twentieth century has led to the formation of megacities and their concomitant cities within cities. In addition to this, the impact of globalization on local and regional manifestations of urbanization is evident, and in addition to the enormous pressures and changes, physical, social, and economic, the urban-rural distinction is becoming less important, as settlements assume characteristics of both. For the twenty-first century the city can be conceptually redefined as a series of overlays, or as a mosaic of overlapping agendas, that help reveal and distinguish its character and functions: the city as a network of pluralistic interactions that are becoming more complex.

Since the 1990s, scholars and politicians have often tried to explain economics, politics and diplomacy in terms of culture.[1] At the opening of the conference: "The Future of Asia's Cities," in December 1996, President Suharto of Indonesia stressed that serious attention should be paid to "cultural plans to enhance the dignity and standing of the life of urban societies."[2] There is the notion that "Islamic Values" should define the contemporary city in Muslim countries, but it is unclear what these values are and how they might affect city form. There are several ideas that permeate the discussions. The organization of the city into *mohallas* or neighbourhoods, or the importance of the mosque and other civic buildings, which serve the people and Islam, or that privacy for the family and women be maintained, are often cited in conversation.[3]

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[1] For a concise outline of cultural positions see the article "Cultural Explanations: The Man in the Baghdad Café," *Economist*, 9 November 1996, 23–26, where the conclusion indicates, "which 'civilization' you belong to matters less than you might think."

[2] Quoted in *The Jakarta Post*, 3 December 1996, 1.

[3] Many scholars have written about the Islamic city and seem to have given it common characteristics—see the writings of Ira Lapidus, Gamal Hamdan, Creswell,

But by and large the modern ideas of city planning prevail, such as zoning and urban transportation networks.

The city embodies the forces of tradition and modernity that exist in juxtaposition where the possibilities of being local, or even regional, are tempered by some form of internationalism. The model and image for cities in the Islamic World have indeed changed.[4] The contemporary Islamic city is moulded on the mythic images of the modern American city—New York, Houston, Chicago, etc.—as a symbol of mobility, corporate power, centralization, and "progress." As Muslim countries follow similar economic and developmental models, cities in the Arabian Peninsula, Iran, Pakistan, Malaysia, and Indonesia, for example, are being based on those models, and are looking more and more like Western cities.

The Islamic city: a reality?

Is there such an entity as the modern Islamic City different from cities in other parts of the world? If so, what are its characteristics? What defines its identity? There is a general assumption that Islam as a religion and culture has had a dominant influence on the development of

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Von Grunebaum, and others. Janet Abu-Lughod, in an essay entitled "Contemporary Relevance of Islamic Urban Principles," suggests that, "there appears to be certain basic 'deep structures' to the Islamic expression in space." The stereotypical perception of the Islamic city was paraphrased by Nezar Al-Sayyad in *Cities and Caliphs* (Westport, CT: Greenwood Press, 1991), 6: "The Muslim city is a city whose central node is a Masjid Jami with a well-defined and somewhat central royal quarter and a *qasabah* or major spine extending from one main gate to another along which lies the most important buildings scattered along the linear bazaar which branches out into the city, forming irregular but functionally well-defined specialized markets. The city also has a citadel or a defensive post on its outskirts. Housing was made up of inward-oriented core residential quarters, each allocated to a particular group of residents and each is served by a single dead-end street. As for its spatial structure, the Muslim city had no large open public spaces, and the spaces serving its movement and traffic network were narrow and irregular." Al-Sayyad went on to challenge the notion of Islamic city, as did Hourani and Stern, eds., in the book *The Islamic City* (Philadelphia: University of Pennsylvania Press, 1970). I agree with them when they say that no one model exists for the Islamic city; however, it remains a convenient term.

[4] I use the terms "Islamic World" and "Islamic City" as a form of shorthand to denote cities or cultures that have a majority Muslim population or are governed by Islamic principles or consider themselves as Muslim or Islamic, e.g. the city of Hyderabad in India or the Islamic Republics. Some of the societies and cities that I include have significant Muslim populations or are historically influenced by Islam, as is the case of Delhi and Hyderabad in India. However, I am generally wary of these labels.

cities in the Middle East and later elsewhere. However, the commonalities of cities in the Islamic world have been questioned, for even early Islamic empires were not monolithic and covered different climatic and geographic conditions, different cultures and different economic systems. It is not important here to establish if Islam was the cause or urbanization the product, or to dwell upon the characteristics of traditional and historic cities in the Islamic world, but to focus on the city within Muslim countries today.

The aspirations behind the development of a vision of the city take on physical forms, and urban design may be seen as the articulation of both public (governmental) and private (civil society) interests. In Asia, governments still control and spend a large part of the GDP, a larger chunk in most places than fifty years ago, so it is hardly surprising that governments influence cities. However, the roles are changing. For example, the delivery of services, usually the task of government, is now being done by harnessing the private sector. Another example is the new towns in Southeast Asia that are being formed by private developers taking the lead role in some kind of partnership with government. Non-Governmental Organizations (NGOs), civil society organizations and individuals are also assisting the governmental and private enterprise sectors. All the players and their roles have now become intertwined. Not only is the nature of cities changing, but they have also become more complex.

The identity of a city can be viewed in different ways: as the place itself, or as those who inhabit or visit it. The notion that cities are losing their identities belies the fact that in the Islamic world the city is in fact an amalgam of several cities that forces multiple readings of place. Embedded in these readings is the notion of an increasing pluralism in which physical form is a less important indicator of what a city is or what a city wants to be (to adapt a phrase used by the architect Louis Kahn). The role of finance and political decision-making may give the city its *raison d'être* and its sustainability but the sense of place is developed through its architecture. Hence, in writing about the Islamic city, I will simultaneously be referring to its architecture; the two are inextricably intertwined.

Here I have chosen to focus on what I believe are the most important factors that give character to the contemporary city in Muslim countries. I start from the macro level of mega-cities and globalization, and work my way to looking at the more localized situations and the living conditions of the poor who constitute a majority in most Islamic cities.

Modern city growth

In the traditional city, be it Cairo or Lahore, its buildings wore their own garb much in the way people wear clothes—expressing climate and technology in an integrated form of development.

The colonial city, on the other hand, Jakarta and New Delhi for example, developed parallel cities and a new urban fabric, leaving the traditional city more or less intact. The modern city, with its new building types, took this further, by means of zoning, and compartmentalized its functions and its population, as can be seen in Islamabad and attempted in places such as Istanbul. In a post-modern reading, the traditional and modern live in juxtaposition, as in the case of Jeddah, and we are unsure how to modernize the traditional city, demonstrated by both Sana'a and the walled city of Lahore, when new infrastructure was introduced into the old urban fabric.

At the beginning of the twentieth century, the greatest influence on Muslim countries were: Turkey (independent in 1923), which articulated a rupture with the past under Kemal Attaturk, Iran (1925) under Reza Shah, and Iraq (1932) under Kings Faysal and Ghazi. Following a bloodless *coup d'état* in 1921, Iran, following Turkey's example, moved towards secularization in the context of modernization, generally regarding religion as a force that hindered progress. In Tehran, the city was transformed by new planning of a grid of streets; generous boulevards, inserted into the dense urban fabric, provided the separation of pedestrians and traffic and inserted new buildings into the urban fabric.

After World War II, many newly independent countries relied upon the West for technology and investment with many designs coming from abroad. The impact of modern urban planning regulations on the character of cities in the Middle East and Asia has been significant, mainly through French and British colonizers. The unprecedented growth in large metropolitan populations modified urban settlements.[5] Colonial cities often existed alongside the older historical settlements, such as in Beirut and Damascus.

Whatever form it took, the act of becoming independent, be it in a republic, dictatorship, monarchy or socialist regime, brought with it the need to express freedom from a colonial or foreign-dominated past or even from a past wrapped in the mantle of tradition. One can argue that in the early part of the century urbanization and internationalism had begun to take hold even in countries with predominantly rural populations. The Russian Revolution of 1917 and subsequent socialist models of development that also influenced new concepts of modernization and equity first focused on urban centres. Even in countries that styled themselves as Islamic Republics, like Pakistan and Malaysia, the need was felt to be "modern" in their forms of government, buildings and cities. New cities or cities that experienced unprecedented growth followed modernist principles of planning. These included notions of zoning, relationship of built to open space, and the accommodation of industrialization. A crucial factor was the planning of roads, railways, and other forms of communication such as the telephone. A few examples illustrate the general course many Islamic cities have taken.

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[5] For example, in the Middle East urban populations increased between 1960 and 1980 in Lebanon from 64% to 79%; in Iraq from 33% to 55%; and in Saudi Arabia from 15% to 23%. Source: World Bank, *World Development Report*, 1994.

The development of Iraq is epitomized by its capital city, Baghdad. The German Turkish railway brought with it new materials and construction techniques, and the British occupation of the country brought with it new architecture, such as the railway stations and airports. Geologists discovered oil in Kirkuk in 1927 and by 1938 oil exports facilitated a dynamic process of modernization. Indeed, oil facilitated much of the development and urbanization in the Middle East, from Saudi Arabia to the Emirates.

Cairo went through several periods of modernization since the rule of Khedive Ismail (1863–78) whose vision was to turn Egypt into a European country. Upon the opening of the Suez Canal, he built new Europeanized districts in Cairo with their parks, wide streets with lighting, apartment buildings, and an opera house, and moved the seat of power from the Citadel to Abdeen Palace. With the British occupation in 1881, hundreds of thousands of foreigners flocked into the country filling up Garden City and Zamalek and other places. New towns, Heliopolis and Maadi, were envisioned and started, leading to the growth of the periphery and the decline of the old city. Heliopolis was designed with a new metro system as a "garden city" in 1931 based on planning principles being introduced in Paris, for example in the Quartier Dauphine. The 1952 revolution under Gamal Abdel-Nasser (1952–70) led to industrialization in the northern and southern suburbs, new bridges were built, and educational institutes established. The social agenda was superior to that which had hitherto existed but the aesthetics and sense of place suffered.

Under Anwar Sadat, from 1972 onwards, Cairo's rapid expansion was aided by the inflow of billions of dollars from Egyptians working in the oil-rich Arab countries and American support. Several new towns were built. The first of these, Tenth of Ramadan, established in 1976, then some 50 miles from the city, was designed for 500,000 inhabitants and well exceeded that number within twenty years. President Mubarak sought a middle course between Nasser's socialist rigidity and Sadat's Infitah, and in 1991 embarked on a period of economic restructuring.[6]

> Cairo's density and compactness have long characterized social proximity, where inequalities are managed... However, the authorities have called upon the science of urban planning to formalize urban order to more easily distinguish and separate its social components and affirm a modern centrality. Three overarching principles have guided contemporary urban planning: first, delineating the external borders of the city; second, asserting centrality to the city and making the city centre more accessible; and third, establishing a new society in new cities on the terrain of the surrounding desert.
>
> —Mohamed Abdelkader[7]

The provision of housing for the lower income sectors was always a goal of Egyptian governments, but the Sadat regime seemed lacking the will or the resources to cope with the housing crisis. Its public housing programme did not really target the poor, for after 1973, 60% of new units were reserved for the army, public employees and people returning from abroad, regardless of their income. By 1985, when land values and construction costs had multiplied ten times and poor populations increased exponentially, the government could not keep up and the city became even more split into the city of the rich and the city of the poor, with one group living in gated communities and the other amongst the historic cemeteries (more about these later).

Cairo had grown from a city of 600,000 in 1900, to 9 million in 1980, and an estimated 14–16 million at the beginning of the twenty-first century.[8] Today, the greater Cairo region accounts for about 25%

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[6] Moheb Zaki, *Civil Society and Democratization in Egypt, 1981–1994* (Cairo: Dar Al Kutub, 1996) 166.

[7] I am indebted to Mohamed Abdelkader for his work on Cairo for his Ph.D. when I was teaching at Berkeley in 2000. This is quoted from a paper he did for me entitled "Political Economy and the Built Environment: Modernism, Socialism and Economic Liberalization in Egypt."

[8] For a more detailed and nuanced account of Cairo's development see Saad-Eddin Ibrahim's essay "Cairo: A Sociological Profile" in *The Expanding Metropolis: Coping with*

of the country's population. There are plans to increase land for housing in Greater Cairo by 27% by 2020, and build 16 new cities in the country.[9] The scale of the problem is immense.

States often chose to express their independence in new capital cities or new areas within existing cities. In Turkey, Ankara was planned by the German architect Hermann Jansen (1928–1932) to be a "rational and modern" city. Islamabad in Pakistan was planned by the influential Greek planner Constantine Doxiades (1959–1964),[10] whose urban theories were based on the design of sectors and neighbourhoods within a larger transportation system and a regional framework. The "logical" planning of the city divided the city into residential sectors, each with its own commercial and transport node and facilities, conceived to be within walking distance. (However, the climate works against this.) The sector inhabitants are divided by income or by occupation, and so one is often defined by where one lives. The plan also cuts through the topography and landscape, but now, half a century later, it remains a clean and pleasant place to live in. At the apex of the layout is the grand Faisal Masjid (conceived as the National Mosque) at the foot of the hills; a reminder of Pakistan as an Islamic state. The Master Plan for Abuja in Nigeria by International Planning Associates[11] (1976–1979) was based on many of Le Corbusier's ideas for the "City for Three Million Inhabitants." Although conceived as a new capital, it only became the actual capital in 1991. All of them were conceived as modern cities. Other capital cities followed: Kuwait City in the 1970s and '80s to name just one.

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the Urban Growth of Cairo (Singapore: Concept Media for the Aga Khan Award for Architecture, 1985), 25–33.

[9] Address to the Peoples Assembly by Prime Minister Kamal Ganzouri, in December 2003.

[10] Constantinos Doxiades (1913–75), was a Greek urban planner, designer, and consultant on ekistics, the science of human settlements. Doxiades held official and academic positions in town planning and housing reconstruction and after World War II he created many bold designs for towns and settlements built throughout the world from Islamabad, the capital of Pakistan, to the Eastwich urban renewal project in Philadelphia, PA. Among his book publications are Ekistic Analysis (1946), Between Dystopia and Utopia (1966), and Anthropopolis (1975). Although his impact is substantial in the Islamic World his work is no longer fashionable.

[11] The consortium of Planners consisted a joint venture between Architect Systems International, the Planning Research Corporation and Wallace, McHarg, Roberts, and Todd from Philadelphia. The Japanese architect Kenzo Tange also played a role in the design of particular sectors and buildings.

New city planning presumed to somehow amalgamate all parts of the urban settlement into one unit connected by transport arteries. Examples are Constantine Doxiadis' plans for Riyadh in 1971, and George Candilis' 1974 grid plans for Dammam and Al-Khobar, Dhahran, developed for ARAMCO (Arabian-American Oil Company). They followed modern principles of zoning and division of the city into sectors connected by vehicular transport with little regard for the old settlements or traditional buildings, which were often demolished. Issues of privacy seemed to have been the most important factor in residential development, with local authorities developing requirements controlling view, height and setbacks during the 1970s.[12]

The expression of nationalism, new forms of social organization, and the internal power structure that emerges, are manifested in urban forms and architecture, amongst other things. A number of new building types also reflected the independent states. The most important among these were the state mosques, public open spaces and parliament buildings. The capitol complex, the seat of government and expression of some form of people's government, was expressed through new parliament buildings as in Dhaka, Bangladesh (then East Pakistan), Kuala Lumpur, Kuwait City, and later in Riyadh. However, as Lawrence Vale asserts: "To a large degree many post-colonial capitol complexes are, like ancient citadels, a refuge for rulers rather than a vehicle for the sharing of political power."[13]

Mosques have been identifiers of Islamic cities. They range from small neighbourhood mosques to the large National Mosques. These mosques are emblems for Islam in the urban landscape and have been built in a number of styles ranging from the historicist, e.g. the Istiqal Mosque (1955–84) in Jakarta by F. Siliban, to the modern Masjid Negara (1957–65), the first State Mosque to be completed, in Kuala Lumpur by Baharuddin Abu Kassim. Mosques remain important markers within different sectors within all cities proclaiming the identity of the population as Muslim, and are incorporated into all contemporary city plans.[14]

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[12] For a good discussion of this, see Saleh Al-Hathlol, *The Arab Muslim City: Tradition, Continuity and Change in the Physical Environment* (Riyadh: Dar Al-Sahan, 1996), especially chapter 6: 195–236.

[13] Lawrence Vale in *Architecture, Power and National Identity* (New Haven: Yale University Press, 1992), 53.

In the Islamic world, periods of national consolidation accompanied the beginning of an identity search in the 1960s, working with a long history of being influenced by external movements, foreign architects, and training abroad. Countries now began to look inward for "legitimate" expressions in building that would resonate both with modernity and with specific cultural aspirations, following what Kenneth Frampton termed as "critical regionalism."[15]

Building forms are inextricably intertwined with city image and development. For contemporary architecture that became associated with Islam it is worth mentioning two architects. Mohammad Makiya and Rifat Chadirji are perhaps the most important Iraqi architects of the twentieth century. Makiya's work tries to reconcile traditional architecture and planning (based on Islamic ideals) with contemporary needs and modern architecture. Chadirji attempted to resolve the paradox of how to be modern yet remain faithful to local roots by using modern technologies in culturally Arab forms. These two mens' buildings and ideas marked the architecture of the 1960s and 70s in the Gulf States and elsewhere, whereas the most famous Arab architect of the twentieth century, Hassan Fathy, has had no impact on urban planning.

The resurgence in confidence in Islam came about in the early 1970s, spurred on by the success of OPEC (Organization of Petroleum-Exporting Countries), which was able to reconstruct the vital oil market in its favour. This caused a worldwide oil crisis and, as subsequent building production slowed in the West, it boomed in the Middle East. The backlash against modern values implied nothing distinct beyond a greater reverence for traditional moral and aesthetic forms. Once again, the issue of identity was at stake, but pan-Islamic sentiments implied a community of culture between Morocco and Manila. The notion of a uniform Islamic identity for states with a majority of Muslims spread around the globe. Even in Turkey, the most modern and secularized state of the Islamic world, there was a backlash in the 1980s and 90s, with conservative and Islamist circles adding their own spin to the development process. The notion of a single Islamic identity was tricky in the face of different Muslim cultures. Nevertheless, it is one that became a political and cultural rallying cry, seized upon as a way to distinguish Islam from the secular and Americanized West. In equating country with religion, the notion of Islam not only as a faith but also as a secular cultural force was introduced.

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[14] For an examination of contemporary mosques, see Renata Holod and Hasan-Uddin Khan, *The Mosque and the Modern World* (London: Thames and Hudson, 1997), also published as *The Contemporary Mosque* (New York: Rizzoli, 1997).

[15] See Kenneth Frampton's essay, "Prospects for Critical Regionalism," *Prospecta*, no. 20 (1983): 144–152, for several views on regionalism in the Islamic world: also essays and discussions in Robert Powell, ed., *Regionalism in Architecture* (Singapore: Concept Media for the Aga Khan Award for Architecture, 1987) and the writings of William Curtis and Rifat Chadirji. A number of articles in the now defunct journal, *Mimar: Architecture in Development*, also covers this subject.

The clearest illustration of this was in Iran. Opposition to the Shah's regime by Ayatollah Khomeini's followers, beginning in 1977 with the slogan "Independence, Freedom, Islamic Republic," led to the Islamic Revolution of 1978–79. The call for a return to Islamic principles led to questioning Western-style urban development, and to a new architecture that paid lip service to traditional Islamic building in formalist terms—without any real acknowledgment of its intrinsic principles. If there is any single idea that might epitomize the current preoccupations of architects and planners in the Islamic world, it is finding an inventive expression, using new technologies, that references the heritage and memory of the past. The search continues for a synthesis of architectural expressions that reflects non-global cultural and social identities.

In the West, the city has by and large remained a stable entity; in America, some cities have actually lost population numbers within the past decades. In Islamic countries the situation is very different, with mega-cities like Karachi and Jakarta attracting ever-growing attention, though it is the mid-sized metropolis that is growing the fastest.[16] In addition to a change in the pattern of growth, new factors are altering the nature of the city.

The Global City in the Islamic World

It is not my intention here to explore the notion of global cities, as this is a subject that has been thoroughly covered by economists and sociologists, but rather to remind us that they are important economic generators (now accounting for over 80% of the world's capitalization), and that they house a disproportionate number of the world's headquarters for transnational corporations and international institutions. Global cities also serve as sites for product innovation and production, in addition to providing the markets for these products. There are strong indications that these cities are also a springboard to further economic and cultural developments that now have far-reaching global repercussions, connecting multi-national firms to urban settlement patterns.[17]

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[16] This is true both in India and Indonesia, and is the trend all over Asia. In general, cities account for a major share in the generation of a nation's income.

Technological and economic changes are inevitably affecting the analysis, perception and form of the city. "The effects of globalization on urbanity and society address deeper issues of cultural tradition and identity as space is always culturally inscribed with meaning, and society is represented through the spaces it creates."[18] It is neither politics nor economics that create a sense of place, but vision and architectural form do. Delineations of urban space still serve as an important indicator of the direction and focus of societies in the face of powerful global influences across national barriers. It may be true to say that the world market is not a cultural concept: and the new technologies are global in nature.

The notion that cities need their own raison d'etre to establish their niche in a global world is becoming trendy. The city as a mechanism of the global economy and particularity of image can be seen through the developments of waterfronts, increases in hotel construction and convention complexes, large-scale commercial retail, and residential developments. This is evident in the types of large-scale projects that are under construction in numerous cities, such as Kuwait with its cornice development, and Dubai (taking over from Beirut of the 1960s), developed as the Middle East's playground and commercial centre. Jakarta with its new peri-urban developments not only presents an image of a new kind of living/commuting pattern but also engenders a different settlement pattern that is an extension of both the garden city and the gated community (more about this later). Other places promote themselves as industrial centres. An interesting and recent phenomena is that of "outsourcing" where activities that serve the information highway and the global marketplace are being placed in custom-designed urban developments. New cities are set up specifically to cater for the new activities and rising new "yuppie" groups have been rapidly developing in India and elsewhere. Cities associated with Muslim culture, Hyderabad in India, for instance, has a centre known as Cyberabad for the computer industry and outsourcing. These settlements provide amenities and a lifestyle hitherto unknown in the country, and hence are beginning to attract back into the country people who were part of the "brain drain" of the past decades. Pakistan, too, is also attempting to follow this lead but, perhaps because of the political and economic climate, is much slower in taking off. These urban developments may not yet engender an altered social urban geography; they are nevertheless making their mark within the existing spatial patterns of cities. All these are a form of establishing identity and do not appear to be religion-specific or culture based.

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[17] Saskia Sassen, The Global City—New York, London, Tokyo (Princeton, NJ: Princeton University Press, 1991) and Jordi Borgia and Manuel Castells, Local and Global (London: Earthspan Publications, 1997). These authors, amongst others, have set the scene for many discussions of the Global City.

[18] Anthony King, "Architecture, Capitalization and Globalization of Culture," in Global Culture, ed. Mike Featherstone (London: Sage Publications, 1990), 404.

The mega-city and new towns: A tale of two cities

Two factors marked the change after independence for Muslim societies and governments. Notions of "Development" as the organizing paradigm and rhetorical means of restructuring the state, and that of "Modernism," usually equated with Westernization in the desire to be players on the world stage, were driving forces in the rhetoric and actuality of new Asian states.

Two mega-cities in Asia—Karachi, Pakistan with around 15 million people, and Jakarta, Indonesia, with a population of 20 million—illustrate more concretely the trajectory of cities in the Islamic world. They will be amongst the world's twenty largest cities by the year 2020 with populations expected to be almost twice what they are today. Both have majority Muslim populations, with Pakistan an Islamic Republic and Indonesia with its doctrine of *pancasila* (five principles), which is more inclusive of all faiths.

> Karachi is not only the biggest city of Pakistan, but by virtue of its dense population and its amazing sprawl, is counted among the big cities of the world. It is the lifeline of the country's economy, the largest contributor to the state treasury, and the most modern city of the country. Like any

> modern megapolis, the habitat of the poorest of the poor and the richest of the rich,
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> ...Where alongside the expensive 5-star hotels, the most inexpensive nihari [a local dish] is also available; and where for years, sometimes with changing frequency, the bodies of innumerable victims are brought down with a spray of bullets in the street in every neighbourhood.
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> —Fahmida Riaz[19]

Karachi was a sleepy little town until the country's independence in 1947 when it became the capital for a number of years. Jakarta was a colonial city under the Dutch and the country's long-time capital. Both the cities are port towns that have grown rapidly due to immigration and the expansion of commerce and trade. Indonesia is richer in natural resources—oil, timber, and plantation agriculture—than Pakistan, and economically growing faster. Both play significant economic and political roles in their own regions: Karachi in South Asia and Jakarta in Southeast Asia. But the two cities leave us with very different images. The characterizations that follow are broad-brush strokes in order to make the point.

Both cities have expanded extensively horizontally from the port and business district to new industrial and residential areas stretching for miles, roughly in keeping with a Master Plan.

Karachi is essentially a city of medium and low-rise buildings. The buildings of the rich and of the institutions follow some form of International Style architecture, and the layout of those areas conforms more or less to zoned western planning norms. The settlements of the middle and lower-income groups appear much more haphazard in their layouts and colourfully eclectic in their architecture. Jakarta, too, grew outwards away from the port and the old Dutch commercial and administrative centre. Here, unlike Karachi, historical change can be traced in the development from that of the traditional and historic settlements to the modern city. Jakarta's new developments with their high-rise buildings and symbols of progress occur along long highways surrounded by neighbourhoods of the rich and the poor intermingled in pockets. The types of settlements vary from those laid out according to a plan to those that occur as urban villages or kampungs. Unlike the situation in Karachi, where such settlements would have been controlled to follow normative mores, these were encouraged to develop in their own model with a large degree of success.

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[19] Fahmida Riaz, *Reflections in a Cracked Mirror* (Karachi: City Press, 2001), 25.

Karachi, unlike, say, Lahore in Pakistan, did not have a long history or sense of place that helped it to surmount the onslaught of modernism, industrialization and unprecedented rapid growth, whereas Jakarta could fall back on its inherited indigenous and even colonial models and to a rich heritage embodied in the music and art forms of Java. New buildings can refer to past models for inspiration and legitimacy. Karachi models can only be termed as "Islamic," referring in some way to the Mughal buildings, but ones that were unable to find a resonance for contemporary living and the newly independent state.

Under President Sukarno, Jakarta modernized with upgraded urban services, boulevards that cut through the heart of the city and a new business area established. The kampungs continued to exist amidst the new city developments. By the early 1990s, Suharto's New Order changed Jakarta's image from being a "city of a thousand kampungs" to "Jakarta the metropolis," making it one of Southeast Asia's Primate Cities. Direct Foreign Investment is imputed on Jakarta's spatial forms as post-modern towers, new toll roads choked with traffic that lead to glittering shopping malls, golf courses, and gated communities, sprawling into the surrounding countryside. Like Singapore, with Lee Kwan Yew, Jakarta's transformation in 1980s was to an extraordinary degree controlled by President Suharto's family and business partners.

Since the 1990s a product of economic globalization in much of Southeast Asia is the American "spread city" model used in new suburban housing developments. These townships established a contemporary image of the West in the minds of the upper classes. In Indonesia, one of the most prominent developers in the country, Ciputra, owned by the Riady Family, working in partnership with the government, developed several new towns including the flagship Lippo Karawaci. The new town, located some twelve miles to the west of Jakarta, was designed by Australian, British, and American architects, and the Malaysian-born Gordon Benton became the in-house urban designer and town manager.

> The adoption of American housing models was the result of popular demand within Indonesia for all things American, and the place appeals mainly to young professionals with no children. The houses themselves conjure up images from those of Californian bungalows to Greek revival mansions, characterized by housing named "Dallas" (American Colonial) and "Mediterranean" (actually Californian), amongst a host of others.

> Some of the small houses are given a local Balinese theme. The architecture of the township reveals the desirability of new hybrids in a post-modern rendering of architecture. Despite claims of being Western the houses bear traces of their local roots and produce a hybrid environment that is Indonesian. The desire for global Western models is tempered by local climate, social conditions and self-image.
>
> —Robert Cowherd[20]

These developments combined with the new CBD (Central Business District) and commercial areas contrast with kampungs and traditional forms of organization such as the *pesantren* settlement based on the teachings of Islam. As in most Asian cities, this highlights the presence of "social dualism" as described by David Harvey in his book, *Social Justice in the City.*[21]

In spite of the rapid growth of both cities, Jakarta, in spite of being a more "global" city, still retains a sense of place imbued with past meanings and current aspirations whilst Karachi grew to accommodate growth without a sense of history or a vision of its role. Their value systems and tastes are different: the former more in conformity with international images of development and the latter with a mix of historicist, vernacular and modernist expressions. Are both "Islamic Cities"? They are certainly good examples of two kinds of urban development in the Muslim world.

Appropriating the global:
The CBD and Commercial manifestations

The CBD with its concentrated high-density development is common to large cities. Many urban centres have been cleared for new office space and forms of cultural consumption for the international population. Infrastructures of advanced telecommunication have been built to facilitate a computer-literate workforce. The intent appears to be to attempt to create an environment to attract new investments and multi-national corporations. So much so, that the new skyscraper office buildings attempt to lift the urban identity of a city from the modern to the spectacular—see for example the Petronas Towers (1998), the second tallest buildings in the world, by Caesar Pelli in Kuala Lumpur.

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[20] Robert Cowherd, "Cultural construction of Jakarta: Design, Planning, and Development in Jabotabek, 1980–1997" (Ph.D. dissertation, MIT, June 2002), 109–111.

[21] See David Harvey, *Social Justice in the City* (Cambridge, MA: Johns Hopkins University Press, 1988).

In the Arab Gulf, mainly due to oil, several countries including Saudi Arabian cities transformed from small desert enclaves into modern cities in the 1960s and '70s. Foreign planners and architects were invited to Saudi Arabia to compensate for the initial lack of local experience, but their work also symbolized the country's new global international and economic success. An equally dramatic transformation took place in the Dubai of the 1990s. "This unrivalled pace of development, however, placed local culture and traditions in tremendous flux.... The overabundance of air-conditioned glass blocks in a desert environment seemed to make local Arabs tourists in their own cities."[22]

The case of Bahrain is also instructive. In the early 1970s, the government made official its plan of converting the small city-state into a banking centre and modern city. Citizens were constantly urged by the authorities and the media to improve the country's international competitiveness. Local architecture was supposed to have an international sensibility and multi-use complexes and high-rise buildings announced the entry of Bahrain not just as a regional centre but a player on the world's stage. The process and will of transforming Bahrain into a modern state required considerable social and cultural changes in addition to economic development. In this process the government consciously supported foreign architects over local ones to promote international recognition and to give the city a validation. This extended into the private sector where involvement of foreign architects usually ensured project approval, even though it resulted in a backlash from local practitioners.[23] However, the growth spurt was limited and other states, notably the United Arab Emirates, overtook Bahrain's importance. It is a tale worth examining in greater detail, and mentioned here only in passing to illustrate the importance of political will and vision.

In many Islamic cities, certain aspects of traditional "Islamic" domestic architecture have influenced the design of commercial buildings. Mashribiyas or wooden perforated screens that were used for diffusing sunlight and providing privacy are often used in an emblematic manner on building façades. They have often become mere surface applications divorced from use and meaning. Similarly, in other buildings the use of the pointed arch is supposed to act as a reminder of regional traditional buildings. Their design invokes a reference to the local past, seen as a reminder of the roots of the society and sometimes some golden age of Islam.

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[22] Deeba Haider, "The Growing Pains of Global Cities" (M.S. thesis, MIT, June 1999), 22.

[23] See for example William Lim's critique of this process: "The nations' wish to express progress and modernity is reflected in the international symbols of modern corporate architecture [which destroyed the] fragile experiment in the evolutionary development of localism and identity," in *Innovative Architecture of Singapore* by Robert Powell (Singapore: Select Books, 1990), 13.

Most of the high-rise buildings with their concrete frames and curtain walls have little to do with local climatic or cultural conditions. In a country where only about 25% of the population is indigenous, this lack of reference to the local, where indeed the locals themselves are far removed from the values of their parents' generation, seems to fit into their desire for an international modern identity. But, by the 1990s (as in most Arab states), this was seen as insufficient, and the desire to create an architectural vocabulary more reflective of the Arab population became an issue of importance.

This is not to suggest that all developments try to reconcile themselves to local history or traditional forms. The physical transformation of Kuala Lumpur during the building boom of the 1980s demonstrated the success of local entrepreneurs and political elite in mobilizing both domestic and foreign capital for new ventures. The Golden Triangle area of downtown Kuala Lumpur features several five-star hotels, restaurants, shopping centres, parking garages, and office towers with high-speed DSL Internet connections. "The Golden Triangle contains no major civic buildings and no religious buildings of any consequence—no monuments, no formal buildings. They have all been replaced by hotel lobbies…sidewalks and street life has disappeared."[24] The buildings themselves are mainly post-modern towers that were read by the local population as being different and contemporary, even when the architects' rhetoric tried to connect them to local forms and symbols.

Similarly, Kuwait's shopping malls, huge air-conditioned blocks with their McDonalds, Hard Rock Cafés, Gucci and other design stores and shops selling items from all over the world have become places of social gathering and family outings. The stores themselves, with very few exceptions, are imports from Europe, America and Japan. In efforts to re-appropriate an environment that is becoming increasingly foreign from what it was thirty years ago, architects and planners have tried to relate architectural forms to traditional and cultural elements in a desperate attempt to make sense of Arab streets and the new commerce. Food courts offer the diversity of international cuisines, in some cases adapted to the local culture—for instance, the BLT (Bacon Lettuce Tomato) sandwich is made with beef bacon. A similar situation occurred in Jakarta, where the first and most successful McDonald's offers rice on the menu. All the large shopping centres have spaces set aside for prayers, and some call shoppers to pray via the mall's public announcement system.

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[24] From the "Golden Area Triangle Study" by J. Beinart, R. Lewcock, P. Kasi and P. Wardi in *Design for High-Density Development* (Cambridge, MA: Aga Khan Program for Islamic Architecture at Harvard and MIT, 1986), 83–90.

Elsewhere in the Middle East, in Jeddah, Saudi Arabia, Gordon Bunshaft of SOM (Skidmore, Owings, and Merrill) designed a high-rise building that attempted to reconcile traditional and global notions of building in the National Commercial Bank (1983). The 27 storey triangular monolithic slab is an inward looking building that responds to the harsh climate and to Arab prototypes. Its interiority is expressed on the outside by large openings, one on each façade, which give glimpses of shaded atriums, blue-grey heat absorbing window walls and landscaped courtyards. The solution provides a new model with an energy-conscious and culturally appropriate approach for tall buildings for the region.[25]

Very few buildings achieve this success in synthesizing tradition with modernity. The presentation of local cultural identity is hard when it conflicts with the impact of globalization. It is made more complex in young cities, which have relatively little tradition or built heritage.

One other urban form worth noting is the gated community for the rich. Gated communities have been developed in many cities of the Islamic world, taking after the gated communities of American cities of the 1930s and the military cantonments found in many cities colonized by the British. Such communities have flourished in and around Jakarta and Riyadh (some catering exclusively to foreigners) in the 1990s. Similarly, in Cairo, on land prepared for development by the state, villa compounds with golf, fishing, and even artificial lakes, flourish. The promoters characterize these developments as a renaissance of urban society (al-nahda al-umraniyya). Those who have the means—private transportation and telecommunications equipment—can now escape the urban cacophony while retaining access to urban life. This development in particular highlights a growing rupture in the Cairene way of life.[26]

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[25] See Hasan-Uddin Khan, The Middle East, vol. 5 of World Architecture: A Critical Mosaic 1900–2000 (Vienna: Springer, 2000), for coverage of this and other important buildings in the region.

Rural / Indigenous settlements in the city

The distinctiveness of the urban-rural dichotomy is being broken down and rural settlements are assuming urban characteristics. As a corollary, the rural nature of urban development is part of cities. The Asian city is often comprised of small village settlements—for example the kampungs of Indonesian and Malaysian cities or the tribally defined communities of North Karachi. The inhabitants of such settlements send back capital to their villages and return to them for special occasions such as weddings and religious festivals. The life of the city is interwoven with the life of the villages. The retention of rural forms masks the fundamental shift to a regional urban economy.

Life in the urban areas and small towns and villages alike is affected by globalization and the international transmission of information and images. By the year 2000, everywhere in the poor rural settlements of the Northern Areas of Pakistan there were satellite dishes and villagers were turning to international programmes, the most popular being Indian soap operas and the scantily clothed women of "Baywatch." (Recently, I learned that the most popular foreign television programme in Iraq and much of the Middle East amongst women of all ages and income groups is "Oprah.") One can imagine the impact of such programmes on local value systems and aspirations! Another major innovation is the easily accessible direct-dial telephone system, in the chai khanas (teashops) in the villages, allowing villagers to communicate directly and immediately with the rest of the country, indeed, with the world. These changes are making their mark on the perceptions and behaviour of people. They bring a new model of development.

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[26] Eric Dennis, "Urban Planning and Growth in Cairo," Middle East Report: No. 202 vol. 27, no. 1 (Winter 1997): 10.

No longer are the cities of Pakistan, such as Lahore or Karachi, the model; now it is the western global city.

Tourism, historic preservation and the vernacular

In much of the Islamic world, rising interest in historic preservation results from the wish to express identity by making a connection to the historic past in the built environment and also by economic considerations, specifically tourism. Concomitant to this, the infrastructure for tourism is being laid out in the form of hotels, travel services, transportation and communications. Countries such as Indonesia, India, and China have enough historic sites to engender these changes, but in some societies, such as Saudi Arabia, there appears to be a need to "Manufacture Heritage and Consume Tradition," to draw from the title of a book by Nezar AlSayyad,[27] and to use historic sites and buildings, few in number, to complement their development as cities. The fear seems to be that the manifestation of modernity is not enough and there is a need to promote locality and a sense of place both for the indigenous population and for visitors.

In an effort to make place appealing for travellers and the inhabitants alike, the rulers have created facilities that refer to familiar forms. The Bedouin tent has become an image for many projects in the Middle East, from its early use in hotels as in the Mecca Conference Centre and Hotel (1976) with its metal-covered tensile structure by Frei Otto, Rolf Gutbrod and others, to the Hajj Terminal of King Abdulaziz Airport near Jeddah (1982) by Fazlur Khan of Skidmore Owings & Merrill (SOM). The innovative structure of the terminal with its Teflon-coated fiberglass tents has had a great impact on the contemporary architectural imagery of the Arab Middle East. The concrete roof of the National Assembly (1983) in Kuwait by Jorn Utzon provides a tent canopies in concrete. So does the Emirates Dubai Creek Golf Club (1988) by Jeremy Pern/Karl Latten. It is one of several golf clubs and courses in a country positioning itself as a major international golfing destination.

Similarly, analogies are made to dhows, the traditional Arab sailboat symbolic of life in coastal areas that is closely tied to the sea-faring culture of Dubai. The flashy, "world's most expensive and tallest hotel (as of 2004)," the Burj al-Arab Tower Hotel, by W. S. Atkins and Partners, on a man-made island adopts this form. Here the sail of the dhow is constructed as an extraordinary glass curtain wall and red Teflon-coated fibre-glass skin. It is interesting to note that this high-tech architecture has taken over from mashribiya façades as the new symbol for Dubai.

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[27] Nezar AlSayyad, *Consuming Tradition, Manufacturing Heritage: Global Norms and Urban Forms in the Age of Tourism* (London: Routledge, 2001).

Under construction is the Palm Island in the shape of 17 huge fronds surrounded by 7.5 miles of protective barrier reefs, extending three miles into the sea south of Dubai city. It will include 2,000 villas, up to 40 luxury hotels, shopping complexes, cinemas and the Middle East's first marine park. They will be accessible by 990-feet bridges from the mainland or boat to two marinas, while the main causeway will also have a monorail system. This ambitious and extraordinary project is being planned and built in conjunction with numerous local and international firms. It, too, is part of the Dubai government's deliberate move towards making the place a "festival destination" not only for the region but internationally. This and other projects in Dubai may indeed change the image of the Islamic City.

Elsewhere in Iran and Qatar, for example, modern buildings employ the use of the imagery of traditional wind-catchers but change their function. The Tehran Museum of Contemporary Art (1977), by Kamran Diba of DAZ Architects, uses light towers shaped like the wind-catchers to light the artwork. Qatar University (1985), by Kamel El Kafrawi, consists of multiple wind towers that let in light into the mechanically air-conditioned complex rather than wind.

Equating authenticity and cultural representation to the picturesque is a common ploy in attracting visitors. Even in cities that have a strong image and the presence of many historic structures as in Baghdad, this approach is common. The area around the Khadimiya Shrine was bulldozed in the 1970s during the city's modernization and re-planning phase. Within a decade the area was felt to be sterile and the whole neighbourhood reconstructed to accommodate narrower streets and high-density development reminiscent of what had existed historically. The traditional-looking structures with their small shops, plazas and pedestrian pathways are built using modern construction techniques and materials, and are modified in plan to accommodate the automobile.

The tourist hotel also plays into the image of an "authentic" historic or vernacular present. An indigenous image of architecture is conjured up and offered to the tourist eager to consume local culture in comfort. Numerous hotels all over Southeast Asia use the model

Balinese architecture; even though it has nothing to do with Islam, as can be seen on the resorts of Java and East Malaysia, such as The Datai on Lankawi Island (1993) by Kerry Hill Architects with Akitek Jururancang. In Pakistan the Quetta Sarena Hotel (1994) by Arcop Associates falls back to the model of the indigenous earthen village architecture, albeit sanitized and made palatable to sophisticated tastes. In other parts of Asia, such as India, the same approach is often taken with the adaptive reuse of Mughal palaces. The architecture is augmented by traditional dances and foods prepared for mass consumption. Images of the past are intermingled with present-day comforts and needs. Here everything is cleaner, neater, and safer than the "real thing," providing an escape from the reality of home (wherever that might be) and a new different and satisfying experience.

Manifestations of the local

If the above are in the main manifestations of modernity and globalization, albeit sometimes mingled with the local, they find their counterparts in local forms of organization and built environments. Institutions of civil society—NGOs, soccer and cricket clubs, and neighbourhood organizations, among others, are reminders of the strength of the local. On a physical level, they find their expression in the local parks and playgrounds and streets. Here I give just one by way of example.

Local forms of organization can be viewed clearly in the residential neighbourhoods of most Asian cities. The history of Javanese urbanism remains the main frame of reference for cities in Java. The kampung, or urban village, even when found within urban centres, existed and outlived Dutch colonization, Japanese rule, independence, and modernization. It is more than a form of spatial organization: it also embodies forms of social organization, and remains the dominant feature of Indonesian cities, housing some 80% of the country's population. Despite housing a majority of Jakarta's residents, these areas occupy a disproportionately small part of urbanized land, typically around 15%.

The high density of these neighbourhoods and the importance of informal sector economy activity, kampungs tend to harbour a rich diversity of land uses, from industrial and retail to residential. (Kampungs are not to be confused with low-income developments.) The social structure of the kampung is made explicit in the concept of gotong royong (Javanese for "mutual assistance") by which residents call upon a neighbourhood community for help when needed. Indeed, as Robert Cowherd has noted, the kampung remains a source of cohesion and stability in difficult times:

> The riots of May 1998 in Indonesia brought an end to Suharto's thirty-two year presidency. The local Muslim population targeted Chinese-Indonesians.
>
> The commercial and high-income developments became targets and the city retreated into a defensive mode. Interestingly, however, residents of the kampung, a place that relies on substantial self-governance and collectivity, demonstrated an impressive capacity for mutual respect and solidarity, giving hope for a counter-balance to the country's economic woes brought about by regional economic failure. These settlements, in conjunction with NGOs, present an opportunity for forging a new vision for society.[28]

The government and planners of Jakarta have used the kampung to build the expanding city, seeing both its potential and problems. A built-in structure and a possible network for dissemination, the World Bank in the 1970s supported the kampungs in Jakarta and Surabaya as part of its cornerstone for local development, and in 1980, the Kampung Improvement Programme won one of the first Aga Khan Awards for Architecture in recognition of improving life and places in the city.

Besides the kampung, other elements of the urban landscape still remain intact in Indonesian cities: for example, the alun alun (town square), the traditional market and the mosque all remain primary sources of meaning and orientation in the city.

The city of the poor

Early on in this essay I started by asking: "whose city" are we considering? Unfortunately many of the cities in the Islamic world house a vast majority of people living below the poverty line. Until around the 1990s many governments felt it their paternalistic duty to provide housing for the poor and in planning cities areas were designated and developed for lower income groups.

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[28] Cowherd, op. cit., 88–89.

From the 1960s onwards, the rapid migration from the countryside to the cities, as in Istanbul or Tehran, led to squatter settlements within the cities and on their peripheries. Squatter communities, often referred to as informal settlements, form a majority of the urban population everywhere in the Islamic world from Jakarta to Karachi and Cairo.

The Gecekondu (literally "night landings" or "built overnight") of Turkey form a significant part of the built environment of its cities.[29] About 50% of Istanbul's population lives in such illegal settlements. The first generation of Gecekondu formed a unique phenomenon of a village-structured self-organized settlement which provided a social net and security for newcomers. In the second generation, every square metre of floor was sold and urbanized. Almost every family in this way became an investor and property developer of the current mega-city, which is however marked out by huge settlement, environmental destruction and a ground market controlled by local mafia. For the majority of the inhabitants who are affected by precarious and informal (undocumented) working conditions, the primarily independently and informally erected houses in a Gecekondu area are often the only social and economic security. The authorities viewed them as unwanted intrusions into the city and sometimes bulldozed them, but eventually became reconciled to them as inevitable manifestations of industrial urban development and in most cases provided electricity and other services to them, and in some cases "regularized" them by providing their inhabitants title deeds to their buildings, usually as leasehold.

In Ankara, where in 1985 some 57% of its inhabitants live in Gecekondu, the government has begun to take steps to accommodate people in new housing schemes; for example in the Çankaya Municipality around the Dikmen Valley. In the long term, however, this may well do away with such settlements in the area to the benefit of the rich.[30]

Although squatter settlements are very visible in most cities, perhaps their most dramatic impact on the urban fabric is in Cairo with its vast necropolis dating from the fourteenth century. As the city was unable to accommodate the population increase within any reasonable distance from places of work in the capital, squatters began to take over the extensive historic cemeteries that are spread within the city. The two vast cemeteries, one to the north that lies along the road from the airport to Bab Al-Nasr and the other to the south, away from the Citadel, to merge with newer shanty towns below the Muqattam, house somewhere between 500,000 to 1 million illegal settlers. These "Cities of the Dead," as they are known, are served with electricity, some running water, and telephone service. Although the inhabitants are poor they appear to be well integrated into Cairo's urban economy.[31]

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[29] A great deal has been written on the Gecekondu, amongst which are: Tugrul Akcura, *Ankara* (Ankara: ODTU Yayinlari, 1971); and Murat Karayalcin, "Batikent: a new settlement project in Ankara," *Ekistics*, nos. 325–327 (July–December, 1987).

[30] A good account of this and others can be found in a paper by Frderico Malusardi and Giuseppe Occhipinti of the University of Rome, "Informal Settlements Upgrading: the Gecekondus in Ankara," in 39th ISoCaRP Congress 2003, Cairo.

By 1971, squatter communities were, on the whole, an accepted element of urbanization as evidenced by their discussion at that year's Habitat Conference in Vancouver. The planner John Turner and others viewed squatters as a resource rather than as a problem.[32] Regarding housing as a process rather than a product, they helped focus attention on such settlements in a more positive manner.

The planned communities for the poor, for example in Karachi the 1970s sites and service-core projects in Metroville, North Karachi, tried to apply "rational" affordable planning to produce placeless places in utter contrast to those neighbourhoods that have some say in their own development. The urban development laid out in a grid pattern has all the usual elements from commercial centres, transport nodes, neighbourhoods, mosques, schools, and other public buildings. But something is missing: a vision, a heart. The city does not conform to the neat theories of planning and grows contrary to governmental schemes.

Another phenomenon in the oil-rich Arab countries is the creation of "camps" for migrant labourers from other, mostly Asian, countries.[33]

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[31] See Keith Sutton and Wael Fahmi, "Cairo's 'Cities of the Dead': The Myths, Problems, and Future of a unique Squatter Settlement," *Arab World Geographer* 5, no. 1 (Spring 2002).

[32] Charles Abrahams influential book, *Man's Search for Shelter in an Urbanizing World* (Cambridge, MA: MIT Press, 1964), and John Turner's writings, *Freedom to Build* (New York: Macmillan, 1972) and *Housing by People* (1976), had a marked impact on governmental policies towards the poor. Until that time, governments usually removed squatters whenever they could in spite of the fact that they constituted a majority of the urban population.

[33] The construction workers, all male, come from other poor Asian countries, both Muslim (Pakistan, Bangladesh, etc.) and other (North Korea, the Philippines). Typically they will be hired through an agency and live in the country for a period of between two and four years. In Saudi Arabia they have very few rights and live with substantial restrictions. During this time they send a major part of their earnings home where they eventually return to live.

Migrant labour had increased substantially in the Arab Middle East. Before 1972, there were some 800,000 migrant labourers; by 1980, 2.83 million; and by 1983, 4 million. Migrant populations form a significant percentage of many Arab states: for example, in the U.A.E., 24% in 1985 and over 50% by 2000; in Kuwait, over 60% by the same year. The labourers are housed in controlled settlements, usually separated from the rest of the city, which have their parallel in colonial city developments which were sited apart from the historical or traditional city. Often the settlements consist of pre-fabricated metal units that are badly designed, sometimes providing dormitory-like facilities, and laid out in lines with no regard to engendering community or a pleasant environment in which to live. These workers' settlements in countries such as Saudi Arabia are for transitory labour and severely contrast with their counterparts for the rich—the gated community.

Pluralism in the "Islamic city": looking to the future

> We need a theory of culture at the level of the international which is sensitive to the ways in which identity is constituted and represented in culture and social relations.
>
> —Janet Wolff[34]

Globalization, with its concomitant impact on place, raises the issue whether national and social identity or, indeed, notions of Islamic identity still matter, for they play an apparently small role in the economically driven city. In spite of this, cities such as Dubai, Lahore, Baghdad and Kuala Lumpur maintain the importance of national culture and identity and represent it visually in their buildings but less so in their planning.

It is arguable that the city has always been an expression of power and vested interests, and that planning and architecture remain weapons of the powerful. However, as Alan Scott has noted: "No matter how determined the attempt to transmit homogeneous and uniform cultural material, actors are too knowing and culture too complex for any process of cultural exchange, no matter how exclusive, to be one way."[35] This applies even to the most technologically and commercially driven area as the CBD. The danger of pastiche, however, persists.

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[34] Janet Wolff, "The Global and the Specific" in *Culture, Globalization and the World System*, ed. Anthony King (Minneapolis: University of Minnesota Press, 1997), 171.

The task of governments, too, has changed, placing them in a position of maintaining identity and producing a framework for external economic interests. In a talk given in December 2002, Ismail Serageldin, a former Vice-President of the World Bank, noted that on one hand governments are ill equipped to govern beyond their boundaries on a global scale (even for the USA—the only current global power) and, on the other hand, they are unable to connect with their local populations.[36] This seems to hold true for Islamic societies.

Cities, with their disparate populations, will continue to move towards global ends. The process of physical homogenization will continue, but may be balanced by hybridization and locale. "The challenge of reading the built form of an Asian city is to do so through the lens where the object derives its meaning through a specific history and culture."[37] The notion of Muslim cultures, in plural, appears to be taking shape and the perceptions and visions for cities will become even more complex. Reading the architecture of place gives us clues to cultural values and notions of "progress." It is culture that is the hallmark of civilization. We remember and evaluate our achievements through the legacy of our philosophical visions and the physical environment that we create, even though access to resources or the pure sciences might change the way in which we view that world. The manifestation of the mega-city is a legacy that will carry through this century, but new settlements, with urban-rural-local-global characteristics, may be the wave of the future. Urban form, in the best scenario, will probably take on the characteristics of some kind of "global village," to use Marshall McLuhan's phrase from the 1960s.

The inherent pluralism of the city in the Islamic world—be it of social, ethnic or physical manifestation—needs to be reflected in a plurality of approaches by all the different players of the urban population. Considerations of public-private roles, of built-up area and of natural environment, of economic well-being and sustainability, of a humanism that recognizes both the local and the international, are forcing us to regard development and interdependence in a real “new world order.”

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[35] Alan Scott, ed., Limits of Globalization (London: Routledge, 1997), 19.

[36] This is a rough paraphrase of the closing/summary remarks made by Ismail Serageldin at the conference: "Protecting Cultural and Natural Heritage in the Western Hemisphere," held at Harvard University, 5–7 December 2002.

[37] Cowherd, op. cit. 84.

THE GROWING PAINS OF DUBAI: A CITY IN SEARCH OF ITS IDENTITY

Deeba Haider

> We live in a world characterized not just by difference but by a consuming erotic passion for it.
>
> —Joel S. Kahn, *Culture, Multiculture, Postculture*

> What marks out the successful city is the sense of the possible.
>
> —Deyan Sudjic, *The 100 Mile City*

At the beginning of the twentieth century, Dubai was a small town, spanning three kilometres by one kilometre. Aided by the initial success of the pearl trade, a mix of various tribes settled along the coast. At first, the different tribes lived separately, forming their own districts of the barasati huts. Eventually these simple homes made of palm fronds were replaced with the wind tower houses introduced by the Persian merchants who migrated to the area. Whether these tribes or settlers lived in the coastal towns, the mountains or the desert, they were all welded together by their tribal background, common religious practices and Arabic language. Their limited "urbanity" was heightened by the vast expanse of desert around them.

As a desert city, Dubai was heavily limited in natural resources, sustaining only a very minor existence. Dubai's pearl trade soon faded after Japan's introduction of cultured pearls. However, with the creek serving as a natural port, Dubai benefited from the income of traders. Yet by the mid 1900's, Dubai still lacked adequate roads, medical services, electricity and sewage facilities. Any form of transportation facilities or communication systems was non-existent. It was finally with the commercial discovery of oil in 1966, in the Fateh offshore field that provided Dubai with the impetus and financial resources to transition from a small settlement to a leading global city. Oil money set in motion an intensive program of modernization. This sudden wealth introduced new building materials such as cement, steel, glass, and electricity, which in turn brought air conditioners into Dubai, completely revolutionising the building industry. The wind towers that once stood so proudly along the Creek were now dwarfed by the concrete and glass high-rises. New shopping centres replaced old suqs, once the heart of the city. Wide orthogonal boulevards cut through clusters of barasati huts. Almost overnight the World Trade Centre and the Hyatt Hotel Galleria became the new symbols of Dubai.

Around the same time modern Dubai was taking root in the late 1970's—the global economy was building momentum and starting its sweep across the world. Dubai's unparalleled pace of development was strongly influenced and driven by the rise of globalization. In Dubai's haste to modernize, catch up and even surpass the developed world, three hundred years of urban, social, and technological development were compressed into thirty five years. Dubai turned from a small fishing village to a city leading its region in superior technology, infrastructure, global finance, and luxury tourism.

The global economy encourages cities to operate and compete in new ways to make their mark on the world's stage. Global cities are concentrated command points for international finance, and global nodes for the distribution of the world's economy. They attract and house a disproportionate number of the world's headquarters, multinational corporations, and institutions, and serve as a springboard to further economic and cultural developments that have international repercussions.[1] The global city is also a tourist centre with the greater part of the city focused on the entertainment industries, luxurious lodgings, and airport facilities.[2] Global cities embody movement and economic power to accommodate an increasingly mobile and transient global community.

The leaders of Dubai have been very proactive in designing a city that would not only participate in the global economy but lead it, easily attracting its significant players. Due to their humble beginnings, their desire to be respected and competitive globally is overwhelming. With tremendous haste, the desert sands of Dubai were blanketed with technologically advanced curtain wall office buildings and five star hotels to accommodate the growing transnational population. Dubai embraced new and foreign images and ideals, customs and culture. Billions of dollars are spent to attract international businesses, investments, and tourists. Disregarding local climate conditions and cultural needs, government planners and designers in Dubai freely transplant the urban environment of leading global cities like Hong Kong, New York, and London. They import international designers from North America and Europe to large design projects such as high-rises, hotels, hospitals and airports, that they believe are too complex for local architects. Mid-rise buildings however, are awarded to local Arab designers, as they were deemed capable of handling such projects.

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[1] Saskia Sassen, The Global City (Princeton: Princeton University Press, 1992), 166.

[2] Hamilton C. Tolosa, "Rio de Janeiro as a world city," in Globalization and the World of Large Cities, ed. Fu-Chen Lo and Yue-Man Yeung (Tokyo: United Nations University Press, 1998), 133.

This rise in construction and economic development has brought a sizable number of foreign labourers and workers from Southeast Asia and Eastern Europe to Dubai to fill many of the new jobs created. Multinational corporations eager to take advantage of the aggressive free trade policies have adopted by the government, sent expatriates to do business in the new thriving economic environment. In a very short period of time, the local Arab population has been inundated with foreign workers drawn to the city for its dynamism, its businesses, opportunities, and wealth. This barrage of foreigners is even more apparent within Dubai due to the minimal size of its local Arab population. Currently, they make up only fifteen percent of the entire population and represent only a small component of Dubai's international workforce from a hundred and twenty different countries. What started as a rather homogenous society was by the 1990's anything but homogenous.[3]

The intense pace of development for three and a half decades has undoubtedly placed Arab culture and traditions in tremendous flux. For many local Arabs, there is the very real fear that the rapid influx of foreign influences and new technology coupled with the dramatic changes in their urban environment are drastically and unsympathetically altering their age-old tribal society. While cultural representation is a very powerful tool in defining a city and making it liveable for its local people, Dubai's limited urbanism before the discovery of oil was quickly overrun with new, seemingly globally homogenized urban development. The planners of the Dubai Municipality sadly concede that the haste of development has not allowed the time for meaningful reflections on the place of cultural identity in the urban environment. When wandering through the malls and the busy streets of Dubai, it would appear that the contemporary tastes of the West are slowly obliterating what exists of the conservative indigenous culture. With curtain wall high-rises, American corporate logos and huge billboards of European designers dominating Dubai's urban landscape, it almost seems that the local Arabs have become tourists in their own city. Yet this would completely overlook the resilient nature of local cultural identity.

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[3] Edmund Ghareeb and Ibrahim Al Abed, eds., *Perspectives on United Arab Emirates* (London: Trident Press, 1997), 270.

By the late 1980's, after a couple of decades of intense development, a greater awareness, appreciation and respect for local culture was burgeoning. Amidst the unceasing pressures of the global economy, local cultural identity surfaced as an influential and powerful force. Sharing a common language and religious heritage with the greater Arab world also provided the locals of Dubai with a strong regional connection that required expression. This voice intensified amongst the local Arab minority in Dubai and demanded acknowledgement within their built environment.

For the leadership of Dubai, it was essential to create a leading global city respected and envied by the world, however once this goal was clearly attainable, it became equally important to them that local culture be clearly represented and celebrated. This became a significant issue as Dubai was becoming completely unrecognizable from the city it was twenty years ago. This tension between global cosmopolitanism and local and regional culture has fostered a heightened duality and complexity within the urban environment of Dubai, introducing an interesting amalgamation of influences. Beneath the apparent neutrality of glass and steel, within the controlled and seemingly homogenous environment of the global economy, there has been a diligent effort to reclaim the space, to re-evaluate and redress it with an identity and culture that is clearly local, Arab, and Islamic.

This effort to articulate a more indigenous cultural identity is visible throughout the urban environment of Dubai. It is evident in the passing of new laws concerning urban development and historic preservation. Buildings deemed historic in Dubai have either been preserved or re-created. Greater attention has been given to more historic buildings as a guiding influence for contemporary development. Traditional architectural elements have been manipulated and incorporated in new technologically advanced forms and façades.[4] All these attempts serve to solidify an increasingly fragile cultural identity in an urban environment most intently geared towards the global economy. In all cases, these architectural signifiers attempt to allude to a local Bedouin culture or a regional Islamic identity.

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[4] Mohammed Abdullah Eben Saleh, "The use of Historic Symbols in contemporary planning and design," *Cities* 15, no. 1 (February 1998): 41–47.

Unfortunately, too often the clarity of these cultural depictions has been diluted and distilled when the motives to foster and promote local influences are confused or in conflict with the endeavours of creating a global city. Given that Dubai's economic success depends on attracting a very internationally diverse and wealthy population, it becomes somewhat nebulous who the ultimate target audience (local or foreign) is for these extensive displays of local and regional culture. This confusion is perhaps best exemplified by Dubai's historic preservation efforts.

During the initial stages of Dubai's urban and social development, egged on by the forces of globalization, the barasati huts and the wind tower houses were widely disregarded to make room for newer buildings. Dogan Kuban describes this destruction of the built past as proof of a city's or country's preparedness for modernization. "The more historical the environment they will destroy, because only with this sacrificial rite can they prove themselves worthy initiates of the modern world."[5] Yet in the past twenty years, this decision has been seriously questioned in Dubai. There is a greater consciousness concerning this loss of cultural identity and representation. As traditional cultural values are increasingly diluted by the constant stream of migrants and other foreign influences, there is a strong desire to preserve or recreate the history of Dubai in its architecture and to permanently distinguish Dubai's Arab cultural identity and heritage for the local population and perhaps more importantly, for the transient migrant population. The government of Dubai has invested tremendous efforts in the restoration and reconstruction of buildings they consider reflective of local culture. Freely drawing from all influences, they are attempting to "restore" the past by rebuilding "historic buildings," renovating suqs to look more authentic, and recreating images from the past—of Bedouins, pearl divers, and traders on their dhows.

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[5] Dogan Kuban, "Conservative of the Historic Environment for Cultural Survival," in Architecture and Community, ed. Renata Holod and Darl Rastorfer, The Aga Khan Award for Architecture: Building in the Islamic World Today (New York: Aperture, 1983), 35.

To lead this endeavour, the "Committee for the Preservation of Architectural Heritage," was created on September 14, 1994. This organization is made up of a collection of individuals from the Public Work Agency and the Planning and Maintenance Agency. Their mission is to identify historic areas that represent local architectural heritage and mark them out for preservation or reconstruction. They also review requests presented to the committee concerning the destruction, reconstruction and maintenance of buildings in the historic areas. The majority of the architecture preserved by this committee to date consists mainly of buildings that were built in the late eighteenth century to the early to mid twentieth century and represent the history of trade and commerce in Dubai. Buildings such as Sheikh Saeed Al Maktoum's House (1896),[6] the Al Faheidi Fort (1799)[7] (figure 1), the Al Wakeel House (1934),[8] and the Al Madiya School and surrounding areas (1912)[9] are all considered by the Committee on Preservation to be buildings that represent the architectural, social, and cultural heritage and urban growth of Dubai.[10] They were constructed of traditional materials such as mud, gypsum, and coral.

The Bastakiya quarter (figure 2), Dubai's only remaining neighbourhood with traditional wind tower houses was also recently preserved. A large number of these buildings were initially torn down in the early 1980's to make room for the Diwan's office. With most of the houses now abandoned, the entire area was marked for conservation by Dubai's Historic Buildings Section.

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[6] This building was the residence of the ruler. It had a huge courtyard and four wind towers for each section of the house. It was built along the edge of the creek to monitor the flow of boats. Above the doorway of the two majlis are Quranic inscriptions. Also present in the decoration of this house are the pierced gypsum screens carved with floral motifs. It is currently used as the Museum of Historical Photographs and Documents of the Dubai Emirate.

[7] The fort is the oldest surviving structure in Dubai. It is distinguished by its three different watchtowers around a huge courtyard. It reopened as a Museum of Dubai in 1995, after the rather successful completion of an extension to the fort underground by Iraqi architect Mohammed Makiya.

[8] This house takes its name form the British agent of the British India Stem Navigation Company. He had used it as a house and office. It stands as the first administration building in Dubai. The buildings are to be used as the Marine Museum of Dubai.

[9] The school itself was built by Sheikh Ahmed bin Dalmouk for children of elite traders who lived in the area. The building had teak wood doors and windows and decorations carved in gypsum alongside Arabic calligraphy of verses from the Qur'an. The school post restoration is now the Museum of Education.

[10] All the buildings listed above completed the process of preservation by around the mid 1990s.

The suqs that were once the commercial and social centres of Dubai have also undergone a 30 million-dirham restoration. Paving and lighting have been improved. The roofs that were once covered with *areesh* or palm branches have been replaced with new wooden structures (figure 3). Tacky neon signs were replaced with the supposedly "more traditional" stone plaques for a greater "authentic" feel. New and old buildings constructed around the suq now need to follow certain guidelines and restrictions, so not to detract from the newly created "traditional" environment. The Historic Building Section of the Dubai Municipality currently has two hundred and fifty projects registered with them. These projects will be completed by 2008.

This drive towards preservation is perhaps addressing what the government's feels is a need for greater cultural awareness. To provide the local population with a link to their heritage in an environment that increasingly alienates them from the past. However, there is another very powerful reason for this focus on preservation. Oil, Dubai's one natural resource is not limitless in supply and is estimated to be depleted within the next fifteen years. This has made acute the need to economically diversify into other sectors. The exportation of oil currently makes up only a small percentage of Dubai's income. However, as the oil reserves start to dry up, tourism is forecasted to replace a significant amount of the profits from oil.[11] While the tourist infrastructure in the form of hotels, transportation and telecommunication is over-abundant in Dubai, local planners fear that Dubai's lack of local "authentic Arab character" maybe a deterrent for potential visitors. For many in the municipality, the propagation of a local identity through preservation is intended to heighten the appeal for tourists searching for "a unique Arab experience." The power of tourism to drive the direction of preservation is especially evident in the conversion of these historic buildings into museums and other tourist sites. These historic preservation projects clearly highlight the discrepancies between local and global pressures. In some instances, what was ultimately "preserved" or recreated had never quite existed in Dubai's past.

For many of the local Arab inhabitants of this desert city, their Islamic heritage is integrally tied to their cultural identity. This religious connection also serves as a strong link to the rest of the Arab or Muslim world. In Dubai this relationship is extremely evident in the urban environment in the design of office buildings and the propagation of mosques. According to the planners in the Dubai Municipality, mosques are the most representative marker of an Islamic city and provide an anchor for the identity of a community. The mosque serves as a significant and timeless symbol of an identity that is separate and powerful in a global environment.

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[11] Diana Darke, *The United Arab Emirates* (London: Immel Publishing, 1998), 162.

The powerful influence of Islam on local cultural identity is clearly demonstrated by the sheer number of mosques found in the city. A law in Dubai, which states, "no one should need to walk more than half a kilometre to reach a mosque" exemplifies this.[12] Since the creation of the United Arab Emirates as a political entity, over two thousand new mosques have been built. The density of mosques in Dubai is higher than most Arab countries despite its minimal population. An eclectic collection of small mosques can be found on almost every street corner. Mosques in Dubai are influenced by architectural styles from all over the Arab world, ranging from Egyptian to Turkish to Iranian. The most famous is the Jumeirah mosque is inspired by Egyptian and Anatolian influences.

In the Bastakiya quarter, the streets are lined with small fabric stores leading up to the suqs. In this district heavily frequented by tourists and locals, there are an incredible number of mosques built side by side. Just minutes walk from the large Anatolian influenced Grand Mosque with its forty-five domes (figure 4), are two other sizable mosques built right opposite each other on the same street. The Ali bin Abitaleb mosque clearly draws its influence from Iran and Central Asia (figure 5).

In addition to the abundance of mosques, a new generation of architects, planners and patrons are also drawing from the architectural styles of past Islamic empires to instil a greater sense of local and regional identity in the buildings they design. To rectify a lack of cultural identity within the urban environment of their city, they are striving to create a better marriage between modern architecture and traditional influences.[13]

In Dubai's business district, certain aspects of traditional "Islamic" architecture have become significant influences in the design of commercial buildings. Masharabiyyas are latticed wooden window screens made of jointed turned wood. Traditionally, in more formal buildings, these window grilles were made of stucco or marble to shield the interior of a building from the sun while allowing for air circulation. However, as architecture, technology and society have changed over time, the purpose of incorporating *masharabiyyas* into building façades have also altered significantly. In contemporary architecture, the ornate wooden or marble grilles of the past have come to be represented in concrete form on high-rise and mid-rise buildings, serving more ornamental, nostalgic or symbolic functions.[14]

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[12] Darke, *United Arab Emirates*, 185.

[13] Daruish Zandy, "Development of Architecture in the Gulf," in *Arts and the Islamic World-Architecture, Archaeology and the Arts in UAE* (special issue), no. 23 (1993): 28–32.

The most prominent example of this is Dubai's World Trade Centre designed by John Harris and Associates. The concrete grilles are set against a plainer concrete wall and provide an interesting layering and depth to the façade, in addition to providing some shade for the interiors. Perhaps inspired by this example, there are an increasing number of buildings exploring a similar interpretation of *masharabiyyas* found in the central business district of Dubai.

A mid-rise government building located on the corner of Omar bin Al Khattab Road and Baniyas Road, at the mouth of the central business district, incorporates a series of metal *masharabiyyas*, vertically aligned on the surface of the concrete wall hiding the window openings. In another mid-rise building located on Al-Maktoum road, interior offices are hidden behind geometrically carved concrete screens. Placed below the operable windows of each floor, these screens are not even visible from the interior. This is a complete distortion of the original purpose of the screens. In this example, they have essentially become superficial surface applications serving no purpose but to associate some form of traditional "Islamic" identity to a glass and concrete building.

Aside from the World Trade Centre there are other high-rises in the central business districts that have also incorporated some form of the traditional window grilles or *masharabiyyas* into the design of their façades. The Deira Tower found just behind the prominent Baniyas Road parallel to the creek is another such example. This building consists of three concave façades and a flattened cylinder on top, all resting on a rectangular podium. Much like the World Trade Center, the concrete screens add an extra layer of depth to the façade of the building. The large concrete screens that wrap around the rectangular base of the building successfully disguise the parking structure within. On all three sides of the Tower, compressed onion shaped arches are repeatedly cut out of the concrete screen. However, these openings are so large that they do not provide any form of adequate shade. Additionally, the concrete grill openings in some instances do not even align with the windows, occasionally blocking views. They serve no purpose but to allude to a historical architectural type. It is instead a rather weak attempt at cultural sensitivity. Complex understandings of culture and identity have been reduced to mere surface applications and pastiche devoid of any original significance or function.

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[14] Shirley Kay and Dariush Zandi, *Architectural Heritage of the Gulf* (Abu Dhabi: Motivate Publishing, 1991), 90.

The search for cultural representations in high-rise buildings is not limited to window grilles or geometric patterning alone. References to the other forms of Islamic architecture have been utilized to represent a cultural identity within the urban form of a city. The re-application and interpretation of arches and *muqarnas* in the designs of contemporary buildings are another means with which local architects attempt to make some connection between the architecture and Islamic identity of the people of Dubai.

The incorporation of the arches and *muqarnas* into the façades of buildings is more commonly seen in mid-rise buildings since the smaller scale allows a greater freedom for such experimentation and application. It may also be due to the fact that mid-rise building projects are awarded only to local architectural firms. In all cases, the focus for such cultural display is found only in the façade. While this concentration on the façade alone maybe criticized, Diana Agrest counters this by stressing the importance of the façade in the formation of urban space. "Façades are not only the frontal place of the building. It is also the surface defining a theatrical space."[15] For her, the public place is where the configurations and complexity of a certain culture is most densely manifested.[16] Unfortunately, the façades of most of these mid-rise buildings in Dubai speak more of a superficial interpretation of "traditional Islamic" architectural forms.

The offices of Xerox and the Dubai Ministry of Agriculture are housed in a mid-rise building on Al-Maktoum road. This street is primarily lined with mid-rises rented to smaller corporations. The Ministry of Agriculture building is ten stories high. The design of the two main sides of the building that sit on the corner of the street is a little more unusual than most buildings in this vicinity. The public façades are wrapped in blue glass. On top of these curtain walls are a random pattern of boxy concrete balconies. The balcony openings form a variety of rounded arches, rectangular or square openings. The tops of these balconies are lined with abstracted allusions to fortress crenellations, signifying the military might of the Islamic past.

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[15] Diana Agrest, *Architecture from Without* (Cambridge: MIT Press, 1991), 114.

[16] Ibid., 17.

Another such example is the Habib Bank AG Zurich building in the very lively Baniyas Square, which also draws from iconic representations of Islamic architecture. Like most mid-rise buildings in Dubai, it is made of a concrete frame. The main façade of the building that faces the square is panelled with blue reflective glass. The top of the building is lined with white staggered arches that spill down the glass façade. The bottom of these arches taper down the building, splitting into two-dimensional abstracted representations of muqarnas, another architectural element often identified with the great traditions of Islamic architecture. However, the initial function of the muqarnas to bridge the supports between the dome and a square base is lost here. The intricacies, technique and craft that were needed to sculpt the muqarnas into the extraordinary architecture of earlier centuries have become stylized in the age of material standardization and hasty construction.

A few buildings down, along the same street in Baniyas Square is another building designed by the local architectural firm Dubarch. On this façade, a tremendous number of pointed arches of all sizes is neatly spaced throughout this twelve-storey building. The majority of these arches frame balconies that provide shade for the interior offices and create a more three-dimensional façade. Additional arches are scattered throughout the front of the building, elongated into long thin linear strips filled with carved window grilles that allow light and air to filter into the building, a use more honest to its original purpose. The very top of this mid-rise building is crenellated once again, oddly alluding to fortress architecture of the early Islamic empires, yet obviously serving no functional purpose.

The design of these buildings, like many of the other mid-rises in Dubai is generally quite awkward and unrefined. In attempting to reference the Islamic architecture of the past, they have completely missed the original significance and function, and have instead reduced it to applications of pastiche. These architects have overlooked that in its origins, Islamic architecture was carefully designed, addressing local needs, climate, and building materials. Unfortunately, the mid-rises and high-rise buildings that dominate the desert sands of Dubai are anything but sensitive to the environment. Instead, they once again demonstrate this battle between the necessary acknowledgement of local culture and the homogenous image of a global city with its technologically advanced tall glass-buildings.

It is however, equally important to note that the surface applications on the façade of these mid-rise buildings, while shallow and impulsive, are perhaps the limited opportunities local designers may have to imbue their own perceptions of their cultural identity onto the public face of Dubai. The superficial adaptations of Islamic architecture are perhaps their attempts to associate their own current environment to the physical, cultural and spiritual strength of past Islamic empires. While one may question the appropriateness and effectiveness of these representations, it is important to note that these designs are also influenced by government regulations. While there are no official laws governing the façades of buildings in the central business district, the municipality has played an active role in their design. A guide known as the "Elements of Traditional Architecture of Dubai Reference Book" has been published to help designers in the central business district perpetuate a style believed to be in line with local and traditional architecture. A special committee has been formed to review building façade proposals. Architects and consultants who design in the central business district must receive this committee's approval to attain a permit for construction. This desire to localize or "islamicize" the façades of the central business district is currently being studied by the Traditional Building Unit of the Municipality in the hope of establishing more coherent standards and regulations for building in this area.

While mid-rise projects are awarded to local architects, foreign architects who are invited to design large projects in Dubai, turn to the local history of the area for architectural inspiration. Many foreign architects have referenced Dubai's bedouin past and the recognized architecture of the nomad, the tent. When the need arises to mark the architecture of Dubai with the character and history of the place, tent-like forms have been freely used as markers of local cultural identity. However, in the age of globalization, this basic structure formerly used for nomadic survival has been incorporated into the built form of leisure and sports clubs.

The first of such examples is the Grandstand of the Camel racetrack in Dubai. It follows the tradition and structure of the black nomadic tent. It is long and low and supported in the middle with central roof poles, giving the illusion of multiple peaks. Another example is the first of Dubai's golf clubs. The Emirates Golf Club built in 1988, was financed by Sheikh Mohammed bin Rashid Al Maktoum. This project designed by American golf course designer Karl Litten, cost ten million dollars to build, covering seven hundred thousand square metres of desert sand with grass. The clubhouse with all its amenities of fine restaurants, swimming pool, and tennis courts takes the form of a more stylized cluster of tents. The form is a mixture of the black and white tents used by Bedouins.[17] More recently a second golf club, the Creek Golf and Yacht Club designed by Brian Johnson, a British architect, alludes to an extremely abstracted image of a tent. The main building is surrounded with luxurious pools, fine restaurants, and lush tropical greenery.

Similar analogies can be found with respect to the wind towers. The Dubai Creek Tower is a commercial high-rise located in the central business district. Basically square in plan, it is anchored on its four corners with narrow cylindrical towers. The centre of the building façade uses reflective glass to give the impression of being hollow, referencing the wind towers that once lined the entire creek of Dubai. The Fairmont Hotel, the Emirate's twenty-eighth five star hotel is also designed in the form of a wind tower. The four corners of the building are anchored with tall, slender towers while the centre of the building is hallowed out at an angle on all four sides.

The image of the boat or dhow, the traditional Arab sailboat is also closely linked to Dubai's culture, as so much of its history has been tied to the creek and port. When Carlos Ott and Adel Almojil were commissioned by the board of directors of the National Bank of Dubai to design their new headquarters, this image of the dhow influenced their final design solution. The bank consists of a convex glass office tower suspended by two giant vertical granite piers above a transparent podium. Ott claimed that the convex vertically faceted curtain wall of the tower represents the billowing sail of the dhows that line the creek before it.[18]

Another reference to the dhow is found in the new conference centre at the Jumeirah Beach hotel complex. The entire form of the conference building takes its shape and design from the hull of a dhow. Three stories high, it is made of steel, timber and glass. Opposite the wave shaped Jumeirah Beach Hotel is the flashy Burj Al Arab Hotel standing tall on a man-made island in the Arabian Gulf (figure 6). The Burj al Arab draws its form from the sail of a dhow. The convex curtain wall of the façade is connected on the opposite side to a giant steel post, signifying the mast of the sail. This technologically advanced project was designed by W. S. Atkins and Partners the same British firm that constructed the Jumeirah Beach Hotel. Combined, both these buildings allude to Dubai's maritime heritage. The soaring heights of the Burj al Arab at three hundred and twenty one feet, not only make it the tallest hotel in the world currently, but also a landmark or icon of Dubai. The hotel is now found on Dubai's license plates. (For more on the Burj Al Arab Hotel, refer to additional write-up.)

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[17] Kay and Zandi, *Architectural Heritage*, 92.

[18] Barry Jordan, "Reflecting an Image-National Bank of Dubai Headquarters," *World Architecture* 65 (April 1998): 48–53.

These abstractions of local icons provide an interesting alternative to the representation of local identity in the built environment. While they may speak of great engineering feats, they still, however, speak more of global will instead of local sensitivities. Whether these giant glass buildings in the desert environment are reflective of the architect's vision or the patron's taste will probably vary from project to project. Nevertheless, they clearly demonstrate, once again, the immense complexity and struggle within Dubai of expressing a local cultural identity within the constructs of globalization.

Recent urban developments have introduced another icon to represent local culture in Dubai—the date palm tree. Perhaps the intent was to reference the architecture of the past, as the barasati huts and suqs were initially made of palm fronds, or they could be referring to the more regional notion of the Islamic garden or oasis. The Palm-Jumeirah, Palm-Diera, and The Palm Jebel Ali (figure 7) will be three man-made islands, shaped like palm trees, built off the coast of Dubai in the Arabian Gulf. The Jumeirah Palm island alone will double Dubai's coastline and when completed will be visible from the moon. These islands will also house the first marine park in the Middle East in addition to a large variety of boutique hotels, villas, marinas, shopping malls, golf course, cinemas, themed attractions, and water-park. The first island was completed in 2006. One of the key goals of Dubai's leadership in commissioning The Palm islands was to firmly imprint Dubai's identity on the globe, especially after the international success of the Burj Al Arab hotel. However, three giant palm trees planted in the Arabian Gulf as representation of Dubai's identity seems somewhat contrived and reduces centuries of heritage into a cartoon-like image.

Lastly, more subtle attempts to acculturate the environment of the global economy are visible in the adaptation and interpretation of public spaces. Shopping centres and malls have become a significant part of the urban landscape in Dubai. These huge air-conditioned blocks selling any item found in the world have become places of social gathering and family outings. The physical design of these prominent shopping centres is homogenous in appearance to the many others seen worldwide. The stores are, with few exceptions, imported from Europe, America, and Japan. The food courts offer all the diversity of international cuisine. Arab men and women line up to purchase the "Big Mac Meal" or a BLT submarine sandwich from Subway. Only, this BLT is made of beef bacon. As simple as this change is, there are quite a few such variations within this commercial environment that hints at the needs, traditions, and culture of the Arab users. The large shopping centres such as City Centre, Bur Jaman, and Wafi have private spaces set aside for shoppers to perform ablution before prayers. Within all these shopping centres are huge halls, one for men and one for women to say their daily prayers. Bur Jaman Shopping centre located at the end of the Khalid Ibn al Waleed Road, even calls shoppers for prayers through the mall's PA system.

All these examples of urban and architectural development are clear demonstrations of a city in flux, grappling with local, regional and global pressures and influences. The determined leadership of Dubai have a vision for their city that has propelled them from a simple, sleepy third world city to a prominent global player. Having limited natural resources, and appreciating the growing and complex demands of the global economy, an extensive and advanced urban infrastructure continues to be developed and expanded to serve current and projected needs. The representation of local cultural identity within this hastily built urban environment has gained increasing prominence, on one hand, as an anxious retort to globalization and, on another, in support of globalization.

Unfortunately, for the designers and planners of Dubai, the process of visually representing cultural identity is a relatively new practice. The conceptualization of cultural identity in Dubai is even more complex when considering the relative youth of the emirate. To successfully and thoughtfully transfer the essence of a culture onto contemporary architectural form requires time, analysis, and study—all of which have been lacking in Dubai. One of the planners in the Dubai Municipality captured this best, when he said, "We [the Arabs of Dubai] are only starting to develop a [visual] culture. People need time to examine our ethical, technical, and cultural values. Many times, plans are made anticipating the needs of the global economy. Often that will change the ways things are done locally. We have only recently started to focus on our traditions."[19]

Lacking this critical distance, the urban environment in Dubai has become somewhat of a battleground between global, local and regional influences. Unable, as yet, to successfully meld these influences and translate them into a contemporary localized design—there remains this push and pull—between the fifteen percent local Arab population and the eighty five percent foreign population. Urban development in Dubai, as a result, continues to depict this conflict and oscillation.

The significance and display of cultural identity in the built environment has always been complex. Its parameters are ambiguous and vague. The influx of the global economy, an international population and new technologies into Dubai has made it even more nebulous and obscure. In almost all the examples provided above, references to traditional Islamic architecture have been reduced to superficial reproductions and images, serving no real functional need. On this level, they may be criticized for being essentially hollow applications. It seems that in an age of globalization, national, and cultural icons have been neutralized. While they represent an assertion of cultural identity and perhaps a cultural dominance over technology and economics, they have become less controversial in their representation. Perhaps in a global economy, this has become necessary. Cultural distinctions are dulled to increase the comfort of a transnational population. They are just animated enough to arouse interest and cultural identification, yet cleared of any provocative historical associations that may be disconcerting to the foreign eye.

As critical as one may be of these new constructions, it still leaves unanswered the most appropriate means of expressing culture in contemporary architecture. Who can ultimately claim what is considered legitimate in an environment as diverse and as complex as that of a global city? This conclusion then begs the question of why the need to instil images of cultural identification at all on an urban environment built primarily to entice the global economy. For it is ironically, on these high-rise buildings, the most prominent beacons of globalization, where interpretations of local identity are most clearly and visibly marked.

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[19] Taken from a conversation with Mohammed Fayez Al-Shamsi at the Dubai Municipality on January 25, 1999.

Perhaps the main allure of cultural representation is its effectiveness in providing a sense of rootedness and connection for the local Arab population. The ruling party of Dubai has maintained their rule through lineage since the days of the barasati huts in Dubai. They have absolute power despite representing only a small fraction of Dubai's population. This disproportional construct of the population base is however, a root cause of considerable insecurity amongst the local Arab population and government. The majority of Arabs in Dubai are fearful that their culture will be diluted by the barrage of foreign cultures and people. They, therefore, feel the need to counter their own insecurities by exhibiting forms of national or cultural pride, making their limited presence felt more strongly.

There are other interpretations for this very visible cultural display. The success of local development after thirty-five years of intense growth and planning has possibly aroused the desire to clearly indicate the people responsible for this impressive development. As Paul Wheatley states, "rising national confidence requires expression of its identity and intrinsic qualities."[20] These applications of traditional architecture onto contemporary built forms are banners of pride acknowledging the contributions of the local inhabitants in the successful creation and continued development of the global city.

This interest in stamping local icons onto the urban fabric may also have much to do with the extreme haste in which Dubai developed from a third world emirate to a leading global city. In less than thirty five years, entire surroundings were completely altered from what they were before, making it essentially impossible to trace their original character. This extraordinary rate of change has undeniably placed tremendous pressures on its society. Fred Davis proposes that in environments of considerable flux and anxiety, there is often a nostalgic evocation of some past state of affairs, even if this connection is not in the forefront of awareness. These emotions, created in moments of uncertainty, threaten the possibility of identity discontinuity.[21] "Nostalgia thrives on transition and on the subjective discontinuities that engender our yearning for continuity."[22] Nostalgia offers a temporary retreat and haven from the anxieties that are created from an environment in flux. It becomes the means to hold on to and reaffirm identities and cultures that have been badly bruised by the turmoil of the times.[23] Therefore, while these symbols and icons applied in the public realm of Dubai, are gross simplifications of local objects and regional architectural forms, they may nevertheless, serve to reference a simpler past, shared by the members of the politically dominant group. Nostalgic creation allows the past to be filtered, selected, arranged, constructed, and reconstructed from a somewhat collective experience. Even something as subtle as the call for prayers within a mall serves to comfort and remind very effectively the apparent timelessness and strength of local culture and beliefs.

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[20] Kernial Singh and Paul Wheatley, Management of Success: The Molding of Modern Singapore (Boulder: Westview Press, 1990), 76.

The role of government has also been undeniably affected and altered by the free flow of the global economy and its influences. The competition between global cities has become more acute, as more cities construct the sophisticated infrastructure necessary to lure the significant global players and multinational corporations. Local governments of global cities are increasingly placed in rather ambiguous positions. Their ability to assert their strength and authority is tainted by their role as the recruiter of the global economy. This duality between affirming their presence, while courting multinational corporations and foreign populations, has inevitably affected the clarity of design of the urban space. As the strongest proponent of the global economy, the government of Dubai ultimately has little choice but to modify their presence within the greater global framework. Representations of cultural identity, while critical, become less controversial when they are colourful and animated.

The significance of cultural representations in a global city is taken a step further with the inference by certain scholars that culture has now become another manufactured product of the global economy. For William Lim and Tan Hock Beng, culture has now become merely another angle to attain greater financial reward. They describe contemporary cultural production as the conversion of historical and cultural forms into commercialized objects.[24] Culture has become a marketable commodity for global cities in this age of globalization. The depiction and value of culture has been reduced to what is considered profitable. This analysis, however, turns cities, societies, and cultures into mere pawns for financial reward. It blindly assumes that the global economy has become that which is all consuming. It supposes that everyone and everything functions solely for the propagation of the global economy. It, therefore, seems somewhat narrow. It is almost arrogant to propose that cultural identity, which has played such an integral part in defining humanity over the past millenniums, would be so easily altered and manipulated.

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[21] Fred Davis, *Yearning for Yesterday* (New York: Free Press, 1979), 34.

[22] Ibid., 49.

[23] Ibid., 107.

Throughout this analysis, the means through which cultural identity has been depicted in the contemporary architecture of Dubai have been questioned and critiqued. However, at the same time an alternative proposal for the most appropriate means of representing cultural identity with the constructs of globalization remains absent. There is perhaps considerable validity to Arif Dirlik's comment that "culture is no less cultural for being subject to change through the practice of everyday life."[25] It is important to acknowledge that globalization is still a fairly recent and young phenomenon. Its rapid development has inevitably evoked more questions than solutions. The critical distance that is so direly necessary to have a fair and comprehensive evaluation is only starting to happen. More thoughtful and complete answers will perhaps only come with time. The subject of cultural identity will continue to flirt with the global city and its society. The complexities and confusion encountered by Dubai as it searches for more appropriate and effective methods of portraying cultural identity are only the initial impulse reactions to the intense momentum of the first thirty five years of globalization. Perhaps, as Dubai continues to mature as a city and becomes a more confident and experienced player in the global economy, it will deviate from these superficial applications, better able to filter what is culturally and architecturally significant and create a modern, complex and thoughtful identity that is clearly Arab, yet global, and that captures the extraordinary dynamism of Dubai.

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[24] William Lim and Tan Hock Beng, The New Asian Architecture (Hong Kong: Periplus Editions, 1998), 31.

[25] Arif Dirlik, "The Global and the Local," in Global-Local: Cultural Production and the Transnational Imagery, ed. Rob Wilson and Wimal Dissanayake (Durham: Duke University Press, 1996), 39.

Burj Al Arab Hotel

"Burj Al Arab" translates as the tower of the Arab in Arabic. Ironically, this hotel, the imposing icon of Dubai, has really very little to say about the local Arabs or the city. The commission awarded to W. S. Atkins and Partners, a British architecture firm, was to design a holiday resort that would give Dubai an icon recognizable throughout the world. The leaders of Dubai wanted a symbol for their city to demonstrate to the world Dubai's arrival on the global stage. Thus, the building was conceived more as a national landmark than a hotel. The resulting structure was carefully designed to resemble the billowing sail of a dhow. According to Tom Wright, the design principal at W. S. Atkins, the design of the Burj Al Arab should evoke, "a sense of luxury, excitement, sophistication, and adventure." The locals in Dubai call it the "Giant Cockroach."[26]

The building is however, an incredible feat in engineering. Completed in 1999, it is the tallest hotel in the world. At 321 metres (1,053 feet), it dominates the urban landscape of Dubai. The Burj Al Arab is located on a 1,400 square metre man-made island, 3,000 metres offshore from the Jumeirah Beach Resort hotel. This distance was necessary not only to prevent shading the beach, but to promote a sense of exclusivity for hotel patrons and guests. The building structure is made of steel and reinforced concrete. A massive steel exoskeleton protects the tower against seismic loads and wind. This V-shaped frame wraps around another V, with a reinforced concrete tower housing the hotel rooms and the lobby. These two structures are then connected to a concrete spine. The building façade is made of glass and teflon coated fibreglass. The 198 m (650 ft)-screen is divided into twelve fields. Each field is supported by steel arches. Unfortunately, as the tallest tensile structure in the world, in a harsh desert environment, the heat and light will ultimately take a toll on the longevity of the fabric that represents the sail. The climate in Dubai is so extremely harsh, that a special new protective coating also had to be developed to stop the desert grit from destroying the windows.

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[26] Andrew Cave, "Where Milton Keynes meets Vegas," The Daily Telegraph, 3 April 2004.

The interior of the building contains a 180 m (600 ft)-atrium, large enough to comfortably house the Statue of Liberty. The inner walls are covered with a chaotic collection of bright fabrics, textiles and intense colours. Excess is the theme of this hotel. All that glitters is gold—22,000 square feet of the interiors have been covered with twenty-carat gold leaf.

While the shape and structure of the building alludes to the traditional Arabian boats, this hotel symbolizes less of Arab culture or the origins of Dubai and more of Dubai's commercial success, excess, and exclusivity. While this building undoubtedly speaks of extraordinary engineering, cultural relativism and environmental sensitivity play no role in its design. The sail of the Burj Al Arab, combined with the wave-like Jumeirah Beach hotel and its dhow-shaped conference centre, seem more like a Hollywood film set than significant cultural representations of a city and its people. The leaders of Dubai wanted a global symbol; a building that announced their increasing role and influence on the world's stage. However, the Burj Al Arab does not seem to say much of substance beyond the highly engineered surface.

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CAIRO BETWEEN TRACES AND LIBERAL RE-FOUNDATION: DEMOGRAPHIC STABILIZATION, EXTENSION OF THE METROPOLITAN AREA, AND THE RENEWAL OF FORMS

Eric Denis

Introduction

Lacunary perceptions, biased and partial, often anecdotal, and subject to an impression of anarchy, disorder and gigantism, commonly confer a comfortable illegitimacy on attempts to interpret a metropolis like Cairo. The impenetrable crowd, inevitably "clamorous," ensures a cheap continuity for nostalgia about the mysteries of the Orient and about the romanticism of ruins. Immutable stereotypes abound: inhabitants of roofs, palaces or cemeteries, illegal quarters stretching boundlessly on, so many emblematic figures supposed to give material body to degradation, perdition and an invasion right from the countryside; to an explosion, or, better still, an implosion. These are convoluted interpretations, which have recently, in a single bound, and with a view to building up once more a totally distinctive Arab city, included the notion of an "Arab street" evidently on the verge of revolt: a kind of renegotiation of an idea that is in fact outworn, but conveys nonetheless the idea of the dangerous city.

These stereotypes, cross-bred with Orientalism, lead us on to a universal element old as the oldest of cities, Babylon, that symbol of perdition and decadence constantly re-applied to the present of the largest metropolises. The fact that the Egyptian lands were the scene of a succession of empires, leaving monumental traces universal in their scope, notably in Cairo, with the Giza pyramids or the mosques and palaces of the old city, invites us to view the contemporary state of things as one of decline, to the detriment of narratives about the complexity of the present and the banality of daily life. Only splendours in ruin remain from the past; the despotism, and the wretchedness of the majority, together with the precarious nature of the majority habitat, has left barely a trace.

Our aim here is to show that these stereotypes of Cairo will not bear analysis. The city's contemporary evolution may be divided into phases corresponding to the global time of very large metropolises. Functional, political, demographic and social transformations reshape its ecology, both its forms and the ways of acting and living in it. They also define the city-dwelling community or classify its elements; and, in consequence, they write the history and valorize the traces.[1]

Over some twenty years, Cairo, the fifteenth largest city in the world with its twelve million inhabitants, has experienced a renewal marked by demographic stabilization, the affirmation of command functions and the improvement of major infrastructures. Cairo has, since independence, seen over-investment in the aim of affirming itself as the functional capital, modern and productive, of an independent nation state. Hence, a non-stop succession of public structuring programmes has been going on up to the present day, driven by the inertia of public policies claiming to control and orient the overall state of affairs; and this despite the evident harmonization with adjustment and liberalization policies favourable to the disengagement of the public authorities.

At present, Cairo is constantly being patched up and extended by private initiatives that are driven, clearly, by a privatization especially affecting the urban property field. Hence the surface area of Cairo has doubled in ten years or so, as a result of prestigious private promotions, while, in its heart, rehabilitation and re-designation of central elements are proceeding apace. Yet the impoverishment of the majority, still rendered vulnerable by the measures of structural adjustment and economic liberalization, shows no sign of abating: it continues to extend, and make denser, the boundaries of agglomerations, by the normal process of popular self-building. It is in the context of such tensions and rhythms, both antagonistic and complementary, that these urban landscapes emerge, impenetrable and at times so hostile.

An examination of these mutations—following a consideration of demographic stabilization, of population redistribution, and of the activities and successive spread of the metropolitan area—will lead us to pose a number of questions about this fabricating of an image, this re-interpreting of urban history and re-designation of places, aimed at giving some meaning to the patching up and re-ordering.

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[1] The term *trace*, used a number of times in the text, refers to the work of Bernard Lepetit on the historical present: writing, re-writing and mobilizing history in the action and the role of inherited urban objects, whether these are monuments, or popular buildings, or indeed those reduced to the cadastral and road framework. See especially, "Une herméneutique de la ville est-elle possible?" in *Temporalités urbaines*, ed. Lepetit and Pumain (Paris: Anthropos, 1993).

National construction and metropolitan explosion

The year 1952 saw the realization of independence and the end of monarchy. It also corresponded to a phase of modulation in the capital's extreme demographic growth, following a period when it had exclusively attracted a large part of the migratory flow from those provinces that were the largest exporters of labour, such as Minufiyya in the central Delta, or Suhag in Upper Egypt.[2] From that time on, the differential of demographic growth would consistently abate in favour of increasingly smaller, and provincial, agglomerations, indicating a structural redistribution of populations and activities (figure 1). Over the century, there was a concomitance of demographic and political inflexions. With the regime resulting from the revolution of the free Officers, polarization became increasingly qualitative, more economic, political and cultural than massively demographic. Attraction became more selective, and the movement of metropolitization was set in motion. Polarization and the organization of flows, by and for the capital, accompanied an increasingly exclusive draining of wealth.

If the tendency was in fact present from 1952, the Cairo agglomeration did not, in terms of absolute value, see an abatement of its growth till the 1990s; it increased by 2 million inhabitants—maximum—between 1976 and 1986, and by a further million in the following decade. In other words, the last 50 years have been marked by an imperative need to equip and ensure the functioning of a capital unable to cope with a demographic pressure initiated by the extreme migratory appeal existing at the beginning of the century. It was the difficulty of accommodating this surplus population that gave rise to the clichés about Cairo's demographic explosion, and about its inexorable degradation, whereas, at that precise moment, plans were being made for a less precarious distribution of inhabitants. However, this project was largely hindered by absence of credit, and by the extent of war efforts, until the 1980s.

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[2] F. Ireton, "Notes sur les migrations internes en Égypte," *Fascicule de Recherches* (Tours, URBAMA—CEDEJ—CERMOC) 27 (1988).

Independent at last, the young nation inherited the inertia inherent in earlier, ponderous times, and organization was necessary. Thus were imposed the conditions of a sustained bias towards megalopolis, reinforced, for a regime seeking pan-Arab and third world leadership, by the need to underline Cairo's status as a regional capital.[3] Consequently, the city drew in a large part of the drive to industrialization, with the Hilwan steelworks and cement works, or the military factories in the north of the agglomeration; and it likewise drew in investments geared to construction, with the public housing programmes, and programmes designed to absorb the services of a state apparatus reinforcing technostructure. Then, in order to maintain and develop this production and command potential, enormous construction sites for infrastructure became necessary—bridges, auto bridges, sewage system, metro.[4]

At the end of the twentieth century, growth rhythms once again converged—no longer a sign of a weak distinction between distant cities and the countryside, but rather of the diffusion of the urban condition to the country as a whole. There was, though, no convergence in the modes of making a city, since, in the meantime, a qualitative ex-filtration had operated within the city system. A new ecology was being deployed, which it will be as well to stop and consider. All the designations of agglomeration, and ways of acting, were transformed. It is pointless to look for single boundaries in Cairo, whose region now forms such an extended network, so far into the provinces, now spreads, in such distended fashion, into the immense expanses of desert that border it. Nevertheless, since all this entity forms a system, the very heart of the city finds itself affected by changes of scale, by redistribution of population, by activities, and by values projected on to spaces and so redefining its territoriality.

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[3] The notion of "urban bias" has long been used to stigmatize the negative character of primal urbanization in the so-called countries of the South, an urbanization that captures for itself most of the means for a weak production and entails most de-structuring effects. It is nevertheless useful as a way of designating the pressure on public finances and the cumulative attractiveness vis-à-vis private investment capacities that always result from the imperative affirmation of the capitals of independent states. At present, international institutions like the World Bank are predominantly focused on the liberal idea of the metropolis being the motor of growth or "motor engine" concerned with the polarization of investment effort and the erasure of regional re-equilibrium policies which states no longer, in any case, have the means to implement.

[4] É. Denis, "Le Caire, quand la ville déborde son enceinte," Villes en Parallèle 30–31 (2000): 89–116.

Demographic control

The decade from 1986 to 1996 confirms the structural settling of growth initiated in the metropolitan region in the two preceding decades.[5] The growth rate of the region went from 3% between 1976 and 1986 to 1.9 for the last decade. The annual population contribution fell below the rate of the previous decade: the Greater Cairo region gained 228,000 inhabitants per year, as against 277,000 between 1976 and 1986.

In comprising 17% of the total population of Egypt, the Cairo agglomeration, with a constant border, returned to a level of metropolitization comparable to that of the mid-1960s. The period between 1986 and 1996 confirms a movement of diffusion or spread of the urban phenomenon, which had already been sensitive during the previous decade. In a context of generalized settling of demographic growth, those territories having the higher growth rates, above the national average, were no longer the cities but the small towns, which, for the most part, did not fall into the official urban category. The countryside—the system of hamlets, villages and small towns—grew faster than the system of cities. The average annual growth rate of the official urban element was now lower than that of Egypt. This slowing of growth was still more accentuated in metropolises such as Cairo and Alexandria.

Hence, there emerges a major bifurcation in the distribution system of the Egyptian population. In fact, for almost a century now, the growth of city systems has been consistently stronger than that of the countryside, so conforming to the classic scheme of polarization and urbanization, despite a faster and earlier decrease in fertility in the large cities. Cities owed their accelerated growth to migrations from the countryside, which, in the most marked phase of metropolitization in the years 1950–1960, was reflected in a very exclusive capturing of Egypt's human capital on the part of Cairo. Now, growing numbers in the cities were, essentially, no more than the product of a natural growth that was itself falling off. The large cities, including Cairo, no longer owed almost anything to migration; they were even losing inhabitants, according to patterns of de-densification and centrifugal migration towards the peripheries and satellite towns. The general configuration of regional growth rates was thus, all other things being equal, comparable to what it had been at the dawn of the twentieth century (1897–1907). The century thereafter took on the configuration of a long wave of metropolitization. This century-long movement was then erased in favour of lower levels of the hierarchy of population units. Spread replaced polarization; or, more precisely, polarization came to focus on the framework of small towns and villages.

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[5] M. Volait, "Le Caire: Les problèmes de la croissance à la lumière du recensement de 1986," *Espace, Populations, Sociétés* 2 (1988): 213–15; F. Shorter, "Cairo's Leap Forward: People, Households and Dwelling Space," *Cairo Papers in Social Sciences* 12, no. 1 (Cairo, 1989).

For a hundred years, evaluated at the level of the *markaz* and the city, the surface area of the overall inhabited territory affected by higher than average annual growth rates first declined, then began to spread once more. Now, 68% of the valley and the Delta had growth rates sensibly above the average, while in 1966 that applied to 29% only—metropolitization was maximal at that point. In 1897, 58% of the viable territory was concerned.

Table 1. Proportion of the Greater Cairo region to the Egyptian population*

1947: 12.5
1960: 15.7
1966: 17.4
1976: 18.5
1986: 18.2
1996: 17.3

* Constant border 1996, level of *qisms* and *markazs*, or urban and rural districts.

An economic upward movement monopolized less and less by the State favours the circulation of merchandise and goods, reducing the importance of proximity to the metropolis. As we shall see later, however, the strictly metropolitan economic concentration showed no sign of flagging; quite the reverse.

Demographic depolarization induces two tendencies: on the one hand, the aging of the centres of large cities through the residential migration of younger people to ever more distant peripheries; and, on the other hand, a breakdown in definitive migrations towards the large cities. Both phenomena are favoured by the upward movement of circular or pendular migrations; which is, in its turn, the fruit of an unprecedented development in transportation capacities and the increasing flexibility of commuting thanks to the explosion of microbus lines. All these elements favoured the reduction of distances, and thus the integration of the territory. This boom in collective private transportation fostered the development of service and trade functions in the lower levels of the population system. It introduced a cumulative pattern vis-à-vis the fixing of populations. Thenceforth, in part, merchandise came to the inhabitants. Large cities no longer had a monopoly of trade, as had long been the case within the context of a centralized shortage economy. There was a progressive movement away from accessibility through mobility of persons to a proximity to merchandise and services.

These changes were closely bound up with the movement away from a shortage economy and a generalized scarcity of products and services—with the corollary of a distribution tightly organized by state facilities—and towards an entrepreneurial economy and one of abundance of merchandise. Naturally, the profusion of merchandise did not eliminate the real financial problems of families in accessing this merchandise and these services. Improved accessibility makes populations tend more towards strategies that valorize the ties and the local networks of mutual aid within the family, as opposed to migration towards the large cities. It even stimulates a return migration towards the "home," and towards family networks, in order to undertake activity, marry, and gain access to housing, even if work opportunities remain closely linked to the relation with the metropolis and, consequently, to pendular mobility.

If we identify "cities" as morphological agglomerations of more than 10,000 inhabitants, then we may say that Egypt had 758 of these in 1996, compared with 48 in 1897. In 1996, the number of such cities was three times that supplied by the official definition. They absorbed an urban population making up 70% of Egyptians, whereas the official percentage was 43%. Now, with more than 800 agglomerations, the system has reached its limit with regard to the amount of territory practically available and to the proximity of units separating them: the agglomeration of agglomerations tends to reduce the number of cities. The 120 cities in the Delta comprising more than 20,000 inhabitants have, on average, three other cities of 20,000 inhabitants less than 20 kilometres away, and, in the Valley the 91 cities have on average two other cities.

This blurring of urbanization remains affected by inherited accessibility corridors. Above all, however, it is, as a consequence of this same reduction in distance and time, meta-polarized and structured by the acute proximity of the Cairo metropolis. Hence more than half of the

Egyptian population now lives within an 80 to 90 kilometre perimeter around Cairo, i.e., at a transportation distance of 120 kilometres maximum, corresponding to the accepted limit for daily pendular migrations, i.e., 3 hours of overall commuting. A 200-kilometre perimeter takes in more than 70% of the population. This third space also corresponds to rural communities with the highest densification: communities with more than 3,000 inhabitants per km^2 are not rare, while the average is 1,700 for the 35,000 km^2 of the viable part of Egypt, which is actually higher than for the North American megalopolis. It is, in truth, a territory of interweaving and movement. It should not be conceived solely as a suburb dominated by daily commuting between home and work: the structuring of the labour market and the weakness of salaried labour do not favour this. It is a circulatory territory marked by the transfer of merchandise, trade, the search for temporary employment, especially on construction sites, and self-employment opportunities adapted to circumstances: to localized shortages in labour, to harvest, or peak periods in cities and towns—markets, religious holidays, weddings, and so on—without taking into consideration the importance of family visits which constantly re-knit the outlines of social spaces, extending and reinforcing alliances and solidarities.

Since economic metropolitization shows no sign of flagging, these demographic tendencies, seemingly contradictory, serve the rationalization of the metropolitan machine. They relieve pressure on its centre, which can then, more comfortably, become the object of a functional re-appropriation. The useful space as a whole is recomposed in order to serve the new metropolitization. This de-concentration movement is not, therefore, something commonplace. It has to be understood as a hierarchically organized spreading of an area still extremely polarized. This territory is organized by the centre itself, but with exchanges increasingly intense and structured around shifting poles and around flows that no longer pass by the centre. This third space combines classic functions of alimentary provisioning of the capital with the capacity to produce the urban in situ, by capitalizing competences and human resources. A sub-proletariat appears, one which is active, on the one hand, to ensure its own survival by making use of the crumbs from the metropolitan machine, and which, on the other hand, provides a potential labour force, hence guaranteeing, in the long run, a low labour cost and a tight interweaving of services, vis-à-vis both commercial enterprises and private individuals.

It would be vain to try to delimit the outlines of this third space. It must be understood as a blur structured by poles and corridors. It should also be considered that, in a space as tight as viable Egypt, it may come to cross-breed within the overall entity. For all that, it will always serve a metropolitan machine that constantly capitalizes revenues and values added; redistributing only to a minimum degree, in order to affirm or guarantee its centrality.

The centrifugal redistribution of populations

The continued drop in the growth of the metropolis is accompanied by a unification of intra-urban tendencies. All the quarters converge towards the middle level of the agglomeration. Growth rates, and consequently densities, become homogenous. Initiated in the 1950s, the demographic drop of central quarters, under the conjoined effect of their aging and of de-concentration migrations towards the peripheries, has spread markedly towards the peri-central suburbs—witness to the continuous decline of the residential function at the heart of the agglomeration. Despite that, the functional alternative capable of appropriating this retreat from the function of living in the centres and peri-central suburbs is emerging only with difficulty. It is rather degradation that still dominates, due to lack of investment and the liberalization of property and land markets.

The haemorrhaging of the population has even accelerated in the old central quarters. Gamaliyya has only 59,000 inhabitants, whereas, at its maximum in 1966, it contained 135,000. Likewise, Muski has only 29,000 people and Bulaq 75,000. The October 1992 earthquake further accelerated this movement of de-concentration.

If the Cairo governorate continues to register a positive growth, weak it must be said (1.1% per year), this is only due to its morphological expansion to the east and northeast, on the desert plateaus. The popular quarter of al-Salam, with an annual growth rate of 14%, now has some 370,000 inhabitants compared with 100,000 ten years before. Likewise, Madinat Nasr, a planned residential suburb initiated at the beginning of the 1970s, exhibits a sustained rhythm—more than 9% per year for 20 years now. At present, it has 400,000 inhabitants.

Redistribution prior to migration from the provinces

It is a fact of major significance that the capital no longer attracts migrants from the provinces. In 1960, 35% of the inhabitants of Cairo had not been born there. Such people comprised barely more than 12% in 1996 (figure 4). For their part, the peripheral governorates of Giza and Qalyubiyya saw a sensible increase in the number of non-natives, but more than half of these were migrants coming from Cairo. Nevertheless, Cairo, with its central and peri-central stock of old and dilapidated housings available at the most modest rent, remains the preferred destination for half the migrants from the provinces. They then subsequently redistribute themselves, at the level of the agglomeration, by taking part in the overall centrifugal tendency. In the north of Cairo, Qalyubiyya has begun to play an essential role with regard to the placing of provincial migrants. As in the case of Giza, this phenomenon should be perceived as a reflection of metropolitan spread. In the oldest and most central zones (degraded or village habitat nuclei), migrants replace a local population that has moved on to property and to better housing conditions on the periphery.

The deferment of growth—i.e., the de-cohabitation migrations of younger people and the aging, in situ, of the inhabitants of the centre—finds expression in the depopulation of an intra-urban area becoming ever wider, and with this being in the Giza and Qalyubiyya provinces reinforced by the collapse of migrations from the provinces. During the last inter-census period between 1986 and 1996, those districts in decline lost 500,000 inhabitants in all. This entity, which includes, at one and the same time, the old centre, the business centre and the degraded suburbs, lost more than 14% of its inhabitants in 10 years.

Over the same period, the remainder of the agglomeration, by a cumulation of input through overspill and through a strong natural growth linked to the taking in of a young population stemming from de-cohabitation following marriage, has grown by more than 40%. Above all, with an additional growth of 30% in ten years, growth is affirmed more clearly than before in small towns and villages, not yet agglomerated.

Non-regulated habitat of popular origin, or the future of Cairo

The de-concentration and de-cohabitation migrations of young households are thus an essential vector nourishing the redistribution of the population. They are reflected in the aging of the centre and in a cumulative rejuvenation of peripheral quarters that receive young couples and their children. Hence, in an unplanned, really flourishing quarter such as al-{Umraniyya, 21% of the population is below the age of 10, while 3.5% is above the age of 60. The estimated migratory balance of this district indicates a positive balance of 140,000 people over 10 years (1986–1996). Comparable structures are found in quarters like Bulaq al-Dakrur, Matariyya, Hilwan, Shubra al-Khayma, or Hawamdiyya.

Conversely, in a central quarter like Qasr al-Nil, those below the age of 10 years make up hardly more than 7% of inhabitants, while 12% are above the age of 60. Maadi, Zamalek, and also Dokki, are likewise aging. Despite negative migratory balances, the older central qisms, such as Gamaliyya, have preserved a population where children are still numerous (15%), while persons over 60 make up less than 5%, this reflecting the resistance of their popular bases.

Despite this persistent centre-periphery differentiation, there is a tendency to uniformization of demographic profiles. The proportion of those under the age of 15 is stabilized around 32% of the population, i.e., 4 million individuals. This result, which testifies to a decrease in the birth rate in the popular peripheral quarters too, is very favourable to the qualitative amelioration of the apparatus of schooling—at least with regard to its improvement and equipping in quarters that have, up till now, been neglected on account of illegal building. On the other hand, the weight of people between the ages of 15 and 60, i.e., of the potentially active population, has increased very markedly. They are now 8 millions, as against 6 millions some ten years before. This increase, the fruit of births between 1970 and 1980, imposes considerable pressure on the labour market. It is neither a factor of evolution towards full employment, nor of a reduction in precariousness or of an increase in wages. It is rather a basic element for a security-based approach to urbanization, one that ceaselessly sets its imprint on the agglomeration, inviting those who can to join the private cities (gated communities) set well apart in the deserts and behind high walls.

Densities redistributed but showing little reduction

The movement towards unplanned quarters is showing a tendency to weaken: these quarters are registering a sensible decrease in their annual growth rate. On average, the rate now amounts to 2.7%, compared with

5.9% during the previous decade (1976–1986). Their rate of increase is now lower than that of the peri-urban *markazs*, which is of 3.2%, reflecting a spread of the migratory fields of de-concentration.

The convergence of densities around the average for the agglomeration is a direct consequence of this demographic mechanism, social and relative to land, of de-concentration from the centre towards the peripheries. However, Cairo does not follow the model of centrifugal redistribution according to the most current canons. As a whole, the agglomeration remains extremely dense. With 217 inhabitants per hectare, it remains one of the densest among the large metropolises in the world, along with Bombay, Jakarta and a number of great Asian cities. It is in no way comparable to the capitals of Latin America and Africa. The average density of Mexico does not in fact exceed 30 inhabitants per hectare, or that of Sao Paulo 20.[6]

If the centre has been continuously depopulated for more than 20 years, the new popular peripheral quarters have shown minimal spread, by reason of the scarcity and hence the high cost of land. Consequently, popular expansion, i.e., the building which, in the absence of major investors, overflows schemes of physical planning and compromises regulation, produces an extremely dense urban space. The strength of this movement of popular promotion has led it to become the norm, and it now accommodates 60% of the Cairo population. These new territories reach densities comparable to that of the old city. Imbaba, a quarter that has reached saturation point, as is shown by its growth rate now below 1% compared with more than 9% in the 1960s–1970s, reveals itself to be the densest *qism* of the agglomeration with 800 inhabitants per hectare.

The modes of producing and inhabiting the fringes of the metropolis do not, then, conform to the classic model of peri-urban spread; this phenomenon remains marginal. Popular promotion has more to do with the configuration of old faubourgs than with un-coordinated outgrowths that invaded the available space in extensive fashion—as may be observed in the wide expanses, often public and undeveloped, that surround African or Latin American metropolises. Here, most of the popular habitat is developed on private land that has been the subject of a transaction; it is the building that is illegal. Given the extreme scarcity of accessible land, verticalization is maximal and the space left for roadway network and services minimal, all the more so in that no authority is present. There is no pre-emption from the point of view of installing collective equipment, or of the imposition of ground occupation coefficients—since building is legally prohibited. As for the layout and parcelling, these are determined by prior agricultural organization and the hierarchy of the irrigation system.

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[6] F. Moriconi, *Geopolis: Pour comparer les villes du monde* (Paris: Anthropos, coll. Villes, 1994).

In these very dense faubourgs, which are in direct contact with the agglomeration, any notion of being thrust outside or set at a distance is reduced due to the nearness of the legal city and the centres: in Cairo, informal quarters such as Bulaq al-Dakrur or Imbaba are in fact less than 3 kilometres away from the functional centre. Moreover, the supplying of these districts, in terms of transportation, water, power, sanitary drainage, and so on, costs incomparably less than for an authorized appropriation, lacking elevation, within the construction framework. These city-dwellers, the great majority natives of Cairo, produce a very structured urban organization, where proximity and compactness are resisting.

A spread is indeed in evidence, as may be seen from the high growth rate in development corridors on the desert plateaus; but, so far, popular construction has resisted this movement far away from the centre. Cramming together remains, massively, the rule. Nearby, equipped and opened up, the accessibility of these quarters makes them sought-after places, where a new generation of buildings, better finished and higher, is appearing. There is no more pushing out at the edges, except in cases of extreme saturation and property revalorization by integration within the legal property market and land tenure securing. The most modest households, thus excluded by the increase in prices and rent, go to live further off. Between 1991 and 1998, the unregulated habitat spread by 25 square kilometres on the edges, i.e., a growth rate of 3.2% per year.[7]

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[7] É. Denis and E. Séjourné, "Le Caire: Métropole privatisée," *Urbanisme* 328 (2003): 31–37.

A redefinition of available property

These redistributions are articulated according to the dynamic of property. The demographic decline of the centre was followed by a reduction in the amount of precarious housing (tents and habitats in canvas and wood), and in shanty towns. The majority of this precarious housing is concentrated in the old city and the ancient faubourgs such as Bulaq, on roofs, and in courtyards and cul-de-sacs. These cases excepted, such classic features of imploding Cairo are, as the urban landscapes testify, given over to peripheral habitat, i.e., apartments in blocks of three or four storeys. In the Cairo governorate in 1996, the precarious habitat made from collected material represented 2.5% of the housing stock, compared with 5% in 1986. Even so, this represents 11,000 housing units, i.e., around 50,000 people! Also, the number of single-room houses or shared houses in Cairo fell from 15 to 9% of the stock. In other words, this available housing stabilized at around 264,000 units, plus 70,000 in Giza and 34,000 in Qalyubiyya. Hence, some 1.5 million persons, or 13% of the agglomeration's inhabitants, still live in relatively precarious housing conditions, since they are unable to live within the legal habitat and even in the popular promotion quarters.

This inadequacy of available housing vis-à-vis demand increased once more between 1986 and 1996: the housing stock increased by 300,000 occupied new units and 248,000 empty ones. As in the rest of urban Egypt, the volume of new empty housing in Cairo is greater than the stock ten years earlier. Cairo now has 486,000 empty housing units compared with 238,000 in 1986, i.e., 17% of available property as against 14%. Giza has 265,000, i.e., 22% of its available housing, and Qalyubiyya 98,000, or 20% of its stock—i.e., a total of 850,000 houses finished and inhabited. The phenomenon is not, however, a recent one: as early as 1882, 20% of Cairo housing was uninhabited.

This property available but immobilized, outside the market, includes 20 to 30% of old, degraded habitat which provides no immediate alternative to housing in informal quarters. These latter are mostly located in saturated central or peri-central quarters. Furthermore, while progressive deregulation of rent may affect the market for new housing, it is not capable of offering massive reinvestment for the central property capital where rents are pegged. The increase in the number of unoccupied houses reflects, in particular, the power of the peripheral property promotion dynamic. Hence, 9% of the 1.5 million new housing units produced in the last ten years, in the metropolitan region, are to be found in Madinat Nasr. This quarter has 135,000 more units than resident families, meaning it has the potential for a doubling of its population without any new building! Nor are the non-regulated quarters exempt, since they contain 50% of the unoccupied units. Here, too, the available stock would permit a quasi-doubling of the population without any new buildings. Illegality is therefore no bar to speculative investment, since building is guaranteed by virtue of its insertion within the existing agglomeration.

The new ecology of integration by the market

The city of popular origin, whose buildings are not recognized by positive law but are secure in practice, tends to install itself as a commonplace feature and a standard norm for living. At present, debate focuses rather on the best way to legalize it than on procedures geared to keeping it on the margin and containing its inevitably overflowing energy. The motive behind this change in perspective is not a charitable one; rather, there is affirmation of a new metropolitan ecology leading to a new designation of the totality and its parts. The aim is to integrate in order to control; to recognize in order to create within the city, en masse, new taxpayers who are part of society; and, finally, to make transparent a powerful investment dynamic which will capture an important share of metropolitan wealth.[8]

The reversal happened at the turn of the 1980s–1990s, taking place alongside the decrease in residential migration towards Cairo and the urbanization of the provinces. Up to that time, the city, and the modes of intervention or protection regarding it, had been conceived with a view to defending an entity: Cairo and its citizens. Successive blueprints aimed to prevent it from overflowing and to consolidate the existing function of parts.[9] Policies meant protection of a city, which perceived itself as denatured by the parasitic and denaturing invasion of provincials; an invasion that was the cause of all the city's ills. These provincials, regarded naturally as peasants, were the Other, the stranger, the scapegoat. Hence, the city acquired a surrounding protection that was also a peripheral boulevard, supposed to mark the limits of the legitimate city. All that was not within its walls did not exist, and, in consequence, could not be the subject of any equipment with facilities. Thus, the new cities were conceived as the sole legitimate alternative, to oppose the flourishing of the non-regulated habitat. Nevertheless, whatever policies were devised to contain illegal building, or to transfer the popular dynamic out towards new cities, these policies failed; they were diverted from their initial objective. The new cities were populated very slowly. This failure was bound up with the need for tolerance so as to maintain social peace and client networks, or with the speculative nature of the building, or even, gradually and over time, with the imperative effort to reduce the public debt. The construction of public housing is an abyss, geared, above all, to ensure the vitality of the construction material side—steel and cement—and the building side itself: those fundamental industrial bases promoted to affirm the young nation, independent since the 1960s. Quite simply, and especially after the signing, in 1991, of agreements with the IMF entailing the adjustment of public expenditure and privatization, ways of viewing and acting had to move on. It was no longer possible to propose an alternative to housing of popular origin through socially vocational public construction. If people were able to house themselves, it was best to go along with this, and their investment should be recognized. Following this logic to its liberal conclusion, some went so far as to suggest to the Egyptian Ministry of Finance that this "dead capital,"[10] once recognized, would become a mortgage potential, and, consequently, a huge source of productive capital to make the metropolis more dynamic and integrate populations. The industrial side of the building trade gave lively support to this approach favouring the legalization of building and the transformation of land, since it was being increasingly deprived of public revenues designed for housing. Non-regulated habitat, it stated bluntly, was its main market; hence, to oppose popular building would in effect be to oppose industrial expansion.

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[8] The illegal property stock, estimated at 175 billion dollars by the team of H. De Soto (1997), represents a capital apparently outside the market, which is equivalent to 22 times the financial capital invested in the Cairo stock market, or 40 times the total of foreign direct investment in Egypt up to 1996.

[9] G. El Kadi, "Trente ans de planification urbaine au Caire," *Revue Tiers-Monde* 31, no. 121 (1990): 166–185; Denis, "Le Caire, quand la ville déborde son enceinte."

Thus, popular habitat was becoming something quite normal, even if legitimization was unsystematic, even if it was accompanied by inherited forms of resistance, on the part of administrations, towards the assimilation of populations involving ordinary citizens. In fact, this strictly legal and liberal approach, which confined the role of the State to that of warrantor of private property, was eventually revealed as utterly simplistic. It generated a new cadastral administration that was inevitably cumbersome to set in place and manage. The study ordered by the Ministry of Finance indicated that 92% of property was to be legalized, along with 88% of the activity![11] The modalities of this legalization of the majority of habitat were evidently essential for the future of urban forms and for Cairo society. Reinforced by foreign experiments, the approaches adopted became increasingly hybrid and critical of strictly macro-economic objectives.[12] They took into account the complexity and nuances of illegality along with traditional norms of property recognition: in other words of the hybrid legal usages and the coherence of local fabrics of popular origin. The strictly liberal approach totally ignored the weight of rental within the non-regulated habitat. Nevertheless, it housed more than 40% of modest families who were defenceless in the face of the inevitable revalorization of quarters and of the leases to which legalization led. The same was to apply to the large number of landlords who were now tempted to re-sell their land and to re-invest further off, on lands where building was still forbidden. In this way the distribution of property titles became the principal motor for the extension of illegal habitat in cities like Istanbul and Mexico. Approaches involving recognition and equipment for infrastructure and services thus came to be increasingly preferred by competent authorities and international programmes.

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[10] The term used by De Soto, in *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else?* (Basic Books, 2000).

Following the same purely economic and accounting perspective for the making of a metropolis, and in order to satisfy the industrial branch of building and also swell its coffers, the State, brutally and radically, opened up the desert expanses, on both sides of the new cities, for building. It placed these reserves of land at the disposal of property companies who developed on them a unique product: private cities and gated communities. Hence, no less than 100 square kilometres, a surface area equivalent to more than a third of the city that had taken over a thousand years to find its present structure, was set to building work, and became partially inhabited in scarcely more than ten years!

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[11] De Soto, *The Mystery of Capital.*

[12] A. Gilbert, "On the mystery of capital and the myths of Hernando de Soto: what difference does legal title make?" *International Development Planning Review* 24 (2002): 1–20; D. Sims, "The Cairo Case," in *Understanding Slums: Case Studies for the Global Report on Human Settlements 2003* (London: UN-Habitat and DPU, 2003).

The new exclusive ecology of megalopolitan fears

Private cities, with such evocative names as Utopia, Dream Land, Beverly Hills, Palm Hills, or Qattamiya Height, answered to the imperative restructuring of the building trade, which had lost the public housing market. To sell this kind of living, so totally alien to local usages in its differentiation and distinction with regard to density, at the level of the building as such, required a considerable effort in redefining urban fears and dangers.

Discourse about the city which had, urgently, to be protected from invasion by peasants, and about defence of the city's integrity, was radically swept aside in favour of a totally negative vision of the degradation of the city as a whole—there was nothing left to defend. A series of events formed the narrative fabric of what gradually imposed itself as an imperative need to leave the city and move to well-guarded private cities, in one's own community and well outside, far from crowds and pollution. The earthquake of October 1992 shed light on gigantic popular quarters, which rescue teams were unable to enter after having excluded and ignored them for so long. They had no landmarks or staging points. By contrast, associative networks with Islamic reference, well established in the health sector and in schooling, swiftly answered the call. Non-regulated habitat was no longer this *terra incognita*, or, worse, home to a potentially violent confrontational group that needed to be re-conquered. There followed legal recognition and equipping. At first, though, confrontation with the police was the dominant feature, and the illegal quarters came to be stigmatized as turfs of violent confrontation with the authorities. This sometimes led to massive police intervention, notably in the popular quarter of Imbaba at the end of 1992. This quarter was then designated an independent Islamic republic. The notion of "illegal quarter" came just at the right time for a distraught government facing ever more violent opposition: it permitted the precise localization of a peril, diffused within society, at the gates of the city, and the actualization of a scapegoat figure. It was no longer a matter of peasants infesting the city, but rather of a potentially dangerous youth adhering, in massive numbers, to radical Islamism. Ecology was thus set harmoniously alongside local socio-demographic reality and global time—Cairo and Islamist youth. In conjunction with all this was a sharp increase in ecological speeches about the city's pollution. These were based on spectacular real-life accidents conducive to urban anguish, like the pungent fumes that invaded the agglomeration in autumn, more and more each year, when the cotton stalks were burned. This burning coincided with the inversion of temperature whereby the ground became hotter at night in the agglomeration, and so, in the absence of any wind, caught all the fumes.

All these alarming facts, once worked on by the media, led to an irreversible resolve, on the part of those who could afford it, to take up the notion of the city in the countryside and the quest for paradise on earth, the notion of being in one's own group, with a pool and the Garden of Eden, a package praised and sold by the promoters of the private cities, along with all the other attributes of the Eden-style consumption society, like golf and amusement park or commercial mall. The city was lost. It was pointless to go on defending it. We had to escape from it. In this way, talk of security, and the market for security, could blossom. There was no way, in any case, to go on protecting one's integrity, or to go on seeking some alternative to the art of making one's own home, apart from ordinary inhabitants. This was interpreted by the new residents of private cities as: "it's time to experience our city on the level of the greatest metropolises, without waiting for some hypothetical development and improvement of the totality." This break-off from the greater number, the non-promotion of this number, with the increasing duality of metropolitan forms that it implied, was even necessary. It was imperative both for the reproduction of the model of deeply unequal division and to stay on top of the costs of industrial production on the globalized market of capital and merchandise, and even for the flourishing of a service society that likewise required abundant and cheap labour. Within the irresistible context of deregulation, informality was a flexible capital whose upward movement was not confined to the so-called developed countries. The dynamic of a metropolis like New York owed much to the utilizing of an under-proletariat imported or fallen in status. As in Cairo, the whole was a system contributing to the convergence of landscapes.[13] Illegal habitat should not, therefore, be confused with uncontrolled development; it was rather an urban form dependent on modes of an economic and political insertion that needed to be reinforced.

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[13] See J. Abu Lughod, "Le Caire et New York vus de la rue," Revue Internationale des Sciences Sociales 42 (1990): 345–358.

The return of the private and the semi-public

The totality of the private city does not simply reflect the return of private promotion as an essential motor for the animation of urban forms and the re-composition of the metropolis; it also entails a major reform of city government. If it was possible, in 1992, to designate the ordinary quarter of Imbaba as secessionist, given its non-recognition by State services and the opportunist interventions of organizations with an Islamic reference, the private citizenship set in place, de facto, by the tight municipalism of private cities represented an open denial of the State's omnipotence. In fact, buyers were seeking to escape a lost city, endlessly corrupt, and, consequently, the negligence of an administration incapable of providing and maintaining basic services. If the State, through programmes of new cities, had provided the basic infrastructure allowing private cities to flourish, and had sold the land they were built on at a low price, all present development was to its disadvantage. The city-dwelling ideal was to be found elsewhere. This is obvious, for example, in the choice, on the part of a number of private cities, to seek to exploit the potential profits from the common funds placed in the Cairo stock market. This emerging "private" citizenship was all the more powerfully significant in that it imposed itself at a time when authoritarianism was being reinforced. Privatization was to be seen in the explosion of shopping malls, those semi-public places where entrances and exits were controlled.[14]

There was also an experiment with privatization to try and solve the problem of illegal quarters, with the intention—difficult to translate into practice—of conceding to contractors pieces of land in the heart of under-equipped quarters, on condition they reserve a part of their concession for collective services and social housing. With the abandonment of overall strategic planning, this incitement approach, devised in the light of the State's measureless need of funds, led to a total retreat on the part of regulatory authority. Production within the city had become no more than the sum of uncoordinated private initiatives or, at best, something geared to the interests of investors. Thus was sketched out a way of making the city close to what it had been before independence, i.e., a city parcelled by private concession, or, still earlier, by princely or religious foundation.[15] As such, those critical of the city's present difficulties increasingly targeted the public policies that had followed independence, and they stigmatized the material urban results of these policies: industrializing industries that had become a major source of pollution, social habitat more unhealthy than the unregulated kind, pegging of rents, destruction of the property patrimony, or else an overloaded administration clogging up the city centre. So many assertions, widely remarked on, which adversely affected the legitimacy of a State already unable to raise taxes and, in consequence, able only to tolerate, not even to regulate. The absence of a land and property tax system did, though, have the advantage that it need not recognize inhabitants' rights; as such, it could maintain a client relation, authoritarian and arbitrary, with city-dwellers confined to an infra-legal margin.

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[14] M. Abaza, "Shopping Malls, Consumer Culture and the Reshaping of Public Space in Egypt," *Theory, Culture and Society* 18, no. 5 (2001): 97–122.

This forced lack, on the part of the public authority, of initiatives aimed at organizing the metropolis revealed that it never had in fact any real authority, and that the period between independence and the present day had been an imported modernist parenthesis, having only a marginal effect on the city. In particular, the creation of public spaces open to the public as a whole under the aegis of the public authorities—a seemingly universal foundation of the modern city—had never adequately fulfilled the aspirations of the majority; there were operas, prestigious gardens, and so on. When these places did in fact approach fulfilment of such aspirations—squares, gardens, or youth centres—the competent services were barely able to maintain them. It was as if the notion of "public" had failed to find a legitimate place in a metropolis whose usages inherited from the practices of Muslim law valorized and guaranteed private property, while at the same time promoting the idea that residents were responsible for maintaining shared spaces. From this perspective, the way monopolization by the public authority was followed by a rapid degradation of the forms of Muslim appropriation and collective management, like *waqf* and *habus*, speaks eloquently. The incapacity of the public authority to assume its obligations, its resignation in the face of degradation, explains in its turn the absence of any sense of responsibility in the users of streets to maintain them, their tendency to litter these streets without a second thought; all the more so in that this was one of the few forms of opposition tolerated.

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[15] See J. L. Arnaud, *Le Caire, mise en place d'une ville moderne (1867–1907)* (Sindbad-Actes Sud, 1998); A. Raymond, *Le Caire* (Fayard, 1993).

By contrast, the maintenance and laying out of pavements, which was the responsibility of residents outside the great axes, offered these residents the chance to create open, mediating spatial devices and to affirm collective competences. So that there could be a space provided for the public, the proprietor, or indeed the local community, had to provide passers-by, and the neighbourhood, with something clearly worthwhile—fountains, mosques, schools, cafés, gardens, and commerce.[16] So it was that, in the cities of popular origin, public space was made up from co-presence and the exposition of oneself. Even if there was a mistrust—not always clearly expressed but unmistakable—towards the pretension of the modern State to manage and divide up the patrimony excluded from the market, it must nevertheless be recognized that, in a city like Cairo, the State owned more than half the land and the constructed patrimony, plus the totality of its outlying desert districts. As such, the Cairo landscapes were powerfully marked by the crushing weight of building and land outside the market, the great majority of it not shown to advantage, rather highly degraded. For some ten years now, the State had disengaged itself, had put up for sale this land and property patrimony in the old centres—buildings belonging to insurance companies especially, but also the property of the waqfs. The search for funds and the confirmed, unreserved adherence to liberal dogma lay behind such sales. But this was not the sole reason: they were also a way of disengaging the State from responsibilities that State services could not assume. It was, in fact, a recognition of a structural incompetence. At the same time, this considered sale of the public patrimony remained the last orientation instrument of urban development for the State services;[17] plus the fact that it constituted a powerful instrument of revenue redistribution for contractors close to the regime.

The principle of a modernist and interventionist parenthesis, within the long period during which a city like Cairo had been structured, is confirmed by the absence of urban forms that might be the fruit of a middle class receiving deliberate support through access to property credit. These forms, so characteristic of residential access in the twentieth century, from the block to the villa, which came to be in the majority while the metropolises of industrial democracies were being extended, are not to be found in Cairo. The standard habitat based on institutional credit is non-existent, apart from projects by certain investors, all of them liable to speculative miscalculation. In fact, the middle class, in the sense of a population with stable jobs and sufficient remuneration, does not exist. The meagre and precarious nature of income forestalls it. In other words, even the habitat of popular origin is the product of precious financial accumulation, from a migration to the oil monarchies of the Gulf, for instance. Moreover, this immediate financing of building imposes specific modes of living and urban forms, marked by a maximization of land revenue, and thus of densities. It requires that construction costs be reduced to a minimum, while radically restraining the financing of all other budgetary areas, thereby reducing the chances of a rise in consumption.

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[16] J. Akbar, Crisis in the Built Environment: The Case of the Muslim City (Singapore: Minar, 1988).

[17] M. M. El Araby, "The role of the state in managing urban land supply and prices in Egypt," Habitat International 27 (2003): 429–458.

At the other end of the social spectrum, the requirement to pay in cash encourages ostentatious buildings that magnify, in their adornment, the financial power of the owner. The ostentatious may be all the better expressed given the building of new prestige residential centralities in the desert; the sense of propriety needed in cohabitation in the metropolis, in proximity to others, is no longer felt necessary. The ways of living in, of experiencing the metropolis have become exclusive.

Nostalgia and patrimonialization as a means of publicizing liberalization

The sale of public patrimony in the old centre has been accompanied by the valorization of blocks and other old buildings that are noteworthy from an architectural or simply historical point of view, as markers of identity or structuring points of reference. This having been said, the opening up of the property market has been based on the valorization of the vacuum, i.e., of the central and symbolic space outside the market.

This work of rewriting urban history through choice and the way of preserving traces constructed in the past is consistent not only with the reactivation of the intra-urban land and property market, but also with the mutation of values accompanying it. The restoration of monuments is progressively replaced by an approach by quarter, which aims at unifying and harmonizing the image that should ideally be projected by these old central quarters, along with the clearly various uses that characterize them. Hence the city—a complex and plural space, a popular polarity, religious as well as craft and commercial—is the subject of a conservation programme geared to transforming it into an outdoor museum. Consequently, the way of receiving is limited and channelled through a strong trans-national, commercial and tourist-style image of the Muslim East with its gleaming mosques, suqs, and cafés. The ways of living and working in the old city are not, of course, erased so easily, but the aging of the resident population offers the chance of an accelerated dismantlement of areas of craft activity not linked to tourism and helps ensure there will be feeble resistance to the folklorization of landscapes and usages. Codification according to trans-national norms does not just have a purely commercial function linked to international tourism; it is also a way of domesticating a plural and popular Islam and of making it consumable by everybody, while re-appropriating the use of this lost centrality, still considered the basis of the city rather than its heart. In addition to the probable disintegration of urban ambiences linked to the mixing of usages, turning the old centre into a museum under the name of "Islamic city" or "Fatimid city" (even though the edifices of this period have almost completely disappeared) is accompanied by increasingly flashy renovations of palaces and mosques; the syndrome of the funfair, which must be clean, smooth and shiny, often has the upper hand over respect for forms, material and the wear of time. We are not far in terms of motivation, but this time too for internal ends, from the reconstruction of the environment of the other in one's own image, timelessly, as the Street in Cairo might have been in the 1889 universal exhibition in Paris. This is still more the case when the plateau of the Pyramids, in Giza, to the west of Cairo, sees the architectural reconstitution, on virgin land, of an eastern suq with its streets, squares, and of course its shops—the Khan al-Azizi!

This summoning up and valorization of the splendours of the past is not limited to the old city and its monuments; it also affects the city inherited from the end of the nineteenth century and the beginning of the twentieth. The activity of patrimonialization now comes to affect noteworthy buildings, villas, apartment blocks, the Stock Market, banks, even architectural assemblages and city-centre squares, whose land began to be allotted at the end of the nineteenth century but whose building actually dates from the beginning of the twentieth. Also affected are more recent concessions like Garden City and Heliopolis. Legal protection, classification and renovations flourish, and they reiterate the high praises accorded to those traces of an architecture imported for the promotion of private cities. Let us simply cite the examples of Mena Garden City and New Heliopolis. The whole entity is in harmony and implies the same investors, city-centre patrons and promoters of the desert, with a view to elaborating a new referential era, a new Golden Age for Cairo, that of the liberal age. Delegated to businessmen, the enterprise of patrimonialization legitimizes these as a feature of civil society. The renovation of the Stock Exchange quarter, the restoration of façades and the implanting of a pedestrian zone integrating the adjacent roads, carried out by an association of businessmen, symbolizes this propagation of image geared to highlighting private initiatives, at the risk of underlining that the period of national construction after 1952 was more damaging than the preceding colonial influence. The revision of history now extends to proposing a rehabilitation of kingship, notably through the creation of a museum dedicated to King Farouq in Helwan. Over and above the obvious function of creating a value to accompany the liberalization of the land necessary for the re-conquest of the centre, along with the closely linked function of glorifying liberalization even when it involves legitimizing a quasi-royal succession for contemporary Egypt, such renovations turned rehabilitation provide a historical base for the new forms of living in the desert. The private cities no longer represent an illegitimate import; they rather provide a rebirth of the glorious past of the metropolis. The patrimonialization enterprises entailed in building at the beginning of the century join forces with this procedure of creating a patina, that is to say, of creating a nostalgia through the re-appropriation of social usages and of an old building frame; in the context, in the case of the private cities, of a patrimonialization and historicization of the present. The issue at stake with this patina is to promote, apart from authenticity, a nostalgia of the present. As such, present-day life appears not simply historicized, but as something that has already been lost. Like fashion, which is a product of the intertwining of worlds and a feature of accelerated circulation around the world, the patina generates what is ephemeral. This fabrication of time, by placing the present in parenthesis for the ends of promotion and consumption, joins forces with the issue of urban fears, in the sense that it creates instability. It calls upon a person to protect himself, to consume protection in the face of increasing uncertainty, of the destabilization of all daily routines, of complexity and growing interdependence. It is a way of fashioning a metropolis which, though it provides a reactivation of the old forms of agglomeration, gives no incitement to the questioning of socio-spatial disparities—gives them, even, an inherited legitimacy.

Conclusion

Since the present exercise, the synthetic presentation of a city, cannot be reduced to the prudent provision of a sum of observations, but must necessarily suggest a path to an attempted restitution of a totality, with all its nuances, and also a reductive coherence, the presentation of the Cairo metropolis proposed here is not free of gaps. It aims, primarily, at shedding light on a contemporary trajectory by focusing firmly on demographic stabilization and its spatial consequences, specifically in terms of expansion of the metropolitan area and of the selective redistribution of populations. An analysis of the means of production, and of the ways to articulate the urban forms that accompany them, follows. It further shows how a new order, both spatial and social, is incorporated within a relation renewed by economic liberalization, and how this harmonization entails a rewriting of history and a re-appropriation of inherited forms. The reading of landscapes under construction in the case of private cities, and in the course of being restructured through the legalization of unregulated habitat, takes into account social distancing and the affirmation of a security-based, integrative approach—the integration being reduced to macro-economic goals.

At this point, we must face the potential conclusion that we have merely replaced the impression of demographic explosion, currently prevalent in syntheses about Cairo, by the establishment of a new socio-spatial tyranny that recomposes existing inequalities to the point of caricature; to the extent that only a stringently security-based, authoritarian approach will be seen as capable of still holding the totality together. As such, the danger of an explosion would not have disappeared—it would simply have become transferred. The brutal and rapid nature of these changes induces us to consider that there is, in practice, an accentuation of fundamental divisions. By the same token, the overall perception of the large cities of the Arab-Muslim world suggests a stringent, unlimited police control of social hazards and of opposition.

We have to make the same observation as those presentations which—concluding that an explosion is imminent, but never in fact meeting with the destroyed new Babylon—insist, as if to justify the non-realization of their prophecies: "yet it does move." Without denying the tyranny of fundamental social divisions and the risks of social explosion bound up with the total absence of legal representation and channels for political opposition, we are bound to recognize that the metropolis contains resources allowing the whole, which is necessarily interdependent, to function and create a system; that is to say, exchanges rendered peaceful do dominate daily practice.

It would now be fitting (although this goes beyond our present purpose) to study the modes of reception and accommodation of these new urban objects that, a priori, invite sorting and distancing. In a social science perspective—taking, that is, an approach centred on reception, interaction and usages and not merely on transient, textual and objective appearances—the transactions and hybridizations that form the mixing of the landscapes should be accorded their proper weight. And what if the impenetrable, that is, the resistance of the co-presence and mixing of usages that enables this evident noisy incoherence (which remains the first impression) to persist—what if this was precisely what fashioned the metropolis, along with its capacity to transcend contradictions? The shopping mall, which may be regarded as one of the categories of privatization, is also a new public space, somewhat reminiscent of the suq. It permits new usages and a new mixing.[18] The appropriation of new centralities in a way that does not follow the wishes of developers, when these extol, for instance, the setting up of an open museum, is one such necessary approach. Studies of the way popular quarters insert themselves within the metropolitan economy would be similarly beneficial. The flexibility of relations and usages, and of transaction, seems always to win the day. Likewise, mobility and transportation, which have not been discussed here, may certainly, in their recent development, bear witness to sorting and dualization, with a very clear bias towards fast roadways and consequently towards the accessibility to cars of the new quarters of prestige and business. However, the very marked flexibility of the transportation supply is also favourable to the intensification of links. It reinforces proximity, despite the extension of the metropolis. Similarly, the metro tends to transcend deep divisions and favour co-presence. It also induces responsible reflexes, to the extent that service is guaranteed and of quality.

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[18] See Abaza, "Shopping Malls."

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THE RECONSTRUCTIONS OF BEIRUT

Joe Nasr and Eric Verdeil

Introduction

Beirut has successively been seen as the icon of the war-destroyed city, the paradigmatic case of "urbicide"[1] and then as the symbol of a city's rebirth through the reconstruction of its city centre,[2] praised in real estate journals and sold as a booming touristic destination to natives of the Arabo-Persian Gulf. Both images place Beirut as a city out of compare, out of norm, defining it as a unique and extraordinary city. Such exceptionality should nevertheless be challenged. On one hand, the city as a field for local and global wars—and its consequent reconstructions—is a fate that Lebanon's capital city has shared with Jerusalem, Baghdad, Hama (and almost Aleppo), Mogadishu, Sarajevo, Mostar, Belfast, among many others in the late twentieth century.[3] The war-torn city is an extreme case, considered from the point of view of urban violence as well as from that of urban planning. Urban violence and planning must then be analyzed as conscious tools for reshaping urban societies and nations in the hands of various political actors at the local, regional, or global scale. The city has to be re-placed within political, socio-demographic, and economic turmoil in its gradation and in the steps onwards and backwards from peace to war. Reconstruction, then, has to be considered as a series of moments in a political balance of power. On the other hand, in certain ways, urban policies related to reconstruction differ only in degree (rather than in kind) from planning and projects intended to transform the city in more common frameworks. Instances can be found in the general attitude of contempt, by many planners, for the ancient urban fabric and its inhabitants, be it in the name of the modernization of the city, the affirmation of the state, or the necessary adaptation to economic globalization.

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[1] Perhaps the best-known example of journalistic analysis is Friedman's *From Beirut to Jerusalem* (1989).

[2] This is exemplified in the title of a book from the 1990s, Gavin and Maluf, *Beirut Reborn* (1996).

[3] It is thus not by accident that an international conference on the rebuilding of post-war cities was held in the 1990s in Beirut. The proceedings are found in Tabet (1999).

The dual image of Beirut as war city versus as rebuilt city is also false because there were multiple reconstructions of Beirut and because of the intricate connections between destructions and reconstructions. First, Beirut has experienced over time several experiences of reconstruction, not only in time of war but also, due to Ottoman, then French projects of modernization, in the aftermath of World War I. During the more recent war, the distinction between the time of destruction and the time of rebuilding itself is not clear since the reconstruction's projects were a factor of destruction or at least demolition; and the failure of peace agreements during the Lebanese war interrupted at least twice the fledgling reconstruction processes. The attempts at transformation, even if many failed, have left imprints, both in legal constraints and property patterns (launched expropriations, approved decrees that were not implemented…) and in the mentalities and memories of various actors. Considering those failures and their effects, thus, offers new light on the rebuilding processes.

Our entry point in this paper is the physical reconstruction of the city, as a way to highlight reconstruction in its broader meaning:[4] the physical reconstruction takes place in a political and socioeconomic framework shaped by the war. Other policies of the post-war context relate to displaced people, reconciliation, or deal with specific sectors (roads, energy, etc.) at the scale of the country; these choices interact with the reconstruction projects. The reconstruction in itself should not be seen as a linear process. Feedback effects are altering the implementation and changing the initial designs.

Understanding Beirut's reconstructions first requires a brief overview of the history of transformations in the Lebanese capital city before 1975. Wartime Beirut and its plans then provide an understanding of the radical changes that affected the city and of the failed reconstructions. The plans and projects of the post-war era, with an emphasis on the city centre, will lastly be analyzed.

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[4] On the multiple understandings of reconstruction in Beirut, see Nasr (1999). Some of these understandings are developed in other articles in the book where that article is found.

1. A Brief History of Transformations in Beirut before 1975

From a provincial Ottoman town to the capital city for a new state

While Beirut remained, until the mid-nineteenth century, a small provincial Ottoman town, a range of political transformations progressively changed its status.[5] The development of trade with the West was favoured through a range of decisions: the creation of the quarantine, then the transformations of the harbour, and the construction of the Beirut-Damascus road. Closer connections with the Mount Lebanon hinterland developed, particularly through silk production and commerce, although that district was administratively autonomous under the status of *muttassarifiya*. Numerous Christian refugees settled in the city after the massacres of 1860 in Damascus and in Mount Lebanon. The creation of the *wilaya* (governorate) of Beirut in 1888 gave the city a new administrative status. During the nineteenth century, Beirut's population and trade grew at the expense of those of Saida and Tripoli. After World War I, the French chose Beirut as the capital city of the states of the Levant and of Lebanon, a new state whose borders were extended beyond those of the Mount Lebanon *muttassarifiya*, in order to include the Bekaa Valley, the city of Tripoli, the Akkar plain as well as Jabal {Amil in the hills overlooking the plains of Palestine, which stood under the authority of the British. Beirut, thus, gained control over territories that used to be in closer relationships with other cities, like Damascus for the Bekaa or Haifa for Jabal {Amil. As for Tripoli, the new border cut it from its own hinterland and the cities of the Orontes basin in central Syria.

After World War II and the national independence of Lebanon in 1943, Beirut was able to take advantage of a range of political and economic transformations that helped foster its regional role. The creation of the state of Israel and the Arab-Israeli war of 1948 led to the closure of Haifa's trade with the Arab countries. Beirut's harbour was reinforced as the main one along the Mediterranean coast, with its hinterland extended to Iraq and the Arabian Peninsula, under the impetus of the oil-fuelled boom in commerce. In 1951, the breach of the free trade agreements between Lebanon and Syria meant that the proponents of a "Merchant Republic" imposed their view of the country as a commercial link between East and West. During the fifties, Beirut benefited from escapees from the nationalist and socialist revolutions in neighbouring countries, from the influx of rich Palestinians, and from those who made fortunes from oil incomes from the Arabic-Persian Gulf, all of whom brought their wealth into Lebanon's banking system and invested in its real estate sector. The policies of banking secrecy and free trade were vital pull factors. Beirut and Mount Lebanon became a touristic centre starting in the sixties. Western firms settled their regional offices in Beirut, where they found the security of a pro-Western government, a skilled population, an attractive atmosphere, and an airport from which all Middle Eastern destinations could be reached. Beirut's regional role, thus, relied on the rise of a service economy for the whole region.

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[5] A number of publications now exist on the urban history of Beirut, including its physical transformation. See for instance: Kassir (2003), Davie (2001), Tabet (2001), and Saliba (1998).

The economic prosperity of the Lebanese capital city did not reach all regions of Lebanon, and this discrepancy was a main factor in rural migration, but the flows of refugees resulting from the multiple regional political conflicts were also a major contributor to demographic growth. After World War I, Beirut received Armenian refugees from Cilicia (southern Anatolia). After 1948, it was the turn of the Palestinians. Economic migrants from rural Syria were also numerous. As a consequence of those migrants' waves, Beirut's population grew from about 160,000 in 1920 to 400,000 in 1950. In 1970, the city and the first ring of suburbs amounted to 800,000 inhabitants but the whole agglomeration pushed the total to 1.2 million.

Indeed, the small Ottoman city had experienced major physical transformations. Since the 1930s, the city had spread beyond the municipal boundaries and absorbed the nearby villages of the plains and hills surrounding the town into suburban nuclei. The typology of buildings was altered through the spread of the concrete multi-storey building. The settlements' patterns also became more complex. A new business centre developed in Hamra, west of the ancient city centre. Informal settlements and refugee camps were built in the suburbs. Partially planned subdivisions were established on the hills outside the city.

The construction of a capital: Plans and projects

The emergence of Beirut as a capital for a new state and as a regional centre, along with its associated physical transformations, were the result of political and economic external choices as well as unexpected regional changes. The new status took place in the broader framework of the modernization of cities, either inspired by the Ottoman Tanzimat (reforms) or, later, by the diffusion of town planning ideas in the colonial world. The desire to modernize the city and to adapt it to its new status and role certainly came from outside but it also met the desire of part of the local elites. Staging the new Lebanese nation has been another intricate dimension of urban projects in Beirut since the end of the nineteenth century. The building of a new state has to be represented in stone in the new city. Over the past century, however, conflicts were always present around the implementation of such projects. The balance of power never allowed the successive national governments to fully achieve their ambitious features. The local institutions—notably the municipality, established in the 1860s, then after 1920 controlled by the French, later marginalized by the government in independent Lebanon—could not be considered particularly powerful actors. Other players, such as landowners including religious foundations (awqaf), and corporate interests, should also be mentioned here.

The "ottomanization" of the city, under the auspices of the municipality and the walis (governors), from 1878 until World War I (Hanssen 2005), included a range of projects. Among them, the redesign of the Burj Square with the new Serail (1883–4) and the erection of a clock tower (1898) reflecting Istanbul time, were representative of the spirit of the time (figure 1). In 1915, a long-delayed project of modernizing the suq area was launched. Some of the demolitions had taken place when the French arrived in town after the war. One of their first concerns was then to complete it, before they progressively extended, transformed and redesigned it. The area near the harbour was designed on an orthogonal grid and its main streets were named after Foch, Weygand and Allenby, the victorious generals of World War I. Designed in 1925–26 and implemented until the end of the 1930s, the Place de l'Etoile superimposed its branches on the old ottoman urban fabric. The plan faced harsh resistance by the Christian awqaf and two of the branches were never implemented.[6] The national institutions like the Municipality or the Parliament buildings were designed according to a new "Levantine" architecture. These first modernization projects of Beirut's centre bore both continuity and change in planning. Change is evident in the new scale that the French gave to the project or in new regular patterns like the new star design. But continuities appeared in the modernizing project itself, or in the modus operandi through the municipality. The Levantine architecture, intended to exalt the new state of Lebanon, was drawing from the same sources as the "Ottoman" and was designed by the same local muhandissin (engineers and architects) who were in charge previously, like Youssif Aftimos.

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[6] On the response of local notables, see Davie, 2003.

The introduction of modern planning outside old Beirut in the thirties (Ghorayeb 1996) was less successful, and from the years of the Independence until the civil war, the Lebanese government experienced many similar disappointments.

During the entre-deux-guerres, French colonial cities became an experimentation field for the planners, at the request of the colonial authorities, with Morocco and Syria, to various extents, emblematic of such methods. In Beirut, a first attempt occurred in 1930–32 by the brothers Danger, whose firm, La Société des plans régulateurs de villes, had operated elsewhere in the Near East. In the context of war, in 1941–43, Michel Ecochard, the young architect who had established the town planning administration in Syria in 1938, was commissioned for the task of setting up a master plan for the expanding city and modernizing parts of the city centre where governmental administrations had to be built. Both attempts failed in the face of real estate speculation, the interests of private French corporations (like the harbour or railways companies or the Banque de Syrie et du Liban) as well as the financial weakness of the public actors.

At Independence, the project of planning and modernizing Beirut was caught in the tension between two imperatives: the development of the national economy and the affirmation of the state. During the 1950s, the plans remained modest, in line with the official laissez-faire policy of the Merchant Republic. The main efforts consisted of building a new airport in Khaldeh, adapting the legal framework to real estate pressures, and widening some major arteries, according to the plans adopted after the drafts by Ecochard and the Swiss planner Ernst Egli (figure 2). After the civil riots that took place in Lebanon in 1958, Fouad Chehab was elected President. He stressed the reform and modernization of the state in order to unify the country. Balanced development across the Lebanese regions and control over the growth of the capital city were identified as key goals. Thus, town planning, now firmly in the hands of the central government, became a major field of concentration; consequently, a law was passed in order to introduce new planning tools.[7] The creation of a directorate for urban planning, in 1959, and of two independent public bodies for the implementation of projects, in 1961 and 1963, was a significant proof of the government's determination.

Once again, Ecochard was hired. In 1961, he had been commissioned to establish a master plan for the governmental cities (a large administrative complex) outside the city centre, reflecting the will to reform and rationalize the administration. In 1963, Ecochard submitted a master plan for Beirut and its suburbs. It integrated the idea of an urban de-concentration towards new cities linked to the agglomeration by a network of freeways. The city centre was to be widely renovated with high-rise buildings and separate circulation according to the Modern Movement principles (figure 3). This project combined the concern for real estate and economic development in a city intended to become a bridge between the West and the East, with the objective of the symbolic affirmation of the state, since several sites were dedicated to public buildings. A new legislation on mixed real estate companies was set up for the implementation of the project. But the Chehabist plans were only partially implemented. The zoning ordinance (though modified under the landowners' pressures), the road network and a few administrative buildings in the governmental city of Bir Hassan were the main achievements, whereas public housing and new town projects as well as the renovation of the central district were all abandoned, because of the change in the balance of power in the country after the end of Chehab's mandate in 1964 and the financial impacts of the regional crisis of 1967.

Because of its status of capital city of a new and unsteady state, planning and modernizing Beirut was always related to the building of the nation. While the attempts at modernizing the capital city, and particularly the city centre, also aimed at fostering an economy based on regional trade and real estate, the projects were always connected with episodes of political reconstruction and of state affirmation.

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[7] Verdeil 2003. See also part of Rowe and Sarkis 1998.

2. Wartime Beirut and its Plans

War as context for urban change

The war, from 1975 until 1990, was a complex framework for urban change. The intricate dimensions of the war (international, regional and local; ideological and religious) are a first specificity. It makes the Lebanese situation different from the case of the European cities during the Second World War in terms of the temporality and spatiality of fighting, the nature of destructions, the identities of protagonists (organized armies or militias) and their nationalities (Lebanese, Palestinian, Israeli, Syrian, Iranian, American, European, etc.) and the stakes of the war (religious, social, related to the local scene or to the regional one). Because of its length, the actors on the scene seriously changed over time. The state and its administrations were greatly weakened: they were now even less able to control urbanization in terms of, for instance, construction licenses. Moreover, the administrations usually were not able to retain and to replace their skilled workforce, which worsened the situation. Ruined, displaced, absent, or wary of undertaking repairs, landowners were also directly or indirectly hit by the war. Conversely, new actors emerged or became prominent. A range of individuals and groups benefited from the war economically or politically. The chiefs of various militias even became ministers or officials. Certain businessmen also profited from the wartime economy. The rise of Rafiq Hariri, based in entrepreneurial successes outside Lebanon (in Saudi Arabia), illustrates another aspect of the political and financial renewal. In the state administration, the Council for Development and Reconstruction (CDR), created in 1977 to replace the Ministry of Planning, gradually concentrated a lot of powers at the expense of the obsolescent “classical” administration.

The Lebanese war is in fact more a succession of “rounds” with different stakes involved, separated by episodes of “peace” that did not succeed, mainly in 1977 and in 1982–83. The cyclical nature of war is the reason why destructions and reconstructions were intertwined. Almost all the country has been affected by the combats, at least during one round, and at least indirectly. Beirut and its suburbs have been one of the major and continuous scenes of the war, which thus deserves the qualification of an urban war. The demarcation lines in Beirut remained over the war’s course remarkably stable. The city centre was also one of the main places of confrontation. The interactions between these different factors were accompanied by urban transformations that can be considered according to their various scales.

Multiple scales of Beirut's wartime transformations

The war hit the city hard. The damage was not only physical: the spatial organization of the population and the means of production were also transformed. People coped in various ways, using the countryside and the secondary towns as places of refuge. But the country as a whole, and Beirut specifically, underwent an economic marginalization. The most immediate cause was war damage itself. Evaluating the destructions is a challenging methodological issue.[8] Buildings that were seriously or totally damaged are estimated, in Greater Beirut, at over 10% of buildings. The numbers hide geographical differences (figure 4): inside the municipal boundaries of Beirut, this amounted to about 16% of destructions; but in the city centre, almost all the buildings were hit to some extent, and along the demarcation line, serious damage has been evaluated at 80%. Still, the level of destruction in Beirut remained below the widespread destructions that befell some European cities like West Berlin, where 25% of buildings were destroyed. In contrast to the heavy damage from air bombing (including associated firestorms) and tank fights, the most destructive weapons in Lebanon were relatively small rockets or missiles.

More typical of civil and urban wars, the population was affected by massive moves. (Verdeil et al., 2007, chapter 4; Shwayri 2002). Exodus from the provinces to the capital and cross-flows of refugees between different areas of the city radically altered the geographical distribution of populations. In 1987, about 27% of the inhabitants were considered refugees, not including all those who had "freely" moved for safety reasons. The most notable result of those shifts was the formation of two sectors with relatively homogenous religious composition on both sides of the demarcation line: the East was almost totally Christian while the West was largely Muslim. Another consequence has been the rapid and massive expansion of the suburbs, particularly along the northern coast and in the hills, as well as in the southern plain. Most buildings were built following regulations, but illegal or non-permitted land occupation or construction was common, notably in the southern suburbs, mostly occupied by Shi{a refugees or migrants (Clerc 2002; Fawaz 2004).

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[8] Some of these challenges are discussed in part of Nasr, 1997.

The withdrawal of multiple functions (housing, industry, commerce…) and at multiple levels (towards the countryside, towards the secondary towns of Lebanon, and towards villages near Beirut) partly compensated for the destructions and insecurity in the capital. The ratio of Greater Beirut's population in Lebanon fell from about 54% to 42% between 1970 and 1996. The emergence of agglomerations like Jounieh, Zahleh-Chtaura, or Nabatiyeh illustrates this mechanism that reduced the place of the capital in the country.

Furthermore, the regional place and role of Beirut and Lebanon were deeply affected by the war. Although partially compensated through the return incomes from the Lebanese diaspora, including those who had fled abroad recently, the loss of GDP, expressed in constant value, reached about 25%. Several key economic sectors were severely hit: some left Lebanon, like the offices of Western firms, banks and other financial establishments, while others had to close, like the hotels and the tourism sector. The Beirut harbour and airport, both major infrastructures of the Lebanese development system before the war, were out of order during most of it. Meanwhile, other cities were able to attract the fleeing firms and to adapt to the economic changes in the region. Amman, Dubai, Manama, Doha, Cairo, and other cities developed new functions: airports, finance and bank sectors, universities, and hospitals. Some of the roles that Beirut used to play before the war were simply no longer relevant, competitive, or unique, as the above-mentioned cities and many others became centres that fulfilled most of Beirut's former basic functions. The Lebanese capital had thus become marginal within its own region.

Wartime plans and projects

The brutal destructions and transformations of the city, particularly in places that had high symbolic and economic value like the city centre, made physical reconstruction an imperative. Conceived as a tool for the recovery, the projects aimed at not only recreating the conditions of economic development of the pre-war time, but at modernizing a historic core that was increasingly seen as decrepit, obsolescent, in need of transformation. This implied that the reconstruction projects would use the opportunities made available by the war to implement some plans and ideas that were previously facing obstruction, such as the modernization projects in the city centre or the metropolitan restructuring plans. The war, thus, would give more relevance to older agendas whose memory was not lost.

If references to the pre-war situation and projects were evident in many plans, the reconstruction was and is, in certain respects, a process of consolidation of the war changes, such as the various confessions' polarization on both sides of the demarcation line or the expansion of the city towards the mountains. This is particularly relevant for the political renewal: the reconstruction was crucial for establishing the legitimacy of new political actors in charge during the two episodes of reconstruction and reestablishment of the state, in 1977 and in 1982–83 (Verdeil 2001).

At the end of the two-year war (1975–77), President Elias Sarkis designated the economist Salim al-Hoss as Prime minister. Amin al-Bizri, an architect and a former president of the Order of Engineers, was put in charge of the Ministry of Public Works. With a professional committee, he personally supervised the reconstruction plans for the centre of Beirut that a French public consulting firm, the Atelier parisien d'urbanisme (APUR), was setting up. The proposal dealt with a vast perimeter of 120 hectares including the main damaged sites. The centre was a symbolic place since it was the major public space of the city where the different communities of the country interacted. The first proposal was to restore the image of a Mediterranean city. It included the restoration of the suqs, the opening of the city to the harbour, and the design of a promenade along the sea. It suggested a limitation of the building heights to 30 m and vituperated against the "international architecture." It was indeed the first time that the issue of heritage was applied in Beirut. But the second side of the project was the modernization of the city: it foresaw new public buildings symbolizing the unity of the state. It also included new arteries through the ancient urban fabric, as well as the realization of a modern business centre on an old dock site. In order to foster business development, it called for doubling the total floor area of the most damaged areas by the erection of new buildings. The 1977 plan's main justification was the pressing need to go back to the normalcy of the pre-war period and to revive the image of a united state and of a Mediterranean city devoted to trade. In line with pre-war projects, these objectives also sought to foster businesses, to develop the real estate and to open new arteries in this area.

The progressive failure of the peace arrangements did not allow the implementation of the projects, and the new fights worsened the damage in the city centre. Reconstruction reflections only resumed in 1982, in the aftermath of the Israeli invasion, when the Phalangists Bachir and Amin Gemayel successively acceded to the Presidency. The latter did not have the legitimacy of his brother nor his political support. The reconstruction process offered him an opportunity to build it. His strategy was not limited, as had been the case in 1977, to the city centre. He launched a broad programme, including several new laws, emergency actions in the city centre and in the southern suburbs, a massive project of urban development with sea reclamations on the northern shore of the agglomeration and a master plan for the metropolitan area of Beirut, whose consultant was the French Institut d'aménagement et d'urbanisme de la région Ile-de-France (IAURIF). The city centre was seen, once again, as a symbol of the continuity of the Nation. But the extension of war damages, combined with the fact that the St George bay had become, from 1978 on, a dumping site requiring major reclamation, made it necessary to alter the previously adopted planning scheme. OGER, a contracting firm belonging to the businessman Rafiq Hariri, offered its help and was in charge of clearing the site. Under obscure circumstances, it demolished wide parts of the ancient suqs near the Burj Square, clearing far more than just war-damaged structures. Between 1983 and 1986, OGER on its own introduced several amendments to the official plans and proposed various options (figure 5). As a result, the reconstruction plan was radicalized. It called for a modern architecture, densification of the project and development of commercial, touristic and business functions, at the expense of heritage conservation and of the old landowners and tenants. In fact, it accepted and affirmed the social changes resulting from the fighting.

In the southern suburbs, the state was facing the question of illegal settlements in an area that was politically controlled by the Shi'a militias of Amal and Hezbollah. The attempt at solving the real estate problem was initially combined with a project of low-income housing and infrastructure upgrading in various parts of the locality (Verdeil 2002a). But the brutal removal of several squats, in the framework of resuming tensions between the President and his Shi'a opponents, led in February 1984 to an uprising that plunged Beirut once again into war. As for the northern projects, they were intended to restructure a partly derelict industrial region into a touristic and residential neighbourhood. This took place in the Metn, the place of origin of President Gemayel who personally supervised the project (Verdeil 2002b). The transformation of this area would not have been conceivable without the social change in it, as it turned from an industrial district to a commercial and residential one, in the framework of installation of Christians fleeing West Beirut.

Both projects, for the southern and northern suburbs, illustrate that planning was not a neutral reaffirmation of the state; rather, it expressed a balance of powers as well as it consolidated the social transformation affecting the city. It should be noted that Rafiq Hariri was involved in both projects and increasingly in the city in general, as a contractor and an investor, which is not without importance for the next stages of the reconstruction processes. The last project was the 1986 IAURIF metropolitan plan. It stressed the unity of the city through the rebuilding of the city centre and a network of public transportation. In order to avoid an uncontrolled urban sprawl, it proposed secondary centres in Nahr el Mott, Hazmieh, Laylaki, and Khaldeh. Although the master plan was established with much less political interference than the other projects, the siting of these centres was later questioned, because their location in the Christian, Shi{ite, and Druze territories was interpreted as an acceptance of the division of the city into belligerent sectors.

These plans have been very incompletely implemented, although they would influence the post-war future of the areas concerned. Uncovering such an archaeology of planning ideas and concepts sheds light on long-term processes and continuities in projects. Among the key actors, the professional planners can be mentioned as bearers of the memory of ideas—though the inflections and alterations they bring to plans cannot be ignored either. The actions of political and economic actors also are essential, particularly when their careers rest so heavily on planning interventions, as the case of Hariri illustrates perfectly.

3. Post-war Beirut and its Plans and Projects

New scene, new stakes

Rafiq Hariri, twice prime minister (1992–1998 and 2000–2004)—and prime investor—of Lebanon, has been the dominant character in the next phase of this story: the post-war years, since 1991. He exemplifies the enduring interpenetration of public and private interests, the linkages between urban planning policies and affirmation of political clout, and the continuity in actors in the city-building (or city-destroying) process during and after the war (having had a wartime role in beginning to reshape the city’s townscape, then expanding this impact after the fighting stopped). Some influential actors of the war era, such as ex-president Amine Gemayel, largely disappeared from the scene, while others appeared. As a consequence of the transformation of the political and administrative framework, important changes occurred in the professional milieus in charge of the reconstruction. Returning emigrants, young western-trained architects and engineers, and consulting firms originating in Lebanon which had grown into regional firms while based abroad (the largest being Dar al Handasah-Shair and Partners), have designed or undertaken most of the reconstruction projects.

One significant shift, compared to the war era, was the re-emergence of the state as a central actor (or actors), even if it was as permeated as ever by private interests. Despite this important caveat, the negotiations that had taken place leading up to the Taxef Accord that paved the way for the stoppage in combats at the end of 1990, meant that it was through the careful and continuous balancing act of political representation across confessions and other groups, that the governance of the reconstruction was to take place. This gave the state, through its key structures (particularly the CDR), the prime role in the recovery of the country, as an actor itself, as a channel for foreign influences, ultimately as an arena for negotiations among various actors.

Because one key stake in such negotiations was the access to state funding (and international funds flowing through the state), the post-war era was generally characterized by profligate spending on “hard” projects. As such, the physical reconstruction was at the heart of the overall reconstruction process, and was to have major consequences on the course this would take over time. Moreover, this spending was twinned, particularly in the early 1990s, with the reinforcement of the vibrant consumerist lifestyle for which Lebanon was long known. This coupling of high levels of public and private spending was to have great repercussions on the entire Lebanese economy over time.

As can be read from the above observations, the post-war era (1991–2004) did not form a single, stable period, but displayed rather an evolution that reflected and resulted from the general course adopted for the country’s recovery. Hence, this recovery—for Lebanon and in particular for Beirut—consisted of a series of false starts, of successes and failures, of miscalculations and adjustments. Overall, one can observe a general trend from an early boom and optimism, followed by a gradual loss of steam through stasis, and ultimately a crippling of the country's progress. This trend in the country's recovery was reflected in (and to a certain extent caused by) the rebuilding of Beirut itself. It will be discussed in three phases that broadly characterize these twinned histories (Huybrechts and Verdeil 2000).

Three phases of Beirut's post-war transformations

Phase 1: Boom in private projects, preparation of public projects (1991–1994)

The first few years after the fighting stopped were distinguished by an almost immediate spike in the level of construction activity in Lebanon. Within metropolitan Beirut, this activity at first maintained the expansion of the fringe areas, even when Beirut became "safe" again; but within a short time, Beirut began to recover, as demolitions, repairs, rebuilding, all took off. This was clearly the result largely of individual initiatives in those early years, on a case-by-case basis, in a very haphazard way. This rediscovery of Beirut as a locus for real estate investments did not throttle the investments in its periphery (many already under way since the 1980s); it was complementary to it at first. The highest levels of construction activity, around 1994, were thus reached before the full apparatus of the state was in gear.

The state attention in these years was in fact spread across a range of efforts; the state itself did not involve itself much in major infrastructural activity, though it worked on the planning for such activity. Instead, its focus in this phase was in emergency mode: beginning to assist refugees financially in relocating themselves out of squatted apartments, repairing basic utilities, restarting state services and administrations.

Some of this activity was not without controversy. But apart from the great public debate—with international echoes—over the future of Beirut's central district which will be discussed below, many other parts of the country's recovery (whether the physical reconstruction outside this limited district, or the many aspects of the country's reconstruction beyond those of the physical rebuilding) received generally little debate, if they were not thoroughly ignored. One example was the priority given to new freeways at the expense of the revival of public transportation. So in the shadow of the towering question of SOLIDERE, the laying of the ground for countless other activities that occurred in parallel went on fairly quietly, while many other dimensions of the post-war recovery escaped any planning by the state.

Phase 2: Economic slowdown and implementation of public projects (1995–1998)

This phase may have represented the peak of the reconstruction era while, at the same time, it displayed the first signs of the "normal" activities of post-reconstruction times, even within Beirut. After a few years of preparation many major projects went into full gear. Notably, the SOLIDERE company had been established by the government after overcoming the range of contestations over its existence and modalities, and it began to implement some of the major components of the transformation of Beirut's centre: completion of the ring road, laying the roadways and its underlying infrastructure, renovation or recreation of much of the built fabric in the "historic" sectors within it, stabilization of the vast wartime maritime landfill... In parallel, the most significant public works projects were under construction or completed in these few years, particularly a number of new highways (the new airport road, the highway to the south, the doubling of part of the highway to the north, the bypass of the Damascus road...).

On the private side, dynamic construction activity persisted, though at a reduced pace. The continuing re-emergence of Beirut as a magnet for large and small construction projects, mostly on the upper end of the market, was maintained. By this time, most of the activity consisted of ordinary projects, mostly redevelopment of older and smaller building sites throughout the city; construction to replace war-destroyed structures by now amounted to only a fraction of the construction activity. A distinctive type of residential high-rises even became recognizable for certain common features (oval balconies, extensive use of marble and granite...). To accommodate these towers, the rash of demolitions, including of a number of buildings that had been placed on official protected lists, ironically went on simultaneously with the spread of renovations of equally historic buildings, particularly to accommodate trendy entertainment spots in some of the neighbourhoods closest to Beirut's centre. Hence, the contradictory parallel trends that appeared in the immediate aftermath of the war were crystallized and reinforced. The "banalization" of the post-war activities could also be seen in the linkages across the metropolitan area. While the profound Christian/Moslem residential split of the metropolis was not reduced at all, the movements across the area, including across the line of separation, continued to be reinforced, serving at a limited level at bridging the contacts among individuals, even though these linkages generally did not get any deeper: in other words, greater propinquity rather than greater connectivity.

The most worrisome trend for the everyday life of the Lebanese and Beirutis, however, was the progressive economic slowdown that was to grip the country and city year after year. While some of it may be considered simply as the wearing off of the boom that is often inherent to many post-war eras, part of it has to be seen in the context of the sharp shift from regional optimism to pessimism that spread across the entire region subsequently to the assassination of Yitzhak Rabin across the border to the south. Indeed, the regional optimism had coincided with the local optimism that surrounded the very first years of the halt in combats in Lebanon—anticipating in particular an influx of individuals (emigrants to the Arab and Western countries) and funds (from these emigrants, from other Arabs, and from a mass of other foreign investors). This optimism evaporated fairly fast in the mid-1990s. However, while these explanations (even if illusory) were all exogenous, at least as important were the endogenous factors behind the slowdown in the economic machinery of the country that gripped it inexorably within barely four years of the beginning of the post-war era. Here, it has to be emphasized that the points in the two previous paragraphs, which seem contradictory to the ones in this paragraph, are in fact closely linked to them. Indeed, the endogenous explanations for the slowdown partly lie in the persistent spending by the state on massive infrastructure projects (including the rebuilding of the centre as adopted) that it may no longer have afforded—if it ever did—in the changed regional climate, combined with the relentless investment in a construction sector on the private side that was not directly connected to specific levels of need and affordability in the country at the time. Hence, the physical reconstruction (or construction) in Lebanon could not be separated from the negative trends from 1995 onwards in the country's broader reconstruction.

Phase 3: Economic recession and end of the "reconstruction" (1999–2004)

This phase is very much an extension of the previous one, with an affirmation of most of the trends that had emerged during those transitional years, a corroboration of the end of the post-war boom and undoubtedly of the "reconstruction" period as such. The economic slowdown turned here into a full-fledged recession, crippled by a spiralling level of public debt (165% of the GDP in 2003), combined with a reinforcement of the blurring of the lines between public interest and private gains and a general lack of faith among potential investors. The forced exit of Hariri from power after President Lahoud's election lasted only a couple of years (1998–2000) and did not result in a reversal of the downhill slide of the country—nor did his return to power either. A minor recovery took place around 2003 (largely seen in an expanding tourism sector, with more than 1 million foreign visitors that year); this related to much more recent factors (especially the complex regional aftermath of the September 11, 2001 events) than to ones associated with the short-lived post-war economic recovery.

The consequences of this confirmation of a listless economic future for the country (Debié et al. 2003)—as reflected in the dramatic expansions of poverty and migration (Kasparian 2003)[9]—are multifarious. Among others, many of the larger public urban interventions were either slowed down or deactivated. Construction activity turned very erratic, with the sight of cranes becoming less common than it had been in past years. Still, deflation in many real estate prices did not result in a halt in construction activity, reflecting the sway of the myth of an unshakeable real estate sector. Nor does the decades-old focus on Arab visitors and investors appear under any threat—to the contrary—it is thriving, as reflected in the continuing erection of massive hotel/resort complexes.

Finally, some trends, first noted in the previous phase, do seem to be strongly confirmed in this period. One is the relative reinforcement of local powers, as seen particularly in the development of municipalities as genuine actors with some actual capacities following the 1998 elections (though their actions remain limited because of state control and funding scarcity). Another significant trend is towards the rehabilitation of the existing urban fabric. The massive success of the new-old Etoile, Maarad and Foch-Allenby zones in the heart of the area controlled by SOLIDERE as the prime destination for nightlife and more recently retail in Beirut would have to be placed among a series of other steps of recognition and usage of existing structures. These steps include some expansion in the reuse of historic buildings beyond the immediate peri-central zone; the façade painting efforts of the Help Lebanon charitable organization, which seems to be spreading to individual actions; the similar effort by the public Fund for the Displaced, shifting its priority from provision of fixed sums to the displaced to improvement of the image of some of the neighbourhoods with a remaining refugee presence like Ras al Naba'; the new activities in old neighbourhoods such as Gemmayzeh's "Arts Stairs" festival; and the large World Bank funding for a program that is twinning "cultural heritage" and "urban development" in Tripoli, Baalbak, Sidon, Byblos, and Tyre.

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[9] In 2001, 42% of the households were earning less than 800,000 LP (about 500$) on a regular monthly basis. About 400,000 Lebanese are estimated to have emigrated after the war, among whom about 250,000 during the years 1996–2001.

Over the course of the past decade and a half, a series of seeming contradictions have emerged: simultaneous demolitions and rehabilitations, adjacent massive investments and untouched war ruins, parallel inexorable economic slide and unrelenting public and private construction spending... The brief explanations above sought to shed some light on how so many contradictions could be understood in the specific context of the Lebanese reconstruction and post-reconstruction years. These contradictions could be clearly seen in the plans and projects that were proposed and partially realized in this period.

Post-war plans and projects

The most basic aspects to note about the post-war reconstruction in Beirut and, more generally, in Lebanon are the selectivity in its planning and the fragmentation in its implementation (figure 6). In other words, there was no overall plan, no cohesive vision for dealing comprehensively with matters related to war recovery. There was no planning ministry, and although the CDR did manage to fulfil many of the roles of such a ministry (some coordination of projects, funnelling of funds from overseas for some rebuilding activities), these roles were never integrated into a unitary and visionary perspective, operating instead on the level of the revitalization of particular sectors or the study of particular parts of the country. The fragmentation of the reconstruction was thus both spatial and sectoral. At the same time, there was a double bias towards two types of physical schemes that dominated the plans that were put in place or the projects that were launched: major infrastructure and large-scale redevelopment of defined areas.

While some major infrastructure projects included complete new ventures that were constructed (such as the highway from Beirut to the South), many were pieces of projects, such as the erection of segments of new highways; for example, the bypass of the Damascus Road in the near suburbs of Beirut was built while awaiting a longer-term extension into the mountains. The partly damaged airport was totally rebuilt (at a scale that foresees a multiplication of the level of activity it receives nowadays); while the harbour received major refurbishment. The main park in the city, the Pine Forest (through which the demarcation passed during the war years), was unusual in that its reconstruction was subjected to a design competition, followed by implementation, although it is still (a decade later) waiting for its opening to the public. However, a crucial piece of planning such as the Transportation Plan that was prepared in 1994 by the French IAURIF agency remained largely a paper document. While some of the highways on it headed towards implementation, the rest of the (public) transportation improvements have not moved even partially towards reality.

As for the large redevelopment projects, there were three: the SOLIDERE project for the central district of Beirut; the Elyssar project for the phased total refection of the southern suburbs of Beirut, between the city limits and the airport; and the LINORD project for redeveloping Beirut's eastern coast and the Metn-Nord landfill just north of it. The better-known and substantially realized first project is discussed later. The other two projects have had long, complex histories, with little to show on the ground a dozen years later. The Elyssar project, the closest one to a public redevelopment project of the three, was bogged down by political strife, lack of funding, complications in acquisition of lands and compensation of residents (legal and illegal), and many other challenges—this despite a gradual shift among local powerful groups (notably Hizbollah) from opposition to the project to integration into the shaping of it. Apart from a handful of new road segments in the area, nothing has been implemented, while life goes on for the tens of thousands of poor and middle-class residents who would have been impacted by the intended displacements and the subsequent collective housing that would have replaced this zone (Harb el-Kak 2001; Clerc 2002). Meanwhile, the redevelopment of the eastern industrial zones has remained without any echo (apart from transformation on a case-by-case basis), whereas the northern landfills were stabilized and a grid of streets was laid out on them, but almost no construction has begun to fill in the large holes that are meant to become future city blocks (Verdeil 2002b).

The three projects clearly differed from each other in many basic ways. Yet some key dimensions tied this trio of mega-projects together.

The most obvious one is their scale, which set them apart from anything else that happened in the country in the 1990s—had the two suburban projects actually been implemented as intended. A second dimension is the principal driving characteristic of the projects as real estate projects, rather than as social transformation instruments or economic engines. At the same time, by their sheer size and by the values they represented, all the projects did acquire a symbolic significance. Finally, these are all not just long-term projects, but with histories that extended far into the past, as they built on many proposals and pieces of realizations that sought to transform these very areas through physical interventions dating back years or even decades, as was shown in the earlier sections of this paper.

The emphasis in this section on substantial plans and projects should not distract from the largely unplanned and non-project oriented reconstruction that characterized the post-war period in the country and its capital. The piecemeal nature of the reconstruction could be seen at two levels. As far as the war-damaged areas, while the central area given to SOLIDERE (and, in a way, the Pine Forest) are clearly subjected to a plan that was more or less followed, the far more substantial kilometres-long destruction along the line of demarcation was left for recovery according to the will and capacity of individual owners and renters. While refugees, displacees, and others who suffered war losses did receive fairly fixed amounts from the government to help them recoup their losses, almost nothing more coordinated was undertaken in all these areas, all of which can be labelled reconstruction zones in the strictest sense of the term. Perhaps the lack of planning for the reconstruction along most of the demarcation line[10] is more significant as a defining characteristic of the rebuilding of Beirut than the extremely controlled transformation that was applied to the kilometre or so of the demarcation line that fell within the SOLIDERE district. At the same time, the subdivision, development and redevelopment activity in the vast areas of Greater Beirut that cannot be considered as war-damaged areas was left entirely up to the individual property owners.

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[10] A study by the IAURIF was prepared in the early 1990s, followed by some proposals that were meant to lead to a plan, but this was not pursued by the Lebanese government.

SOLIDERE and its evolutions

The creation of the SOLIDERE company as sole redeveloper of the partly war-destroyed central district of Beirut has been greatly publicized from the time of the controversies before its inception, through the regular features that appeared in the world (and local) press around the time of its launch and the start of its activities, until the recent years when its partial realization has become a sort of regional model for redevelopment[11] and highlight of the touristic experience in Beirut. Given the mass of writings that exist on the subject, both scholarly (including, by these authors) and in the mass media,[12] and since this article made references to SOLIDERE throughout, the concluding section will be kept brief, reviewing retrospectively what characterized this approach to rebuilding Beirut's centre, emphasizing the constants in the project and the aspects that evolved.

SOLIDERE's distinction is as a private, publicly traded corporation that was chartered by the Lebanese government (in the early 1990s) and was given full control over a clearly defined zone that covers Beirut's historic centre and the immediately adjacent areas, including the massive trash dump on its seafront (about 1.5 square kilometres all together). The rights of most former property-owners and renters were transformed into shares, making up two thirds of the company's stock. The other third was opened to investors, local and Arab—the largest being Rafiq Hariri; the project has been intimately linked to the prime minister in reality and in the public imagination (figure 7). An old (unapplied) law allowing the creation of redevelopment corporations on the basis of land pooling and re-parcelling had been used as basis for this approach, but it was modified to allow its combination with private investments and its treatment as a tradable company. The will to redevelop parts of the city centre was a decades-old idea, as we have shown above, but the SOLIDERE route magnified this attempt in degree of control (from the clearance of entire sectors in the centre, down to the choice of street pavement type), in scale (the redevelopment-area boundaries chosen went well beyond the area of heavy destruction) and in time (the state recently extended to 75 years the concession granted to SOLIDERE). Another innovative aspect of the project was the degree of professionalization of the company itself; indeed, its reliance on a state-of-the-art, technocratic approach in the planning, design, marketing, management and other processes was heavily emphasized in its self-representation, to emphasize to both the outside world and the country itself that it is meant as a model of the "world-class" globally integrated company that is possible in a Lebanon that is once again a vanguard of modernity in the Middle East.

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[11] As seen in references to SOLIDERE made in major redevelopment projects in Amman (Abdali) and Damascus (Souq Saruja).

[12] See, for instance (in different languages): Beyhum 1991; *Cahiers de l'Orient*, 1993–4; Khalaf and Khoury 1993; *'Iimar bairut…*, 1992; Schmid 2002; Verdeil 2002a. A major documentary effort on Beirut's reconstruction had been undertaken by the French research centre CERMOC (now IFPO) within its former *Observatoire de recherche sur Beyrouth et la reconstruction*. 14 issues of the *Lettre d'information de l'ORBR* were published from 1994 to 2001.

While the dimensions above are the basic constants in SOLIDERE's history, the project has also evolved in various ways in the dozen years, since the end of the fighting and the accession of Hariri to power in 1992 allowed it to move from paper ideas to concrete buildings, streets, and spaces. The great degree of contestation that the concept of SOLIDERE, as proposed, faced soon after it was revealed, had a range of impacts, including on the plans themselves. Two types of adjustments can be highlighted. In response to criticism of the mechanisms of expropriation and their consequences, a list was established of buildings that could be recuperated by their owners (hence excluded from the property-for-stock swap that was imposed on all others), to be renovated under strict controls of the company and within a strict timetable. All property held by religious communities (including under the waqf form of tenure) was also excluded. The broadest shift may have been the acceptance that certain sectors within the district were set aside as "historic" zones to be preserved but upgraded (figure 8).[13] The repeated attacks by the project's initial critics, while they were not able to block the general approach the project adopted, can be largely credited for this subtle but important shift; some of these individuals have remained fully dissociated from SOLIDERE, by their choice, or the company's, but others have ended up cooperating with it on a variety of bases, from planning or consulting on entire sectors within it to designing specific buildings inside its controls.

The integration of preservation—and to a lesser extent archaeology—represented a partial shift towards the existing built fabric. However, this shift was very erratic, so some areas were totally (southern end of Burj Square), mostly (Souq Sursock/Souq Ayyas) or partially (Wadi Abu Jmil) razed, while others that had been equally impacted by the war were largely saved and renovated at great expense (Foch-Allenby, Etoile/Maarad, Saifi). This shift was accompanied by a shift in representation, where the modernity of the centre was twinned with its historicity, as the company's former slogan of "ancient city for the future" crystallizes (Nasr 1996).

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[13] The resulting reduction in density was however amply compensated by increases in density elsewhere and an expansion of the landfill area.

One sensed, though, that this shift was an effort at pacifying the critics. The renovation of the preserved areas was, hence, mostly a provision of an amenity for the rest of the centre (and the city), which accounted for the bulk of the area and projected volume of construction. However, the slowdown in the economy and other reasons led to the preservation activities (and of course the completion of the main infrastructural works that had to be laid out first) largely preceding the new construction, which has seen a very slow start. The phenomenal success of the renovated areas—at least at ground level, as the upper levels remain largely a ghost town—has in fact transformed the meaning of the SOLIDERE precinct; ironically, the areas meant for larger buildings, which have until recently mostly failed to materialize, are actually providing the vast parking lots that serve the islands of fixed-up areas that have become the chief public space for all of Beirut (figure 9).

The slow start in the core activity of the company (the erection of thousands of square feet of new construction), as reflected in substantial loss of stock value and even reduction in personnel size over its first years of existence, is worth further consideration. Some of the explanations are internal to the approach followed. The choice of creating a world-class project has meant standards that have necessarily set the resulting cost per square meter far above those found in Beirut, thus excluding most from the possibility of renting, working, living or otherwise occupying the SOLIDERE zone (apart from as a space of leisure). Some of the costs have been dramatic, such as the stabilization of the trash dump and construction of the sea wall. The attitude of the company as an institution outside state controls (and above them) confronted realities of existing laws and regulations that fell under the purview of other governmental entities, which slowed down progress on a number of projects in the centre; the relation to the Beirut municipality has been particularly problematic.

The impacts of these internal decisions blended with those of external factors, some more directly than others. Political positioning between the country's powerful groups and individuals often used SOLIDERE as a battleground. The main suqs project, for instance, was originally seen as the initial catalyst and anchor for commercial activities in the district; instead, it is stalled as a consequence of conflicts between Hariri and some of his opponents controlling various state or municipal institutions. The project has, thus, missed the boat on the retail scene, which is scattering across other sites in the centre as well as other neighbourhoods in Beirut (Achrafieh, Verdun, Jnah...). The creeping economic slowdown in the country has probably had the most profound effects, for SOLIDERE as elsewhere. It can be partly blamed for the drop in the value of the company's stock, for a sizable deficit in its budget in 2000, for a very slow take-off of its real estate sales, for cutbacks in its activities. While a new wave of investments emerged after September 11, 2001, these have not made up for the slowness of its start relative to what it had anticipated publicly.

As with most things in Lebanon, part of the political clash, as it was translated into the battle over Beirut's centre, has had some sectarian dimensions. It is appropriate to conclude by considering how rebuilding Beirut's centre has been about rebuilding a city in the Islamic world. One has to observe here that the confessional dimension has been largely absent from this section, and to some extent from most of the discussion of the many reconstructions of Beirut as proposed and planned in the past. In that way, this dimension has not dominated the rebuilding of Beirut's centre. This does not mean an absence of religion as a factor, of course.[14] For one, the confessional communities have long been significant landowners and even developers in older parts of Beirut; but their role as a significant player was limited, and they were co-opted as players, as SOLIDERE allowed their lands to be excluded from the land-pooling it undertook, and it distributed the representation on its board according to the various denominations, as is typically done in the highly confessionalized state of Lebanon.

The controversies that characterized the company's life, especially in its early years, rarely took explicitly sectarian dimensions. It is, thus, ironic that after all this time, it is only during the 2000 electoral battle for parliament that the first significant attempt at "Islamicizing" the city's centre has gotten under way: the construction of the new great mosque in the very heart of the city, at the edge of the main square (el-Burj), adjacent to the main Maronite church of Saint George over which it now towers (figure 10). The story of this mosque is complicated; suffice it to say that the introduction of the idea of a new great mosque, as had been erected in Casablanca, Amman and many other Arab (and other) cities, was originally in contestation of the authorities, but was then appropriated by these powers (and specifically Hariri). It may be then that, at a time when the reconstruction—and its correlation to a war that at least in part was about sectarian strife—is receding from the daily activities, if not the memories in Lebanon, in the heart of the country's capital, religious symbolism is making its strong mark for the first time in the post-war period in one of the only parts of the city that had managed to avoid clear association with sectarian communitarianism.

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[14] See for example Beyhum 1997.

Postscript

Post-scriptum: This chapter was completed in April 2004. Dramatic changes have occurred in Lebanon during the years 2005–2007 and they have impacted directly the rebuilding of the center of the city and altered its sense of place. Rafiq Hariri, the former prime minister, was assassinated on the 14th of February 2005 and buried right next to the new mosque, along Martyrs Square; this, of course had not been planned, just like the mosque itself had not been in the plans for the city center. The site soon became a place for huge rallies by pro- and anti-Syrian demonstrators coming from all over the country. In December 2006, in the context of political struggle following the war of July–August 2006 between Israel and the Hezbollah, backers of "opposition" parties established a tent village that occupied a large part of the city center, freezing almost all the activities in the area. The meaning of the place thus experienced its latest radical changes among its long history of shifts in symbolic meaning over the decades.

The summer 2006 war also deeply impacted the southern suburbs of Beirut, where 30,000 housing units were destroyed. Amidst veiled critiques by various parties, a new reconstruction project, mostly controlled by Hezbollah, has begun to get under way. Sectarian and political lines once again split the geography of the city and urban violence is resurfacing, leading to fears of a new civil war. The future of the city

center in general is once again in uncertain territory, as is that of the country and its capital. The destructions and reconstructions of Beirut thus continue.
(written in January 2008)

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PLATES

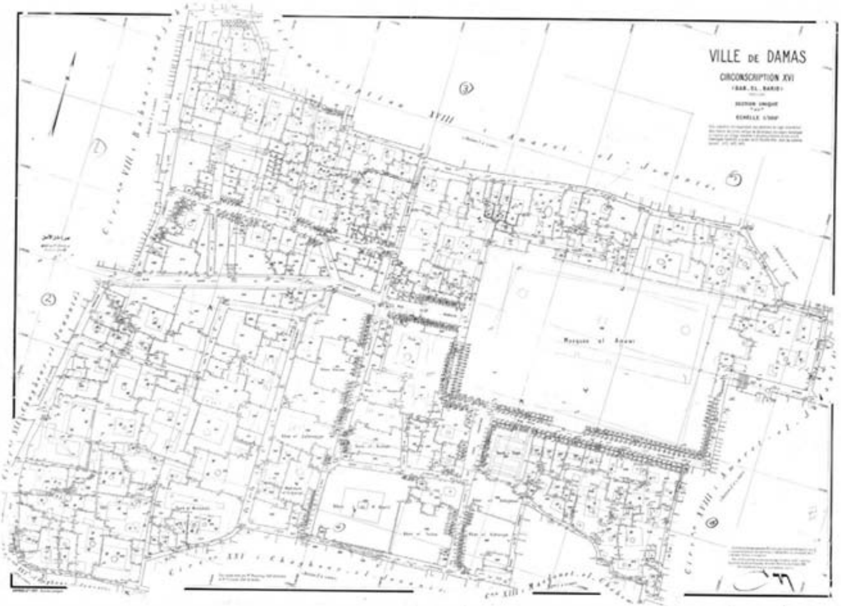

VILLE DE DAMAS
CIRCONSCRIPTION XVI
SECTION UNIQUE
ECHELLE 1/500e
Mosquée el Amawi

Fig. 1. French cadastral plan of Damascus, scale of 1:500, 1934.

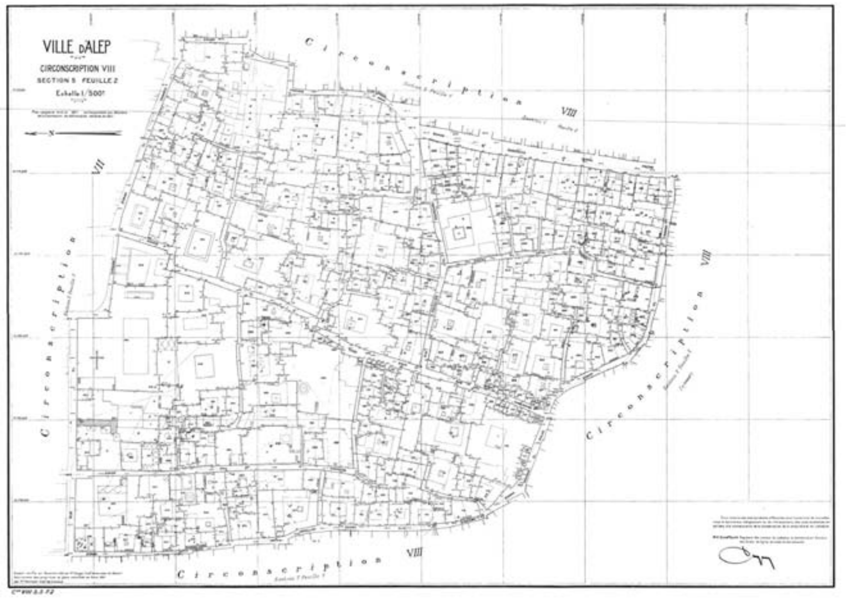

VILLE D'ALEP
CIRCONSCRIPTION VIII
SECTION 5 FEUILLE 2
Echelle 1/500e
Circonscription VIII

Fig. 2. French cadastral plan of Aleppo, scale of 1:500, 1931.

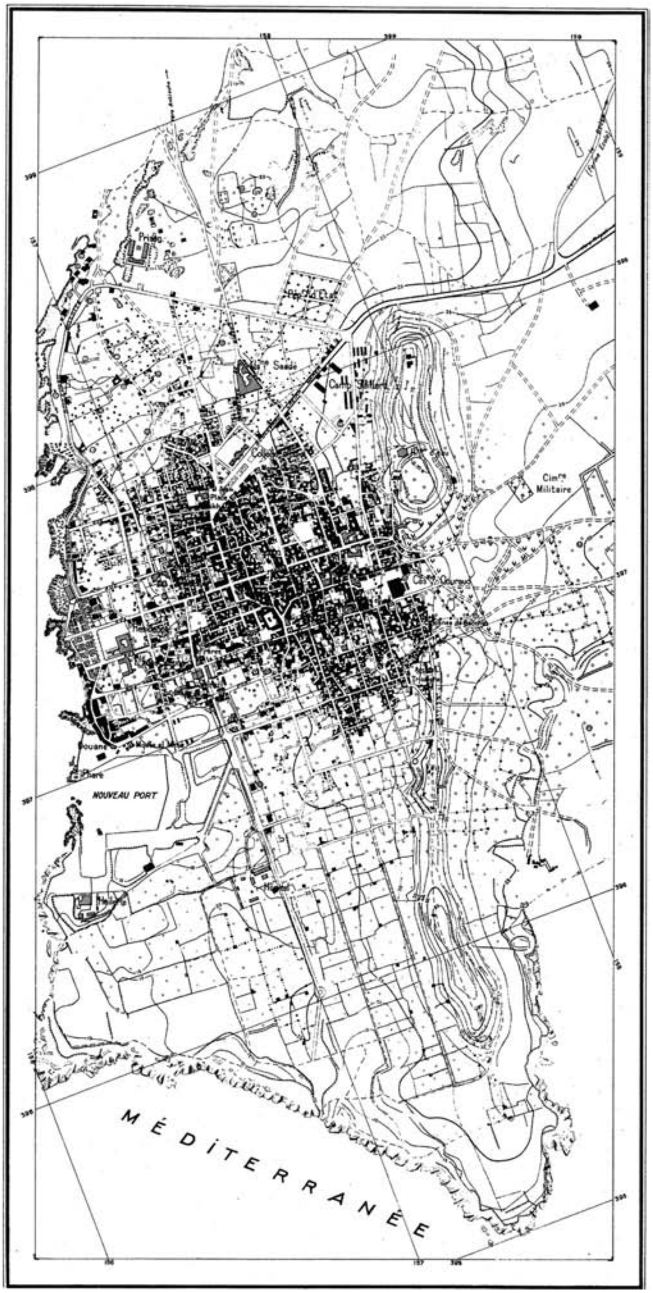

Prison
Cim^re Militaire
NOUVEAU PORT
Phare
MÉDITERRANÉE

Fig. 3. French map of Latakia "Lattaquié," scale of 1:10000, 1941.

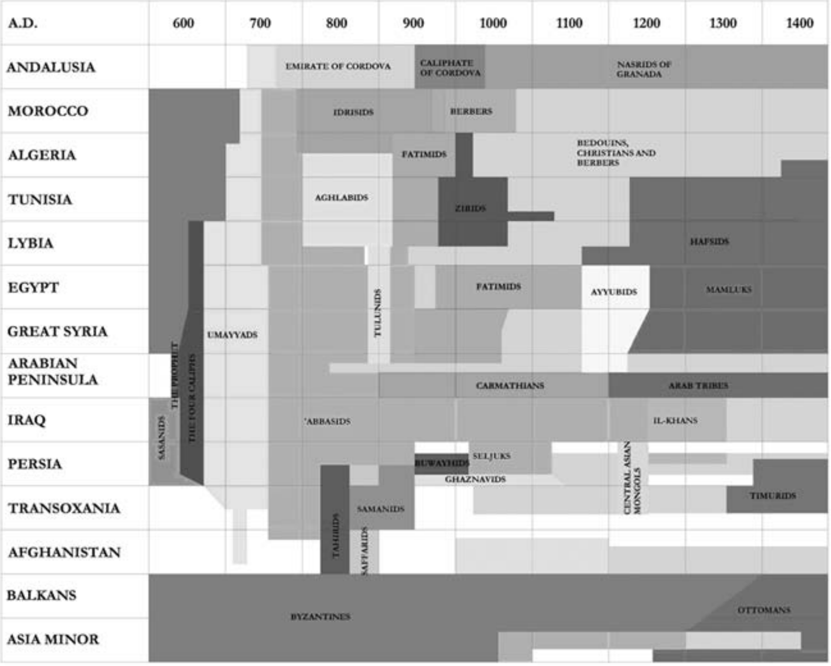


Fig. 4. Chronological Table.

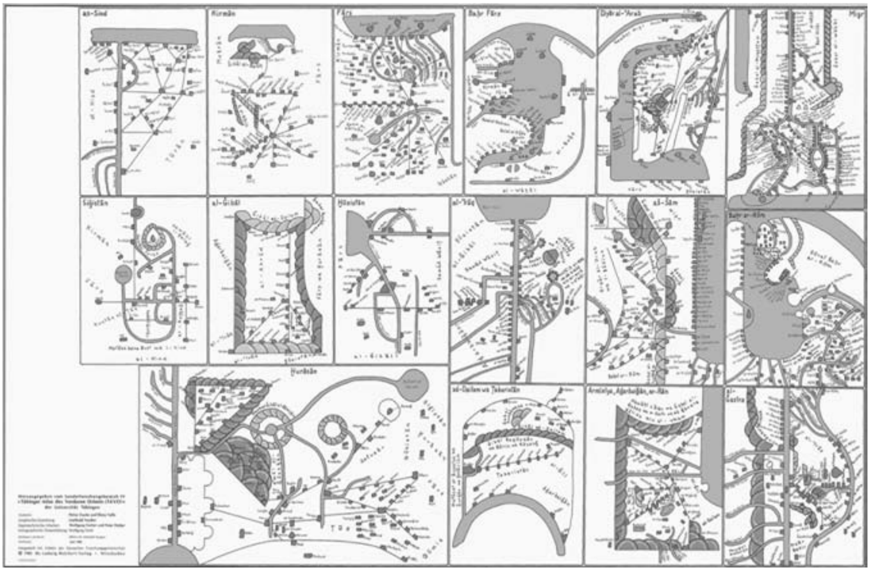


Fig. 5. The Maps of Ibn Hauqal ca. 988 A.D. From TAVO, The Tübinger Atlas des Vorderen Orients, Wiesbaden 1977–1993.

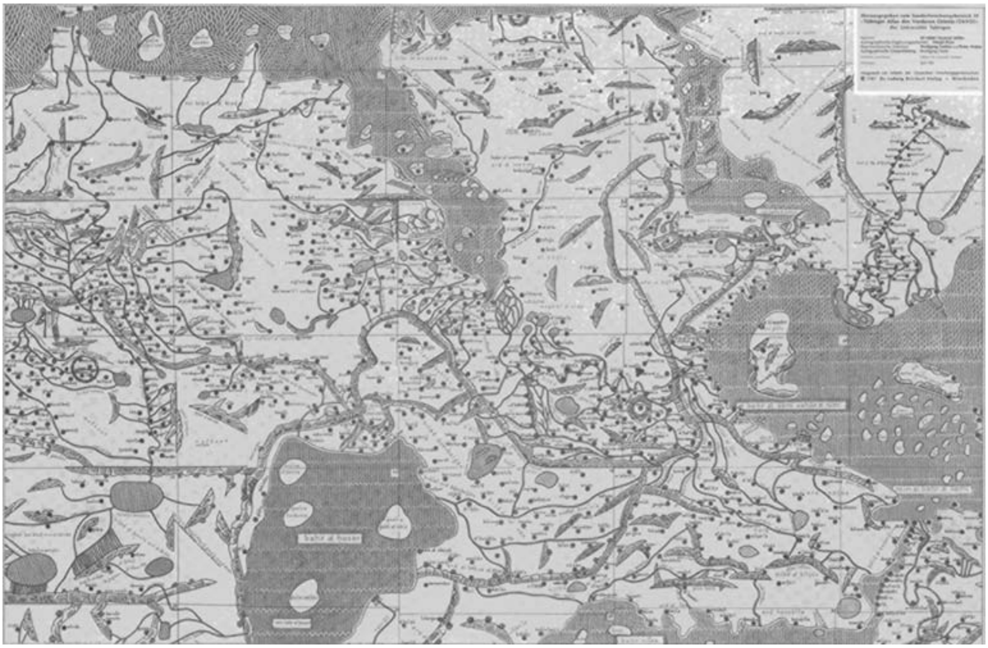


Fig. 6. Idrisi's Maps of the World 1154 A.D. From TAVO, The Tübinger Atlas des Vorderen Orients, Wiesbaden 1977–1993.

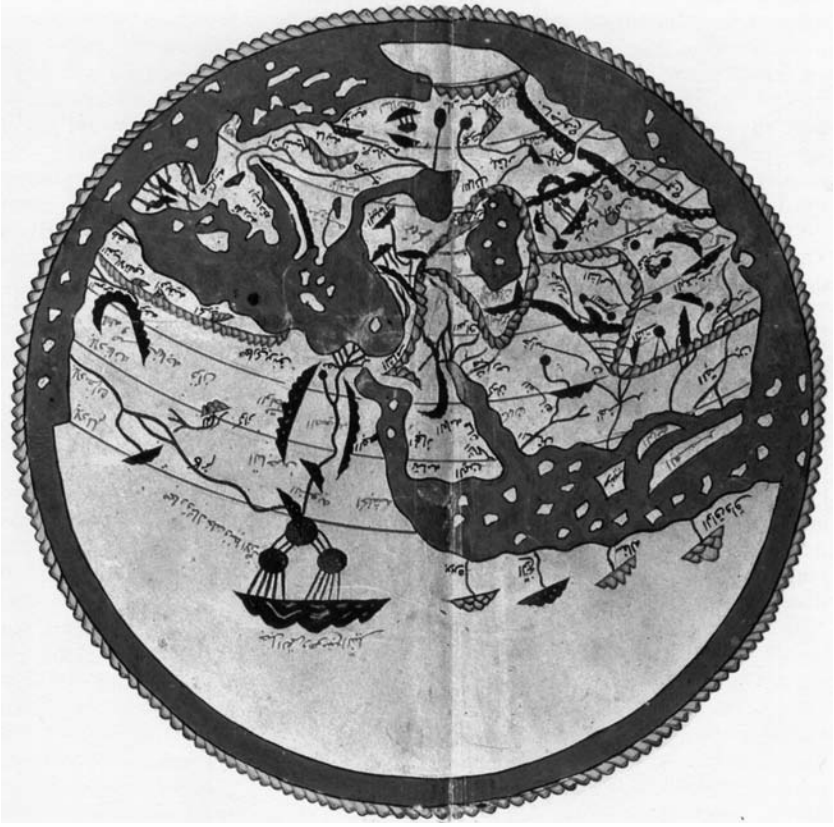


Fig. 7. Map of the world by the twelfth century Sicilian geographer Idrīsī. The Mediterranean is recognizable up to the Straits of Gibraltar, but the Atlantic coasts of Spain and Africa, India, and SE Asia show ignorance. By contrast, South Russia, Central Asia, and China are shown in some detail. The titling of the map is upside down. Idrīsī travelled widely and plainly knew much more of the Muslim world than appears here. His map shows how dependent Islam still was upon Ptolemy's Geography. From Michael Rogers, *The Spread of Islam*, Elsevier Phaidon, 1976.

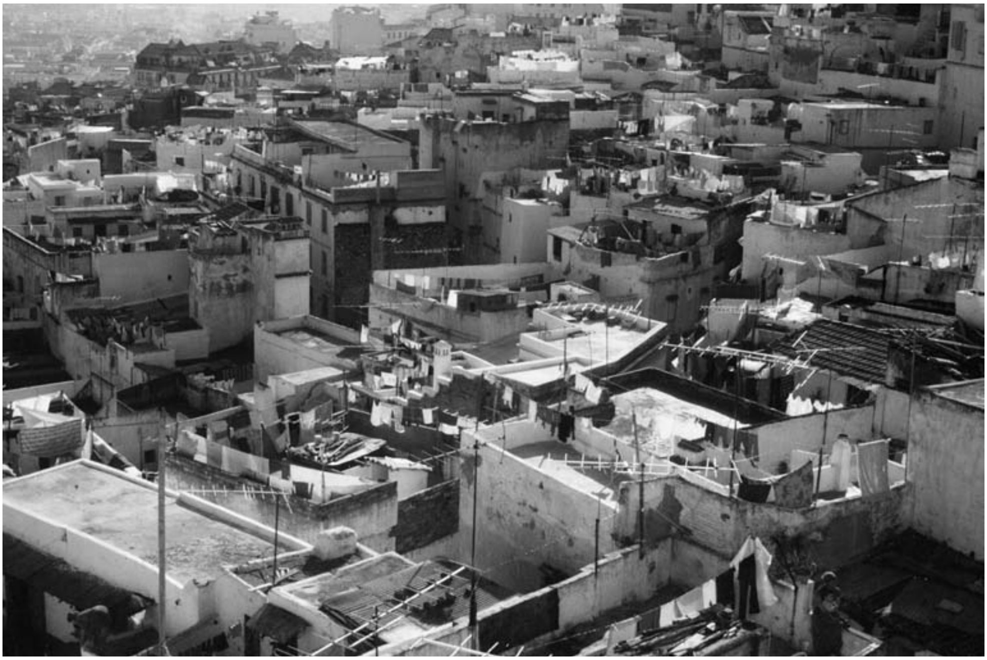


Fig. 1. The roofs of Algiers.

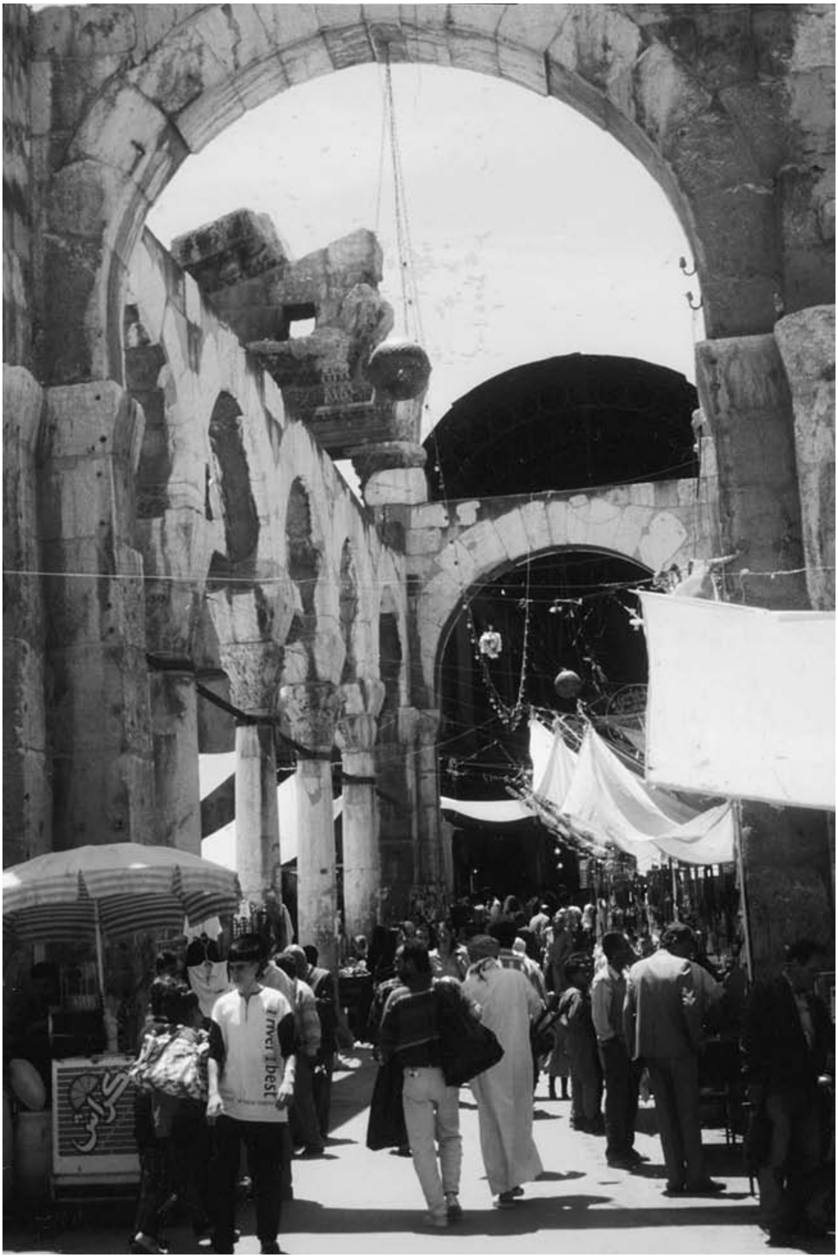


Fig. 2. The Roman Propylees of Damascus.

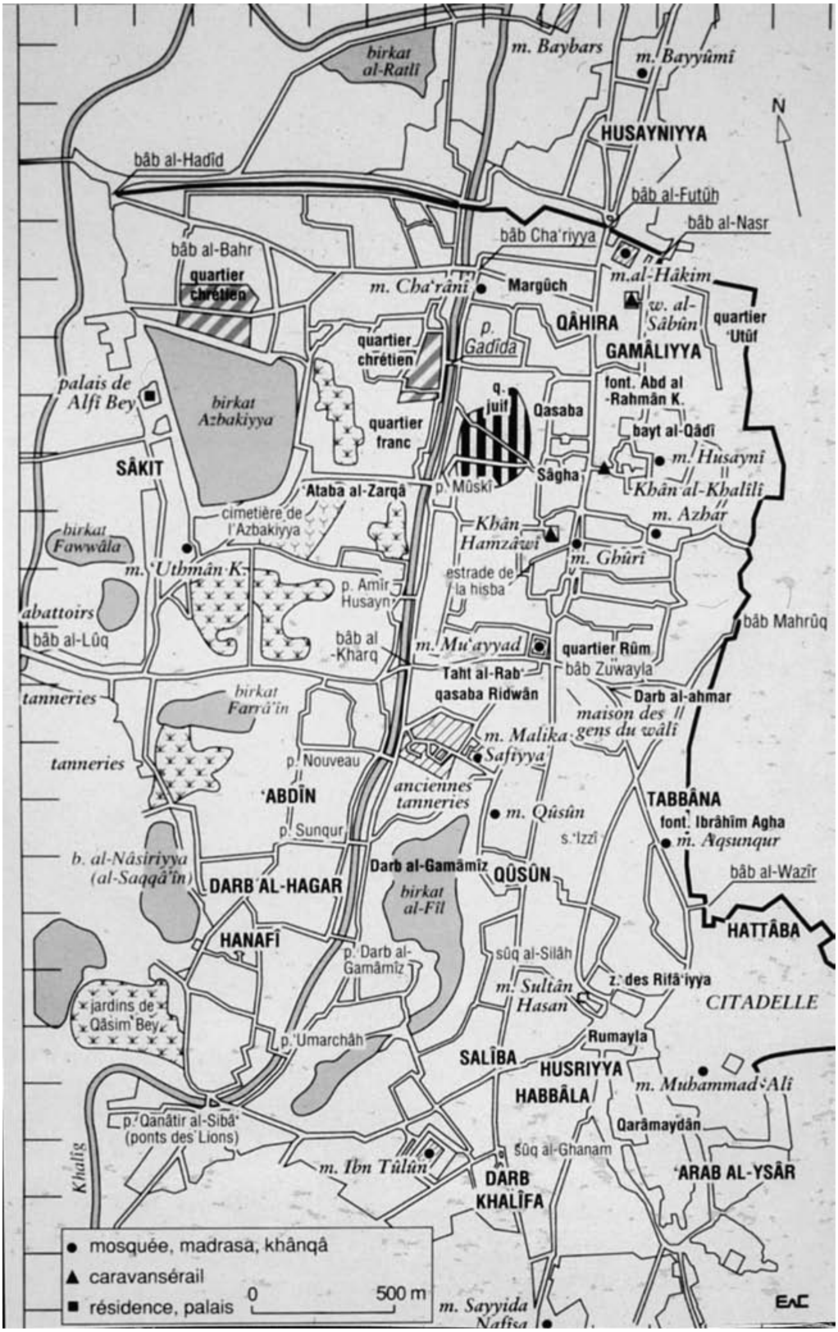

birkat al-Ratlî
m. Baybars
m. Bayyûmî
HUSAYNIYYA
N
bâb al-Hadîd
bâb al-Futûh
bâb al-Nasr
bâb Cha'riyya
bâb al-Bahr
quartier chrétien
m. Cha'rânî
Margûch
m.al-Hâkim
w. al-Sâbûn
quartier 'Utûf
p. Gadîda
QÂHIRA
GAMÂLIYYA
quartier chrétien
palais de Alfî Bey
birkat Azbakiyya
quartier franc
q. juif
Qasaba
font. Abd al -Rahmân K.
bayt al-Qâdî
m. Husaynî
SÂKIT
Sâgha
Khân al-Khalîlî
'Ataba al-Zarqâ
p. Mûskî
cimetière de l'Azbakiyya
m. Azhar
Khân Hamzâwî
birkat Fawwâla
m. Ghûrî
m. 'Uthmân K.
estrade de la hisba
p. Amîr Husayn
abattoirs
bâb al-Lûq
bâb Mahrûq
bâb al -Kharq
m. Mu'ayyad
quartier Rûm
bâb Zuwayla
Taht al-Rab'
qasaba Ridwân
birkat Farrâ'în
Darb al-ahmar
tanneries
maison des gens du wâlî
m. Malika Safiyya
tanneries
p. Nouveau
anciennes tanneries
'ABDÎN
TABBÂNA
m. Qûsûn
font. Ibrâhîm Agha
p. Sunqur
s. 'Izzî
m. Aqsunqur
b. al-Nâsiriyya (al-Saqqâ'în)
Darb al-Gamâmîz
QÛSÛN
bâb al-Wazîr
DARB AL-HAGAR
birkat al-Fîl
HATTÂBA
HANAFÎ
p. Darb al-Gamâmîz
sûq al-Silâh
z. des Rifâ'iyya
m. Sultân Hasan
CITADELLE
jardins de Qâsim Bey
p. 'Umarchâh
Rumayla
SALÎBA
HUSRIYYA
m. Muhammad 'Alî
HABBÂLA
Qarâmaydân
p. Qanâtir al-Sibâ' (ponts des Lions)
sûq al-Ghanam
m. Ibn Tûlûn
'ARAB AL-YSÂR
Khalîg
DARB KHALÎFA
● mosquée, madrasa, khânqâ
▲ caravansérail
■ résidence, palais
0
500 m
m. Sayyida Nafîsa
EAC

Fig. 3. Cairo in the Ottoman period.

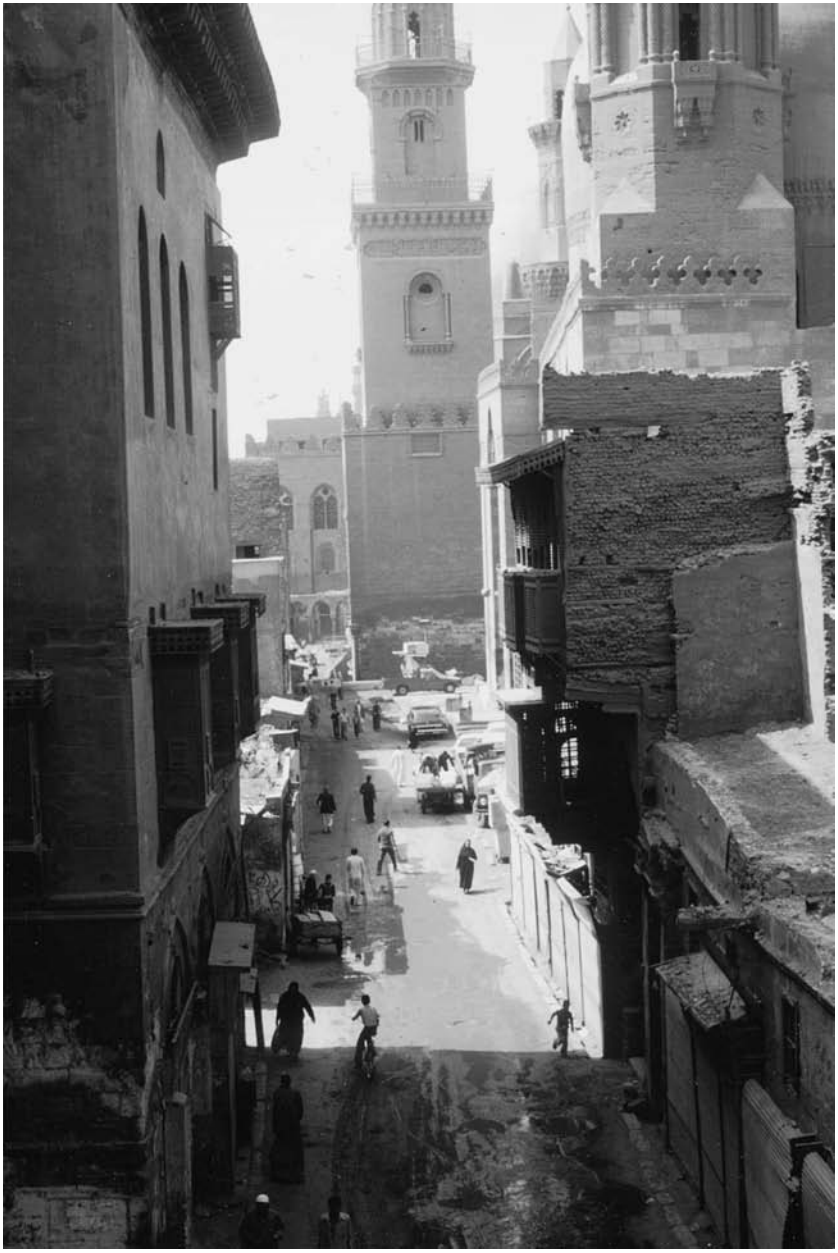


Fig. 4. The Qasaba of Cairo.

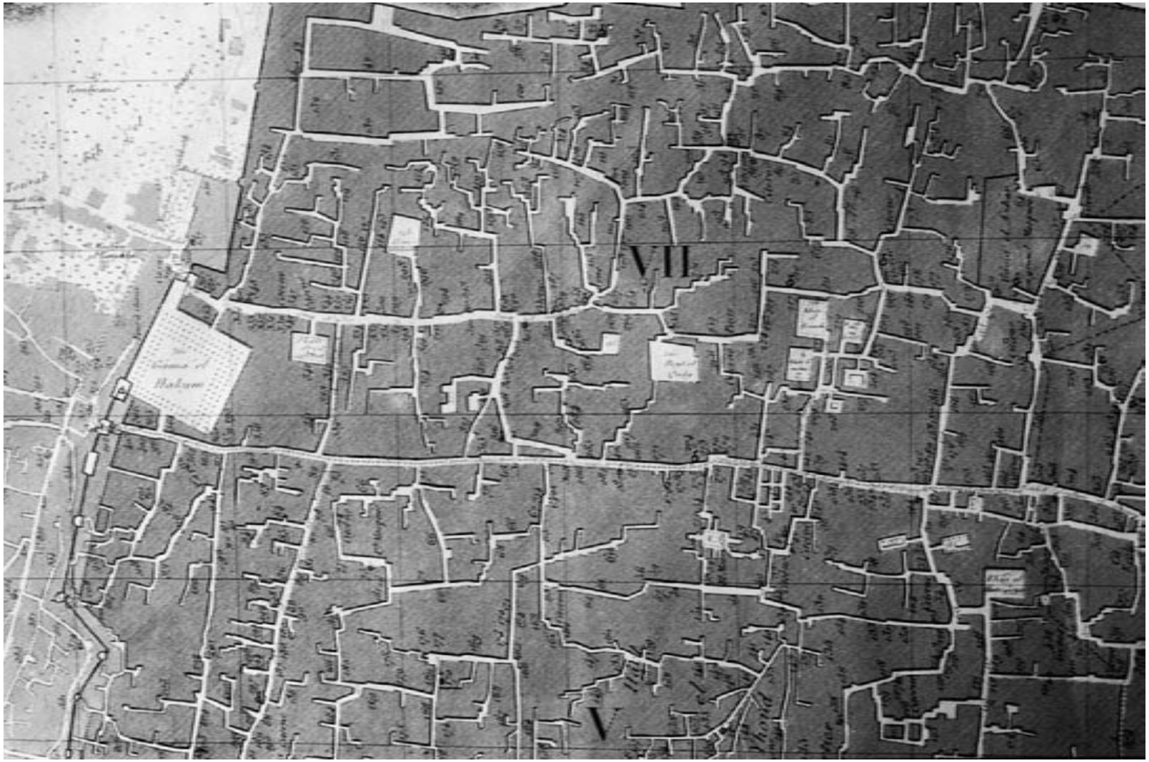


Fig. 5. Qahira region of Cairo (from the Description de l'Egypte).

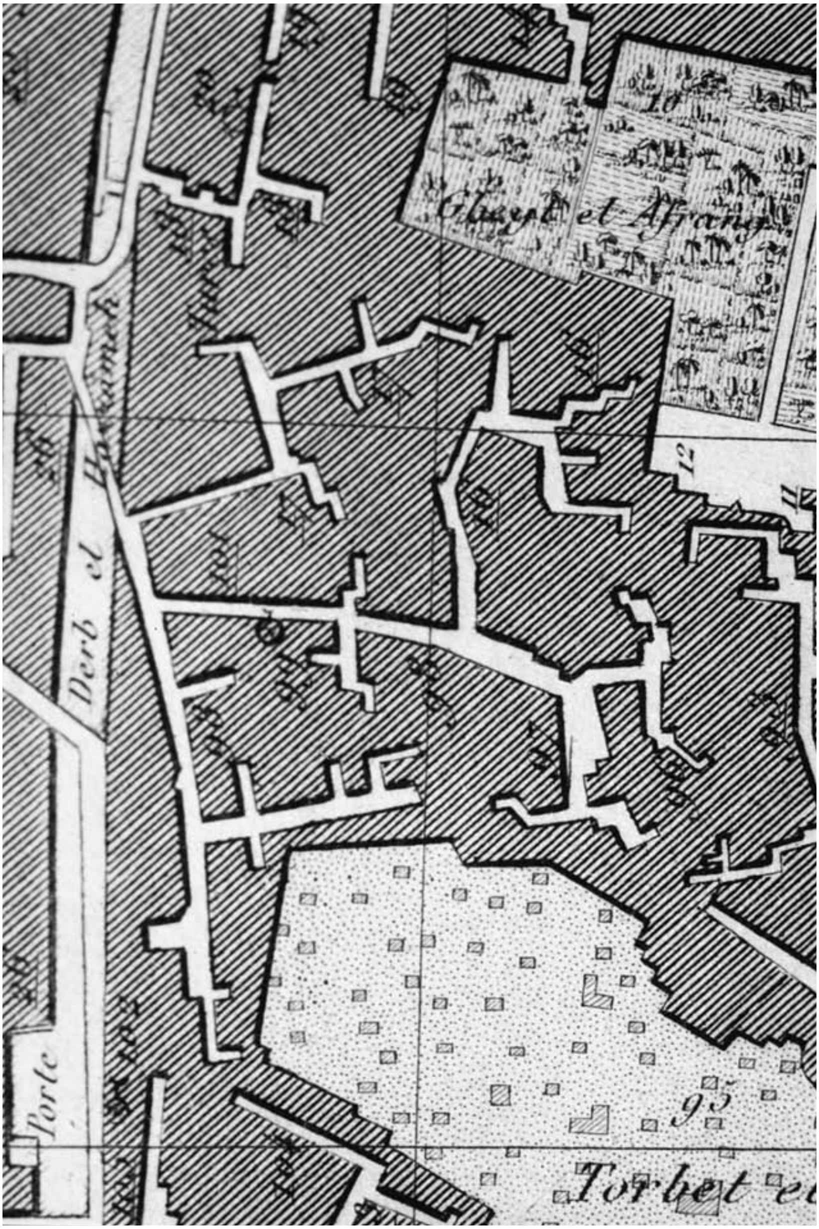

Gheyt el Afrang
10
Derb el Barâmeh
Porte
12
11
95
Torbet el

Fig. 6. Kawm al-Shaykh Salama quarter in Cairo (from the *Description*).

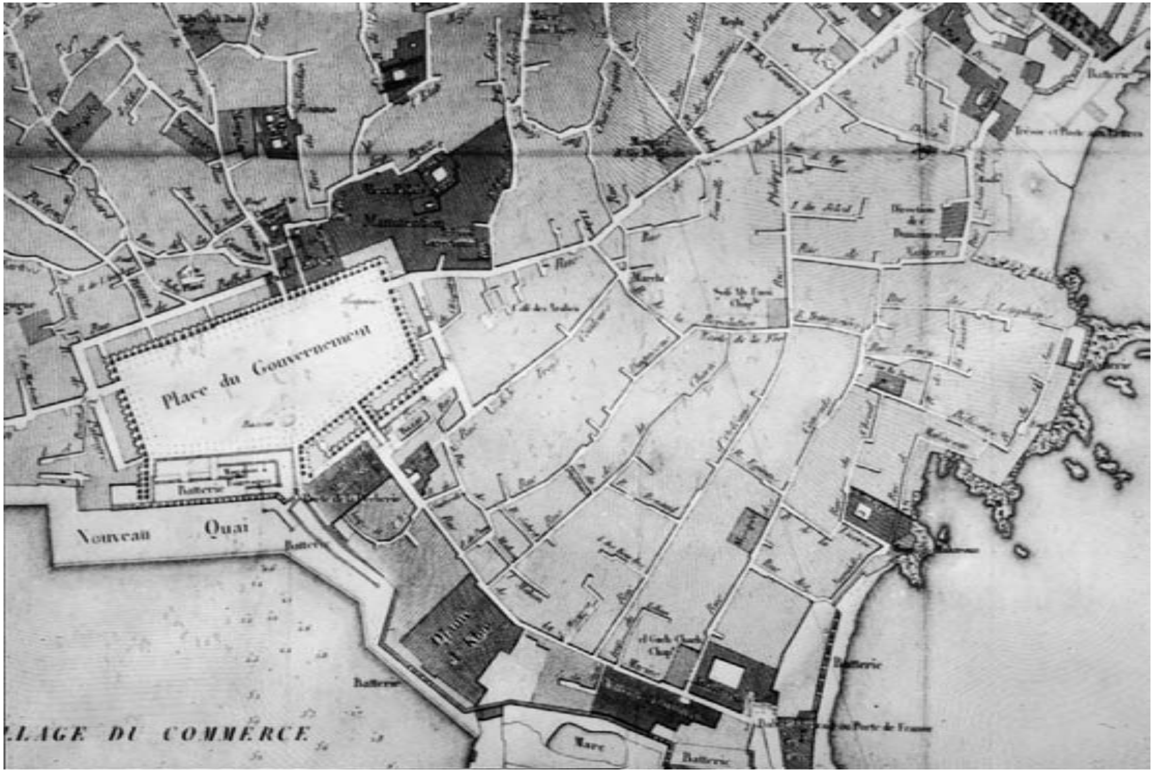

Place du Gouvernement
Nouveau Quai
Batterie
Batterie
Batterie
Batterie
LLAGE DU COMMERCE
Mare

Fig. 7. Algiers street network: lower city (from Pelet's map, 1832).

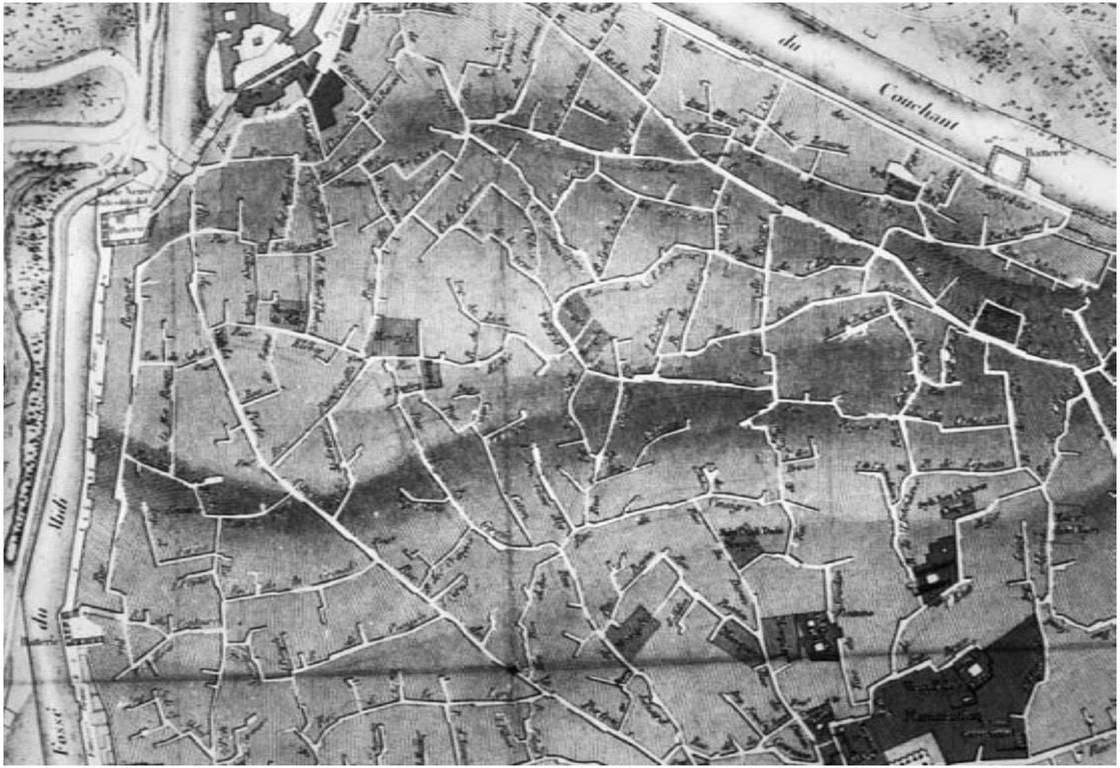

du Couchant
du Midi
Fossé

Fig. 8. Algiers upper city (from Pelet, 1832).

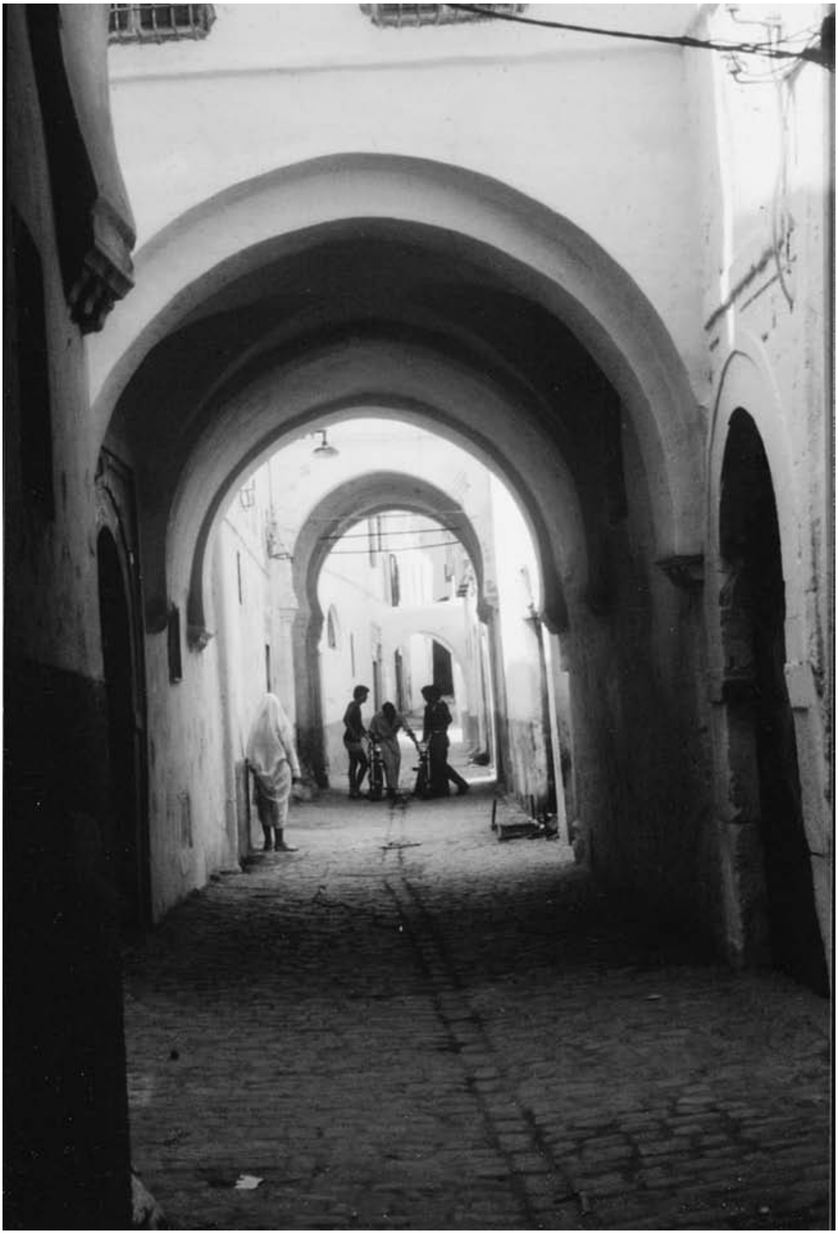


Fig. 9. Elite's residence quarter in Tunis.

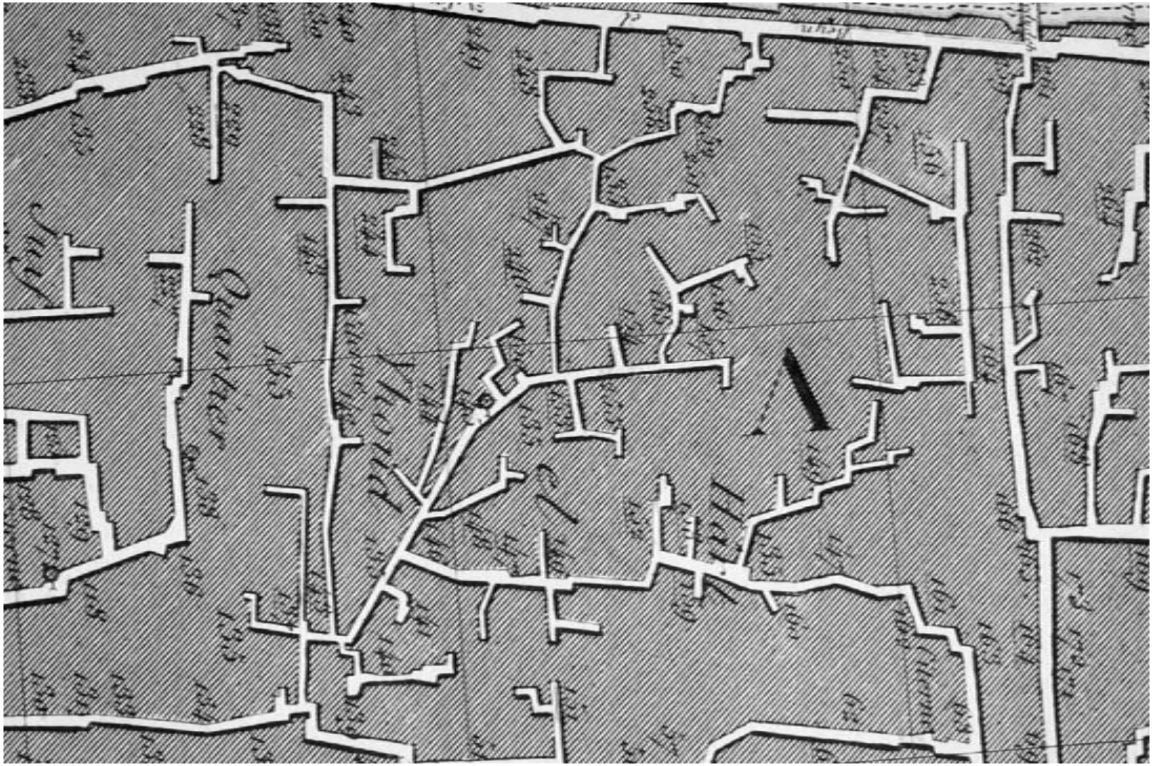

Hart el Yhoud
Quartier Juif
Citerne

Fig. 10. Jewish quarter in Cairo (from the Description).

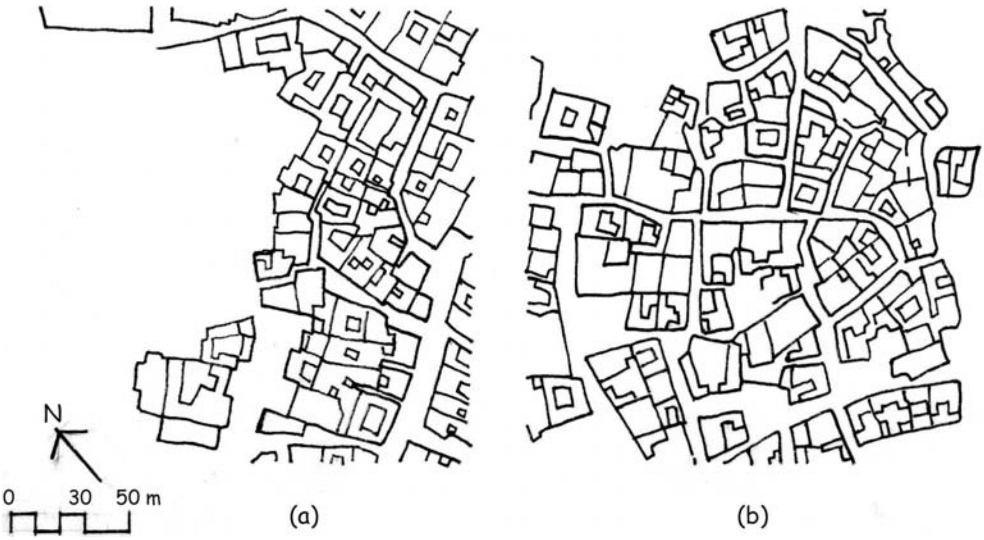


Fig. 1. Compact urban tissue resulting from abutting one structure against its neighboring structures. This was the predominant traditional pattern in the Islamic world. Two examples, drawn to the same scale, are illustrated here: On the left (a) is a partial plan from Sidi Bou Saʿid located on the Mediterranean in northern Tunisia. On the right (b) is a partial plan from Darʿiyah near Riyadh, Saudi Arabia. After sources from the author.

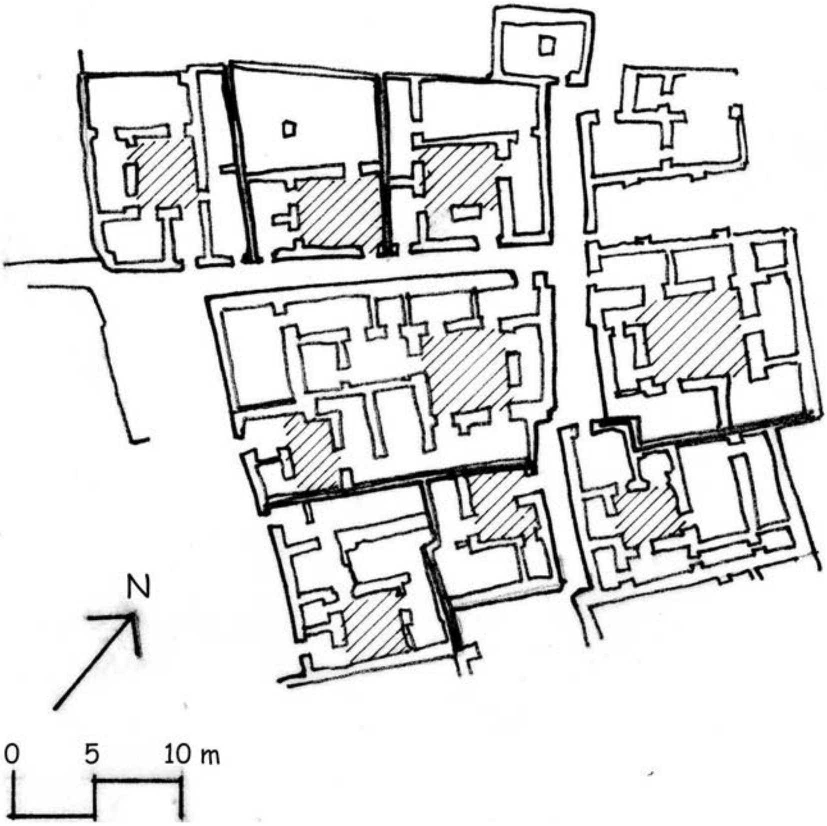


Fig. 2. The organizational pattern of clustered courtyard houses, predominant in many regions of the Islamic world, pre-date Islam. This example from the ancient city of Ur in southern Mesopotamia is dated at about 2000 B.C.E. The drawing denotes, by double lines, the use of the party wall between adjacent neighbors. After a drawing by L. Woolley.

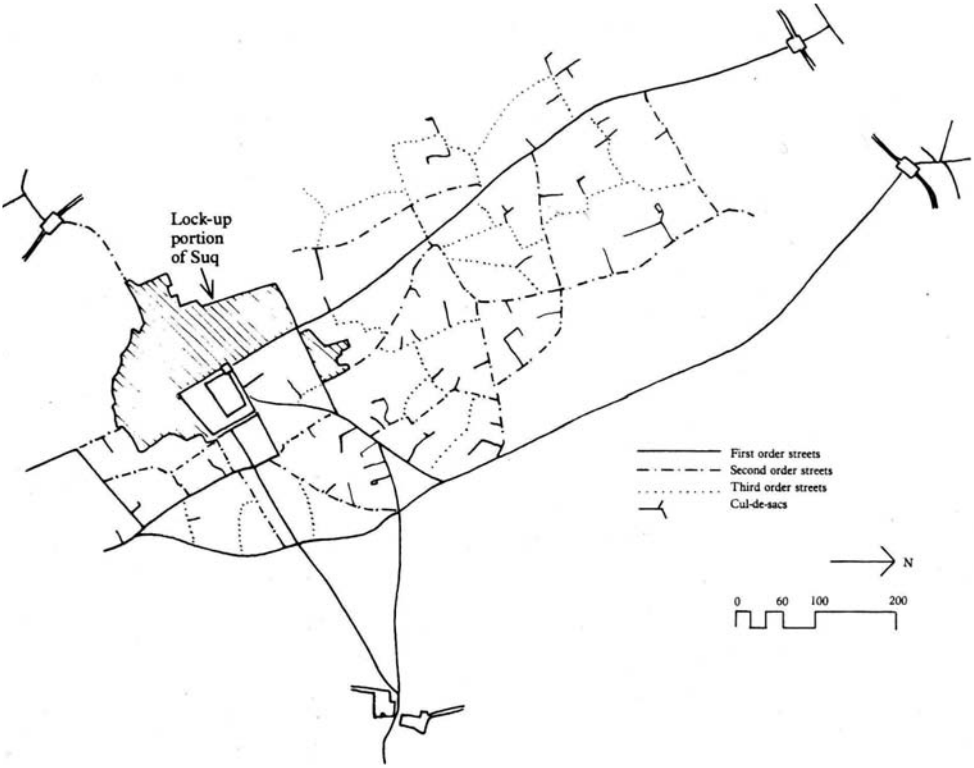
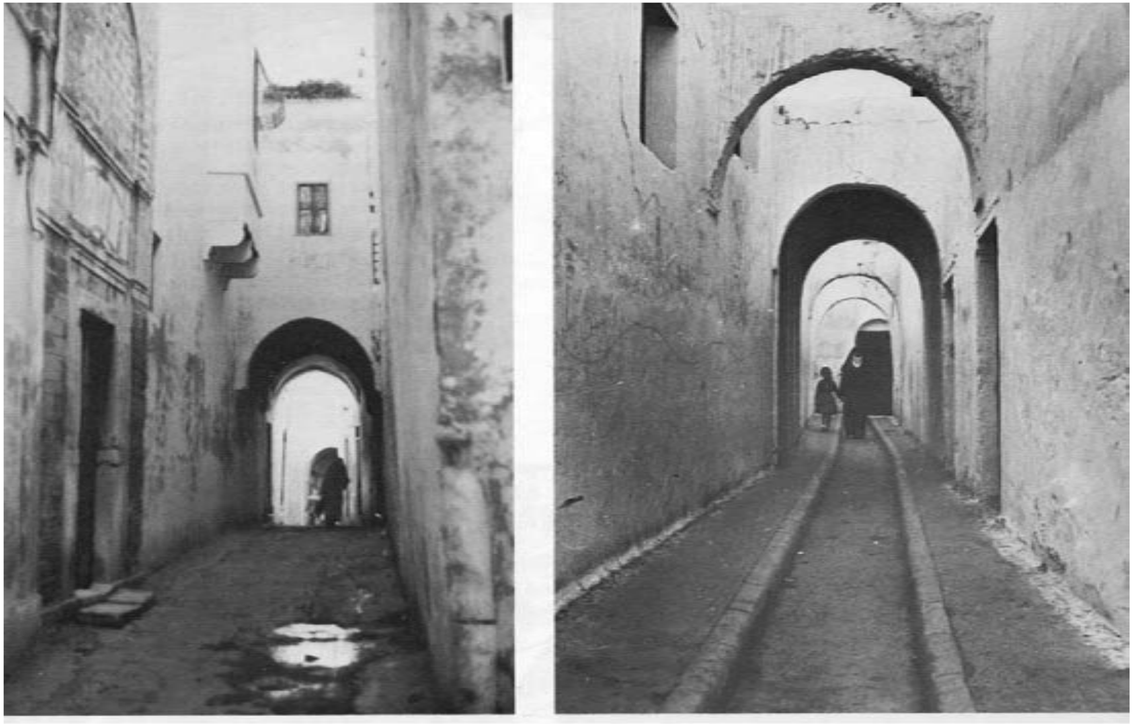

Lock-up portion of Suq
First order streets
Second order streets
Third order streets
Cul-de-sacs
N
0
60
100
200

Fig. 3. The street hierarchy in Tunis medina, showing the three levels of public through streets, and their linkages to the privately controlled cul-de-sacs. From the author's book Arabic-Islamic Cities, 1986.



(a) (b)

Fig. 4. Examples of elements above the street: On the left (a) is a street in Tunis medina showing a Sabat, and a projection from the upper level within the Fina space of the house. On the right (b) is an example from Rabat medina, Morocco, showing buttressing arches and a Sabat. The sidewalk width on both sides is about the width of the Fina for the houses on each side of the street. From the author's book Arabic-Islamic Cities, 1986.

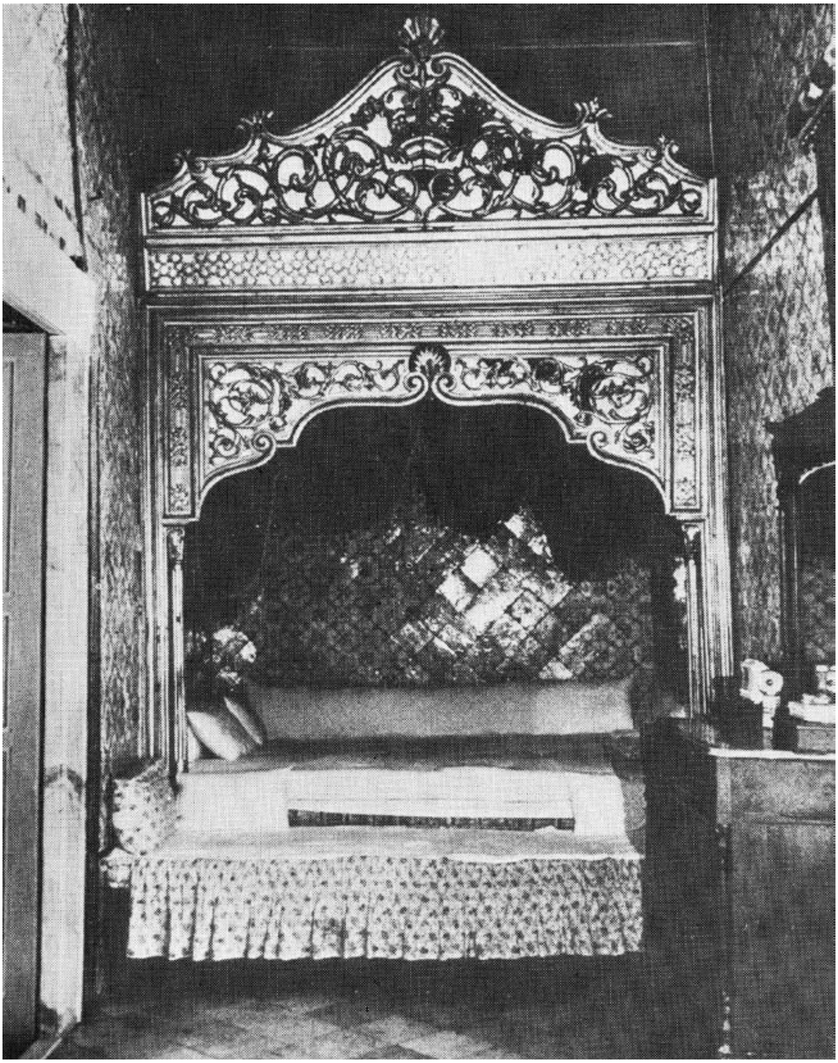


Fig. 5. Example of a Hanut Hajjam in Dar Bairam, Tunis medina. Note the tile work on the walls and the elaborate design of the bed alcove. From the author's book Arabic-Islamic Cities, 1986.

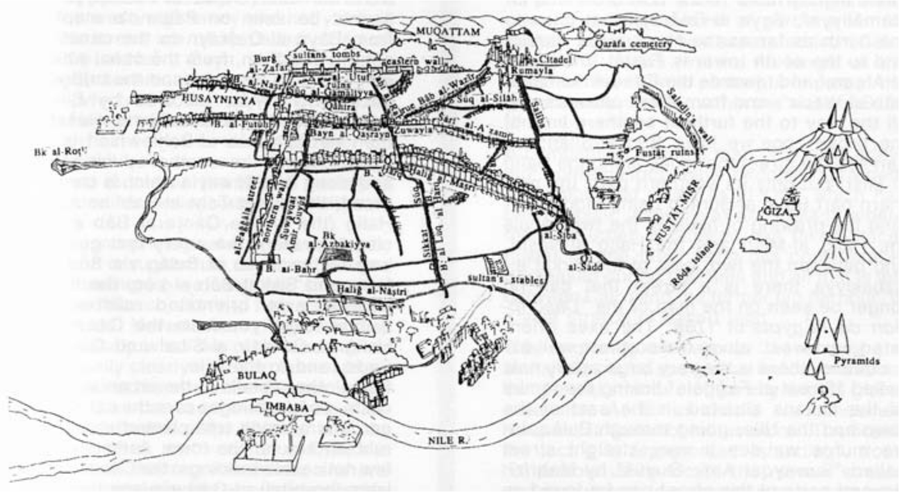

MUQATTAM
Qarafa cemetery
Burg al-Zafar
sultans tombs
eastern wall
Citadel
Rumayla
HUSAYNIYYA
B. al-Futuh
Bk al-Ratl
Suq al-Silah
Fustat ruins
FUSTAT-MISR
GIZA
al-Siba
al-Sadd
Roda island
sultan's stables
Bk al-Azbakiyya
B. al-Bahr
Halig al-Nasiri
BULAQ
IMBABA
NILE R.
Pyramids

Fig. 1. Main axes structuring Cairo from Mateo Pagano's map: Canals. From Environmental Design—Urban Morphogenesis, Dell'Ocra Editore, 1993.

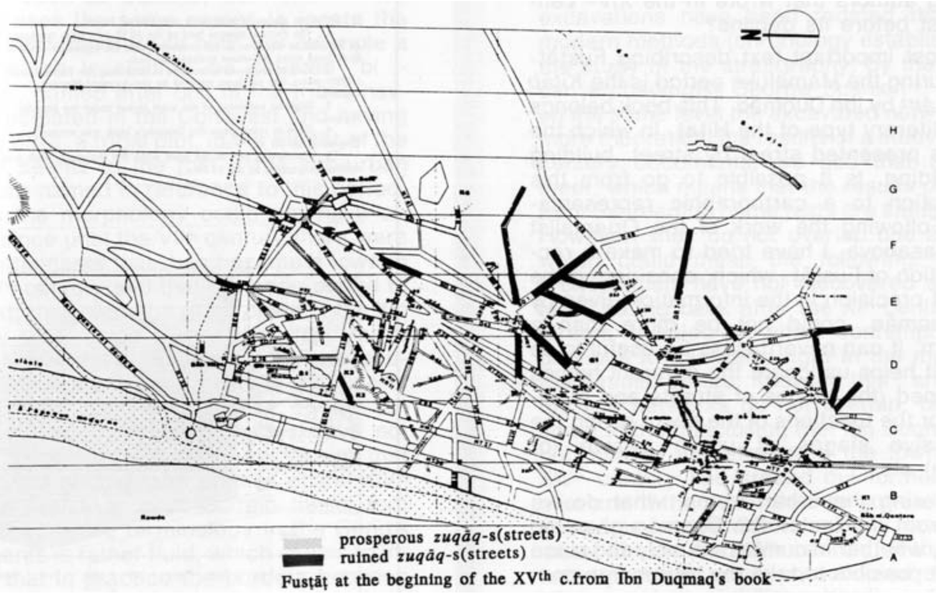

H
G
F
E
D
C
B
A
prosperous zuqāq-s(streets)
ruined zuqāq-s(streets)
Fusṭāṭ at the begining of the XVth c.from Ibn Duqmaq's book

Fig. 2. Fustat at the beginning of the fifteenth century. From Environmental Design—Urban Morphogenesis, 1993.

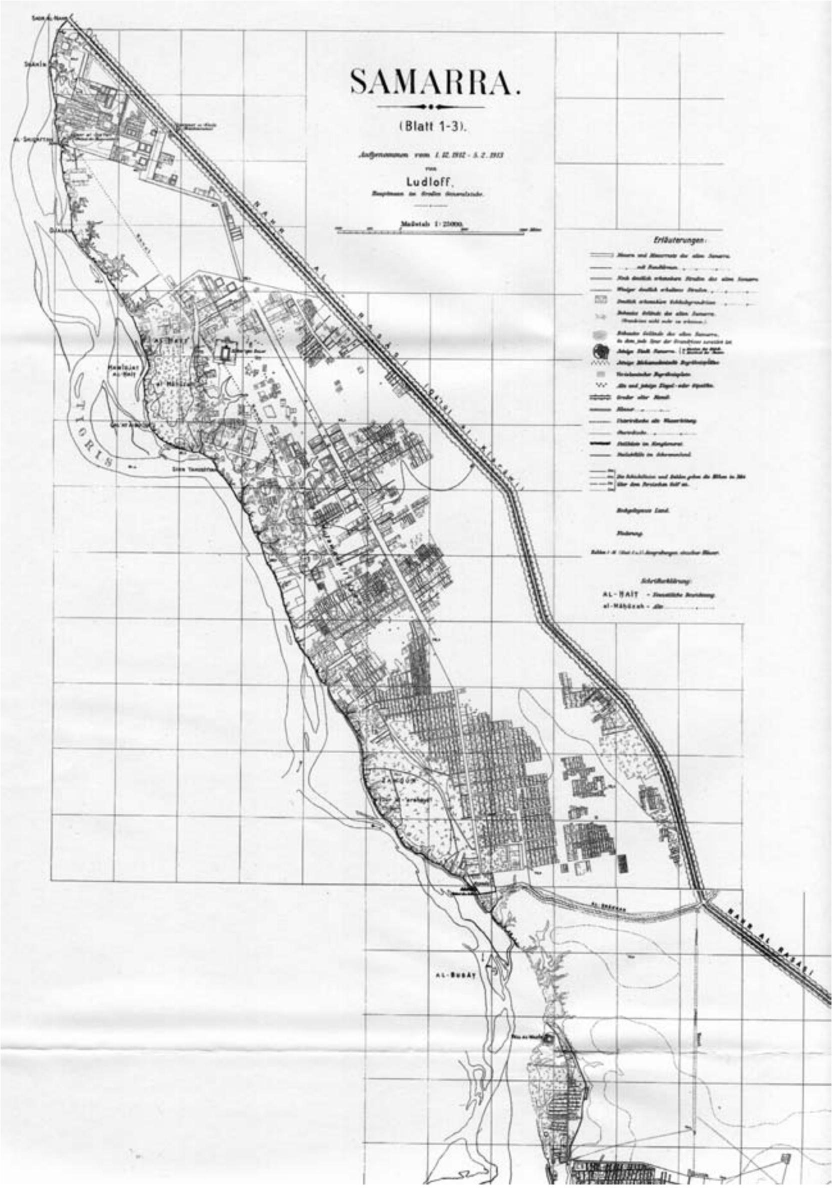

SAMARRA.
(Blatt 1-3).
Aufgenommen vom 1.12.1912 - 5.2.1913
von
Ludloff,
Hauptmann im Großen Generalstabe.
Maßstab 1:25000.
Erläuterungen:
Schrifterklärung:
AL-ḤAIṬ
al-Māḥūzah
NAHR AL RAṢĀṢI
TIGRIS
al-Māḥūzah
AL-RUBĀT
NAHR AL RAṢĀṢI

Fig. 3. Map of Samarra (detail).
From Eugen Wirth, Die Orientalische Stadt, Verlag Philipp von Zabern, 2000.

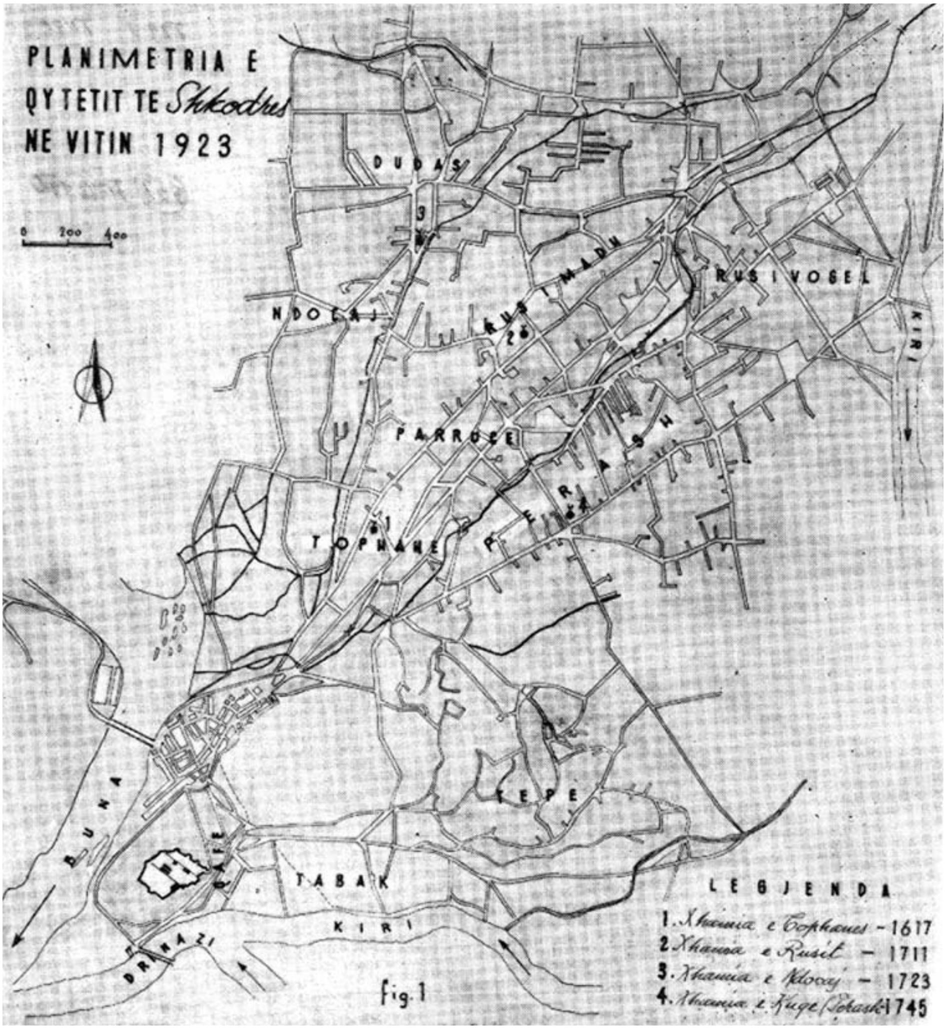

PLANIMETRIA E
QYTETIT TE Shkodres
NE VITIN 1923
0 200 400
DUDAS
3
NDOCAJ
RUS I MADH
2
RUS I VOGEL
KIRI
PARRUCE
PERASH
1
TOPHANE
4
TEPE
BUNA
KALE
TABAK
KIRI
DRINAZI
fig. 1
LEGJENDA
1. Xhamia e Tophanes - 1617
2. Xhamia e Rusit - 1711
3. Xhamia e Ndocaj - 1723
4. Xhamia e Kuqe (Perash) - 1745

Fig. 1. Plan of Shkodër in 1923.

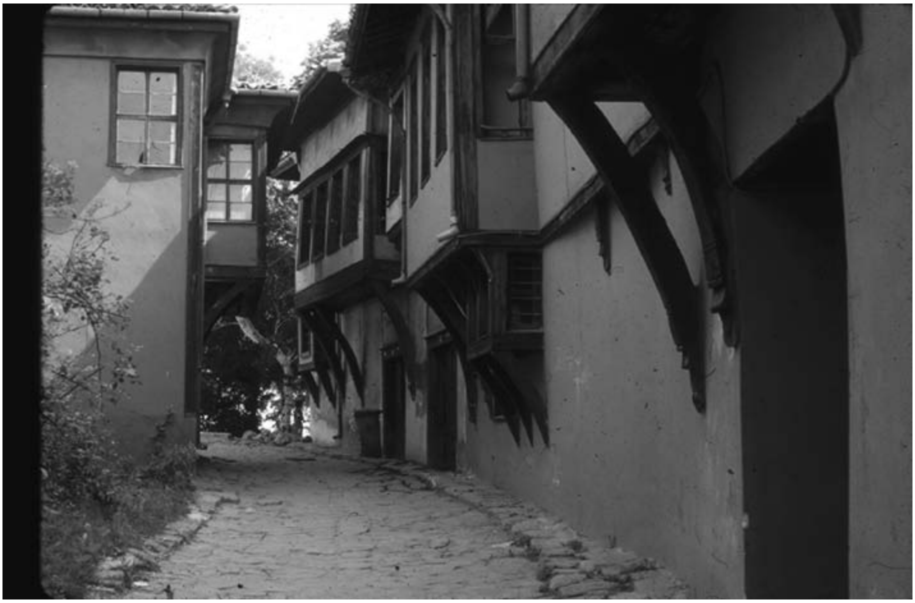


Fig. 2. View of a street in Plovdiv. (Photograph by P. Pinon.)

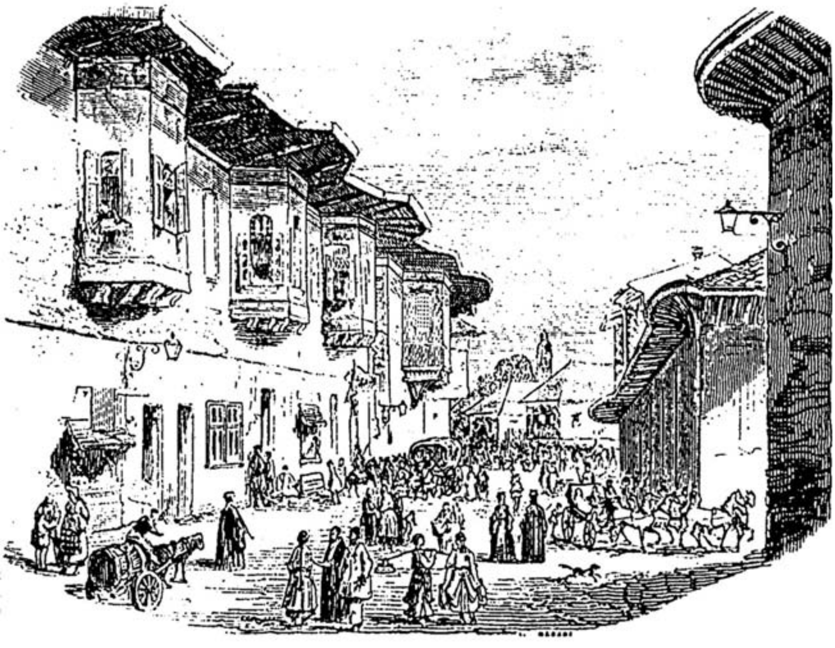


Fig. 3. View of a street in Bucharest in the mid-nineteenth century.
(Engraving according to M. Doussault.)

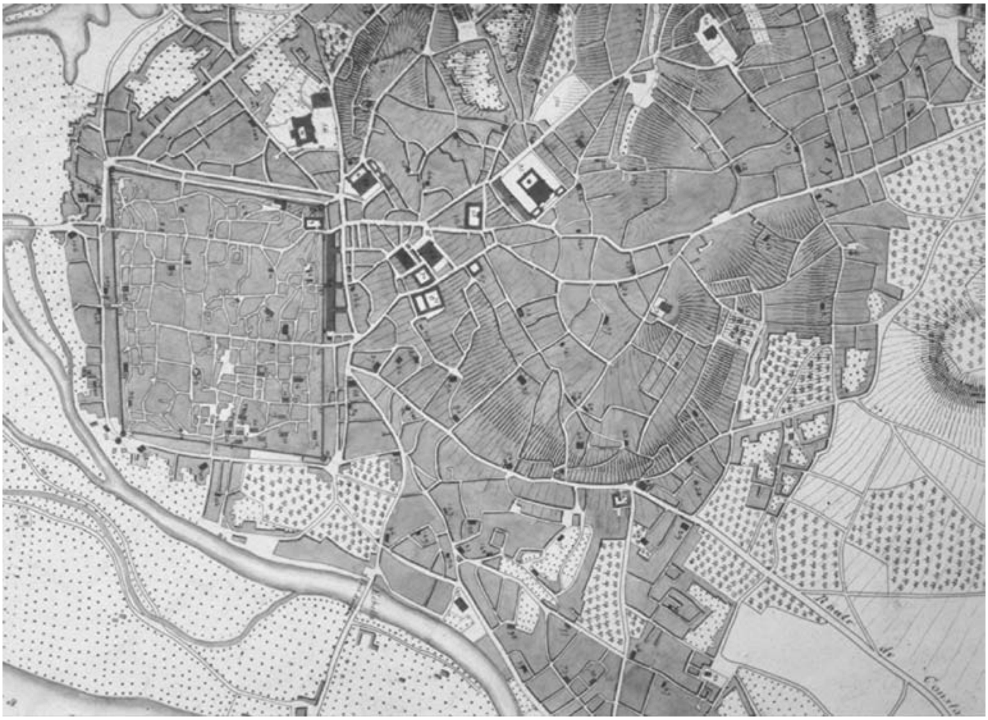

Route de Consta

Fig. 4. Plan of Edirne in 1854, by Colonel Osmont.

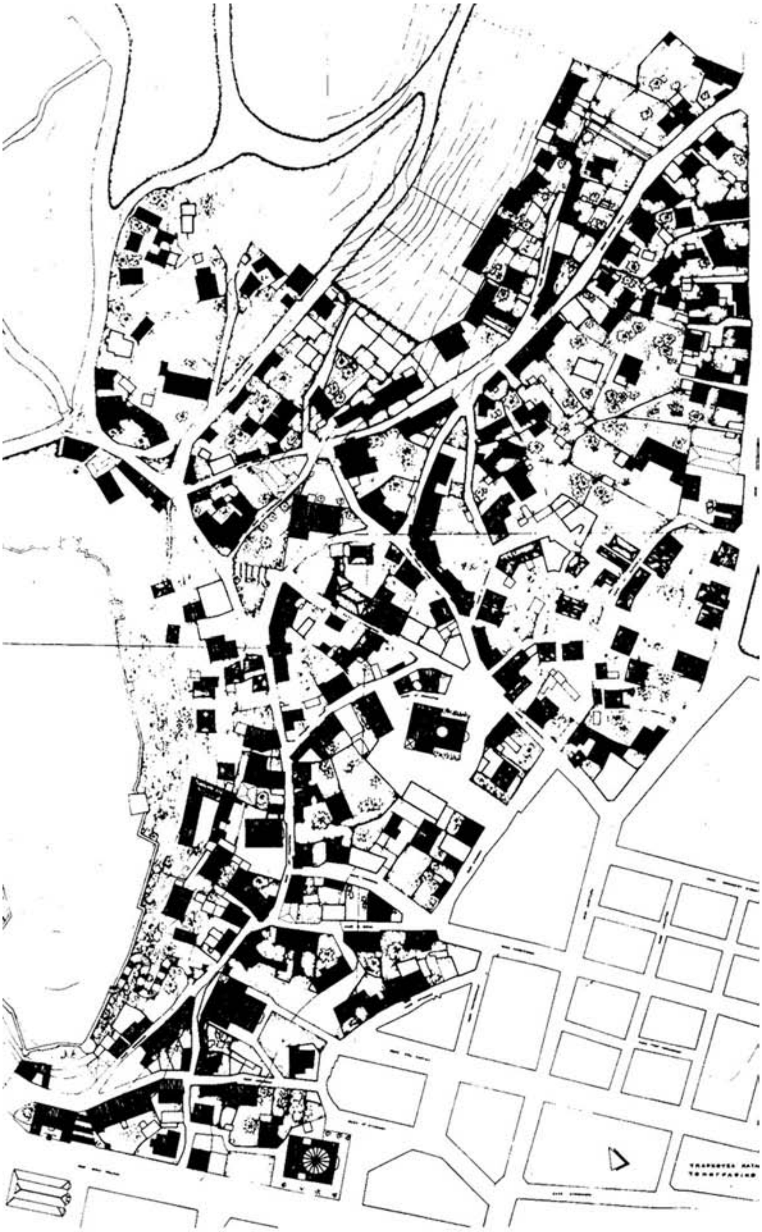


Fig. 5. Plan of Trikala. (According to F. Tsapala-Bardouli).

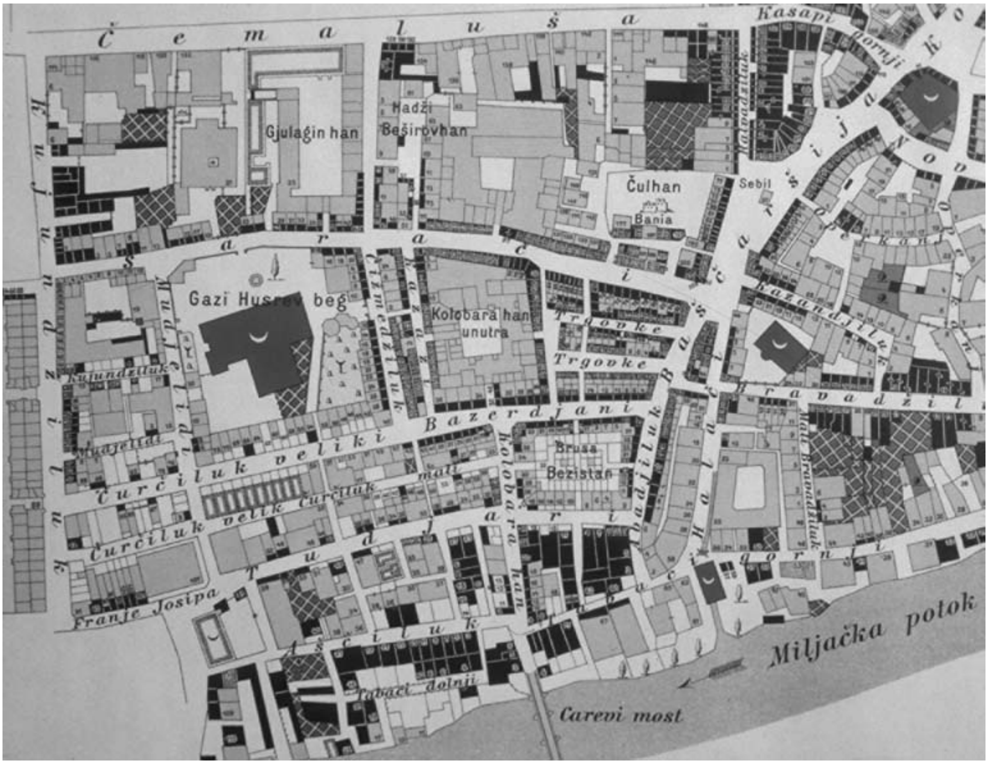

Čemaluša
Kasapi gornji
Halvadžiluk
Gjulağin han
Hadži Beširovhan
Čulhan
Sebil
Bania
Saraći
Kundurdžiluk
Gazi Husrev beg
Mudželiti
Kujundžiluk
Čizmedžiluk
Kolobara han unutra
Trgovke
Trgovke
Bazerdjani
Brusa Bezistan
Čurčiluk veliki
Čurčiluk mali
Čurčiluk veliki
Kolobara han
Abadžiluk
Baščaršija
Kazandžiluk
Bravadžiluk
Mali Bravadžiluk
Halači
Terzi
Franje Josipa
Aščiluk
Tabaci dolnji
Miljačka potok
Carevi most

Fig. 6. Plan of the carsija of Sarajevo (1882).

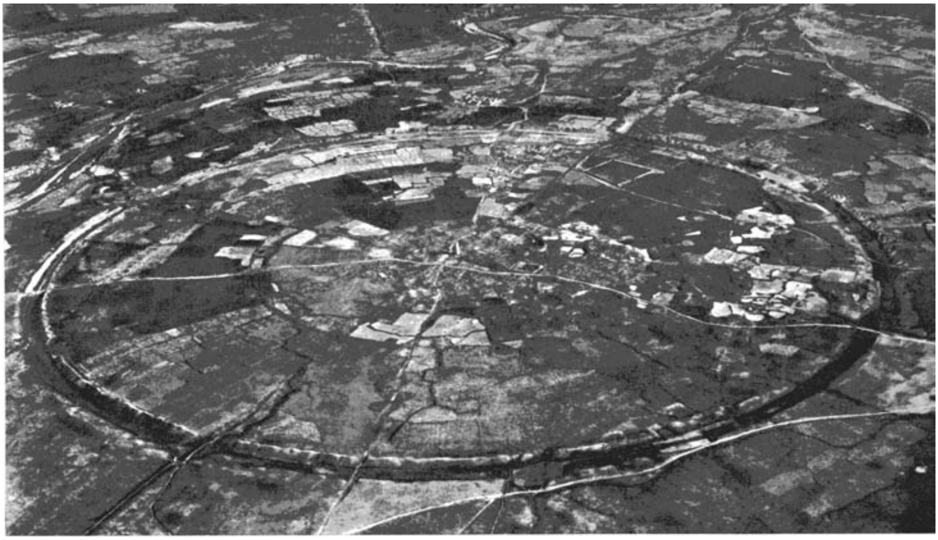


Fig. 1. Firuzabad (Ghirshman 1962).

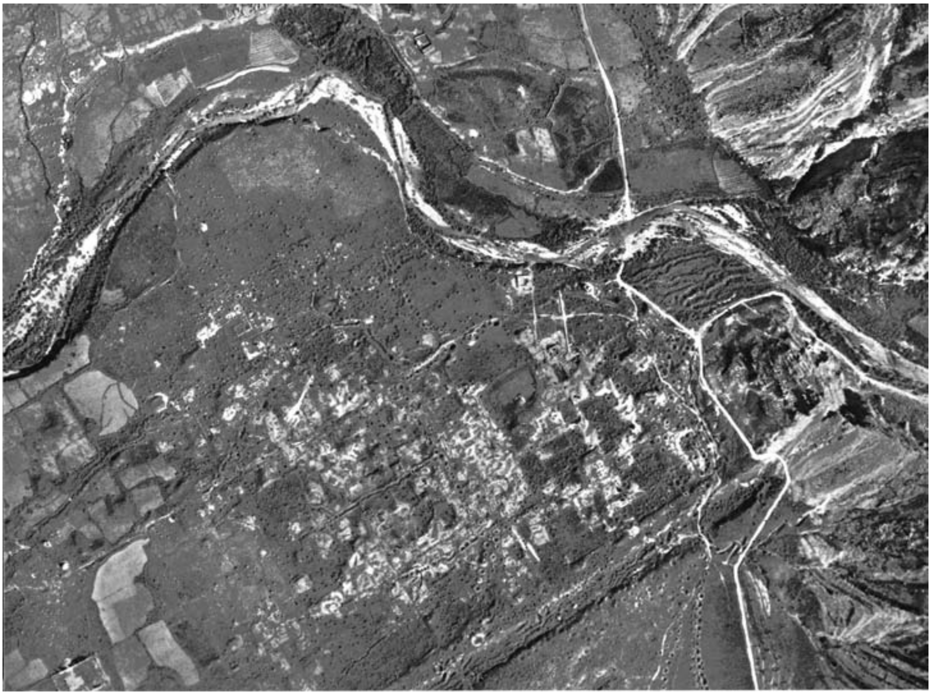


Fig. 2. Bishapur (Ghirshman 1962).

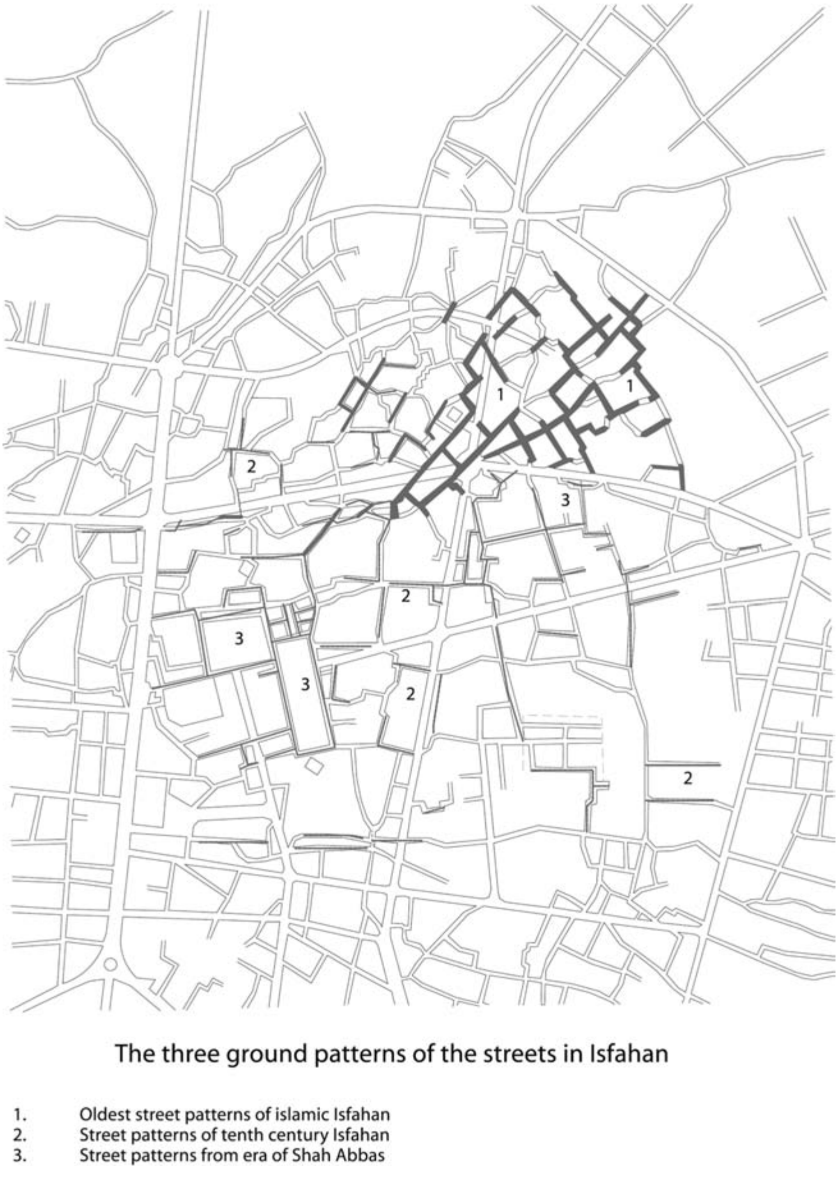

1
1
2
3
2
3
3
2
2
The three ground patterns of the streets in Isfahan
1. Oldest street patterns of islamic Isfahan
2. Street patterns of tenth century Isfahan
3. Street patterns from era of Shah Abbas

Fig. 3. Isfahan, streets (Gaube-Wirth 1978 and Gaube 1979).

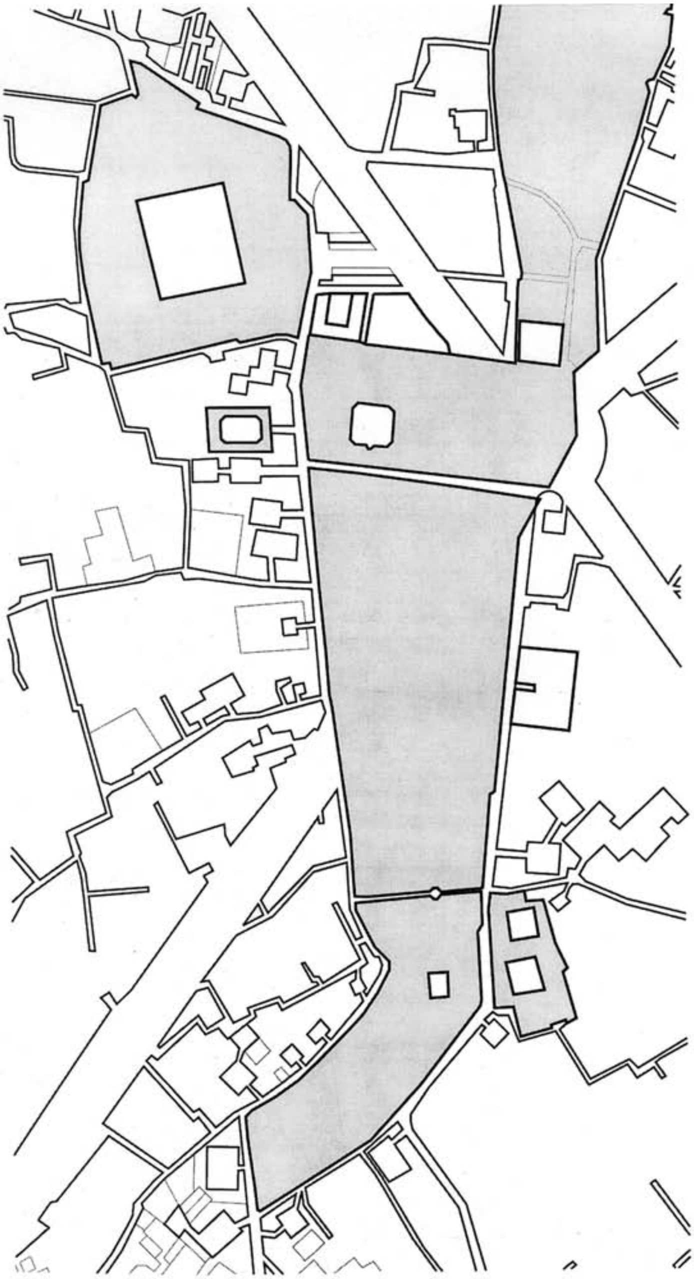
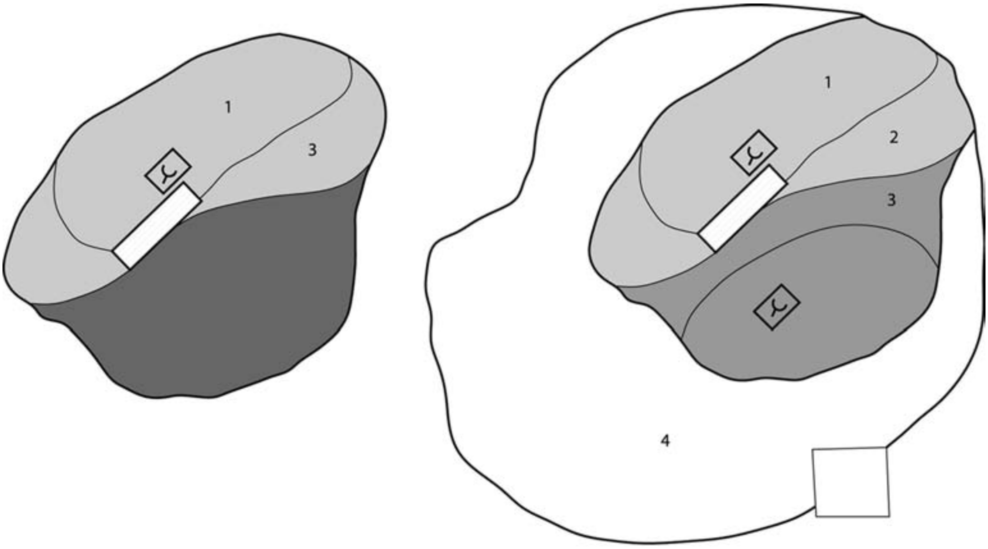


Fig. 4. Isfahan, the old maidÊn (Gaube-Wirth 1978 and Gaube 1979).



The development of Khushinan and Yahudiyya

Fig. 5. Isfahan, KhÖshinÊn, and YahÖdiyya (Gaube 1979).

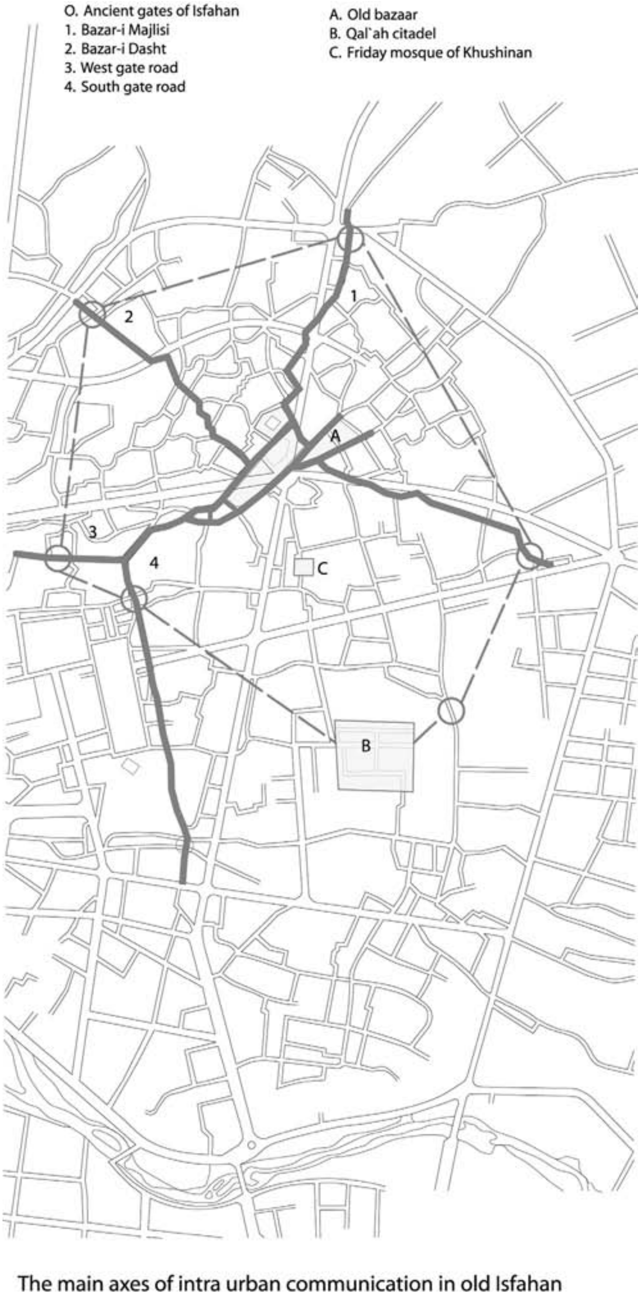
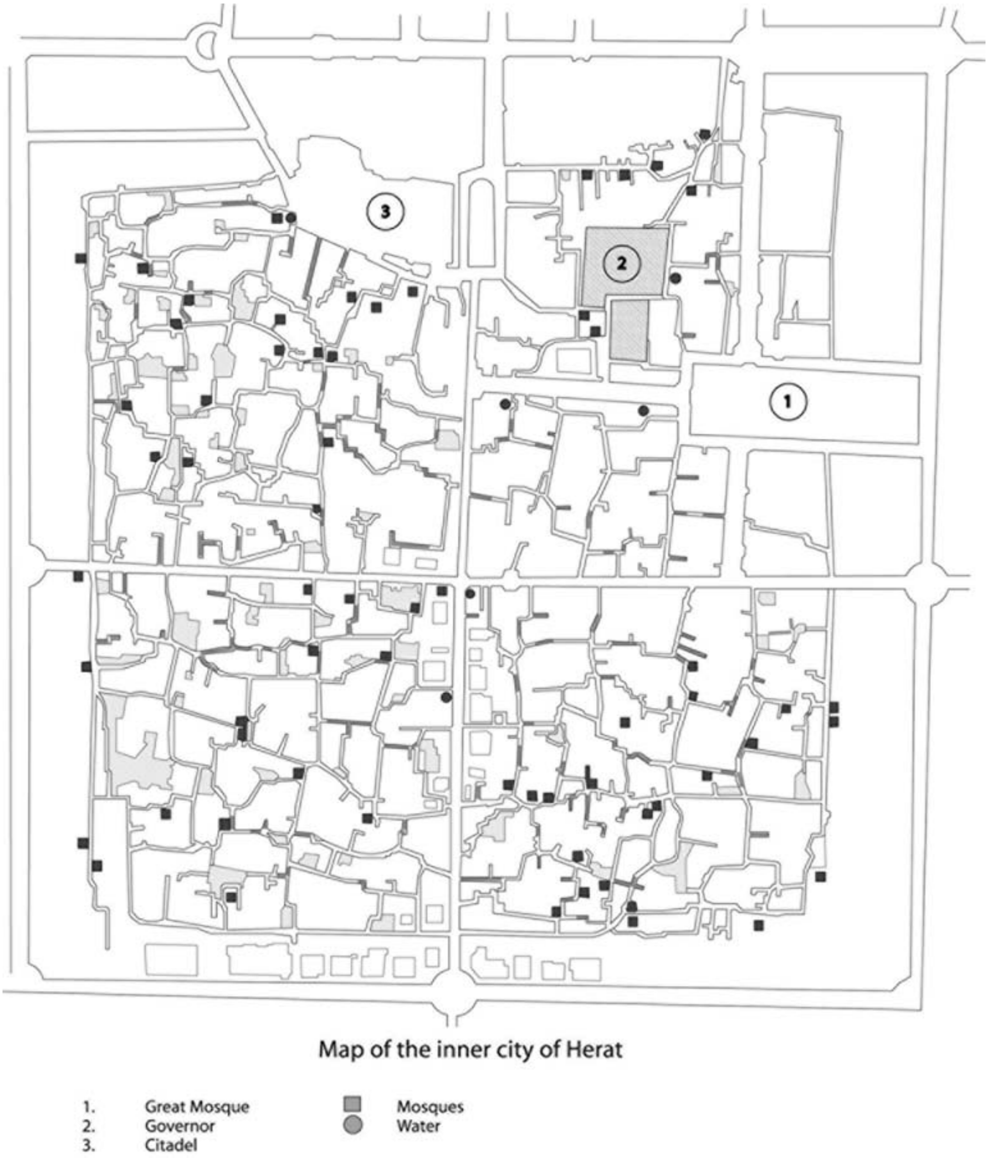

O. Ancient gates of Isfahan
1. Bazar-i Majlisi
2. Bazar-i Dasht
3. West gate road
4. South gate road
A. Old bazaar
B. Qal`ah citadel
C. Friday mosque of Khushinan
1
2
A
3
4
C
B
The main axes of intra urban communication in old Isfahan

Fig. 6. Isfahan, the main axes (Gaube-Wirth 1978 and Gaube 1979).


3
2
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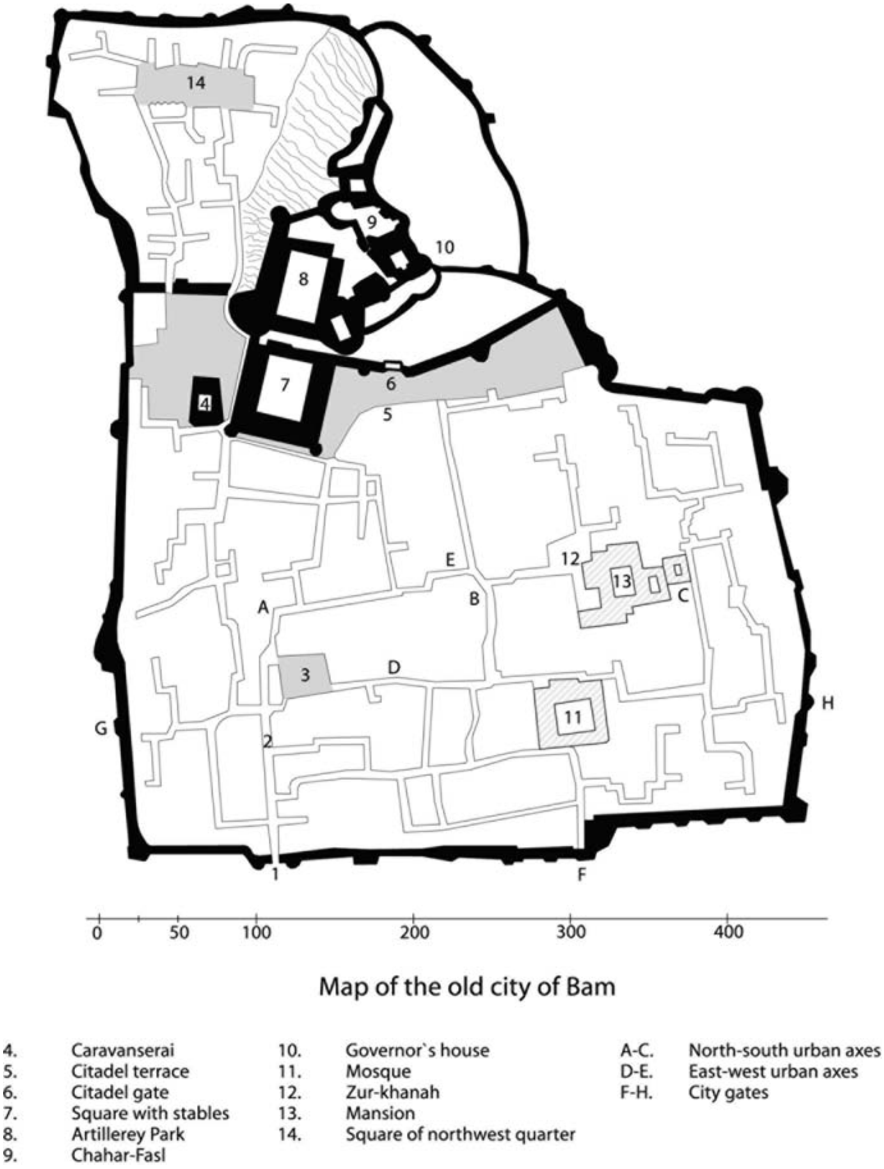
Map of the inner city of Herat
1. Great Mosque
2. Governor
3. Citadel
■ Mosques
● Water

Fig. 7. Herat, inner city (Gaube 1979).


14
9
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50
100
200
300
400
Map of the old city of Bam
4. Caravanserai
5. Citadel terrace
6. Citadel gate
7. Square with stables
8. Artillerey Park
9. Chahar-Fasl
10. Governor`s house
11. Mosque
12. Zur-khanah
13. Mansion
14. Square of northwest quarter
A-C. North-south urban axes
D-E. East-west urban axes
F-H. City gates

Fig. 8. Bam, inner city (Gaube 1979).

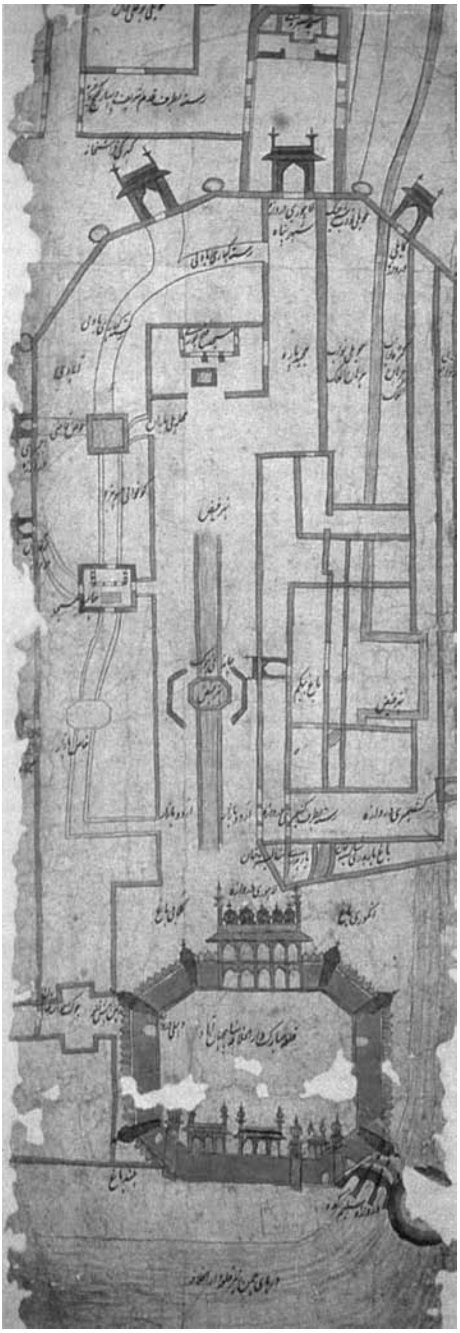

Fig. 1. Shahjahanabad. (From Indian Maps and Plans by Susan Gole, Manohar Publication, India, 1989.)

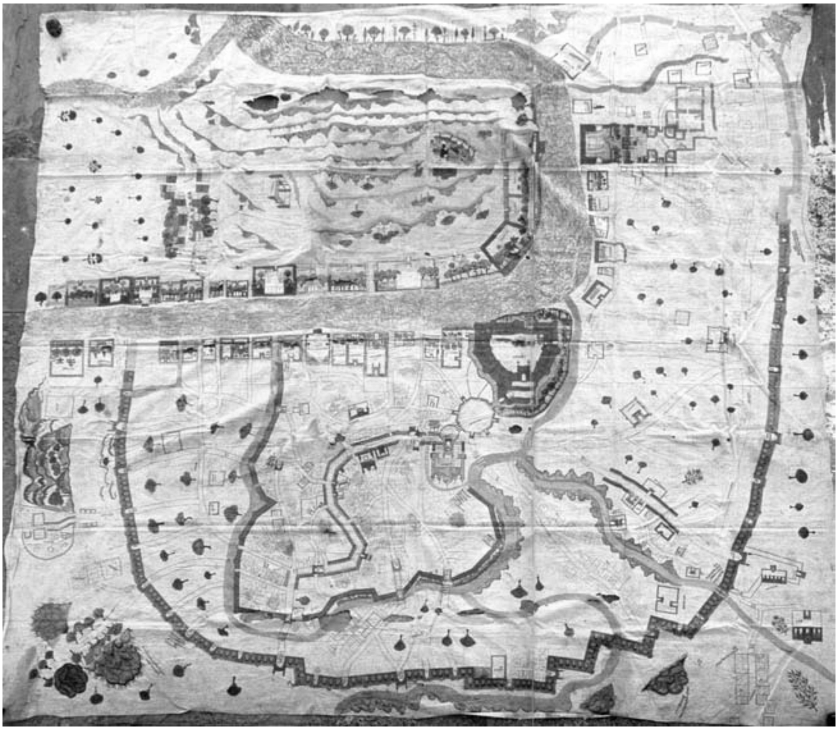

Fig. 2. Agra. (From Indian Maps and Plans by Susan Gole, Manohar Publication, India, 1989.)

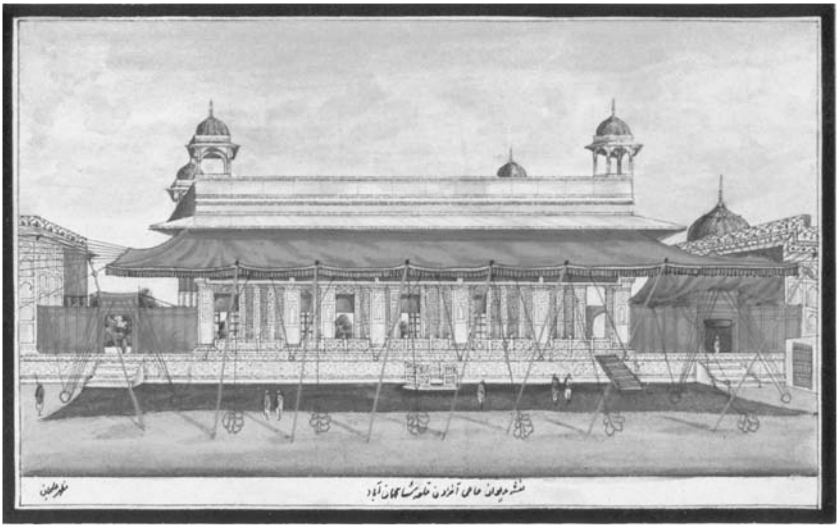
نقشه دیوان خاص اندرون قلعه شاهجهان آباد

Fig. 3. The Diwan i-Khass in the Red Fort, Delhi.

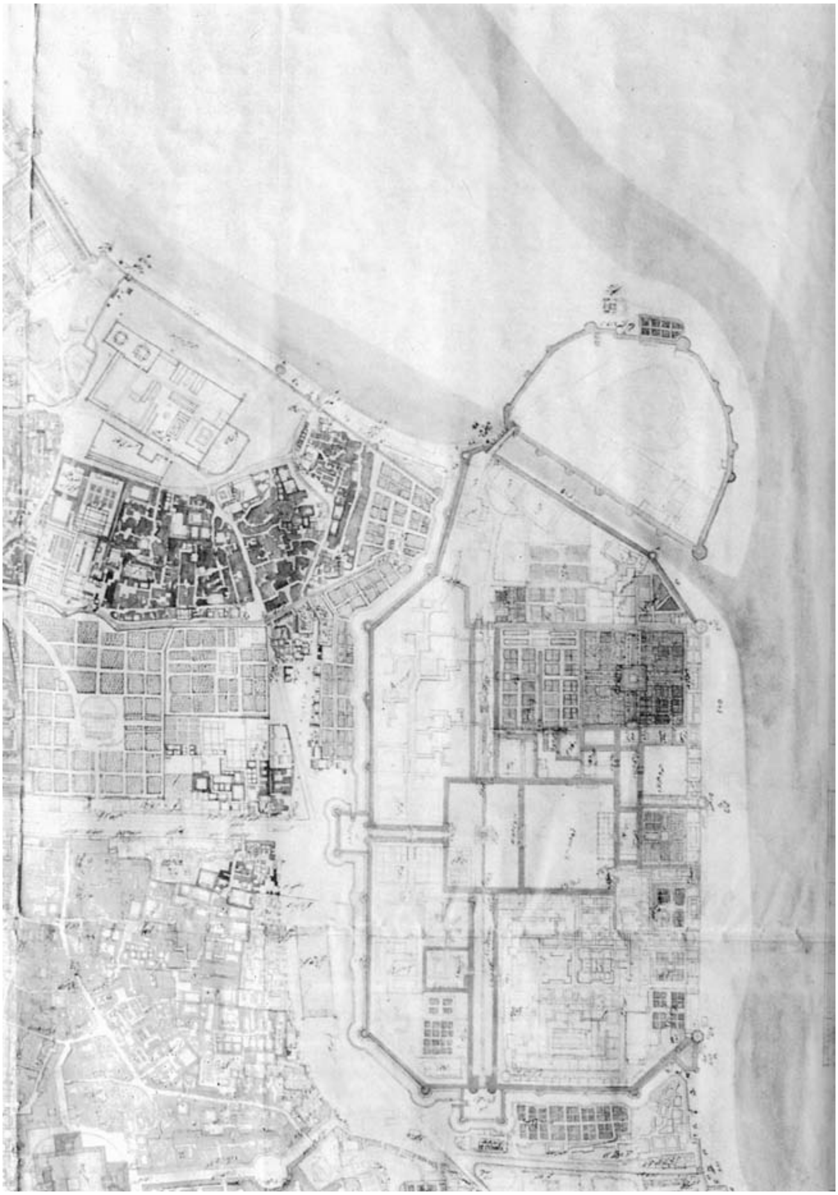

Fig. 4. A detail of the map of Shahjahanabad dated 1830.

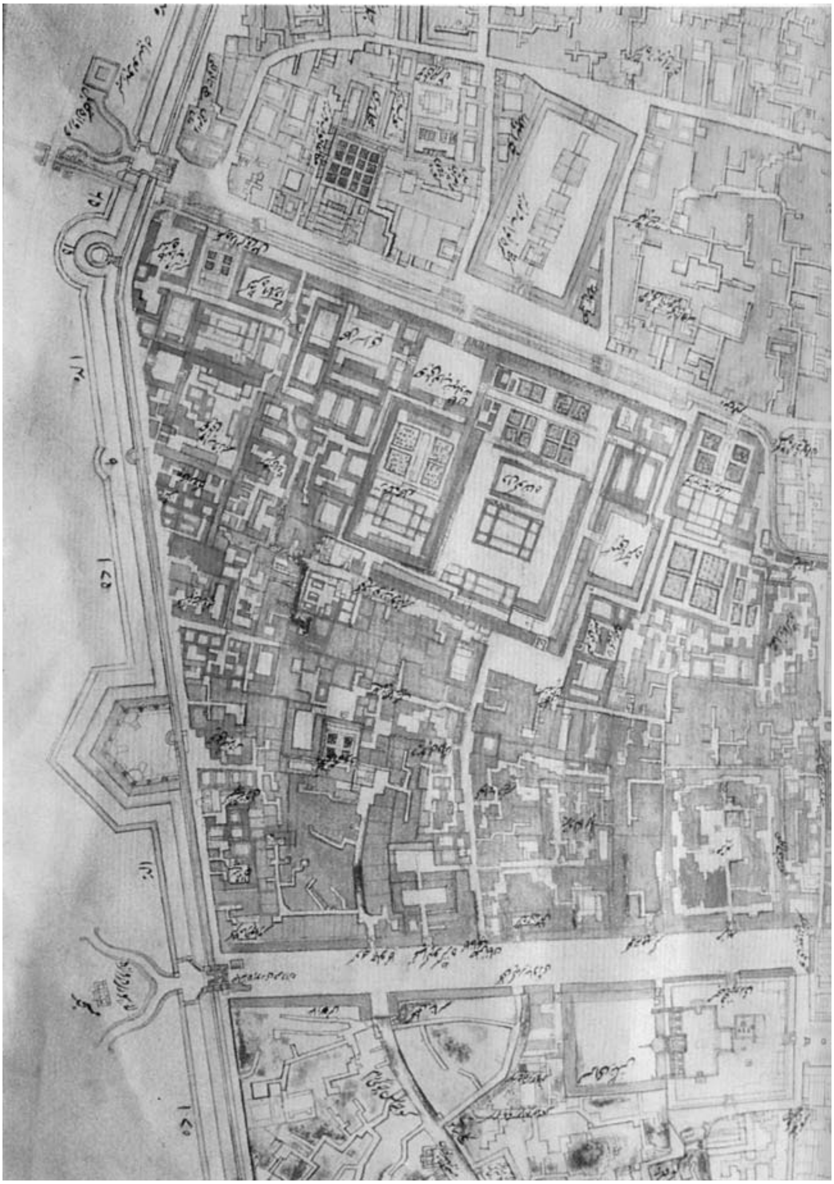

Fig. 5. The quarter between Kabul Gate and Lahore Gate in the map of Shahjahanabad dated 1830.

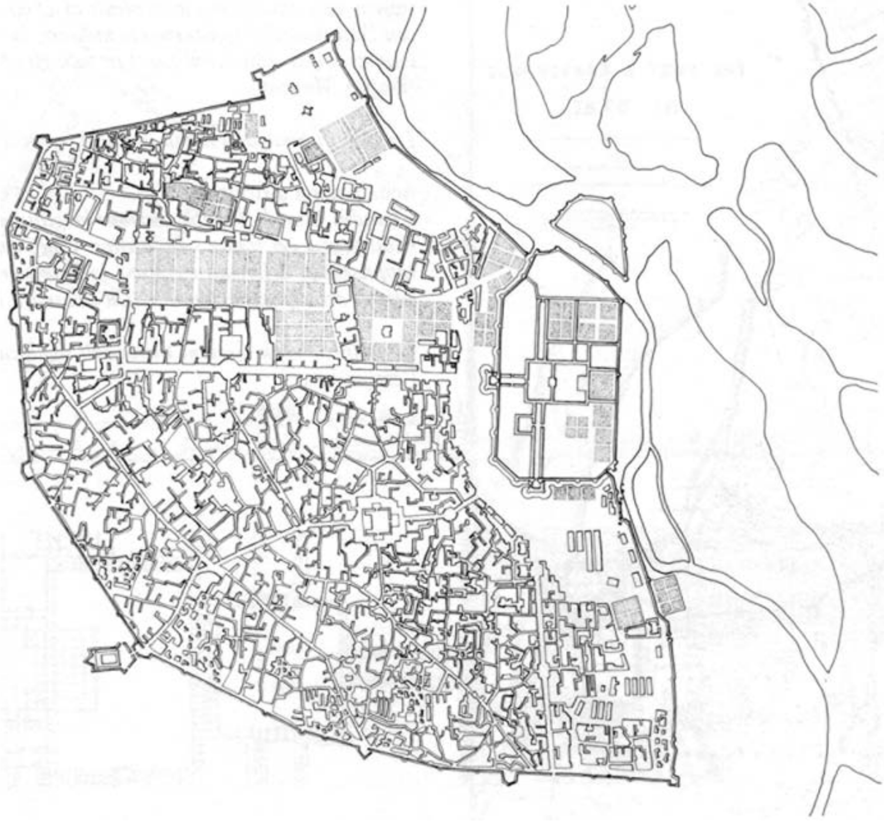

Fig. 6. Reconstructive map of Old Delhi in 1857.

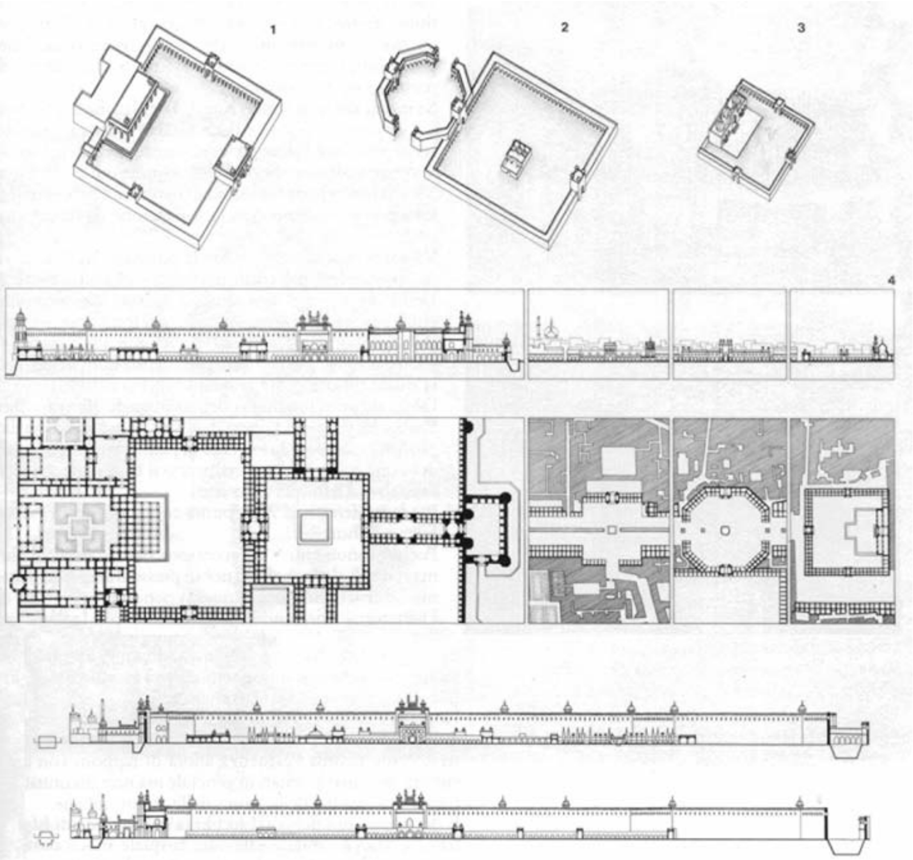

Fig. 7. Plan and transversal sections. 1. Diwan i-Amm; 2. Jahanara Begum Sarai; 3. Fatehpuri Masjid.

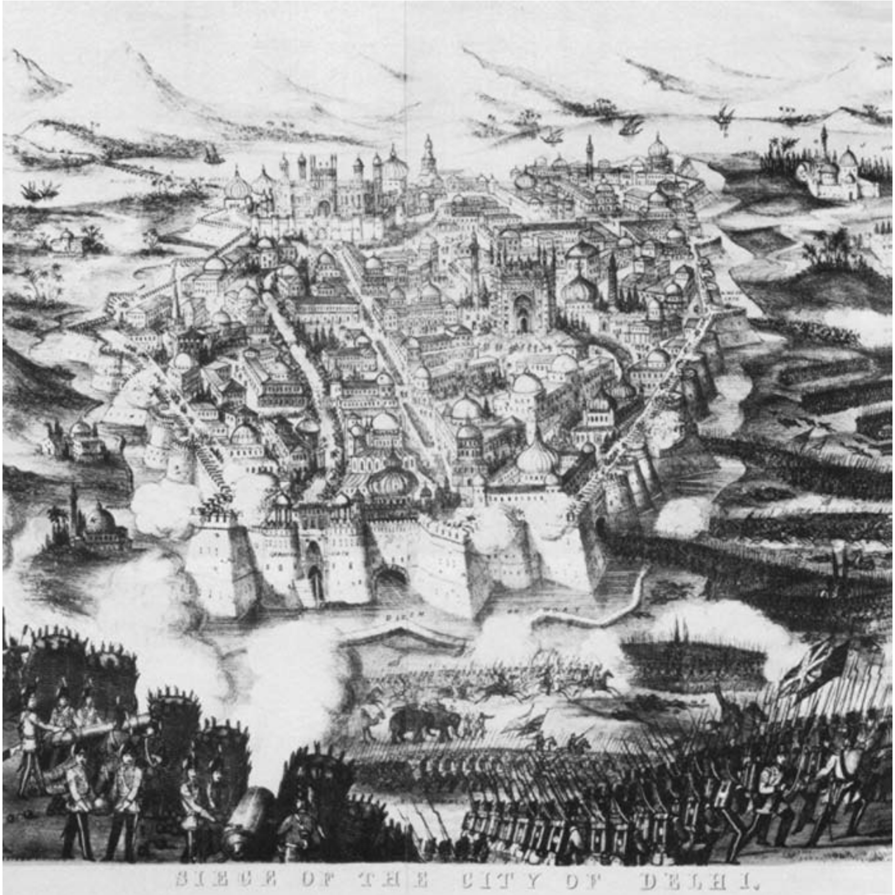
SIEGE OF THE CITY OF DELHI.

Fig. 8. In an arbitrary view of Old Delhi dated 1858 we see the Chandny Chowk.

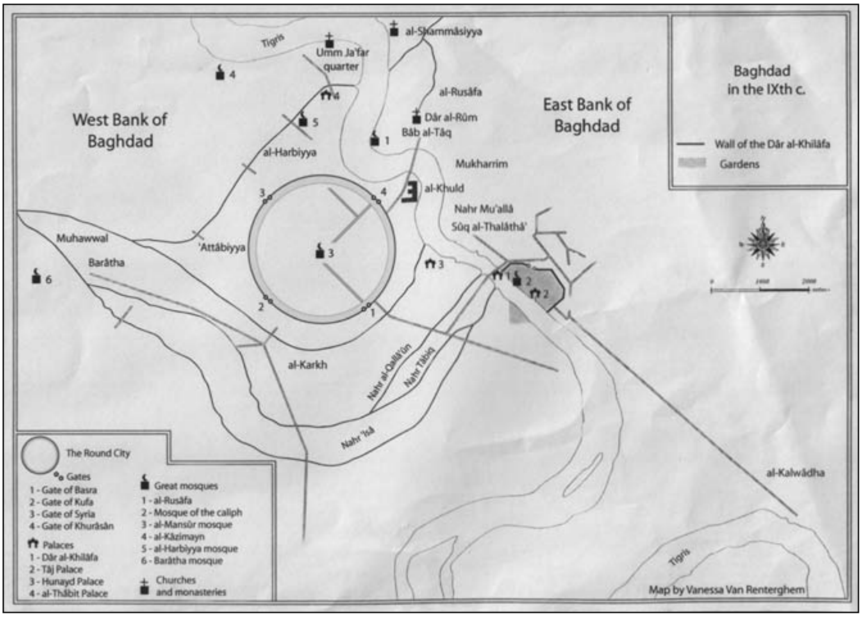
Baghdad
in the IXth c.
Wall of the Dâr al-Khilâfa
Gardens
Tigris
Umm Ja'far quarter
al-Shammâsiyya
al-Rusâfa
Dâr al-Rûm
Bâb al-Tâq
East Bank of Baghdad
West Bank of Baghdad
al-Harbiyya
Mukharrim
al-Khuld
Nahr Mu'allâ
Sûq al-Thalâthâ'
Muhawwal
Barâtha
'Attâbiyya
al-Karkh
Nahr al-Qallâ'ûn
Nahr Tâbiq
Nahr 'Isâ
al-Kalwâdha
The Round City
Gates
1 - Gate of Basra
2 - Gate of Kufa
3 - Gate of Syria
4 - Gate of Khurâsân
Palaces
1 - Dâr al-Khilâfa
2 - Tâj Palace
3 - Hunayd Palace
4 - al-Thâbit Palace
Great mosques
1 - al-Rusâfa
2 - Mosque of the caliph
3 - al-Mansûr mosque
4 - al-Kâzimayn
5 - al-Harbiyya mosque
6 - Barâtha mosque
Churches
and monasteries
Map by Vanessa Van Renterghem

Fig. 1. Baghdad in the ninth century.

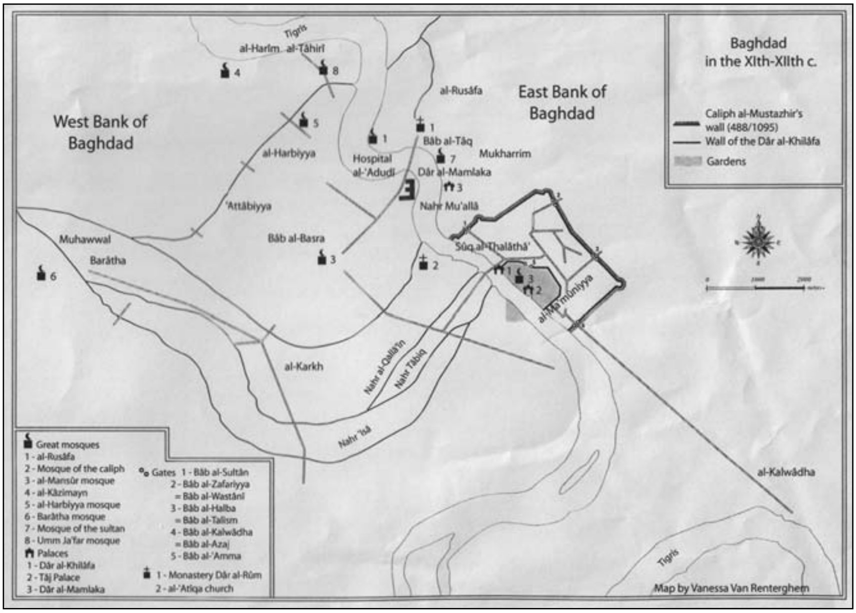
Baghdad
in the XIth-XIIth c.
Caliph al-Mustazhir's wall (488/1095)
Wall of the Dâr al-Khilâfa
Gardens
Tigris
al-Harîm al-Tâhirî
al-Rusâfa
East Bank of Baghdad
West Bank of Baghdad
Bâb al-Tâq
Mukharrim
al-Harbiyya
Hospital al-'Adudî
Dâr al-Mamlaka
Nahr Mu'allâ
'Attâbiyya
Bâb al-Basra
Sûq al-Thalâthâ'
Muhawwal
Barâtha
al-Ma'mûniyya
al-Karkh
Nahr al-Qallâ'ûn
Nahr Tâbiq
Nahr 'Isâ
al-Kalwâdha
Great mosques
1 - al-Rusâfa
2 - Mosque of the caliph
3 - al-Mansûr mosque
4 - al-Kâzimayn
5 - al-Harbiyya mosque
6 - Barâtha mosque
7 - Mosque of the sultan
8 - Umm Ja'far mosque
Palaces
1 - Dâr al-Khilâfa
2 - Tâj Palace
3 - Dâr al-Mamlaka
Gates 1 - Bâb al-Sultân
2 - Bâb al-Zafariyya
= Bâb al-Wastânî
3 - Bâb al-Halba
= Bâb al-Talism
4 - Bâb al-Kalwâdha
= Bâb al-Azaj
5 - Bâb al-'Amma
1 - Monastery Dâr al-Rûm
2 - al-'Atiqa church
Map by Vanessa Van Renterghem

Fig. 2. Bagdad in the eleventh–twelfth century.
]

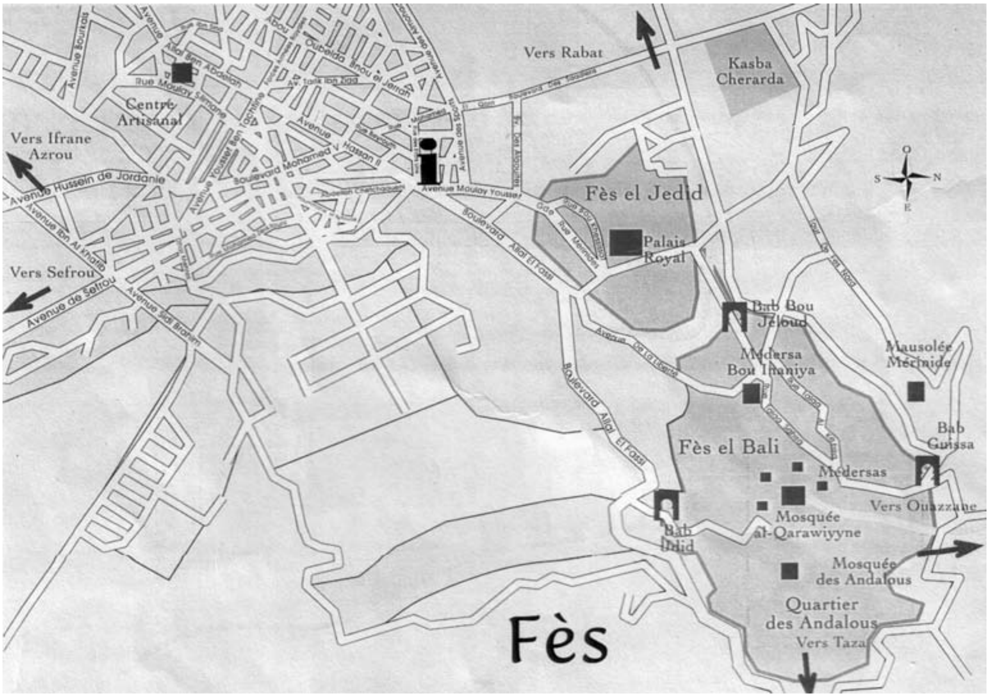
Vers Rabat
Kasba Cherarda
Centre Artisanal
Vers Ifrane Azrou
Vers Sefrou
Avenue Hussein de Jordanie
Avenue de Sefrou
Avenue Sidi Brahim
Avenue Moulay Youssef
Boulevard Mohamed V
Boulevard Allal El Fassi
Avenue Hassan II
Avenue Bourkais
Avenue Allal Ben Abdellah
Rue Moulay Slimane
Avenue Youssef Ben Tachfine
Avenue des Sports
Boulevard des Saadiens
Avenue de la Liberté
Rue des Mérinides
Fès el Jedid
Palais Royal
Bab Bou Jeloud
Medersa Bou Inaniya
Mausolée Mérinide
Bab Guissa
Fès el Bali
Medersas
Vers Ouazzane
Mosquée al-Qarawiyyne
Bab Jdid
Mosquée des Andalous
Quartier des Andalous
Vers Taza
Fès
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Fig. 1. Plan of Fez.

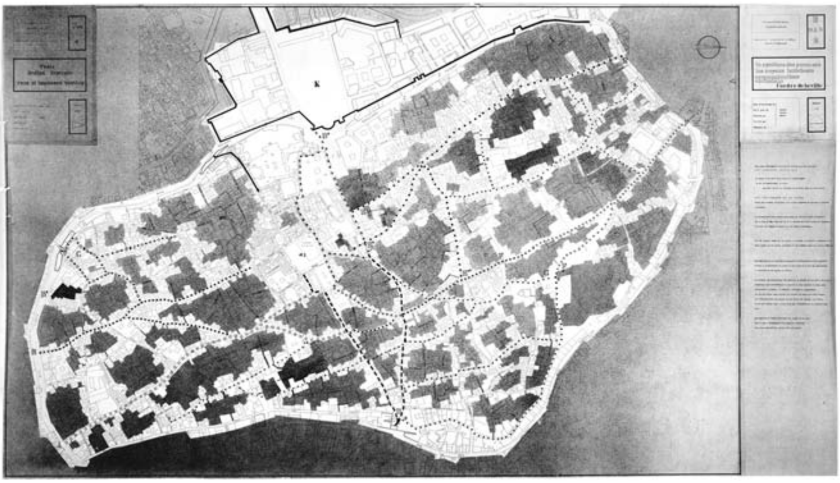


Fig. 1. The city of Tunis. Scale1/5000. Plan by Colin. Paris, Bibliothèque Nationale.

This plan, dated 1860, is probably the first such representation of the city obtained using reliable, if not perfect, instruments. At the bottom (east) is the Lake of Tunis, the outline of the old port and the future TGM Station. Above these are vegetable gardens and orchards through which the drainage canals pass. One can just make out the future Avenue de la Marine and the Maison de France under construction. In the centre of the plan are the Central Medina, encircled by walls, and the Bab el Bahr gate. From here, to the right, extends the Rbat Bab el Souika, next to which, on the eastern side, are a Jewish and two Muslim cemeteries. The Rbat Bab el Souika is encircled by its own walls to the north, while to the west it shares them with the Central Medina. To the east the walls are replaced by marshland. Between the western extremity of the Rbat, the Central Medina, and the Kasbah is a large open space used for military drills.

The Kasbah forms a separate city, next to the western side of the Central Medina, with which it communicates via a gate. It contains the royal palace, congregational mosque, and baths. The Central Medina, encircled by walls, is flanked to the south by the fortified Rbat Bab el Djedid, which includes Muslim cemeteries and uninhabited areas. Note that no road from the hinterland leads directly into the Central Medina. The traveller must first present himself at one of the peripheral gates, obtain right of entry, and then repeat this at one of the gates to the inner city. In conclusion, the city proper of Tunis, Tuns el Hâdhira, is made up of three distinct agglomerates, from north to south in succession, from the hill-cemetery of Djellaz to the high ground to the north.

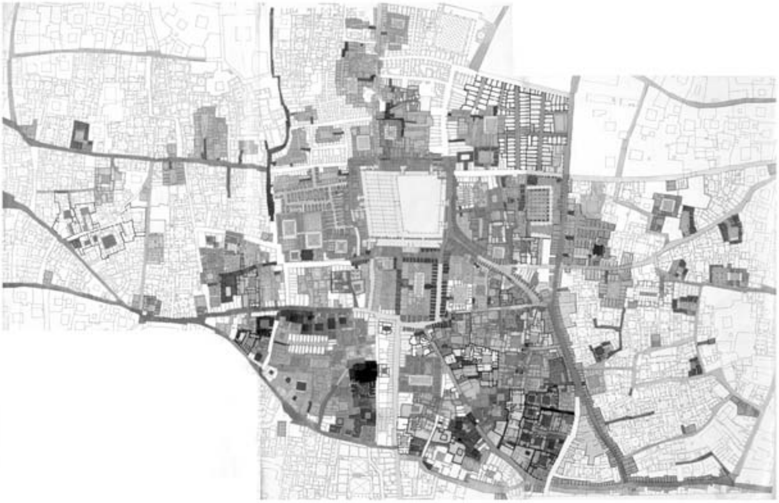


Fig. 2. Tunis Medina. Scale 1/1000. The inner city. Plan by Roberto Berardi.

The plan illustrates the inner city. Above, to the west, the Kasbah is delimited by a red line. To the south, from Bab el Djedid, is the forked route that begins at the gate and the blacksmith's souq (Rue el Menatki, Rue des Juges, Rue des Plaideurs) and ends in one direction (Rue Ben Bjebi, Rue Mohsen) at Place du Château, once the site of a royal palace, while in the other it continues as far as the souqs, crosses them, skirting the Great Mosque, and proceeds to Bab Benat. This last stretch constitutes a main route that goes from Bab Benat to the Great Mosque in one direction and Rue de la Kasbah in the other.

A second main route (Rue Ben Tayed—Rue Essourdou) breaks off, to the south, from a side gate of the palace, proceeds towards the Great Mosque and then branches off to become Rue Sidi Ali Azouz and join Rue Djamâa el Zitouna. From here it runs into Souq el Grana, coming from Bab el Souika, that forks off towards Bab el Carthagena to the east.

A third main route leaves Bab el Dzira with the name of Rue des Teinturiers and branches off in two directions: Souq el Blat, as far as the Great Mosque, and Rue Sidi Ali Azouz, which then flows into Rue Djamâa el Zitouna. The plan illustrates how these so-called main routes are studded with minor religious buildings—mesjeds, zaouias, and madrasas—and specialized staples near the city gates. It is this concentration of socially significant places that qualifies them as two main routes, as distinct from secondary routes.

The olive-green area on the plan to the right represents the destroyed part of the Hafsia, almost entirely organized around blind alleys, starting from Souq el Grana. Above, in the centre, is the network of dovetailing souqs, interwoven with the Great Mosque, madrasas, hammams, zaouias and staples.

The term "main route" does not indicate a street that cuts through large areas or that is more important hierarchically in terms of size; rather it indicates a frequently used route, where the presence of religious buildings and souqs selling food stuffs has created a less "private" route system than that of the blind alleys or secondary routes, which can be easily closed off.

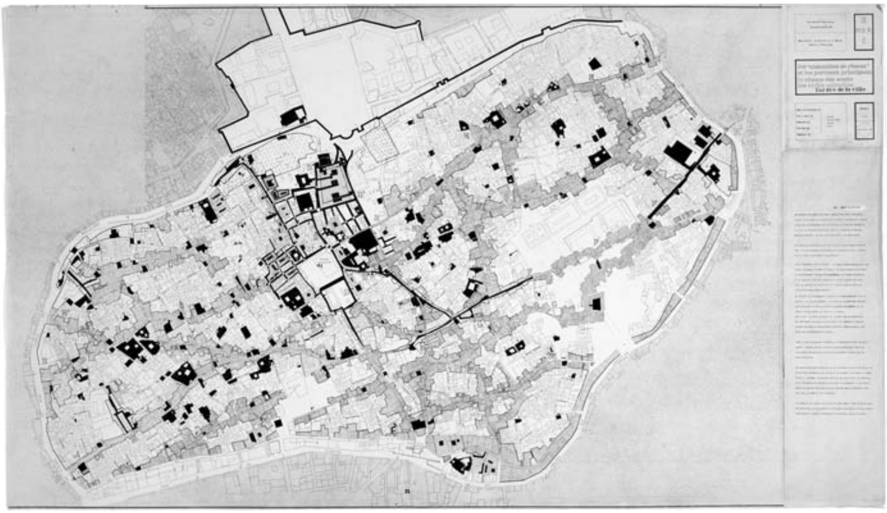


Fig. 3. Tunis Medina. Scale 1/1000. The network of main routes. Plan by Roberto Berardi.

The "main routes" are not voids incised between the buildings, nor routes without buildings traced out on a hypothetical urban plan; rather, they are architectonic organisms composed of two rows dwellings facing each other along an access route.

These "ribbons" are represented on the plan. They correspond not only to the building alignments but also to a succession of segments, made up of buildings and family groups that protect the privacy of those within them. These "inner" zones are themselves delimited by the "ribbons." In times of peril, the segments can be closed off, thereby interrupting the continuity of the route and impeding free circulation. Thus whole areas of the city are cut off, isolated from the outside. In such cases, the urban space seems entirely fragmented and the main routes loose their primary function within it.

At the beginning of these routes are, a city gate, the cell of a holy man, the staple of a guild, an occasional oukala. Along the routes, as already mentioned, are minor mosques, buildings for assisting pilgrims, theological schools, and mausolea. The city of the rich and socially important lies beyond these defensive belts.

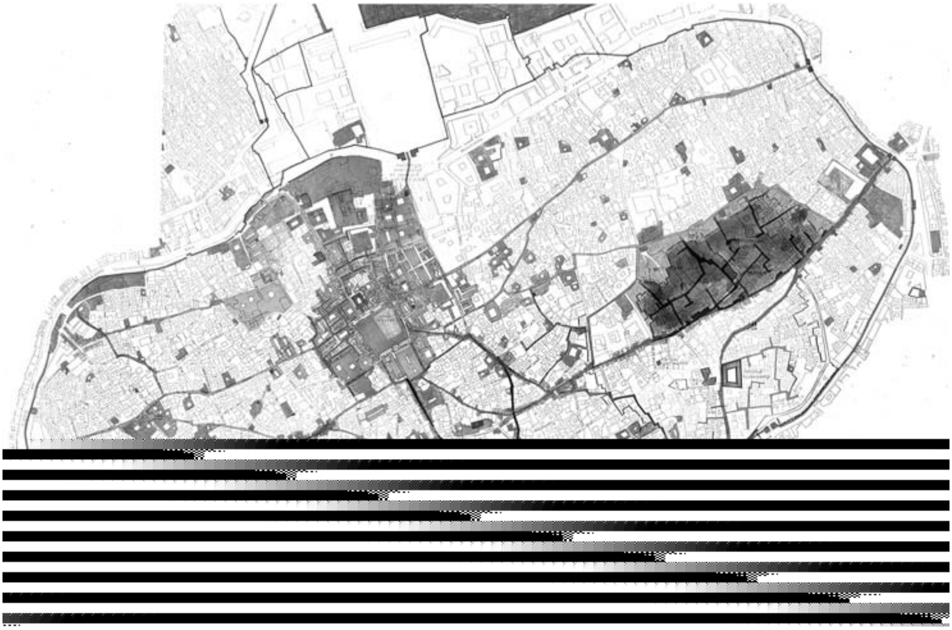


Fig. 4. Tunis Medina. Scale 1/1000. The inner city. Plan by Roberto Berardi.

This plan is like a photographic negative of the preceding one; it represents the areas within the network of main and secondary routes. The routes act like protective belts, concealing what lies behind them. These protected areas, which vary in size and shape, are organized around blind alleys and lanes that can, if necessary, be closed off.

Fig. 5. Tunis Medina. Scale 1/1000. The blind alleys. Plan by Roberto Berardi.

This plan demonstrates the importance of the organization of the blind alleys in the construction of this urban space. The main routes are in yellow, the blind alleys (some of which branch off in different directions) in grey and brown. It becomes clear from the plan that the urban space follows complementary patterns of aggregation, obeying precise rules that concern, not so much a model of urban planning as the processes of dovetailing housing clusters and an intarsio-like organization on a general scale of agglomeration. At least until recently, the housing clusters represented the settlement of an extended family, or better still, of a particular lineage, and often these were created at the expense of garden areas. Thus, the order established by a blind alley—by its branches and the varying size of its dars—accounts for a widespread procedure in this urban society, not only in the construction of the space belonging to a particular lineage, but of the entire urban space.

The relation between the “ribbons” of houses and the clusters organized around the blind alleys could perhaps best be understood by studying changes in property ownership. Certainly, the settlements of prestigious families were generally grouped around the blind alleys, while along the defensive “ribbons” of houses, clients, staff, and other, less important members of the extended family settled, thereby forming a protective belt and, spatially, a barrier of invisibility. Note the different conception of urban space with regard to western European cities from the late middle ages to the present.

Fig. 6. Tunis Medina. Scale 1/1000. Around the Great Mosque. Plan by Roberto Berardi.

The Great Mosque, in yellow in the middle of the plan and completely surrounded by souqs, is inlaid in their pattern and is thus invisible. The same happens with the staples, which, like the large family aggregations, occupy spaces concealed behind the series of workshops. Where the souqs end abruptly, the "ribbons" of dwellings begin that conceal the larger, more wealthy habitations, made up of more than one house. Sometimes, for instance to the left below, the larger houses are provided with private staples, such as the Fondouk el Henna that opens onto Rue el Nayar, while its owner's dwelling opens onto Rue Diamâa el Ghorbal, passing through a family shrine, now in ruins. The houses of the Ghorbal family dovetail with the northern side of the Fondouk el Henna from which one has access to them.

In the aggregate to the right of Rue Djamâa el Zitouna, between Rue de la Kasbah and Souq el Ouzar, the same type of conjunction between a large house and a workshop recurs. Next to the Great Mosque, at the intersection of Rue Sidi Ben Arous and Souq el Trouk, a zaouia, a madrasa, a small religious building, and a (destroyed) staple are interwoven in the kaisariyye. Types of organization around blind alleys or lanes, houses with dribas (the latter often with a complex articulation), "ribbons" of souqs, and of dwellings are here represented.

Fig. 7. Kairouan Medina. From Paola Jervis, “Kairouan,” in Enviromental Design, 1988. Measured drawing adapted by Roberto Berardi.

The Islamic holy city of Kairouan, once the capital of Ifriqya, after the invasions of the Banu Hilal tribe was slowly rebuilt over its ruins on the once fertile North African plains. The present city does not follow the typical layout of the first Muslim city, and so the Great Mosque, once the focal point of the urban spatial organization, is now on its outskirts, far from the souqs and staples, and is, above all, a place of pilgrimage for Muslims from other countries.

As Paola Jervis (op. cit.) has underlined, it no longer possible to retrieve a syntax of built space here as exact and organic as that of Tunis Medina. Nevertheless, we can still recognize the arrangement of souqs in linear succession, the “intarsio” of religious buildings both in the organization of “ribbons” of houses lining the routes and in the network of souqs, the blind alley systems and the more recent encroachment of houses with a driba beyond the “ribbons” of the so-called main routes. All the spatial strategies used in the transformation of a series of souqs in fondouks and vice-versa have been applied here. Yet the whole seems more like an unplanned “intarsio” of sporadic settlements, without the spatial unity and congruity of Tunis Medina. Here a different model has been used, the fragmentary nature of which has still to be deciphered. What is impressive is the systematic repetition of dwellings with T-shaped baits that form a reticular pattern, in terms of size and distribution, along the whole surface area of the agglomeration. I know of no other Arab-Muslim city in which this type of dwelling plays such a fundamental role.

Fig. 8. Fez. Around the Great Mosque. From Stefano Bianca, *Urban Form in the Arab World*, London, 2000. Plan assembled and reworked by Roberto Berardi.

This measured drawing represents the immediate vicinity of the Qarawiyyin Mosque, in the city of traders and artisans, as distinct from Fez el Djedid, seat of the king and his court. It includes the entire extension of the markets (souqs and fondouks) the main religious buildings—(the Great Mosque, the mausoleum-mosque of Moulay Idriss and madrasas hidden from view behind the "ribbons" of shops) and clusters of family dwellings wedged between the series of workshops and organized around blind alleys that end at the souqs through imperceptible openings. The blind alleys are often very long, and like those in other similar cities, derive from aggregations followed by "disaggregations" and reorganizations; that is, from a transformation of family ties, or indeed a substitution of family groups and the construction of new building clusters. They are, therefore, extremely broken up and angular. Their minor branches serve smaller housing clusters and end, for instance, at a souq that flanks the Great Mosque to the east and southeast.

Along the main commercial street to the west a series of workshops is organized around open spaces, creating a number of unconventional fondouks. The kaisariyye extends along the western flank of the Great Mosque; it is similar in plan to that of Tunis. The combinations and permutations illustrated in the Appendix find their precise application here.

Fig. 9. Sfax Medina. From M. Van Der Meerchen, “The Sfax Medina,” *Monumentum* 8 (1972). Plan by Roberto Berardi.

Sfax Medina is organized around a double, diametrical “ribbon” of markets (in orange-yellow), tangent to the western side of the Great Mosque. Outside the gates to the north and south are workshops that produce dust, smoke, and noise. The defensive walls are arrayed with bastions and mausolea. A further series of markets, parallel and perpendicular to the two main “ribbons,” extends from the northern gate to the Great Mosque, and is lined with mesjeds and madrasas. To the west and east are “ribbons” of houses along the main routes—the former indicated by entrance skifas in red—and clusters of family dwellings organized around blind alleys (in purple, pink, and yellow). The same applies the zone below and that to the east of the Great Mosque. The distinction between blind alleys and open passageways is highly debatable. The length of the lanes without an exit onto other streets suggests, rather than thoroughfares, a succession of housing clusters that can be broken up at will. Note, moreover, the regular “intarsio” pattern of religious buildings (in green) along the routes that lead to the Great Mosque, as well as along their secondary routes.

Fig. 10. Damascus. The medina and parts of the suburbs. From the French cadastral plan of the City of Damascus, 1932. Scale 1/500. Plan assembled and colour-coded by Roberto Berardi.

The information contained in the cadastres has been integrated with that published 12 years earlier by Wultzinger and Watzinger in *Damaskus, die Islamische Stadt*.

In this extremely detailed plan of the intra muros city, the project for a neighbourhood in the heart of a suburb is outlined to the left (west) above. Below this is the area around the citadel, surrounded by souqs that have been partially reorganized around the route leading to the Great Mosque. Below this are areas of demolition and reconstruction, the latter in the form of a division into lots of another part of the suburbs. Below this is a part of the intra muros city. Further down is a large cemetery and a suburb. The building work that led to the demolition of the western suburbs may be dated to c. 1932 and is indicated in orange on this plan.

Apart from the Hellenistic via recta, there are routes from the same period going in a north–south and east–west direction, though identifying a kind of imprint from a pre-Arab past is one thing, identifying the structure of a plan in these vestiges is quite another. Indeed, within these fossilized networks, the aggregate is organized according to non-Hellenistic schemes: the very same ribbon-like arrangement of souqs and fondouks, houses along the routes, and clusters of family dwellings along one or more blind alley or along a ramified blind alley, in the kind of organization that is by now familiar to us. There are no forking main routes, such as are common in Tunis, for instance. On the other hand, there are staples and oukalas near the gates, as in all the other cities we have described. The inhabited areas tend to have a garden in every courtyard (like Aleppo, see Plate 11 below); in any case every dwelling has at least a tree and a circular well.

Many madrasas, mesjeds, and zaouias are scattered around the Great Mosque, but also along the lanes that serve the residential areas within the vestiges of Hellenistic routes, in the more arbitrary routes near the ancient walls (to the southwest, for instance), and even in the suburbs. To what extent have changes in the watercourse that encircles the city from north to east influenced settlement patterns? And to what extent did pre-Hellenistic routes affect the Greco-Roman and Islamic organization of urban space? Only archaeological excavations, which now seem impossible, could tell. In any case, apart from the curiosity excited by the traces of a theatre, an odeum, and a forum, we may also note that:

a) The neighbourhoods around the Great Mosque form a sort of immense workshop in which souqs and fondouks proliferate, flanking and backing onto housing clusters, madrasas, and small shrines. These workshops extend to the end of the via recta and the northern gates. The production of wealth and the production of equity and rectitude in life and before God coincide with most of the intra muros city, which also contains dwellings of different sizes that form an intarsio-like pattern.

b) The residential buildings, in the form of housing clusters, are able to penetrate, along the blind alleys, every nook and cranny within the heart of the city, and spread out over the rest of the city too, following the well-known scheme of “ribbons” of houses along the streets and blind alleys from which they reach the innermost zones and shape the clusters of family dwellings isolated from the public thoroughfares. Traces of the Hellenistic network are reused in a series of hierarchies and modes of occupation, which conform completely to what we have seen in Tunis, Kairouan, Sfax, and Fez. The space created here by these processes is identical to what we find in all these cities. The straight route has no views; the square or rectangular web is traversed by paths, penetrated by dribas and blind alleys, its ancient metrical and compositional value thereby annulled.

Fig. 1. Map of medieval Cairo.

Fig. 2. View of Cairo and the Citadel. Sketch by Louis-François Cassas, Wallraf-Richartz Museum, L. F. Cassas (Egy 8).

Fig. 3. Map of Bayn al-Qasrayn, Nicholas Warner.

Fig. 4. Citadel with Great Palace by Louis-François Cassas.

Fig. 5. Street of Cairo, L. Libay.

Fig. 5. Street of Cairo, L. Libay.

Fig. 6. The mosque of Qaytbay in the cemetery, L. Libay.

Fig. 1. Al-Aqsa mosque and the Umayyad palaces next to the Southern Wall of the Haram.

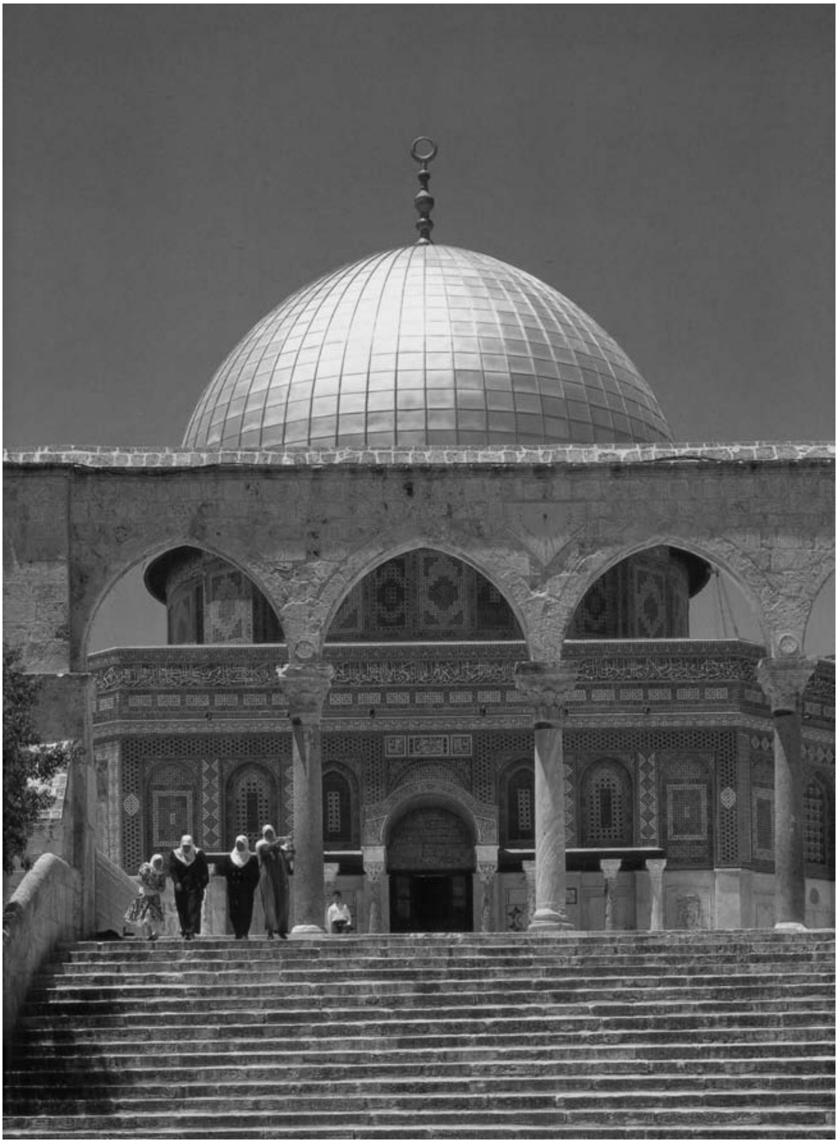


Fig. 2. The Dome of the Rock and the Dome of the Chain.

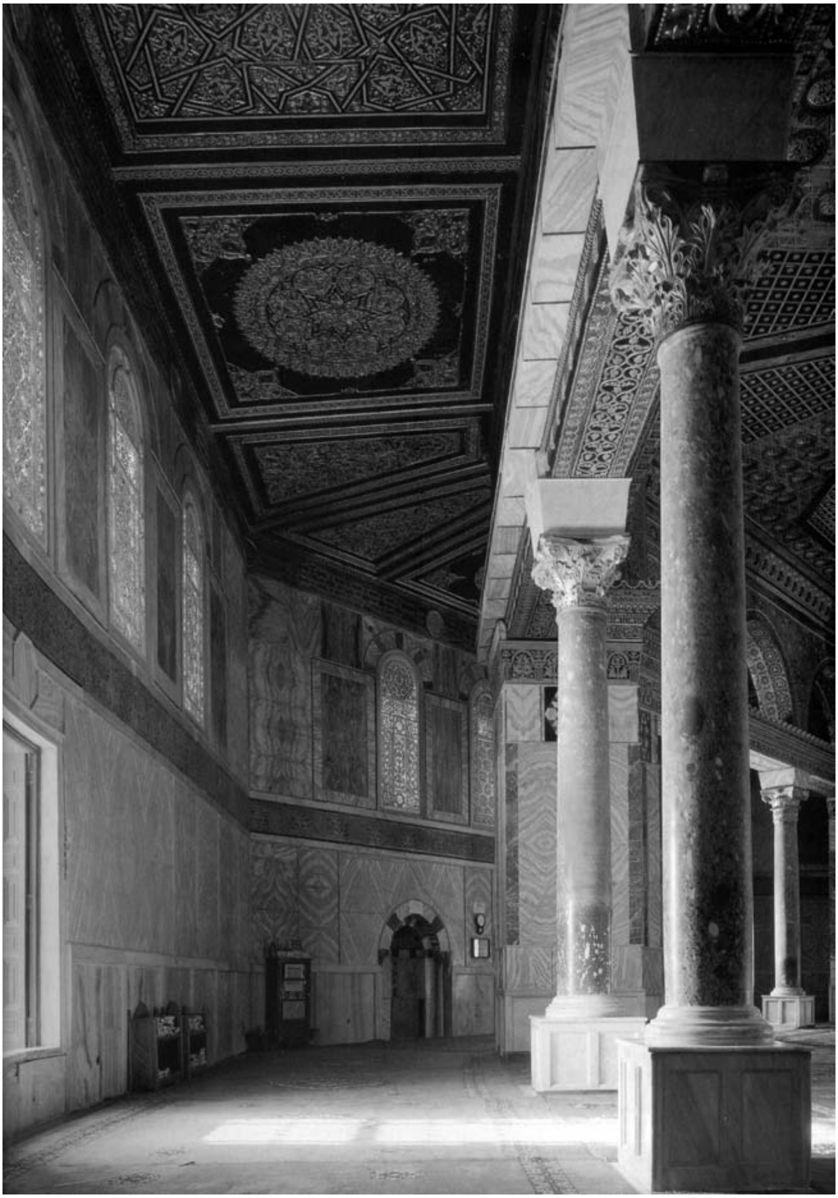


Fig. 3. Al-Ashrafiyya mosque.

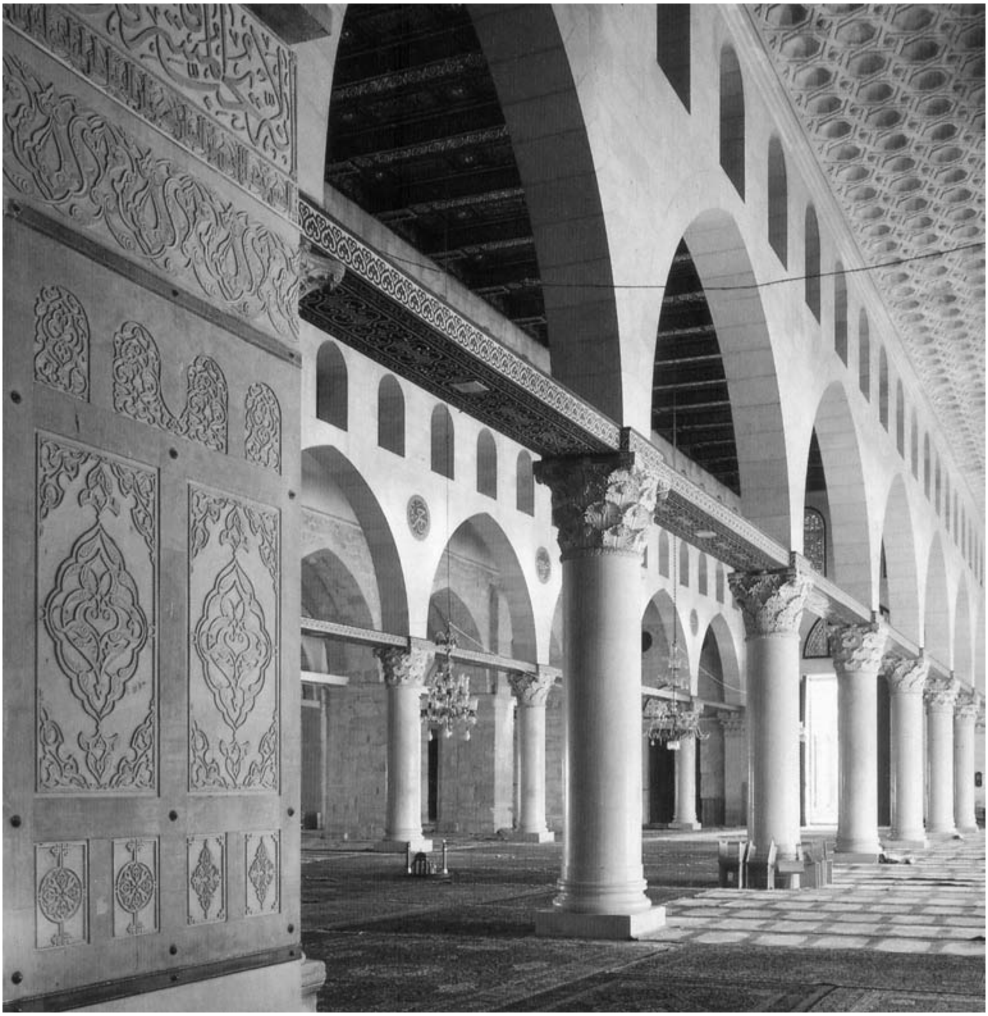


Fig. 4. The Dome of the Rock facing the Holy Sepulchre.

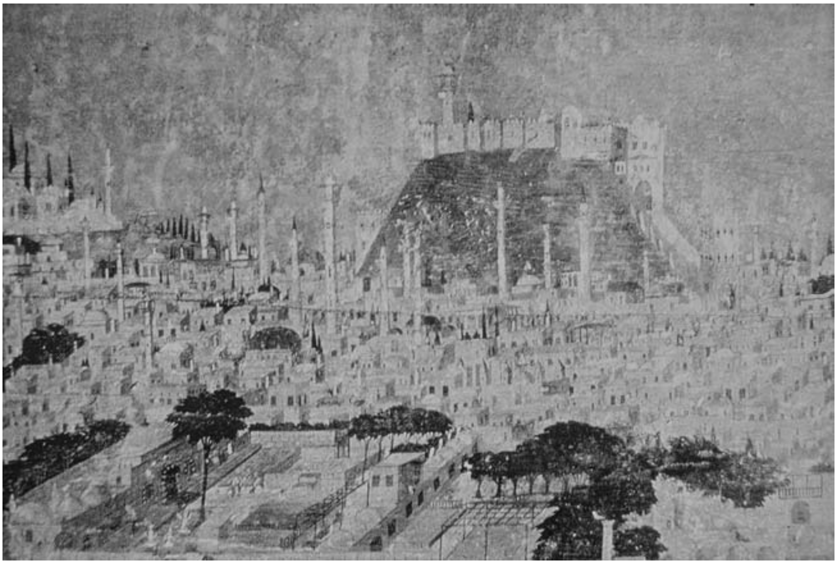


Fig. 1a. The minarets of Aleppo: view of Aleppo in the eighteenth century (autrefois au palais Azam de Hama).

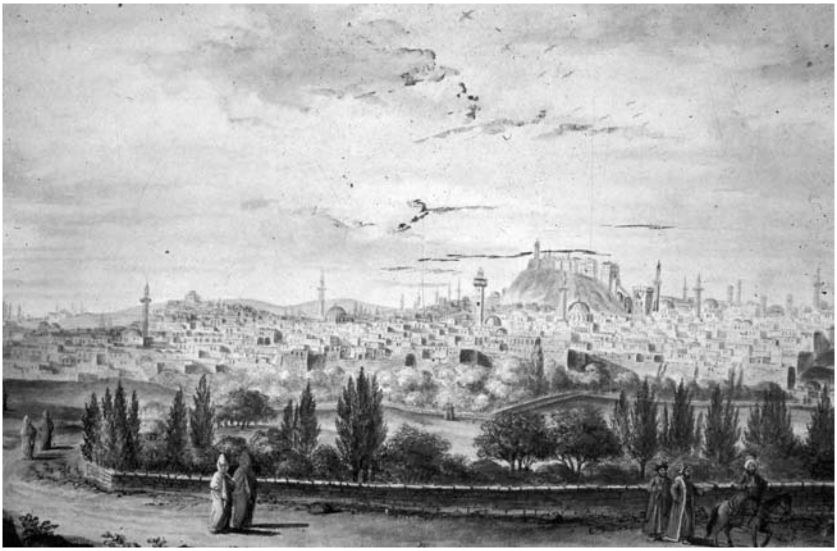


Fig. 1b. The Minarets of Aleppo: view of Aleppo, around 1790, by the painter François Rosset.

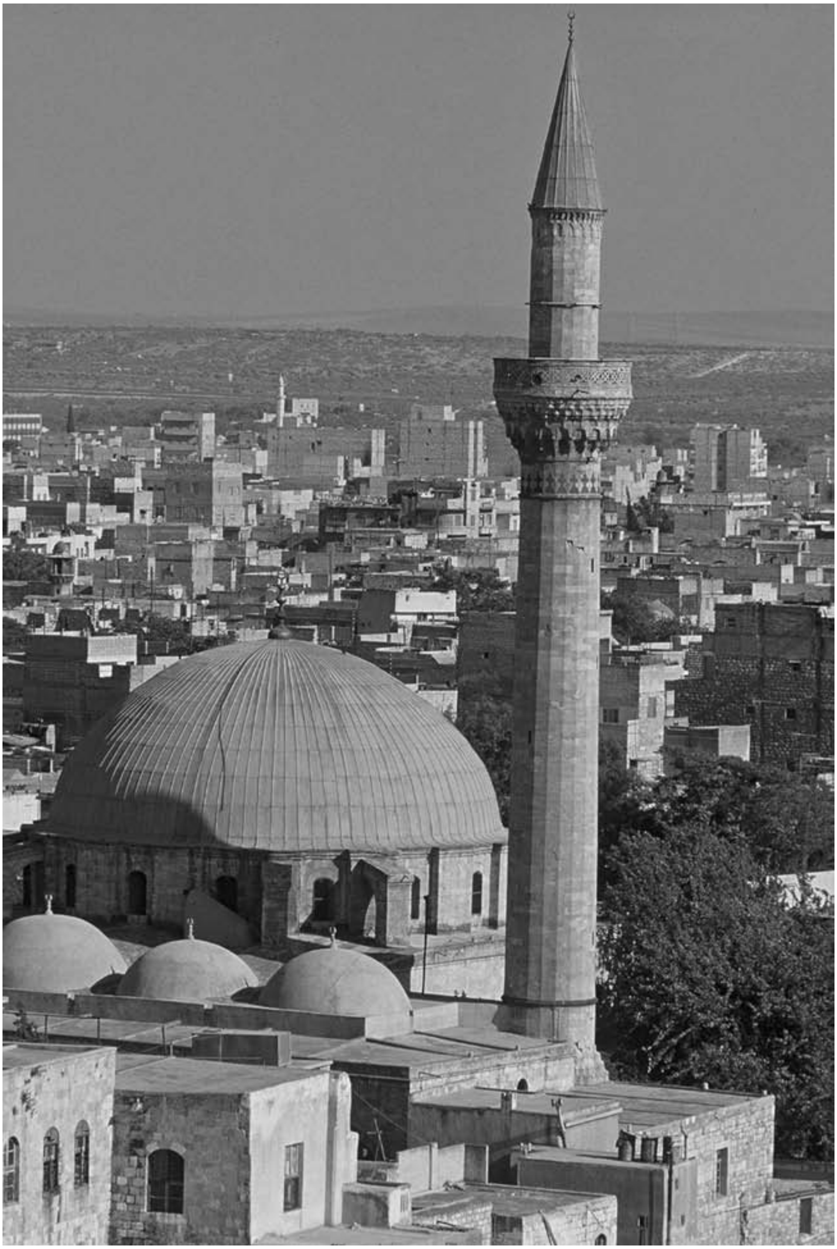


Fig. 2a. The waqf of Muhammad Pacha Dûqakîn Zâda, around 1555: the {Adliyya mosque.

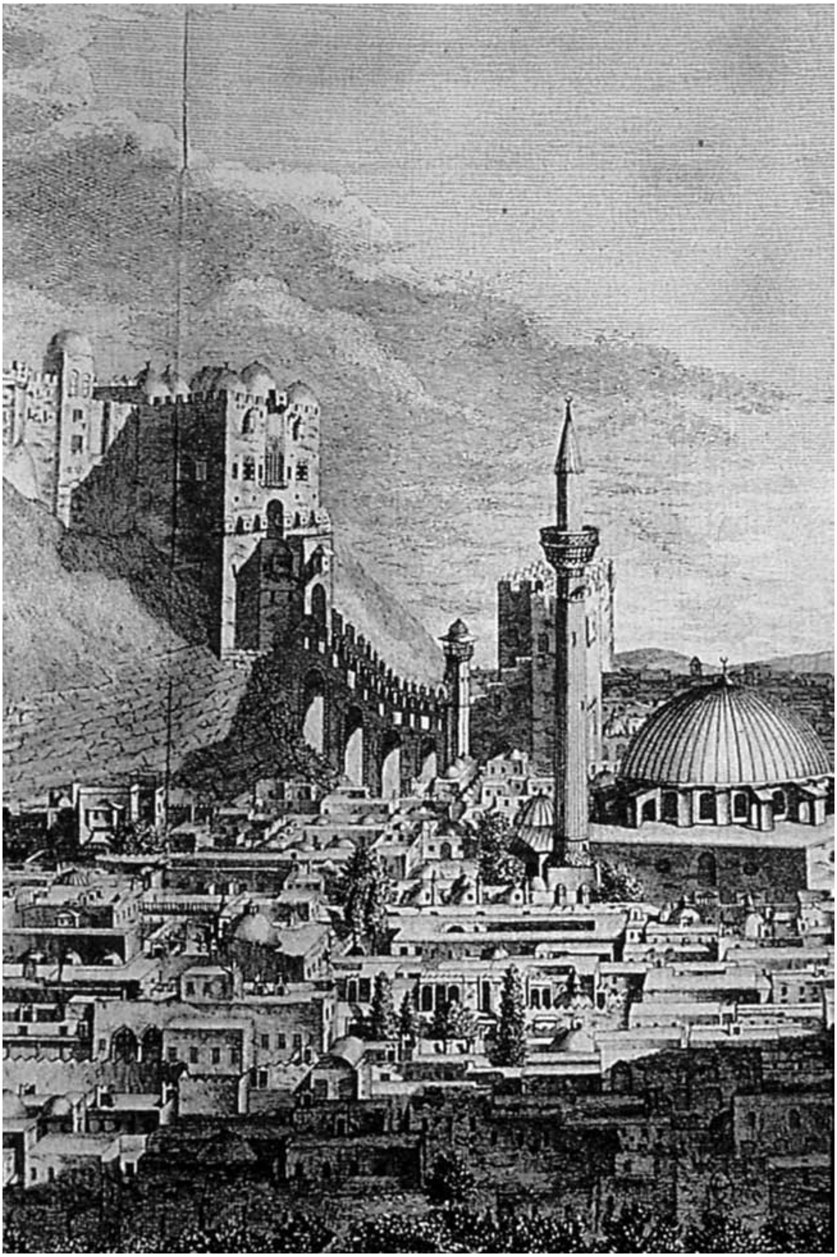


Fig. 2b. The waqf of Muhammad Pacha Dûqakîn Zâda, around 1555: the mosque of {Adliyya and the Citadel. Engraving by Drummond, eighteenth century.

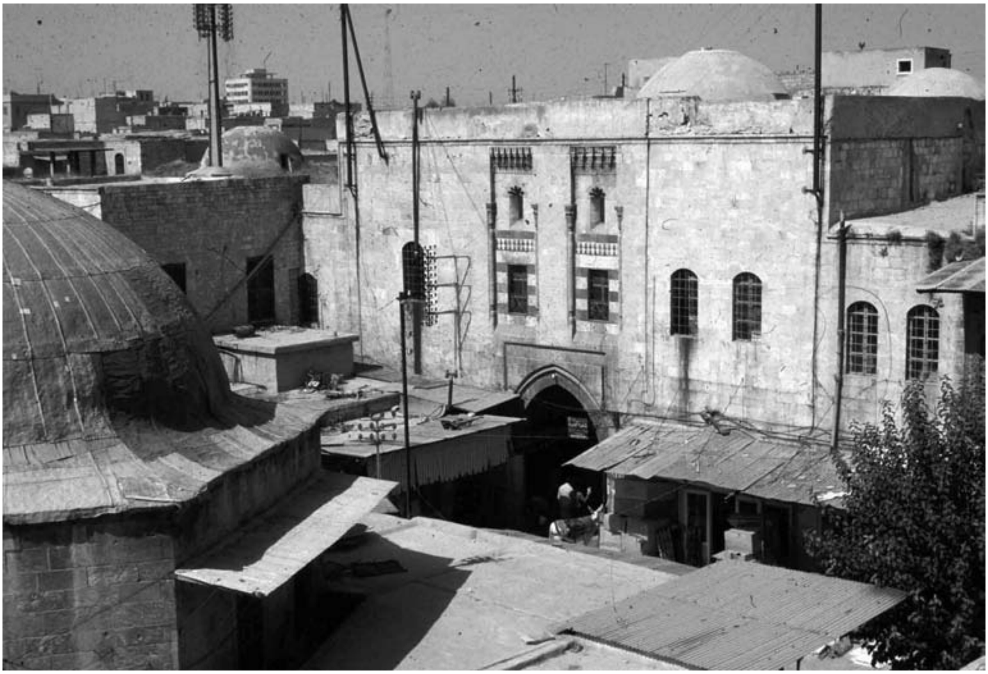


Fig. 3a. The waqf of Ibrâhîm Hân Zâda, in 1574: courtyard of Khan al-Goumrok.

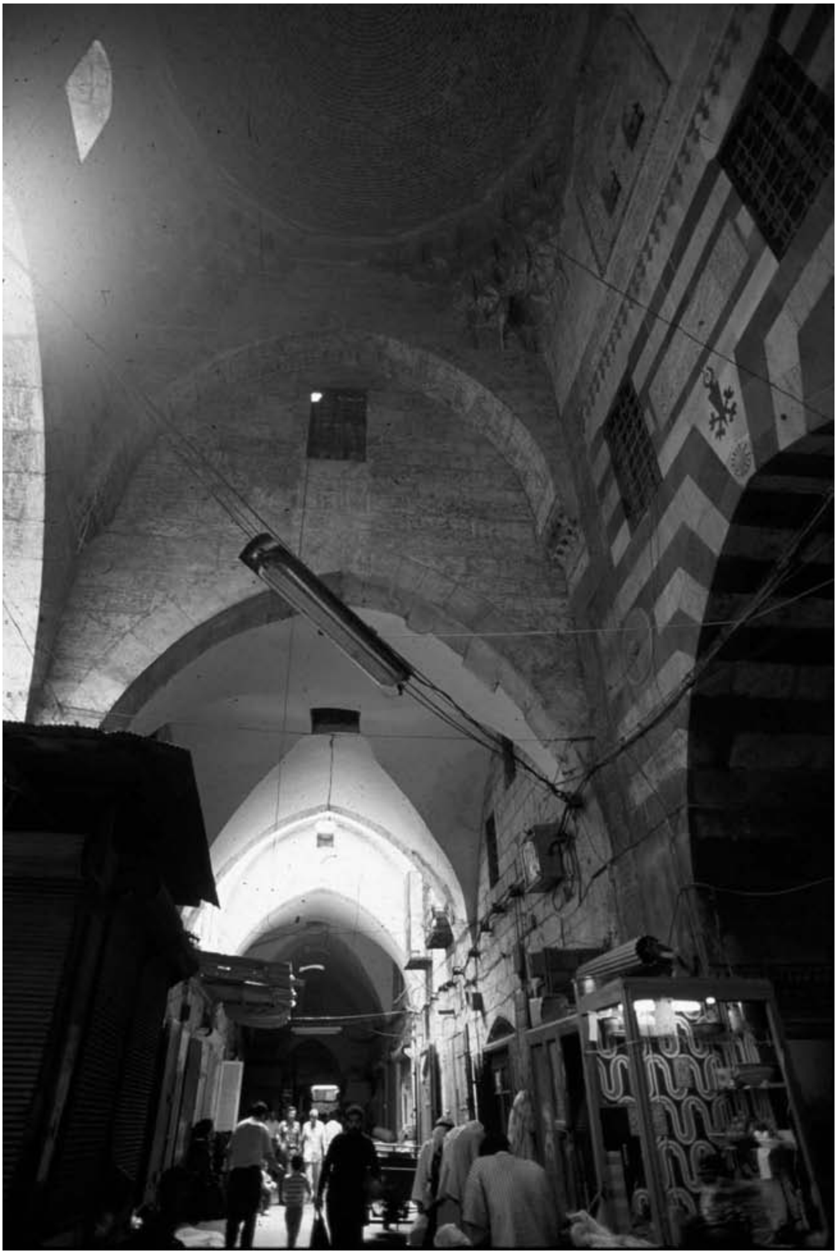
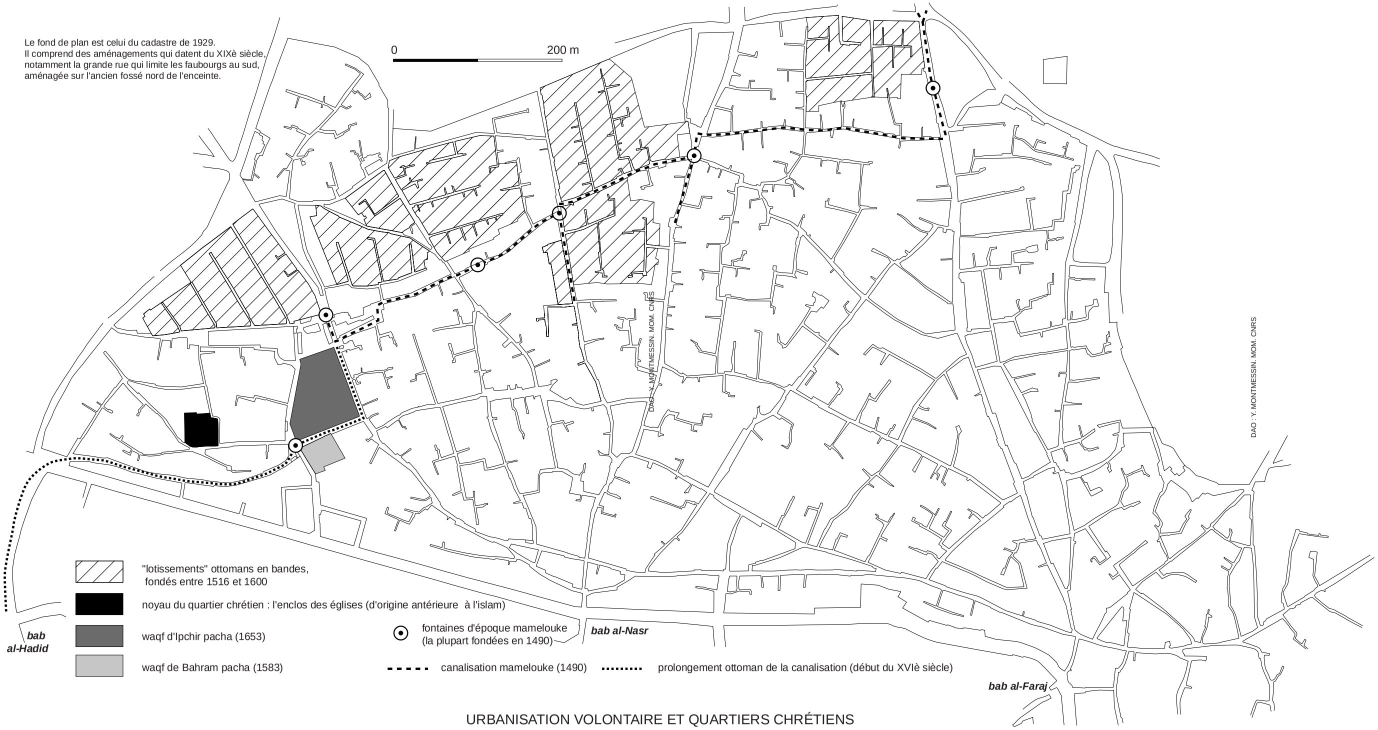


Fig. 3b. The waqf of Ibrâhîm Hân Zâda, in 1574: souq of Khan al-Goumrok.



0
200 m
"lotissements" ottomans en bandes, fondés entre 1516 et 1600
noyau du quartier chrétien : l'enclos des églises (d'origine antérieure à l'islam)
waqf d'Ipchir pacha (1653)
waqf de Bahram pacha (1583)
fontaines d'époque mamelouke (la plupart fondées en 1490)
canalisation mamelouke (1490)
prolongement ottoman de la canalisation (début du XVIè siècle)
bab al-Hadid
bab al-Nasr
bab al-Faraj
DAO : Y. MONTMESSIN. MOM. CNRS
DAO : Y. MONTMESSIN. MOM. CNRS

Le fond de plan est celui du cadastre de 1929.
Il comprend des aménagements qui datent du XIXè siècle,
notamment la grande rue qui limite les faubourgs au sud,
aménagée sur l'ancien fossé nord de l'enceinte.

URBANISATION VOLONTAIRE ET QUARTIERS CHRÉTIENS

Fig. 4. “Voluntary” Urbanization and the Christian quarter (fifteenth and sixteenth centuries): new adduction of water, allotted neighbourhoods.

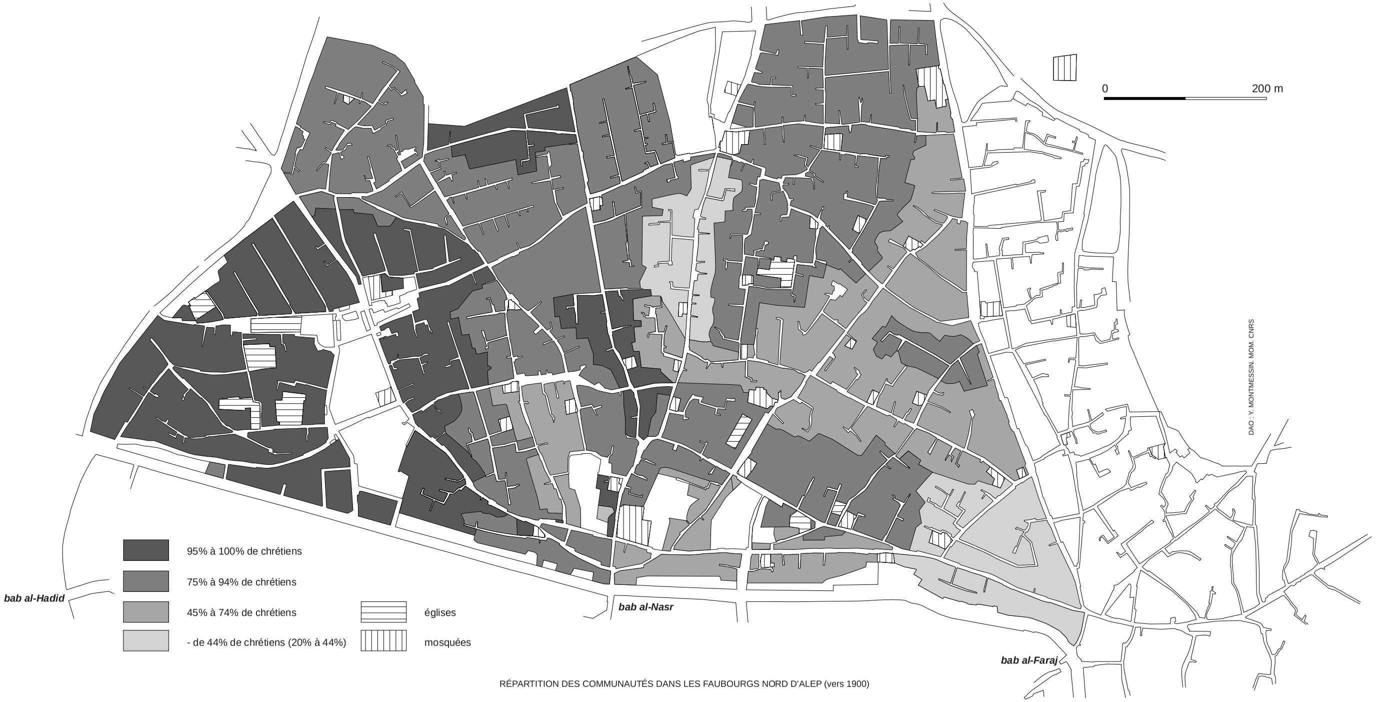

0
200 m
DAO : Y. MONTMESSIN, MOM, CNRS
bab al-Hadid
bab al-Nasr
bab al-Faraj
95% à 100% de chrétiens
75% à 94% de chrétiens
45% à 74% de chrétiens
- de 44% de chrétiens (20% à 44%)
églises
mosquées
RÉPARTITION DES COMMUNAUTÉS DANS LES FAUBOURGS NORD D'ALEP (vers 1900)

Fig. 5. Distribution of communities in the northern suburbs of Aleppo (around 1900).

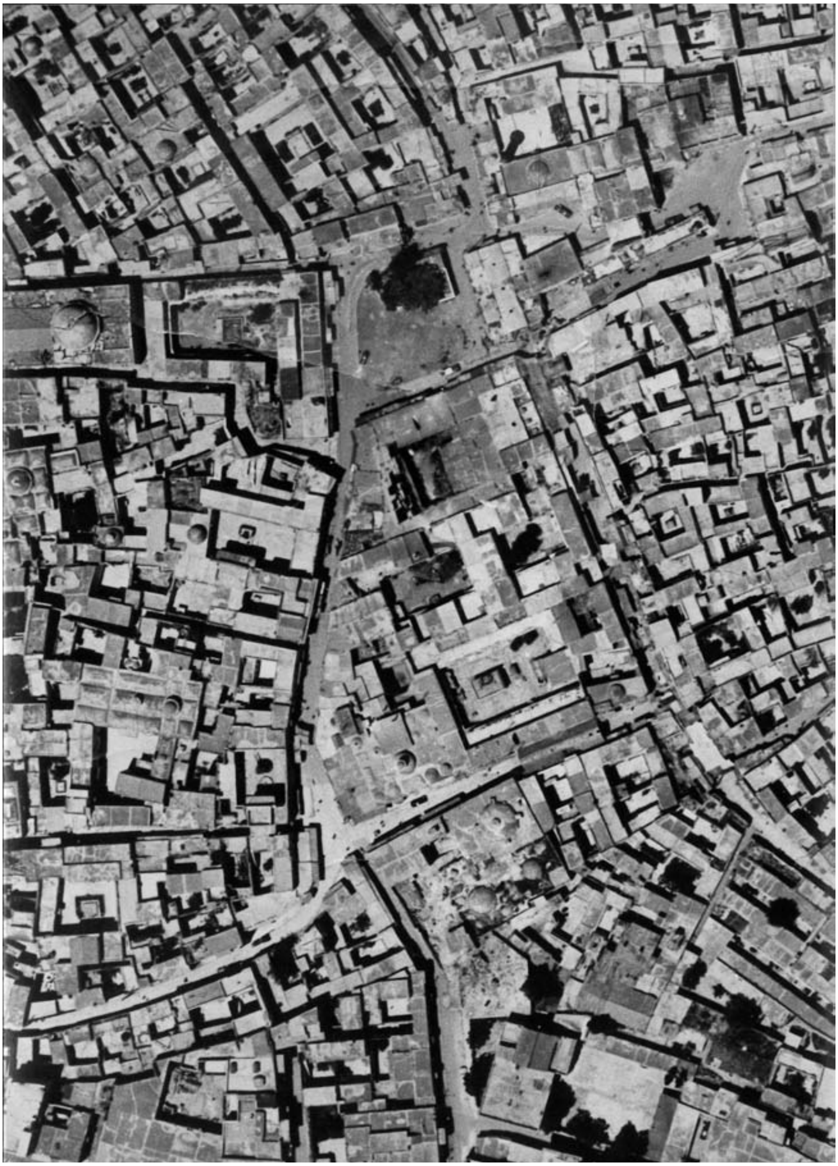


Fig. 6. Aerial photo of the waqf of Ipchîr pacha and the quarter of Jdeidé, around 1954.

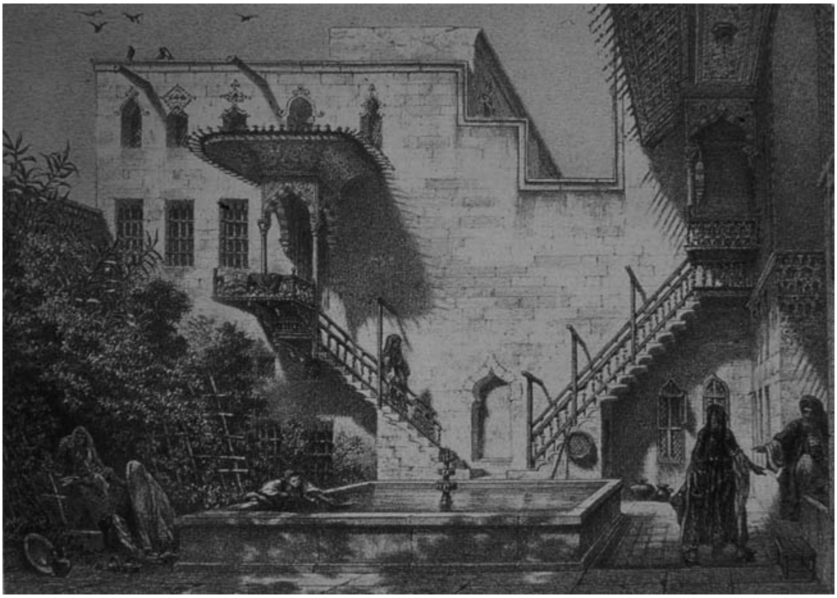


Fig. 7. Interior courtyard of house in Aleppo, first half of the nineteenth century, by Eugène Napoléon Flandin.

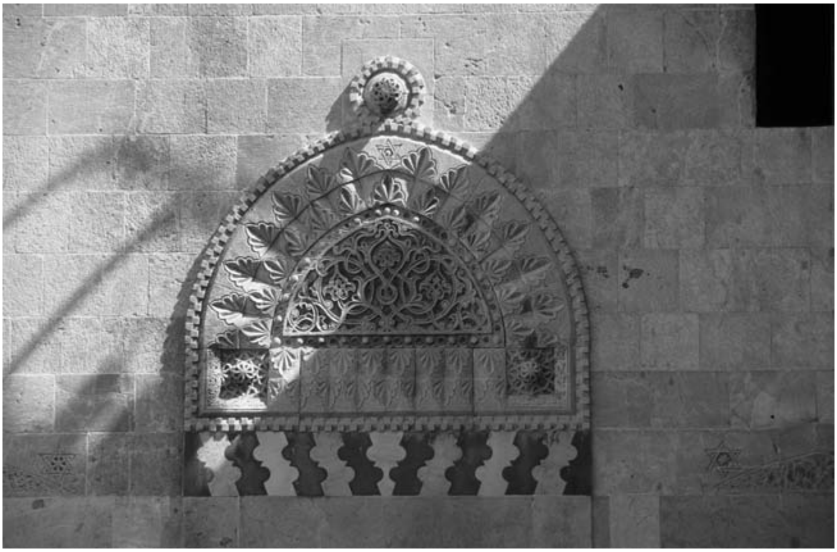


Fig. 8. Window decor of the house Maktabi.

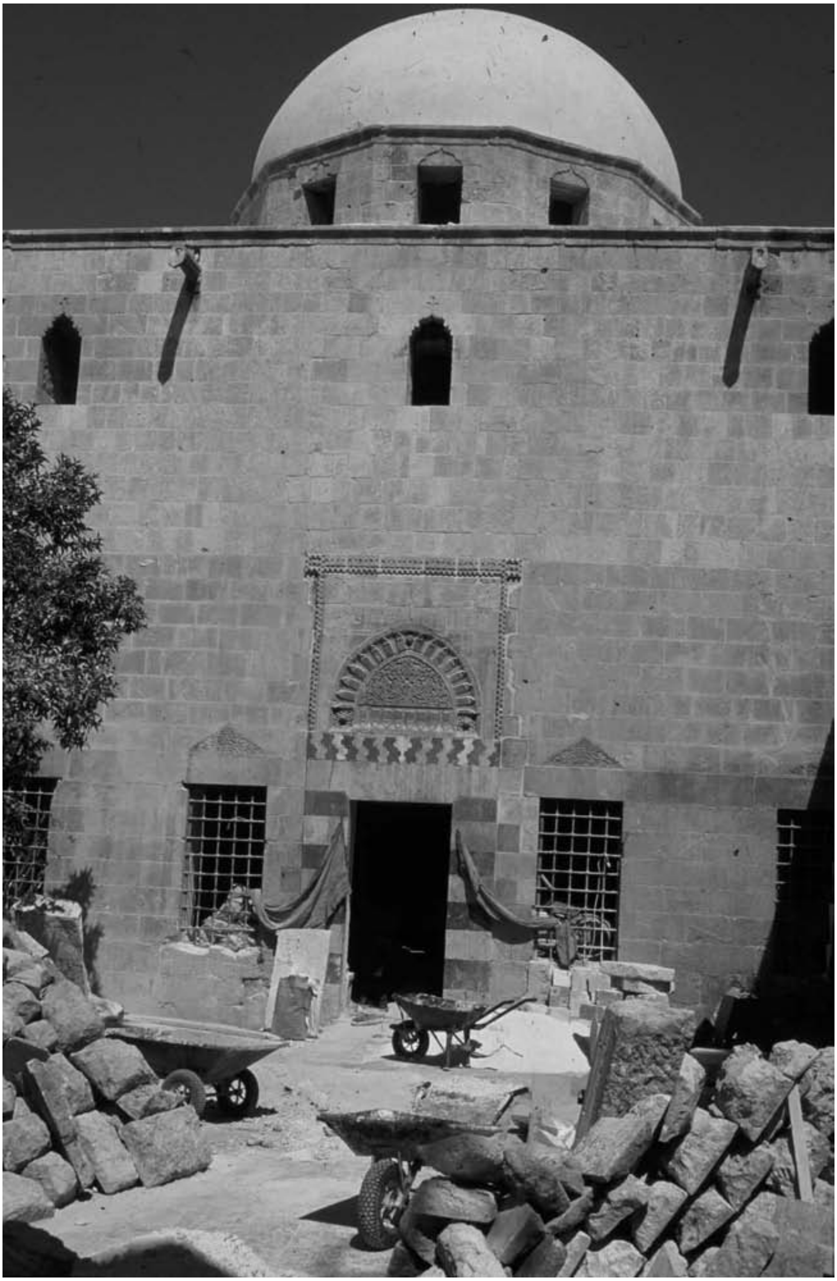


Fig. 9. Front qa{a of the Maktabi house (sixteenth century), during restoration.

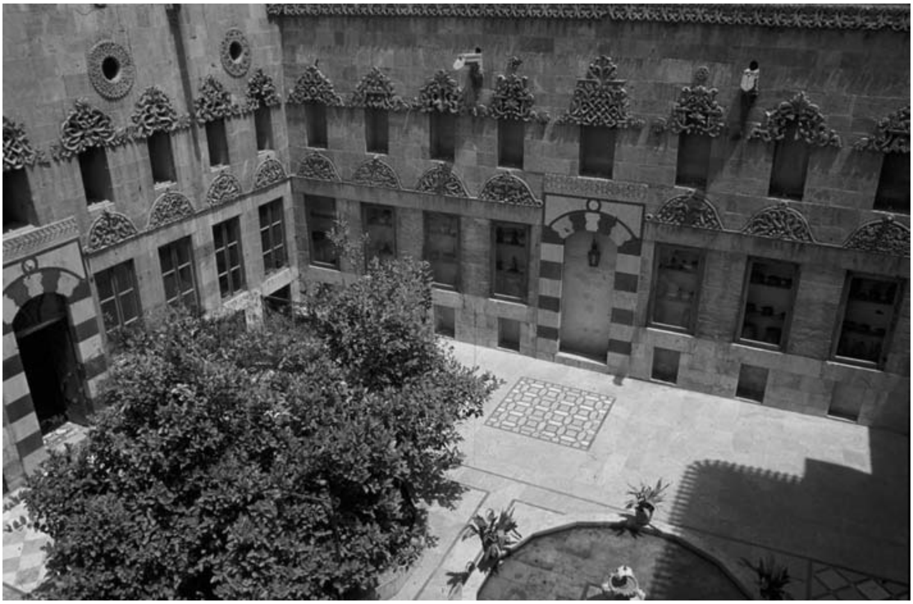


Fig. 10. Courtyard of the Atchikbach house (eighteenth century).

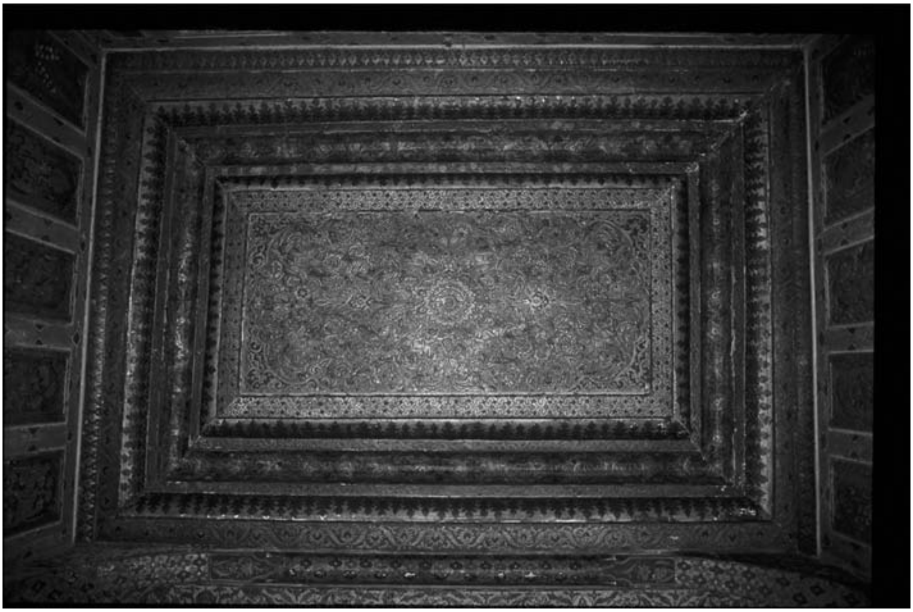


Fig. 11. Ceiling of a salon; eighteenth century.

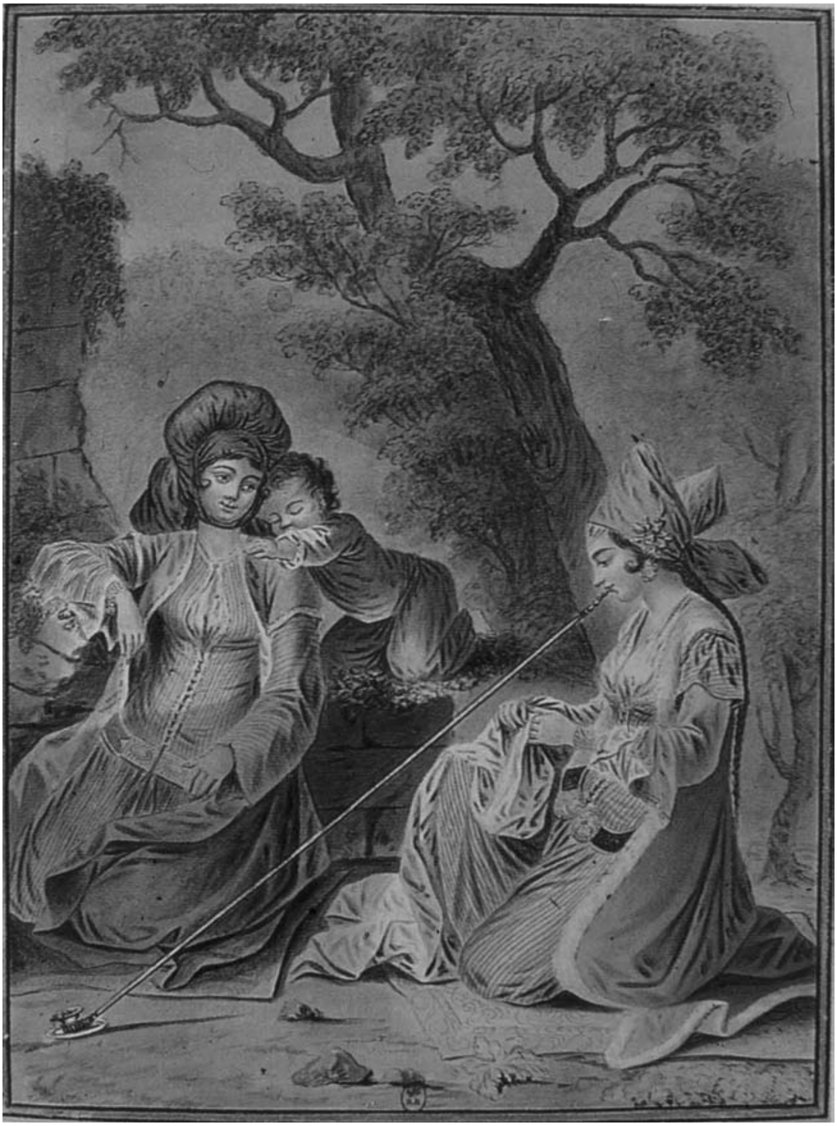


Fig. 12. The women of Aleppo (1790), by François Rosset.

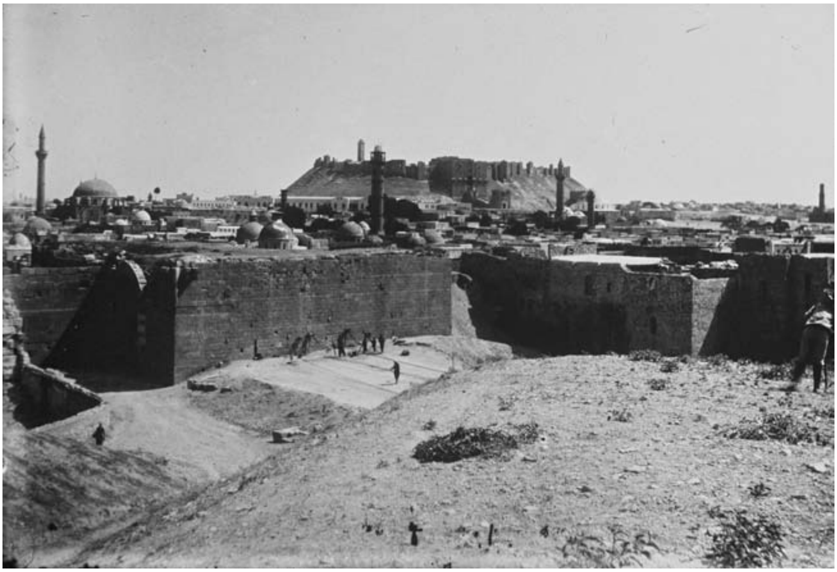


Fig. 13. Aleppo in the beginning of the twentieth century. View from the hill of Tellet al-Soda. (Photo Poche.)

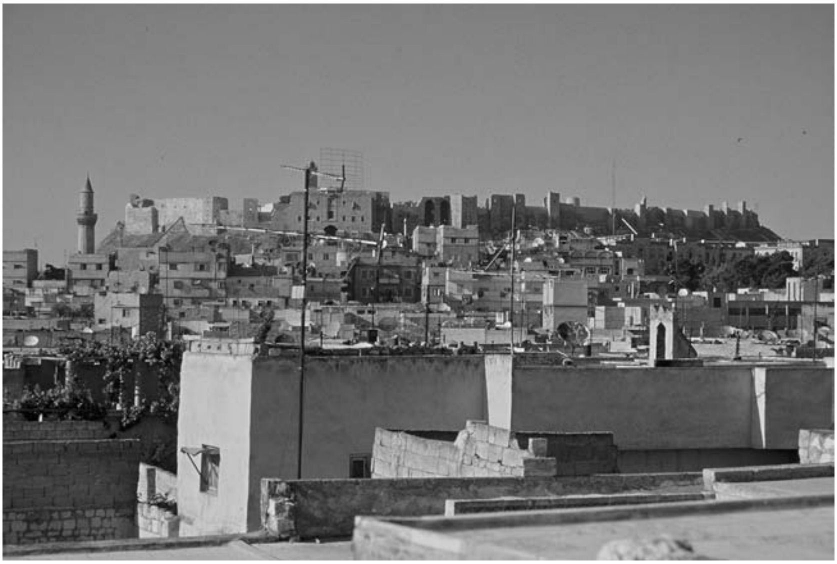


Fig. 14. The citadel from the south.

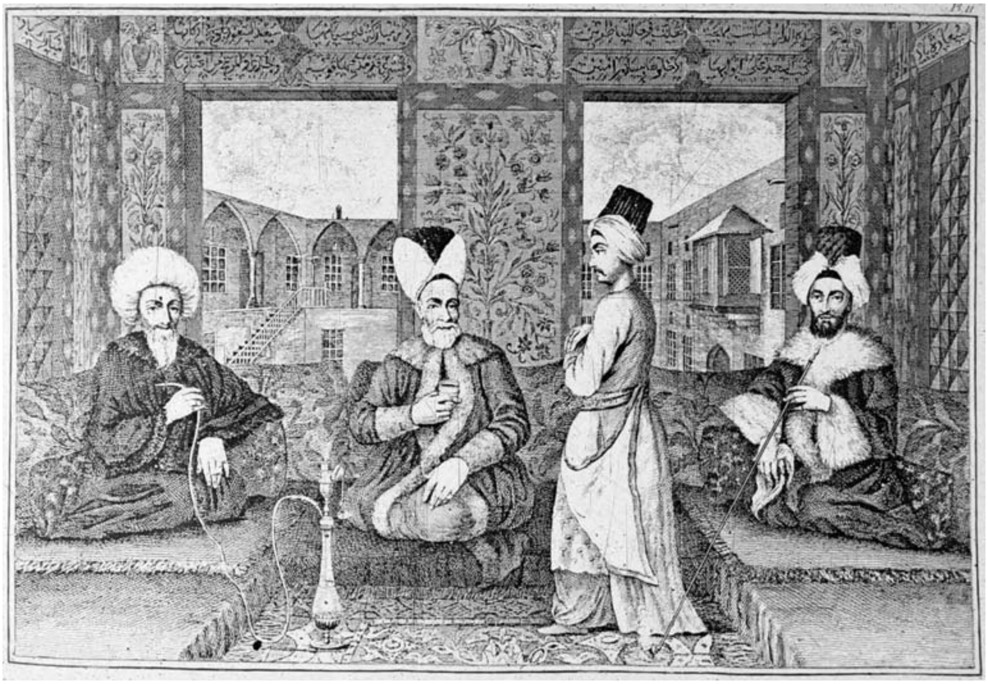


Fig. 15. Meeting of notables in the salon of a khan (milieu du XVIIIe siècle).
Engraving in the book by A. Russell.

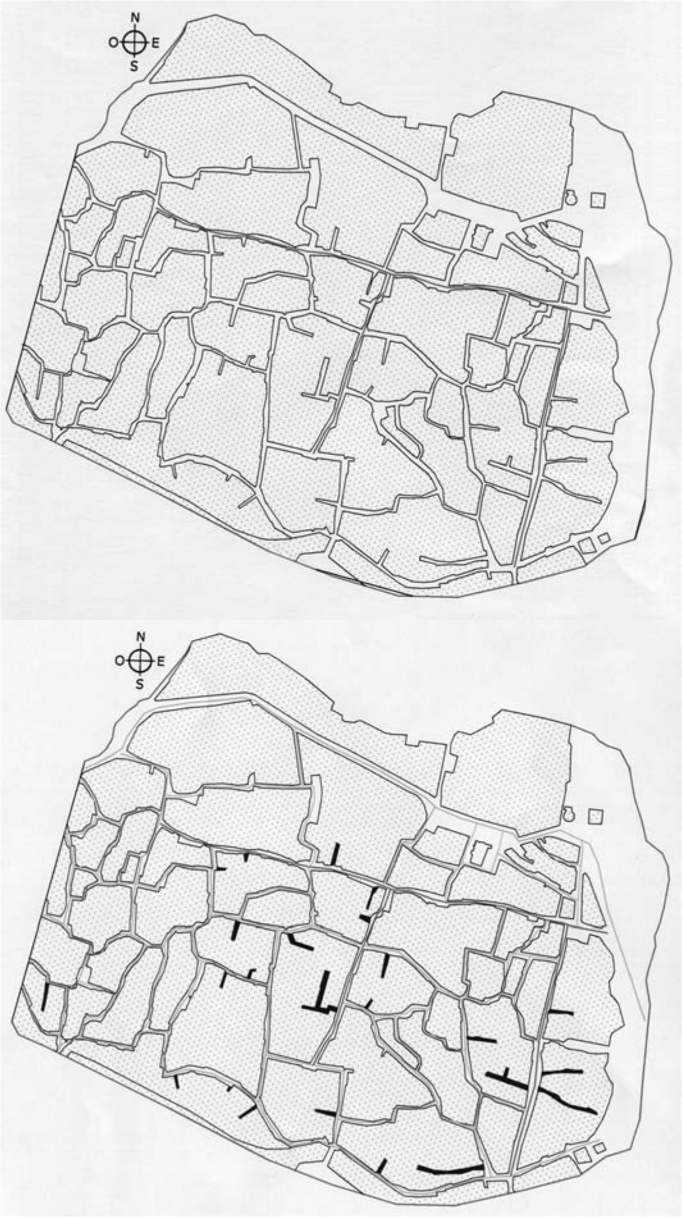


Fig. 1. Bursa: reading of the main paths (above) and their classification (below).

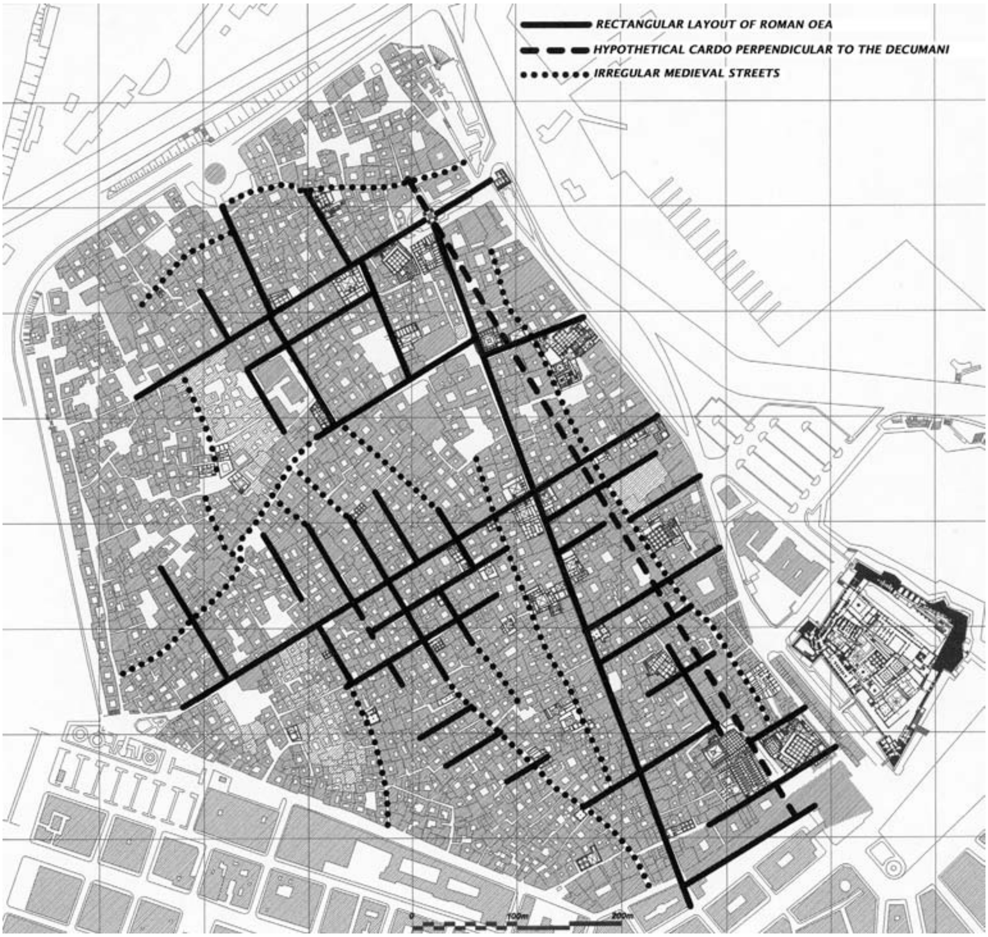

RECTANGULAR LAYOUT OF ROMAN OEA
HYPOTHETICAL CARDO PERPENDICULAR TO THE DECUMANI
IRREGULAR MEDIEVAL STREETS
0
100m
200m

Fig. 1. Historical urban layouts in the Medina of Tripoli.

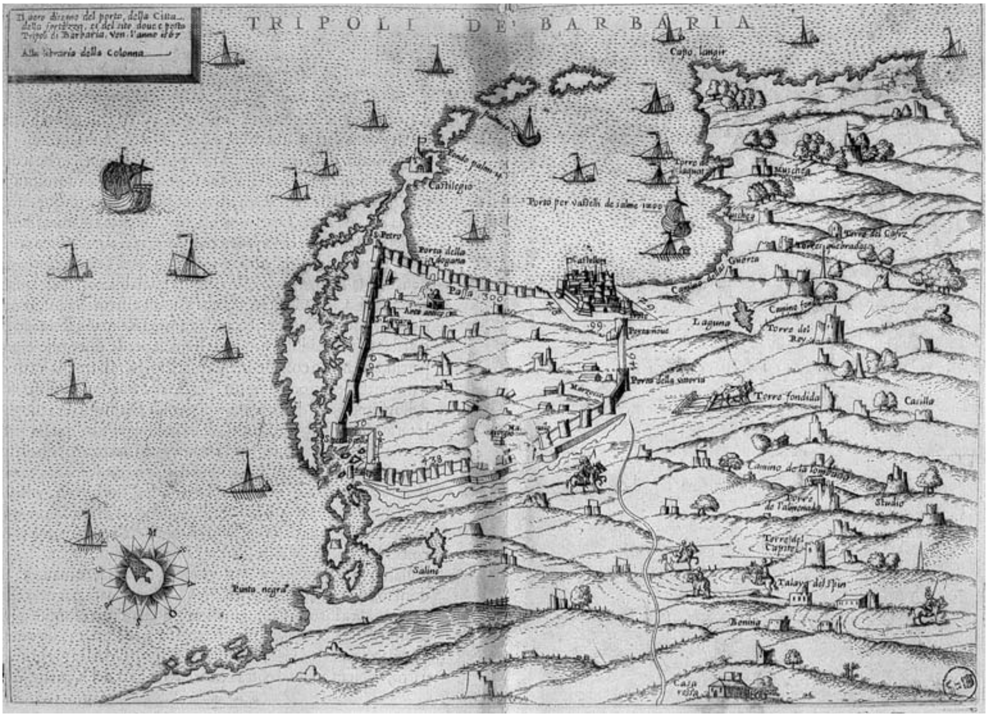
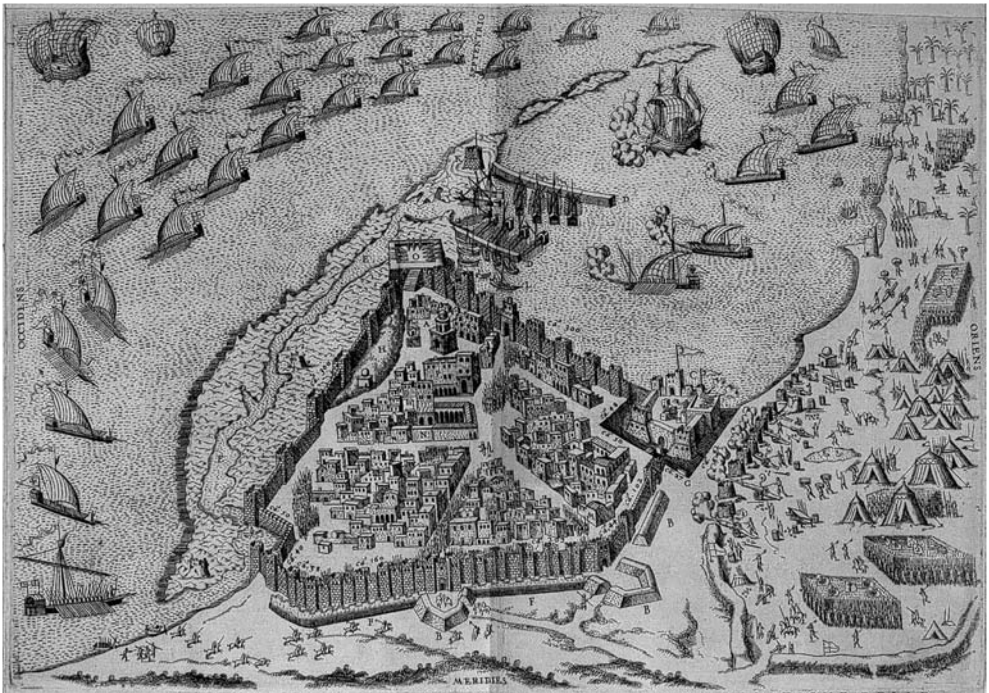

Il vero disegno del porto, della Citta, della fortezza, et del sito doue e posto Tripoli di Barbaria. Ven. l'anno 1567
Alla libraria della Colonna
TRIPOLI DE' BARBARIA
Capo langir
Castilegio
Porto per vasselli de salme 1000
S. Petro
Porto della dogana
Passa 300
Castellon
Torre de laqua
Muschea
Torre del Cafez
Torres quebradas
Guerza
Camino della Guerza
Laguna
Porta noue
Torre del Rey
Porta della vittoria
Marzocco
Torre fondida
Casilla
Camino de la lombarda
Torre de l'almenara
Studio
Torre del Cupito
Talaya del Spin
Bonnia
Casa rossa
Saline
Punto negra

Fig. 2. Plan of Tripoli in 1567.



TRIPOLI Città di Barbaria, coſi detta, per eſſere edificata in memoria delle ruine de tre Citta, Adrumento, Lepea, & Ruſpina, che gia forno potenti in quelle parti, è diſtante da Malta circa 260. miglia, & da Cicilia circa 320. verſo mezo giorno, & da Tuniſi verſo Leuante circa miglia 500. Luogo ameno, & fertile quanto altro che ſia in quelle parti con aſſai buon porto, Anticamente appreſſo Romani in buona reputatione como ſi uede per un arco triumphale di marmo, & altre rouine memorabili. Fu preſa dall'armata del Re Catholico del anno 1510. alli 25 di Giuglio eſſendo Signore di eſſa il Cieco Lambes moro, & fu ruinata la Città, è fatta una fortezza per guardia del porto qual fortezza del anno 1530. L'Imperador Carlo Quinto dono al gran Maſtro & Religion di Rhodi, che l'an conſeruata finche uenendo l'armata del gran Turcho del 1551. di poi d'eſſere ſtata fracaſſata con l'arteglieria ritornò di nuouo in mano d'infideli alli 14. d'Agoſto, & è ſtata redificata & fortificata da Dragut Raya famoſo corſaro che ui ſta de reſidentia. Nouamente il Duca di Mendina Celi Vicere di Sicilia con l'armata del Re Philippo & con aiuto della Sede Apoſtolica, del Duca di Fiorenza, & del gran Maſtro della Religion de Rhodi à perſuaſion della quale ſi fa queſta impreſa è andato per la recuperation di eſſa con circa 60. Galere & altre tantè Naui, per hauer alcuni Signori barabi & mori in aiuto, & per ſecurezza hanno dato loro figlioli per oſtaggi, Sperando con l'aiuto di DIO di reportarne Vittoria.

SIGNIFICATIONE DELLE LETTERE.

A Arco triumphale di marmo antico.
B Baſtioni tre di terra fatti di nuouo.
C Caſtello fatto da Chriſtiani.
D Dui moli di nuouo fatti da Turchi.
E Foſſo d'aqua ſalſa uerſo il mare.
F Foſſo uerſo terra in alcun luogo con acqua.
G Ponte dentro il foſſo del Caſtello
H Collina dentro la Citta che ſcuopre il Porto.
I Il Porto con la bocca uerſo Greco et Leuante.
K Fortezza che difende il Porto.
L Luogo doue ſtanno le Galee et altri uaſſelli.
M Magazeni edificati da Turchi.
N Moſchita maggiore reedificata di nuouo.
O Balluardo nuouo che difende li Vaſſelli.
P Palazzo edificato da Dragut Corſaro.

Fig. 3. Plan of Tripoli in 1559.

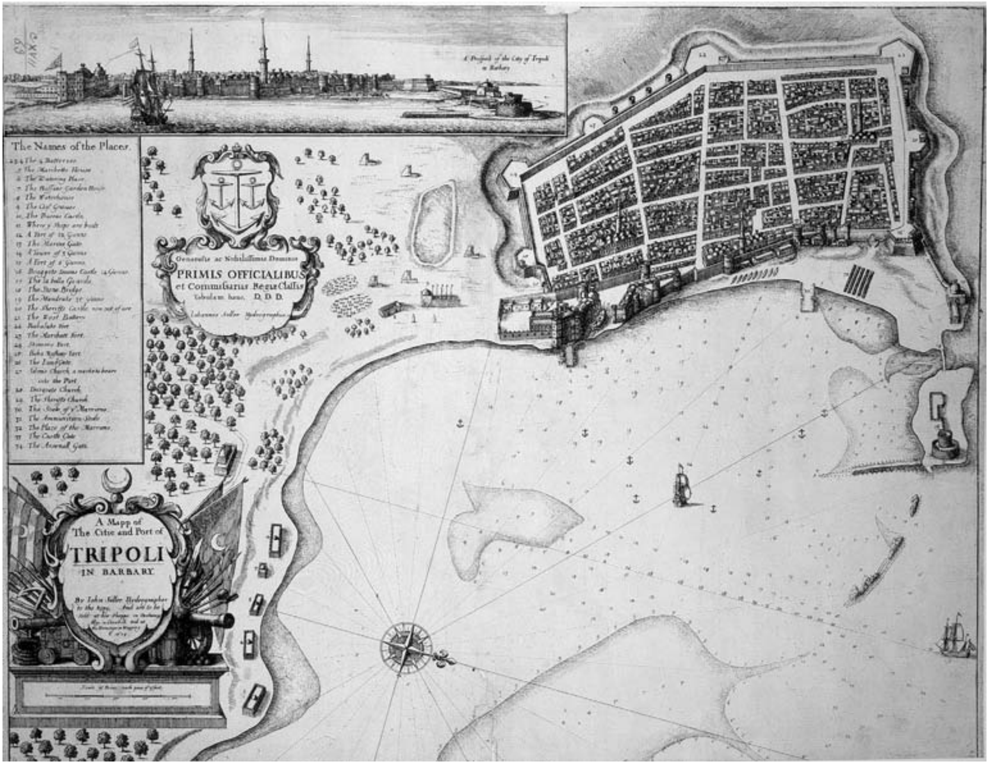

The Names of the Places.
PRIMIS OFFICIALIBUS
et Commissariis Regiæ Classis
Tabulam hanc. D. D. D.
A Mapp of
The Citie and Port of
TRIPOLI
IN BARBARY

Fig. 4. The city and port of Tripoli in 1675 (J. Seller, Atlas Maritimus, or the Sea-atlas; being…, London, 1675).

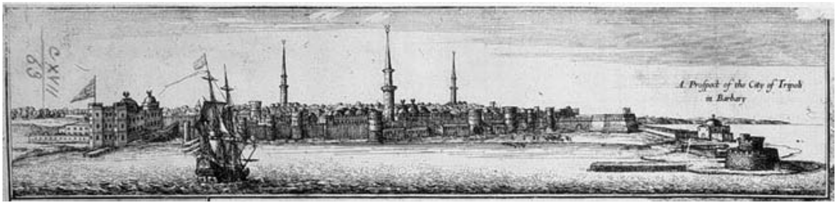

A Proſpect of the City of Tripoli
in Barbary

Fig. 5. Prospect of the city of Tripoli in 1675 (J. Seller).

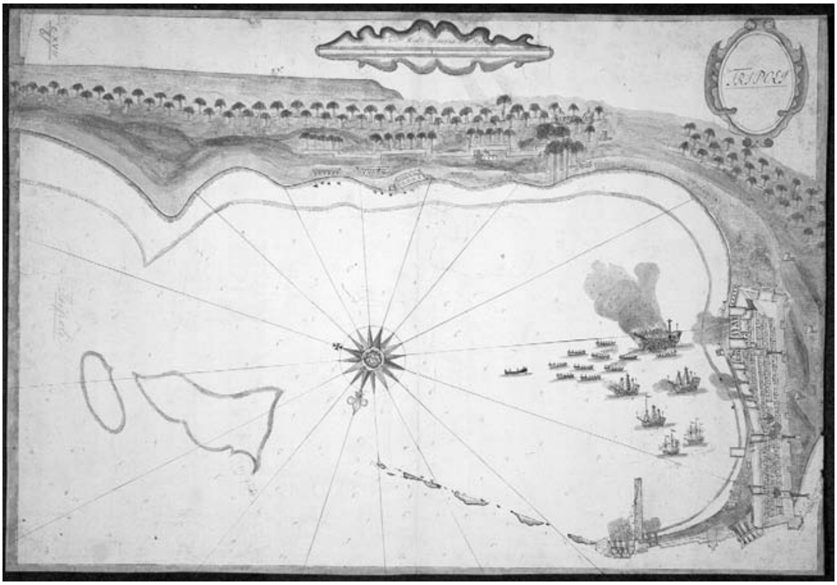


Fig. 6. Naval battle in the port of Tripoli (1676).

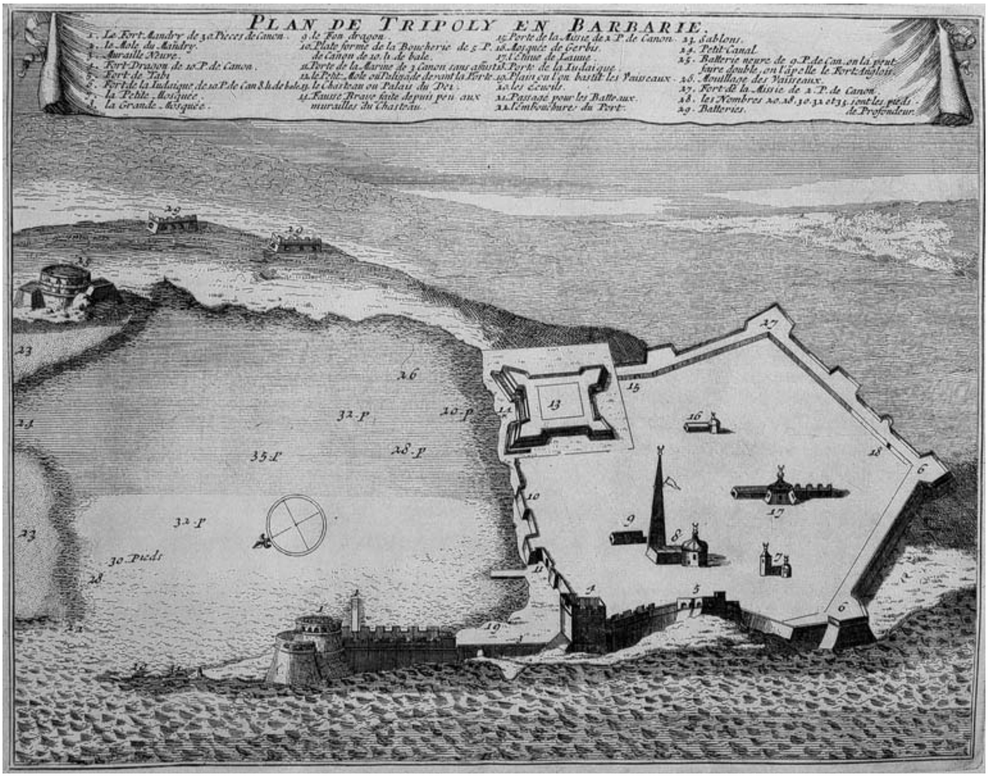

PLAN DE TRIPOLY EN BARBARIE.
1. Le Fort Mandry de 30 Pieces de Canon.
2. le Mole du Mandry.
3. Muraille Neuve.
4. Fort Dragon de 10 P. de Canon.
5. Fort de Tabi
6. Fort de la Iudaique de 10 P. de Can. 8 li. de bale.
7. la Petite Mosquée.
8. la Grande Mosquée.
9. le Fon dragon.
10. Plate forme de la Boucherie de 5 P. de Canon de 10. li. de bale.
11. Porte de la Marine de 3 Canon sans afust.
12. le Petit Mole ou Palissade devant la Porte.
13. le Chasteau ou Palais du Dei.
14. Fausse Braye faite depuis peu aux murailles du Chasteau.
15. Porte de la Missie de 2 P. de Canon.
16. Mosquée de Gerbis.
17. l'Étuve de Laume.
18. Porte de la Iudaique.
19. Place ou l'on bastit les Vaisseaux.
20. les Écueils.
21. Passage pour les Batteaux.
22. l'Embouchure du Port.
23. Sablons.
24. Petit Canal.
25. Batterie neuve de 9 P. de Can. on la peut faire double, on l'apelle le Fort Anglois.
26. Mouillage des Vaisseaux.
27. Fort de la Missie de 2 P. de Canon.
28. les Nombres 20. 28. 30. 32 et 35. sont les pieds de Profondeur.
29. Batteries.
26
32 P
20 P
35 P
28 P
32 P
30 Pieds
28

Fig. 7. Plan of Tripoli in 1696 (N. De Fer, Les Forces de l'Europe…, Paris, 1696).

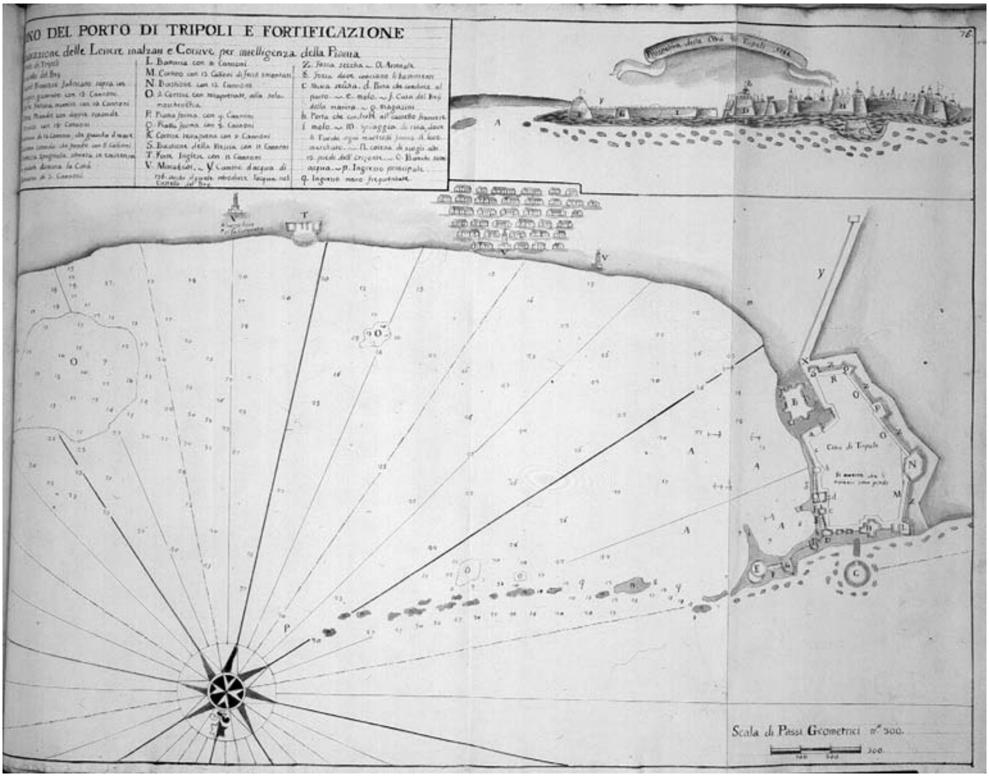

NO DEL PORTO DI TRIPOLI E FORTIFICAZIONE
zzione delle Lettere inalzate e Corsive per intelligenza della Pianta
L. Bastione con 8 Cannoni
M. Cortina con 13 Cannoni di ferro smontati
N. Bastione con 12 Cannoni
O. 2 Cortine con Magazzini, alla sola moschetteria
P. Piatta forma con 9 Cannoni
Q. Piatta forma con 5 Cannoni
R. Cortina terrapienata con 7 Cannoni
S. Bastione della Mezza con 11 Cannoni
T. Forte Inglese con 11 Cannoni
V. Minareto
Z. Fossa secca
q. Ingresso meno frequentato
p. Ingresso principale
A
B
C
E
P
T
V
O
y
Città di Tripoli
Scala di Passi Geometrici n° 300.
300
75

Fig. 8. The port and the walls of Tripoli in 1766 (A. Borg, Piano di tutta la costa delli stati soggetti al Gran Signior…, 1768–1770).

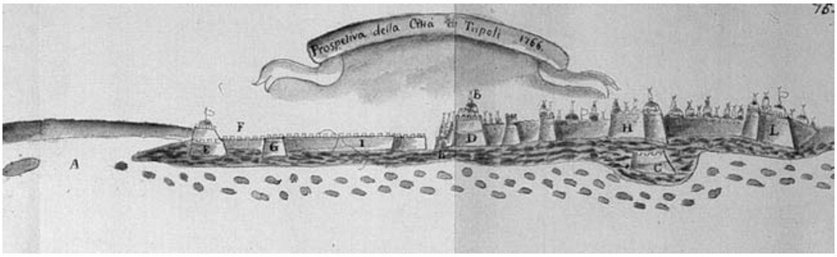

76
Prospetiva della Città di Tripoli 1766.
B
F
D
H
L
E
G
I
K
C
A

Fig. 9. Prospect of the city of Tripoli in 1766 (A. Borg).

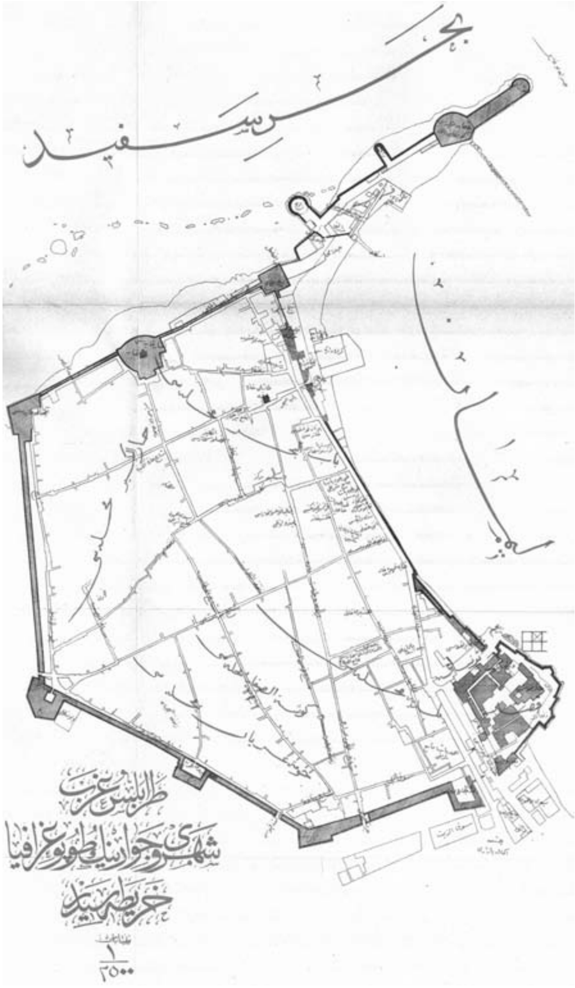

بحر سفید
طرابلس غرب
١
٢٥٠٠

Fig. 10. Plan of Tripoli in 1910 (Fehmi Bey).

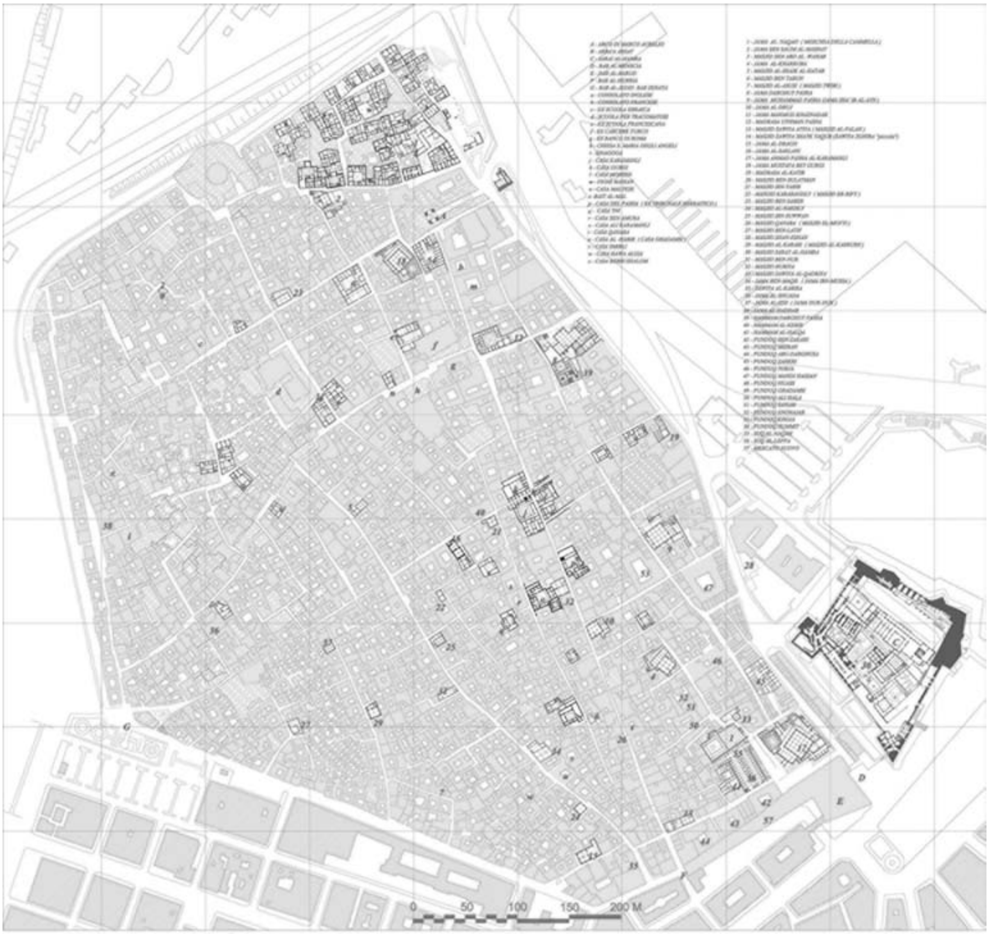

0
50
100
150
200 M

Fig. 11. The present plan of the Medina of Tripoli.

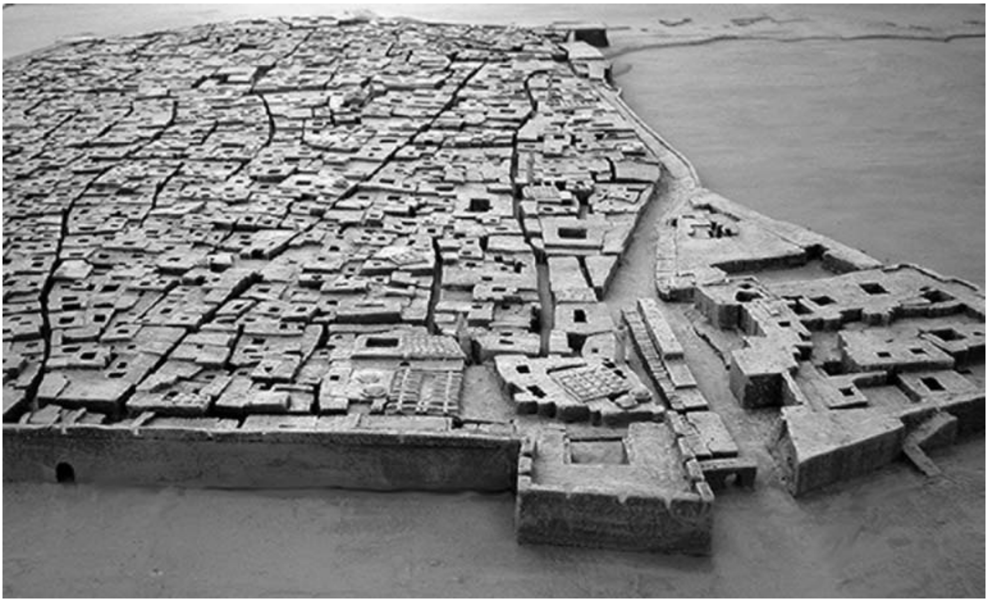


Fig. 12. A northward view of the model of the Medina of Tripoli. In foreground Bab Al-Hurria, the Jama Ahmad Pasha Al-Karamanli, Bab Al-Menscia, The Castle (Sarai Al-Hamra).

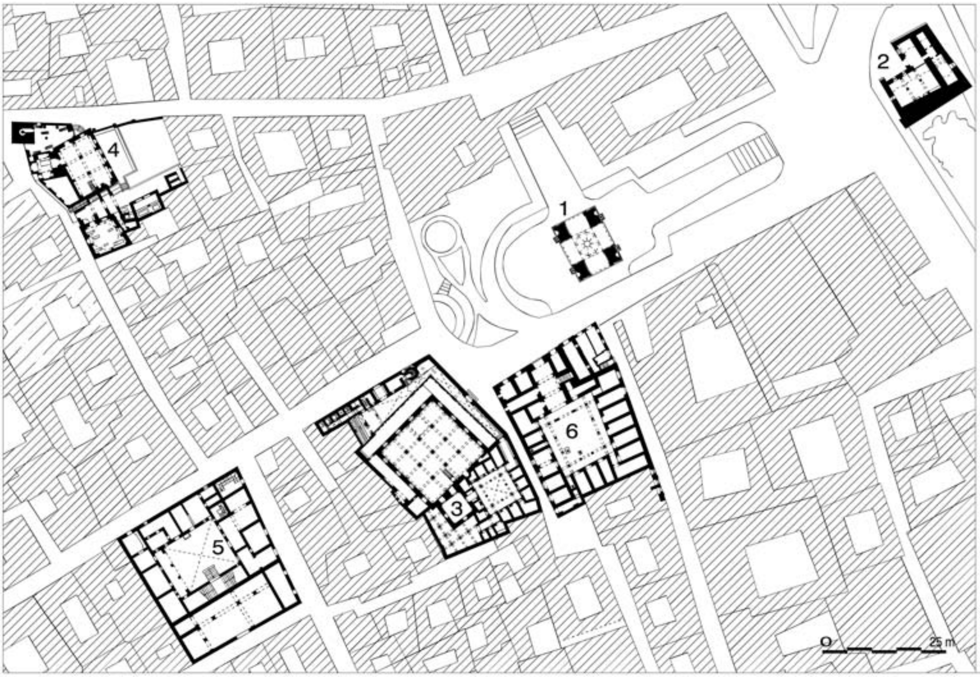


Fig. 13. The Arch of Marcus Aurelius node in the Medina of Tripoli. 1—Arch of Marcus Aurelius; 2—Jama Sidi Abd Al-Wahab; 3—Jama Mustafa Bey Gurgi; 4—Jama Sidi Salim Al-Mashat; 5—English Consulate; 6—Funduq Zummit.

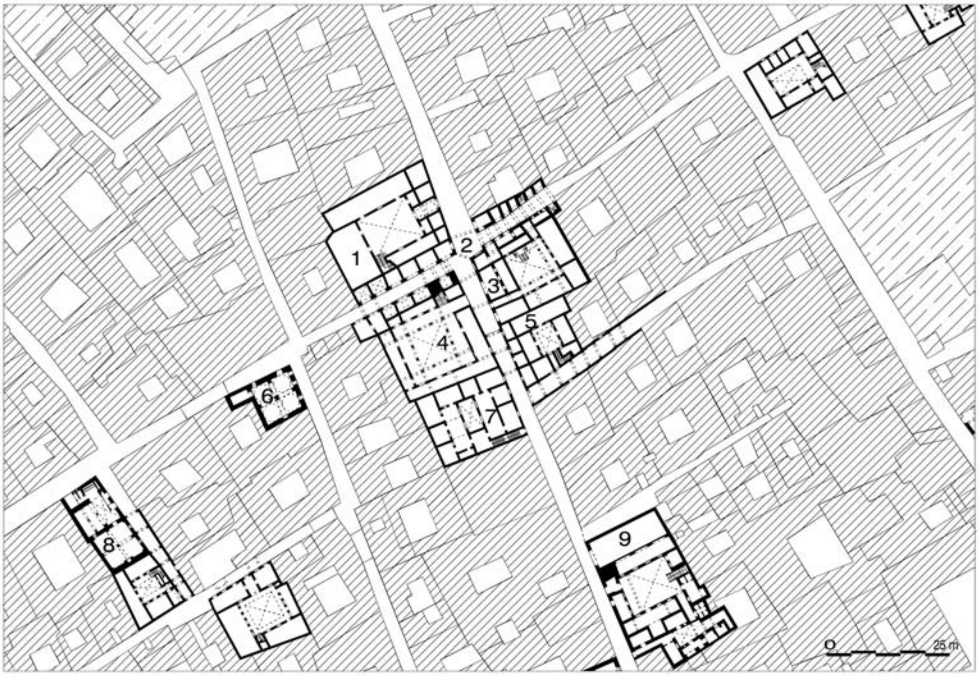


Fig. 14. The Arba{a Arsat node in the Medina of Tripoli.
1—Gurgi house; 2—Arba{a Arsat; 3—Mohsen house; 4—Karamanli house; 5—unidentified house; 6—Masjid Ibn-Tabib; 7—house of the Italian Colonial period; 8—Jama al-Saklani; 9—house of Pasha.

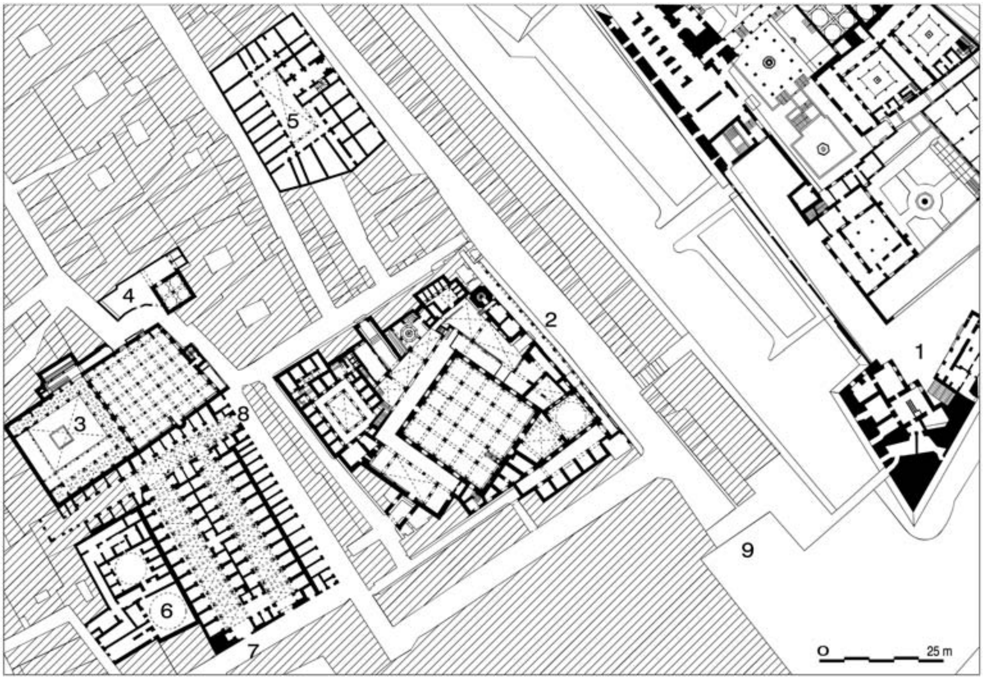


Fig. 15. The Karamanli Mosque node in the medina of Tripoli.
1—Sarai Al-Hamra; 2—Jama Ahmad Pasha Al-Karamanli; 3—Jama Al-Naqah;
4—Masjid Zawiya Al-Qadriya; 5—Funduq Zaheri; 6—Hammam Al-Halqa;
7—Souq Al-Leffa; 8—Souq Al-Naqah; 9—Bab Al-Menscia.

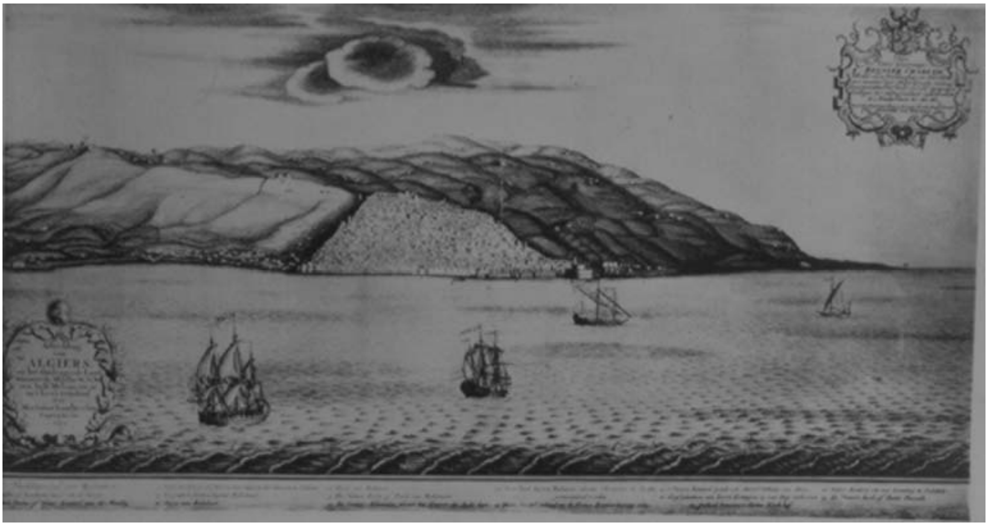


Fig. 1. Algiers from the sea, a seventeenth century view. (After G. Esquer, Iconographie historique de l'Algérie, Paris, 1931.)

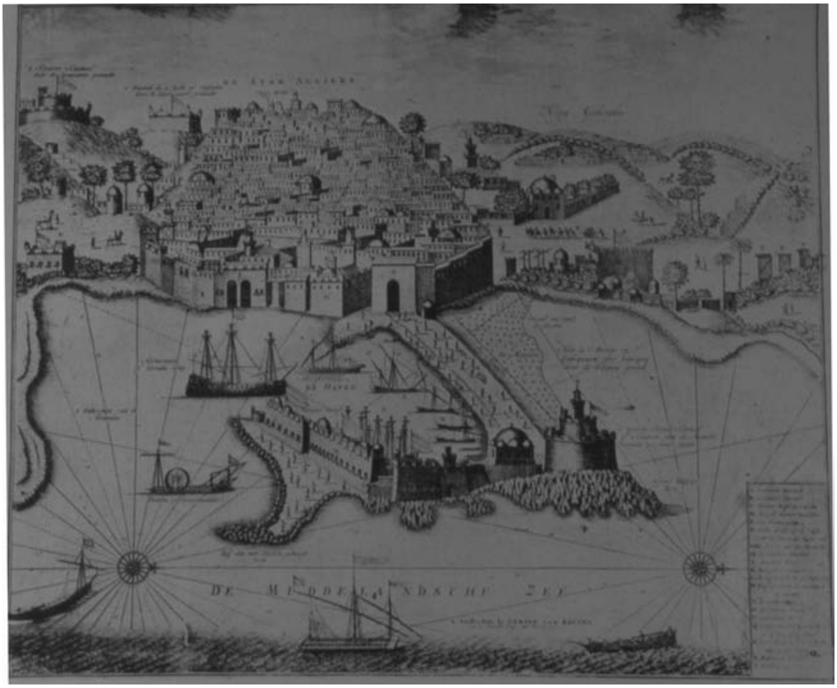


Fig. 2. Algiers in the eighteenth century. (After G. Esquer, Iconographie historique de l'Algérie, Paris, 1931.)

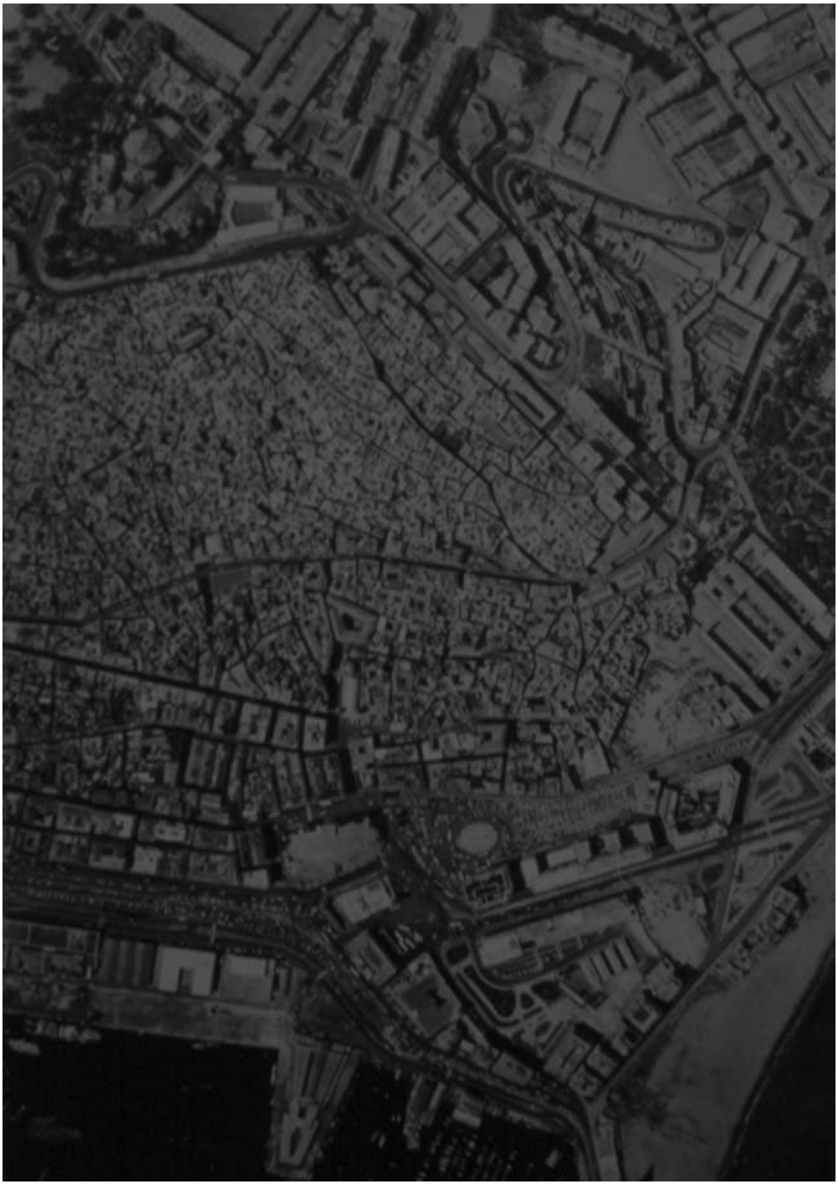


Fig. 3. Aerial photo of the casbah, about 1970. (After R. Dokali, Les mosqueés de la periode turque à Alger, Algiers, 1974.)

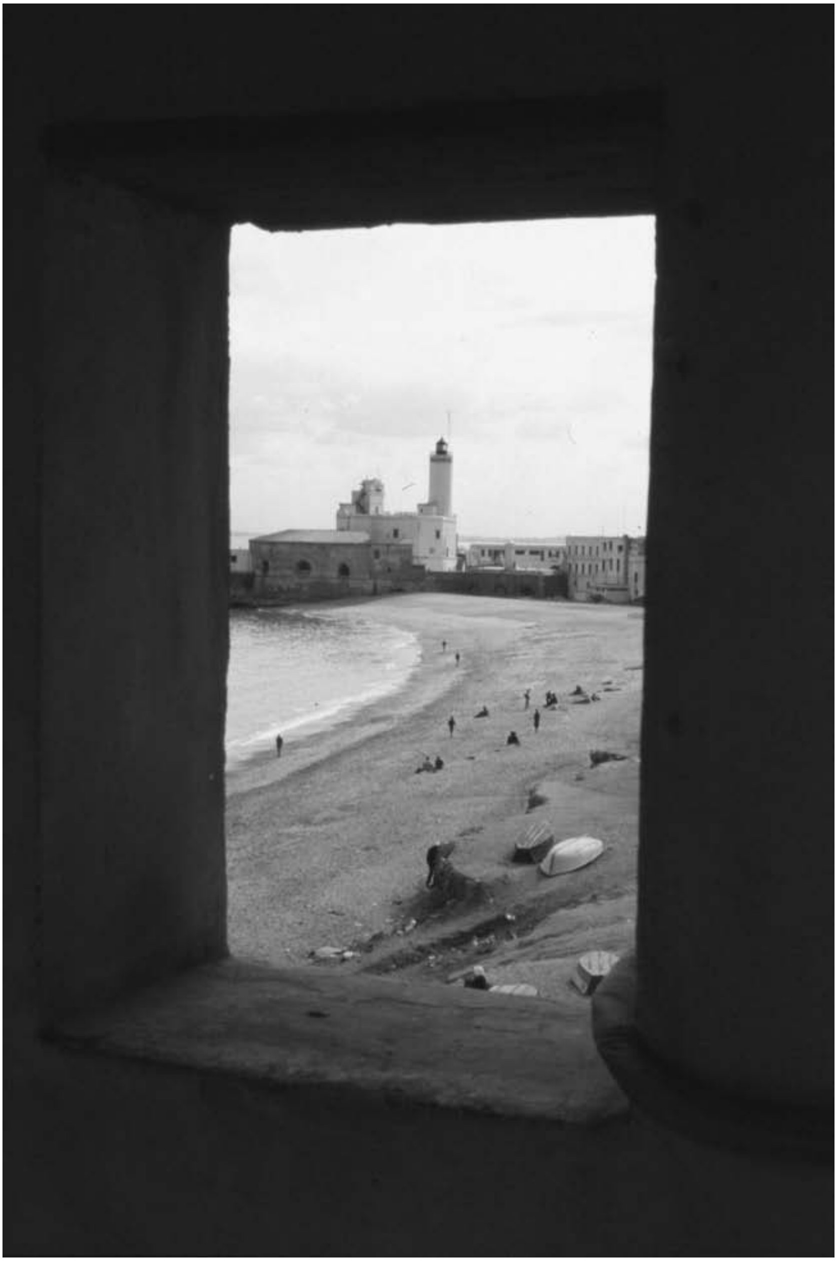


Fig. 4. Mole built by Khayr ad-Din and Bastion 23 with its “Peñon.”
(Photo: author, February 2000.)

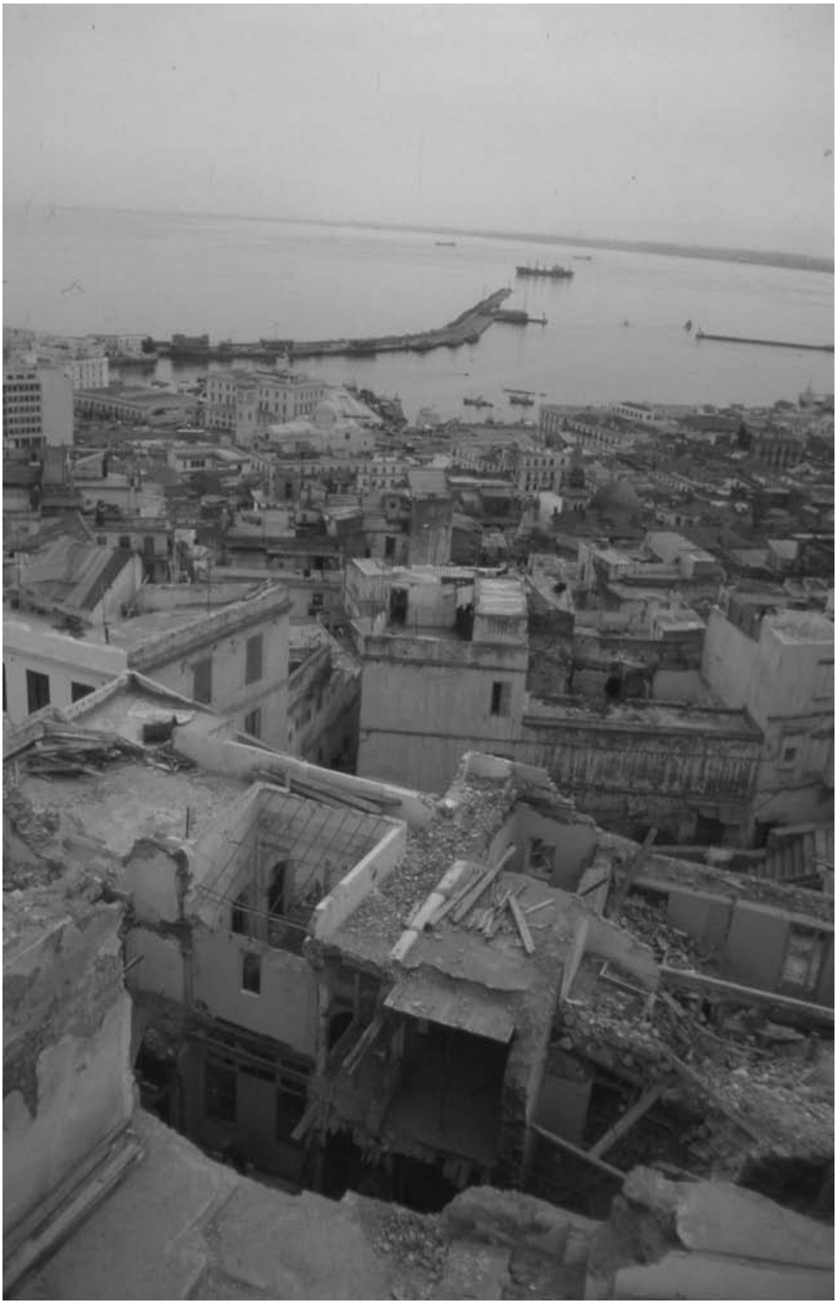


Fig. 5. View from the terraces of the Ottoman city. (Photo: author, September 1987.)

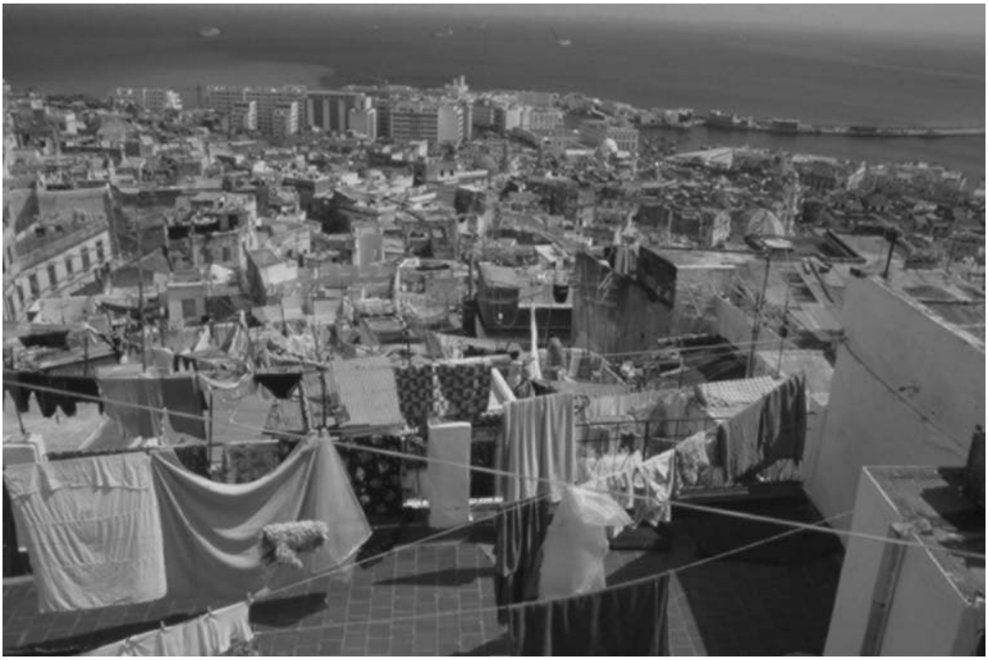


Fig. 6. View from the terraces of the Ottoman city. (Photo: author, March 1989.)

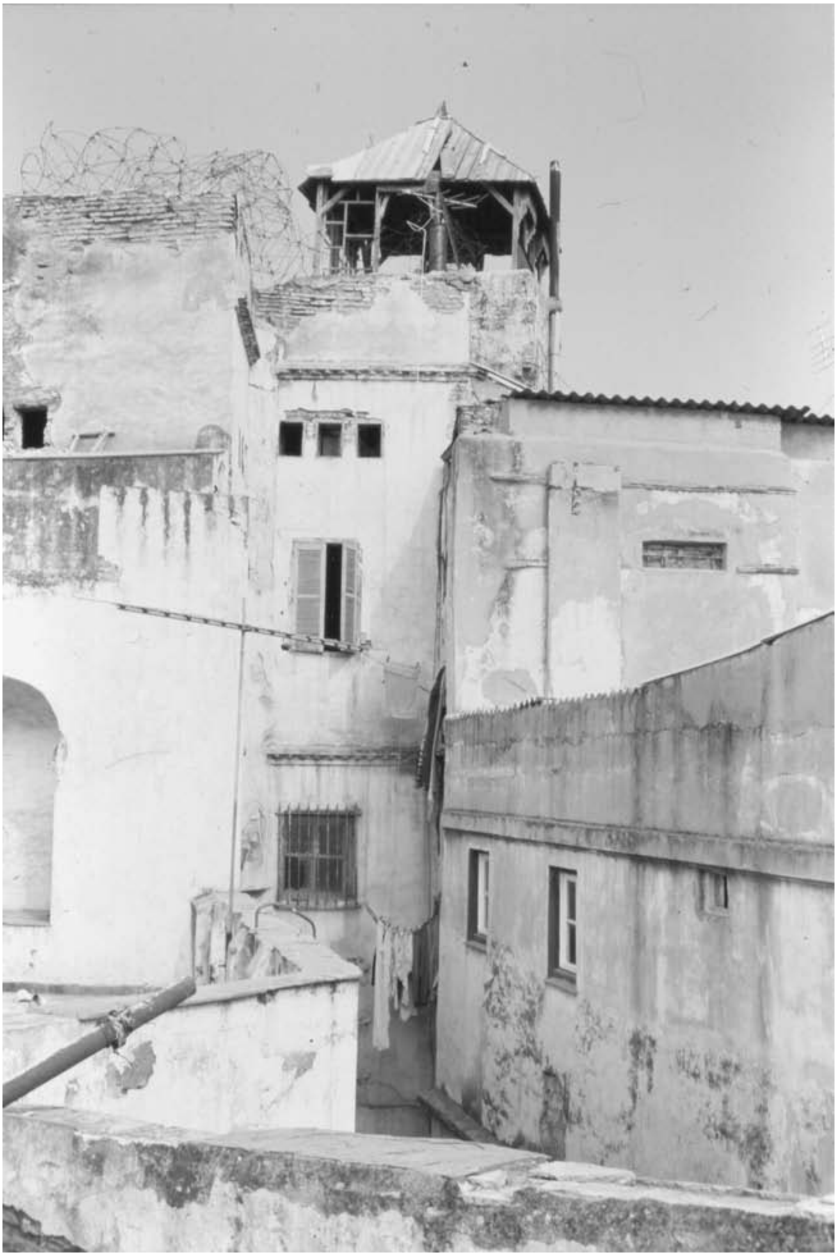


Fig. 7. Dar Mustafa Pasha, end of the eighteenth century.

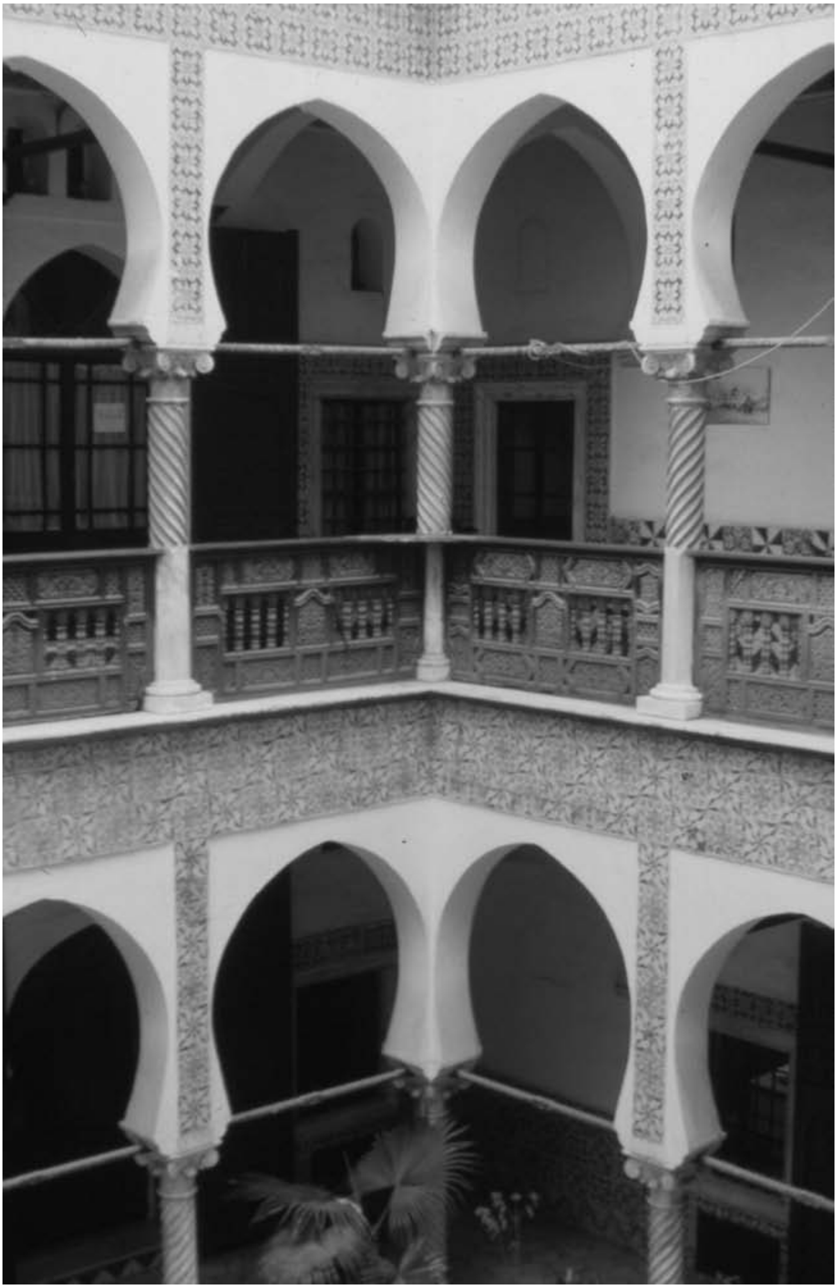


Fig. 8. Dar Mustafa Pasha, end of the eighteenth century.

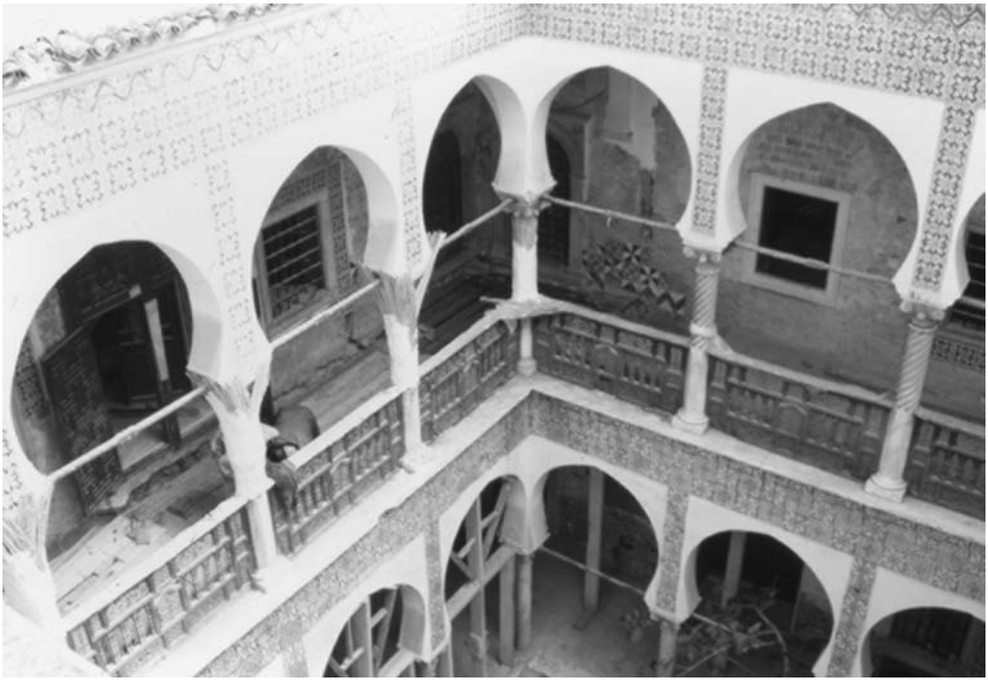


Fig. 9. Terraces, attics, and roof pavilions of Dar Al-Suf. (Photo: author, February 2000.)

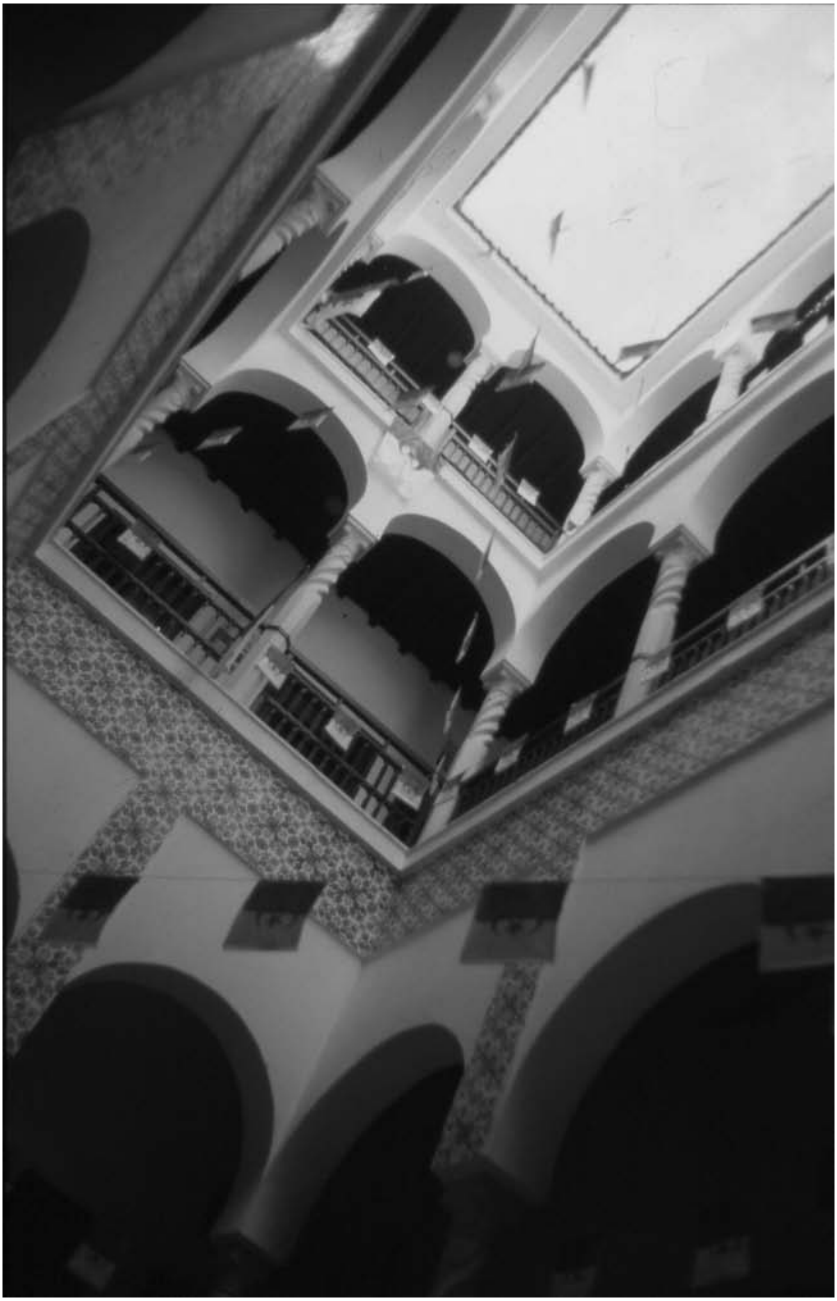


Fig. 10. Small dar, now a dispensary, Rue de la Casbah.
(Photo: author, 1987.)

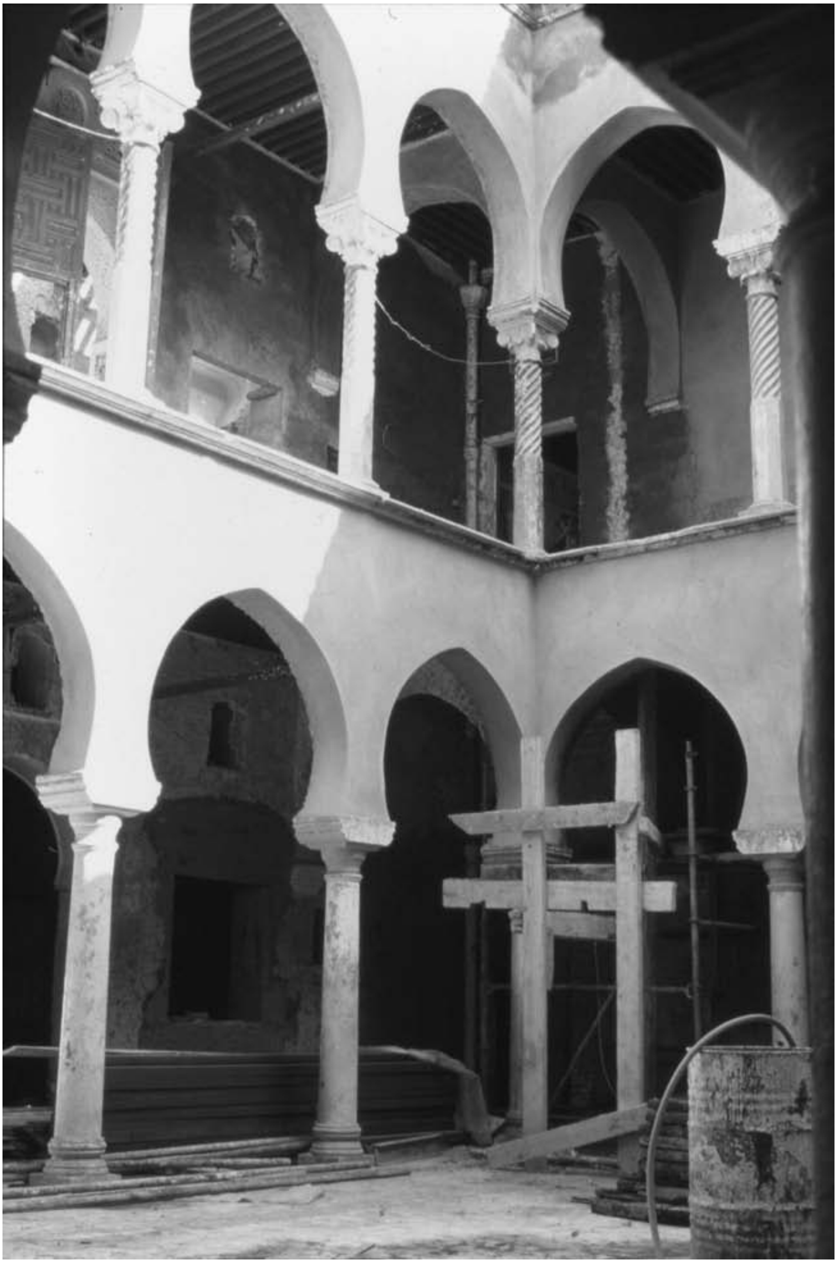


Fig. 11. Porticos of the main courtyard (wust al-dar) of the Dar al-Suf, beginning of nineteenth century. (Photo: author, February 2000.)

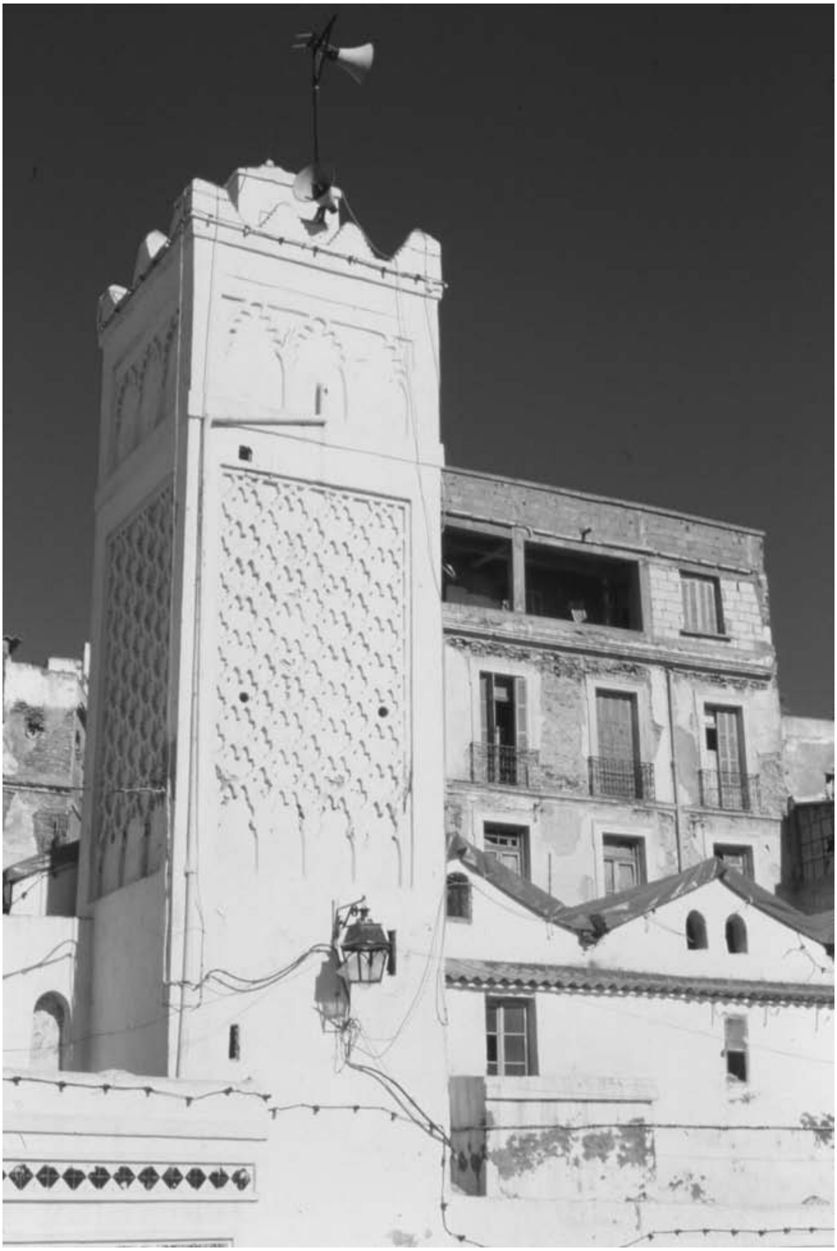


Fig. 12. Minaret, Sidi Ramdan Mosque. (Photo: author, February 2000.)

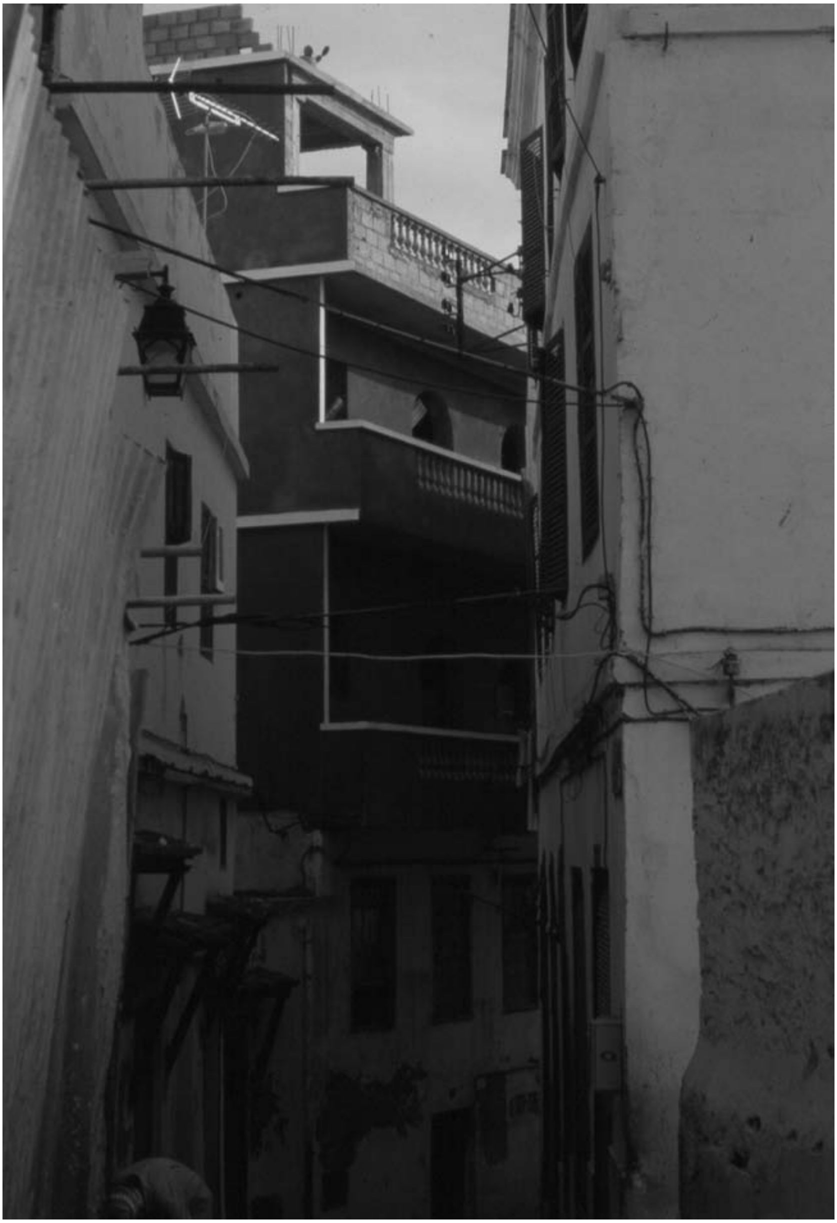


Fig. 13. Rue de la Casbah, 1990.

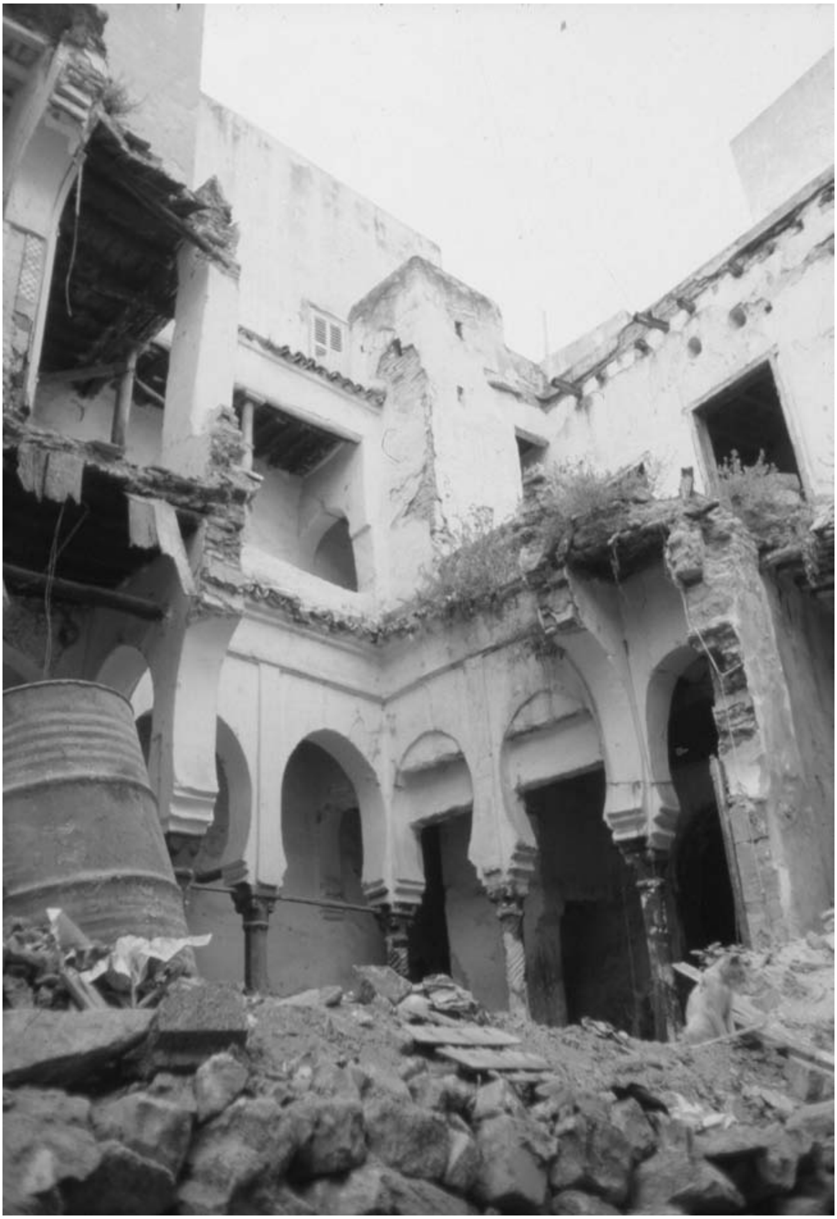


Fig. 14. A collapsed house near the Jama{ al-Yahud. (Photo: author, 1993.)

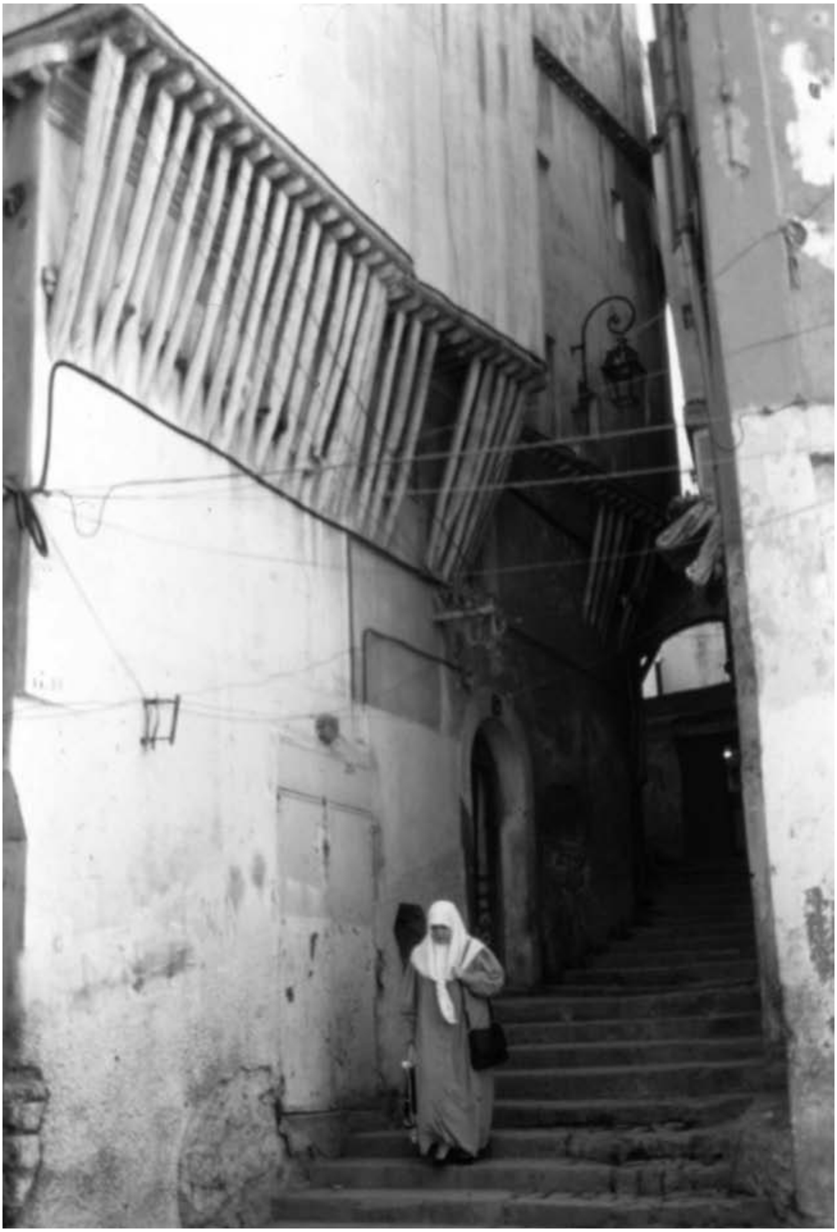


Fig. 15. Rue Bab al-Jadid. (Photo: author, 2000.)

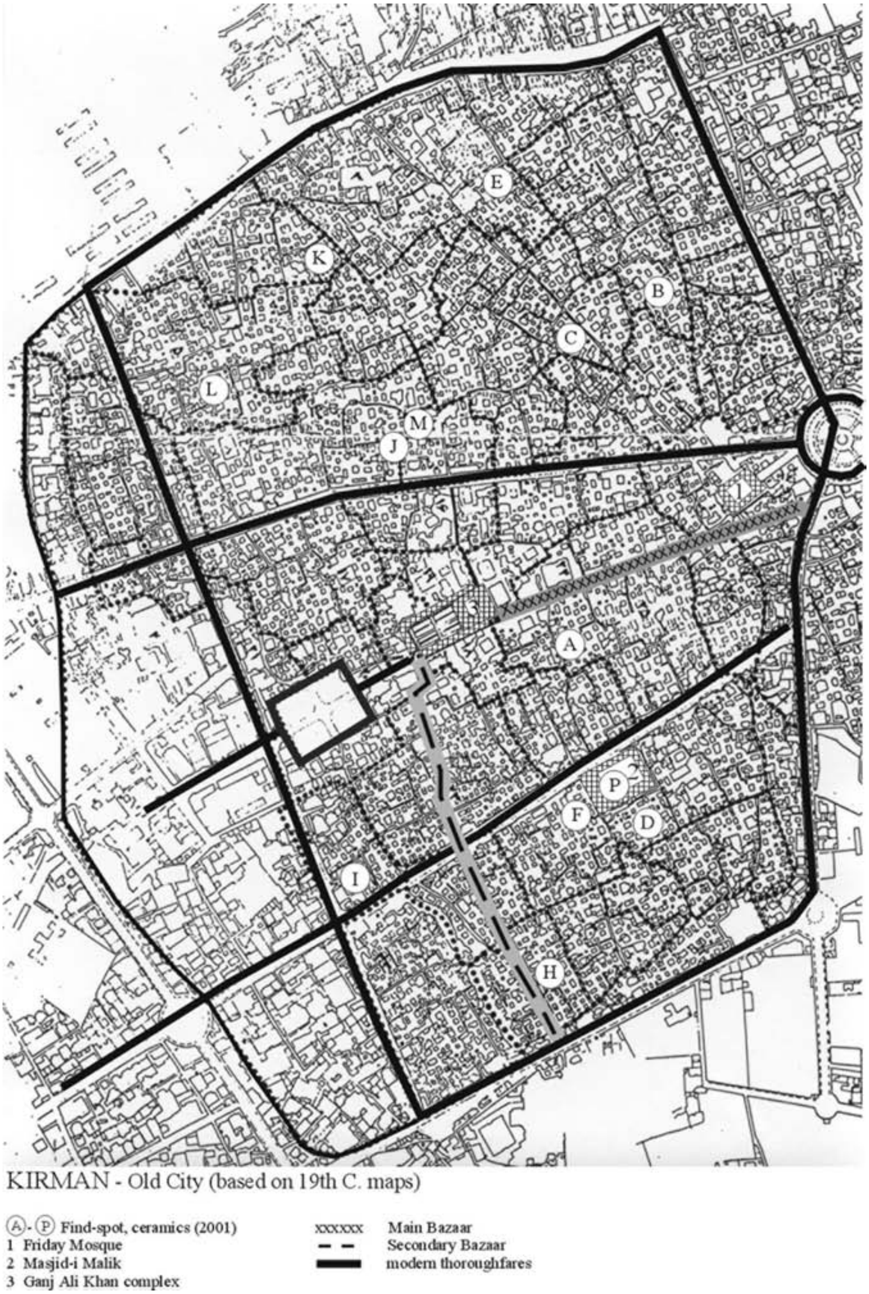

E
K
B
C
L
M
J
1
3
A
2
P
F
D
I
H
KIRMAN - Old City (based on 19th C. maps)
Ⓐ-Ⓟ Find-spot, ceramics (2001)
1 Friday Mosque
2 Masjid-i Malik
3 Ganj Ali Khan complex
xxxxxx Main Bazaar
– – Secondary Bazaar
▬ modern thoroughfares

Fig. 1. Map of the old city of Kirman with some of the major arteries created in the twentieth century (perimeter follows walls of Qajar period).

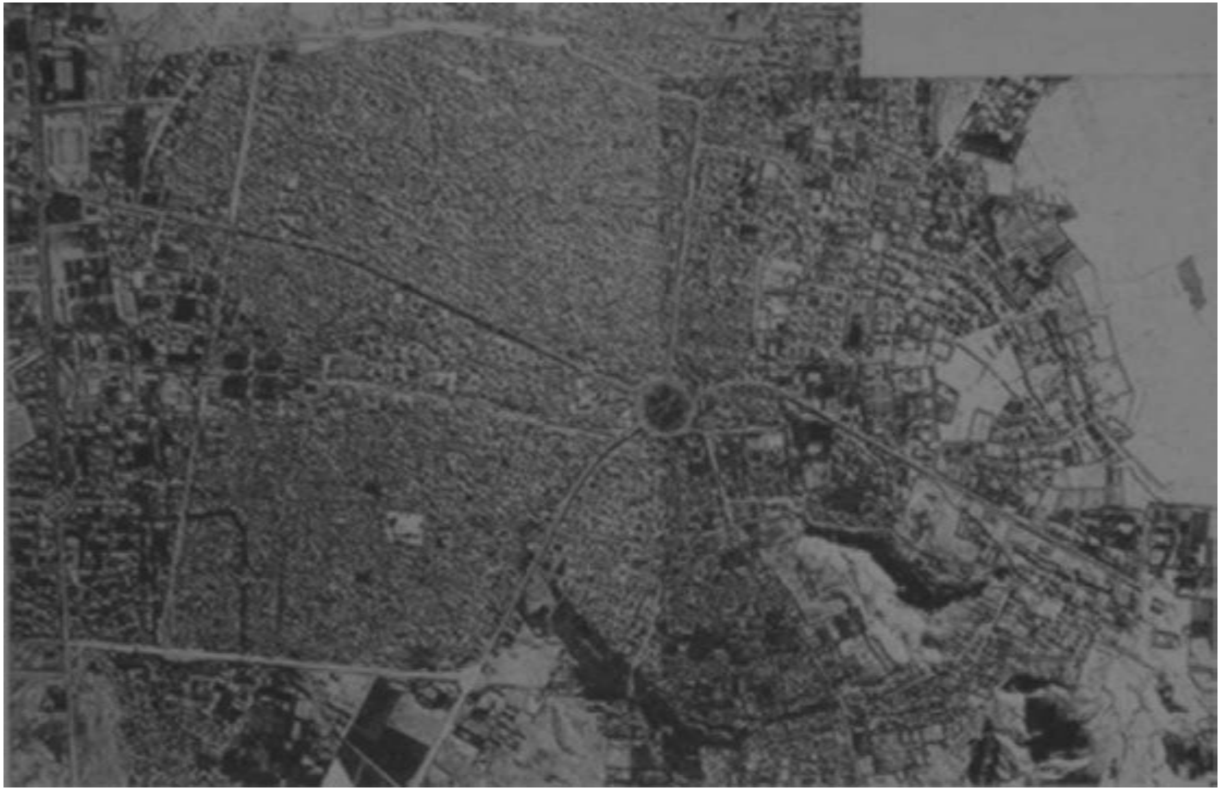


Fig. 2. Aerial photograph of Kirman, including Qalʿeh Dukhtar (first half of twentieth century).

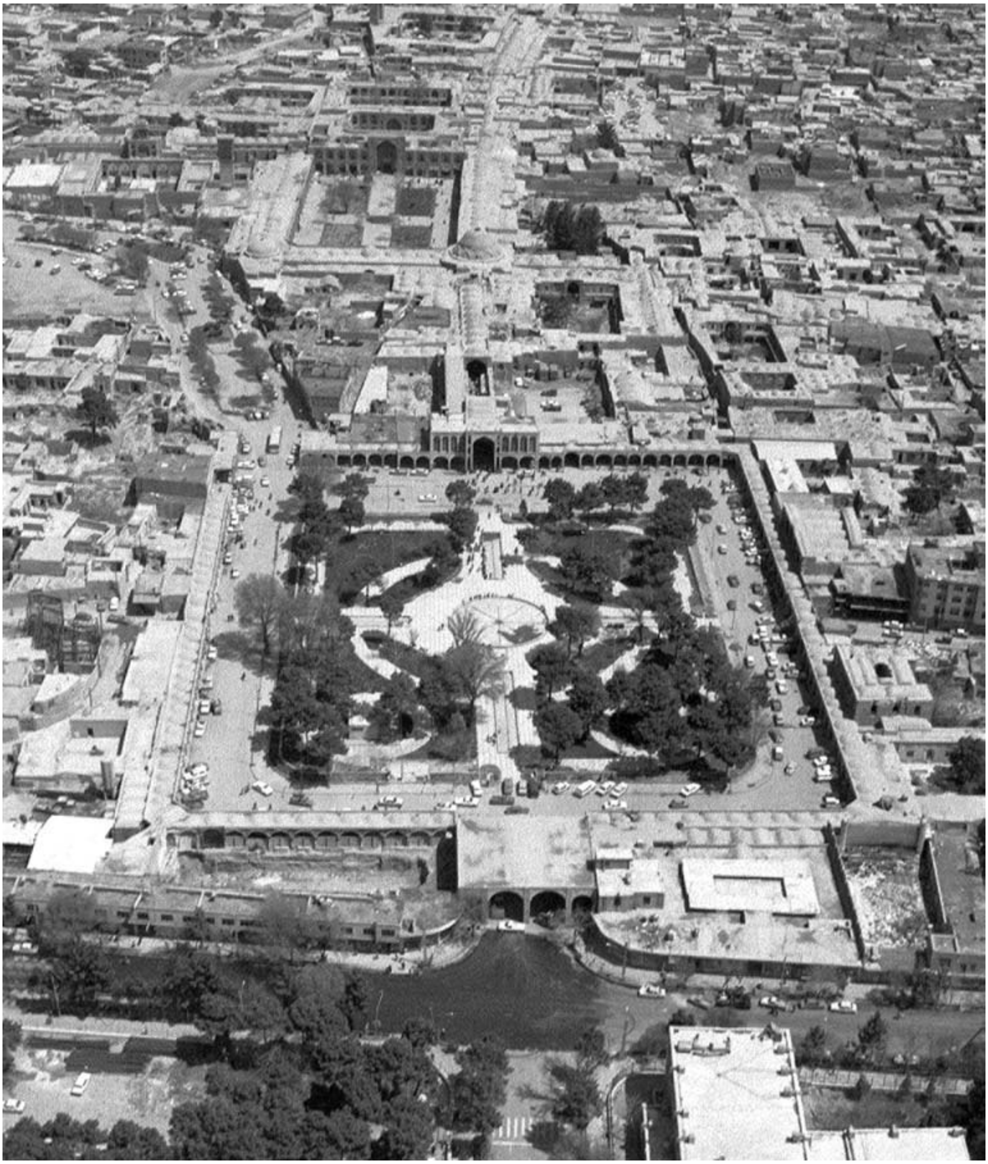


Fig. 3. Aerial view of Grand Bazaar from the west. Foreground: Tawhid Square; Upper left: Maydan of Ganj Ali Khan attached to left side of Bazaar. (Photo: M. Zenderuh Kermani.)

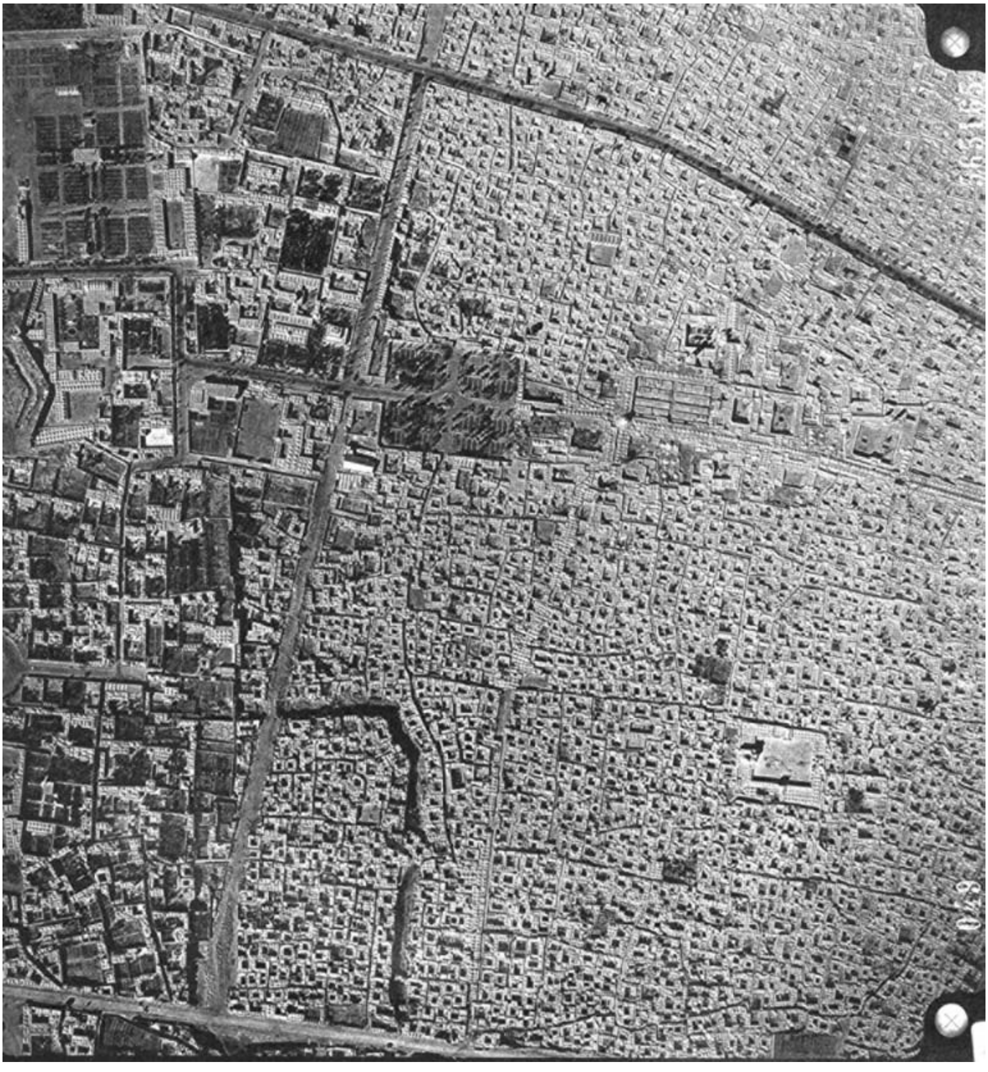


Fig. 4. Aerial photograph of southwest quadrant of old city, showing in lower left corner traces of a medieval moat; to the right, level with north trench is Masjid-i Malik; just above centre runs the Grand Bazaar (first half of twentieth century).

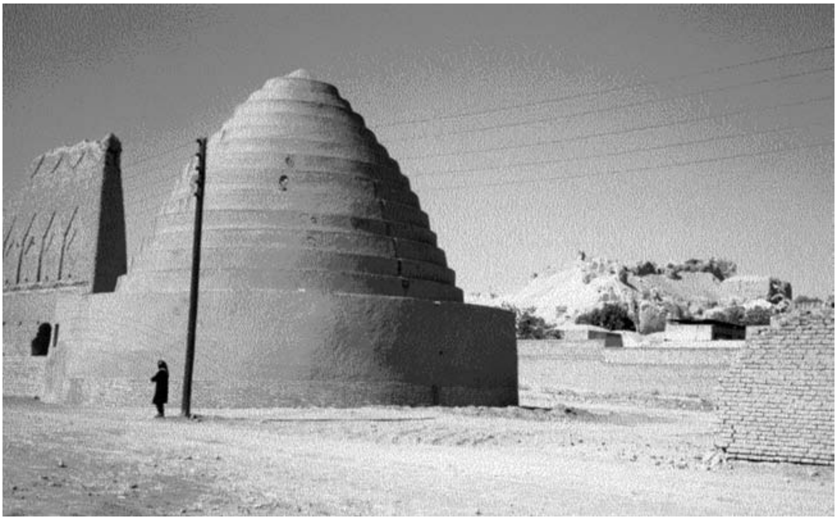


Fig. 5. Icehouse (*yakhdan*) north of Qal{eh Dukhtar.

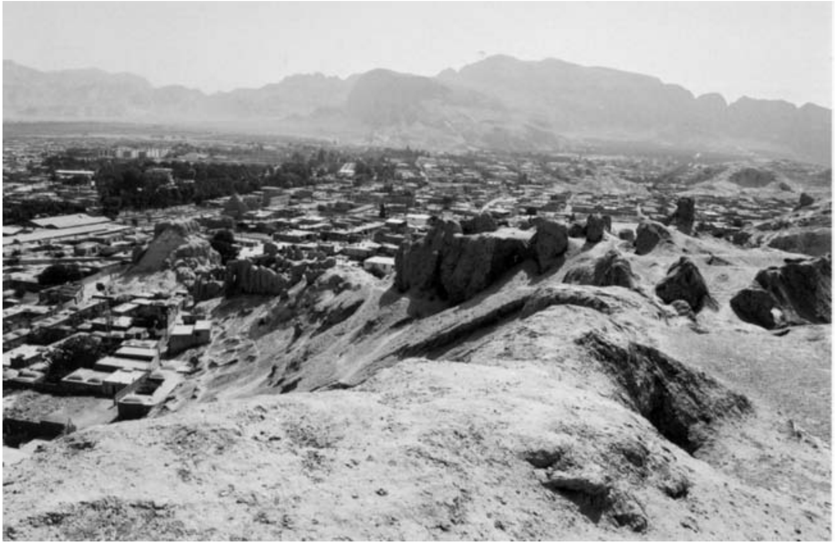


Fig. 6. Qal{eh Dukhtar from upper terrace toward northeast.

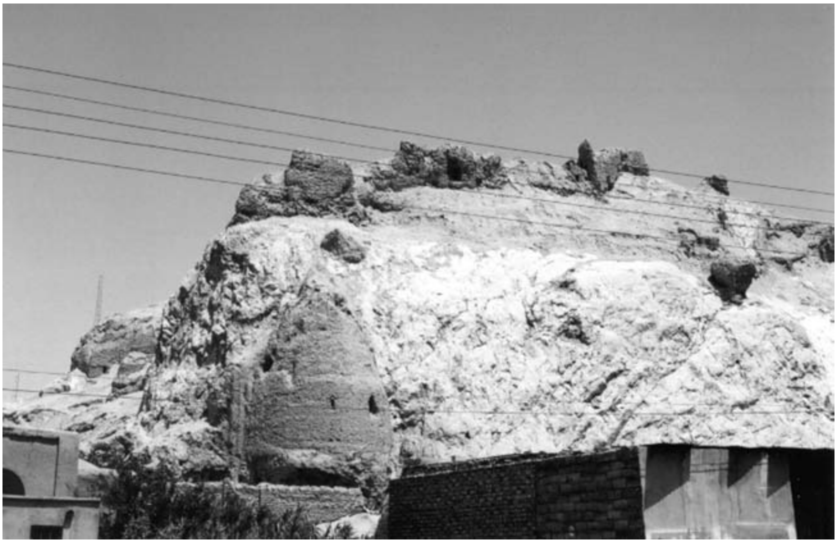


Fig. 7. Old tower joining fortification walls of Qal{eh Dukhtar to medieval (tenth century?) city.

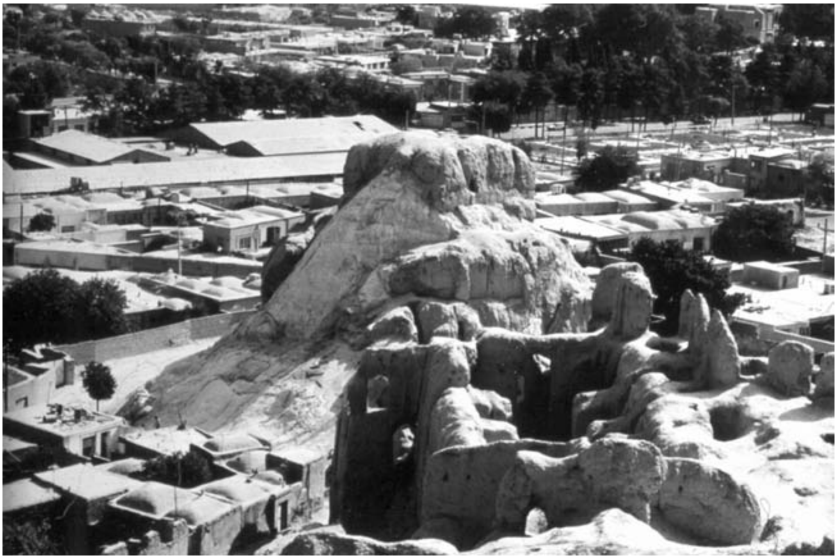


Fig. 8. Qal{eh Dukhtar, looking across enfilade toward a Drum-house.

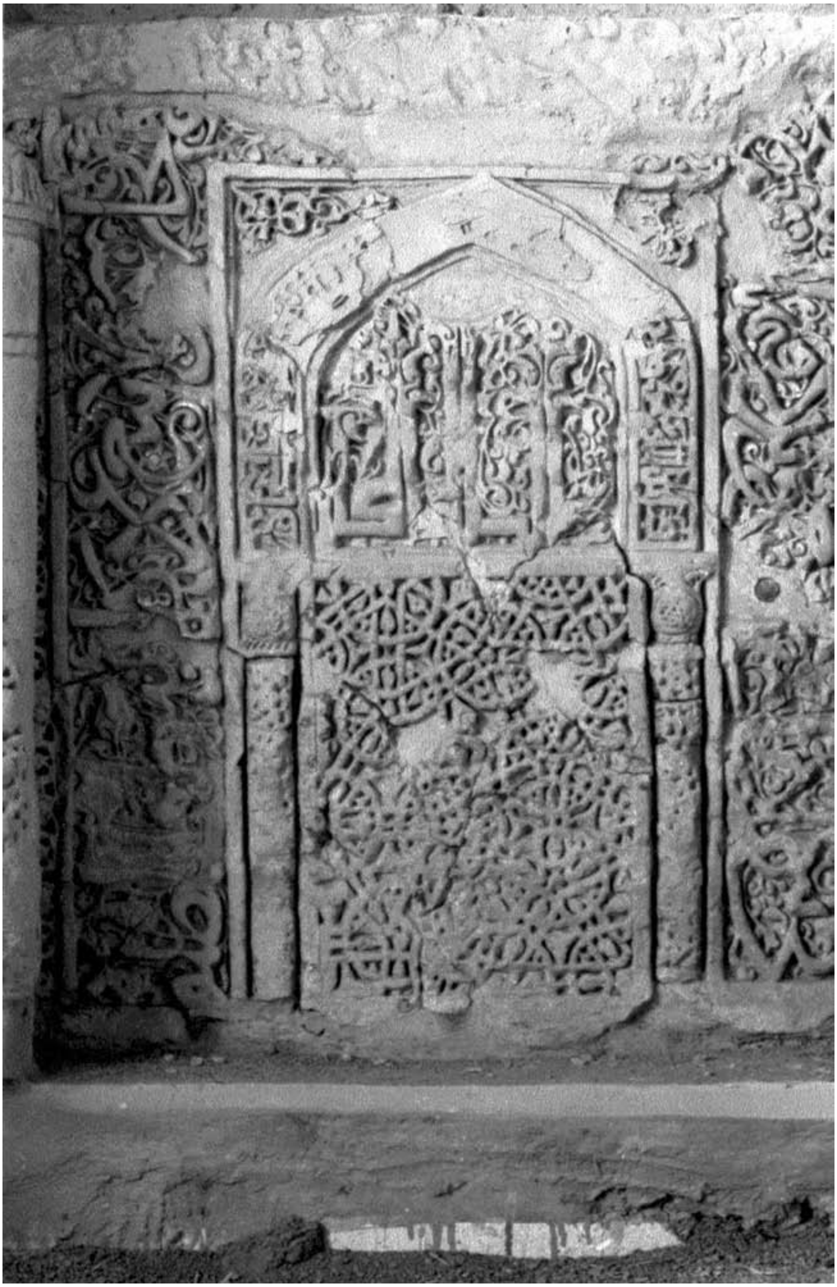


Fig. 9. One of three stucco mihrabs on roof of Masjid-i Malik.

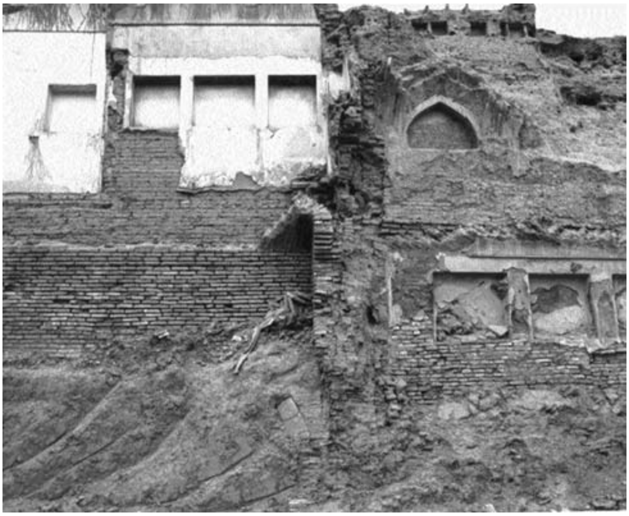


Fig. 10. Site excavated for new construction south of Masjid-i Malik; medieval collapsed arch at bottom, centre.

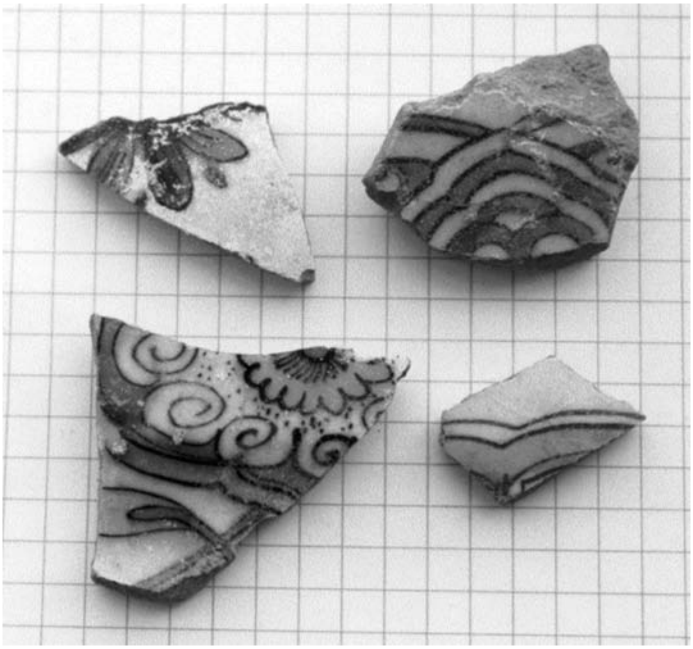


Fig. 11. Sherds collected from Kirman, underglaze painted with chromium black and cobalt, early seventeenth century (produced in Kirman).

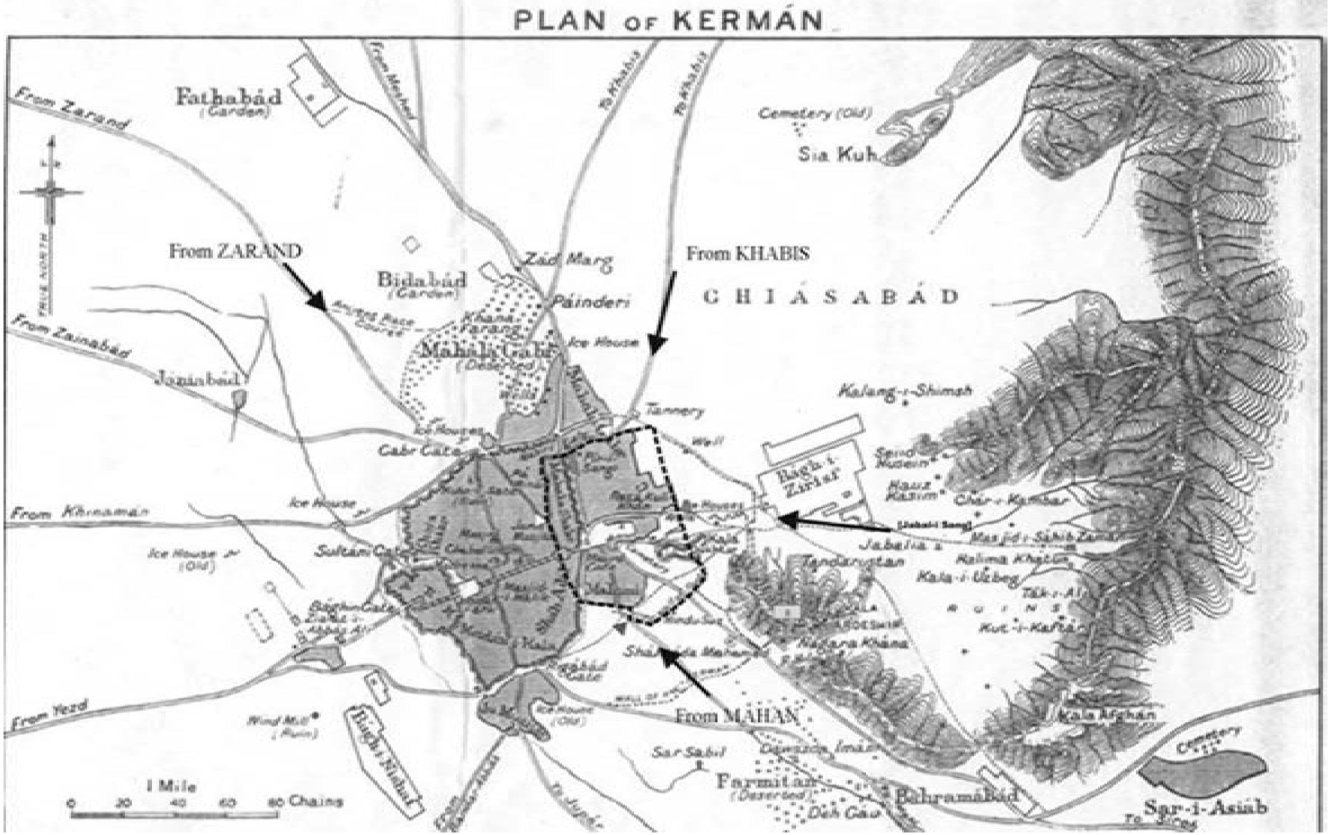

PLAN OF KERMÁN
From Zarand
Fathabád (Garden)
From Meshed
To Khabis
To Khabis
Cemetery (Old)
Sia Kuh
From ZARAND
Bidabád (Garden)
Zád Marg
Páinderi
From KHABIS
GHIÁSABÁD
From Zainabad
Jopinbád
Racing Race Course
Khana Farangi
Mahala Gabr (Deserted)
Ice House
Tannery
Kalang-i-Shimah
Well
Bagh-i-Zirisf
Ice House
Gabr Gate
Saiad Husein
Hauz Kasim
Char-i-Kambar
From Khinaman
Ice House
Jabalia
Masjid-i-Sahib Zaman
Tandurustan
Halima Khatun
Sultani Gate
Ice House (Old)
Kala-i-Uzbeg
Tak-i-Ali
RUINS
Kut-i-Kaftar
Naqara Khana
Shahzada Mahamad
From MAHAN
Wind Mill (Ruin)
From Yezd
Bagh-i-Nishat
Ice House (Old)
Kala Afghan
Sar Sabil
Imam
Parmitan (Deserted)
Bahramabad
Deh Gau
Cemetery
Sar-i-Asiab
To Sirjan
To Jupár
1 Mile
0 20 40 60 80 Chains
TRUE NORTH

Fig. 12. Map of Kirman drawn by Sir Percy Sykes (1902), with reconstruction of Tenth-century city and its four gates; Qal{eh Dukhtar (= the Hill Fort); Qal{eh Ardashir (= the Old Fort).

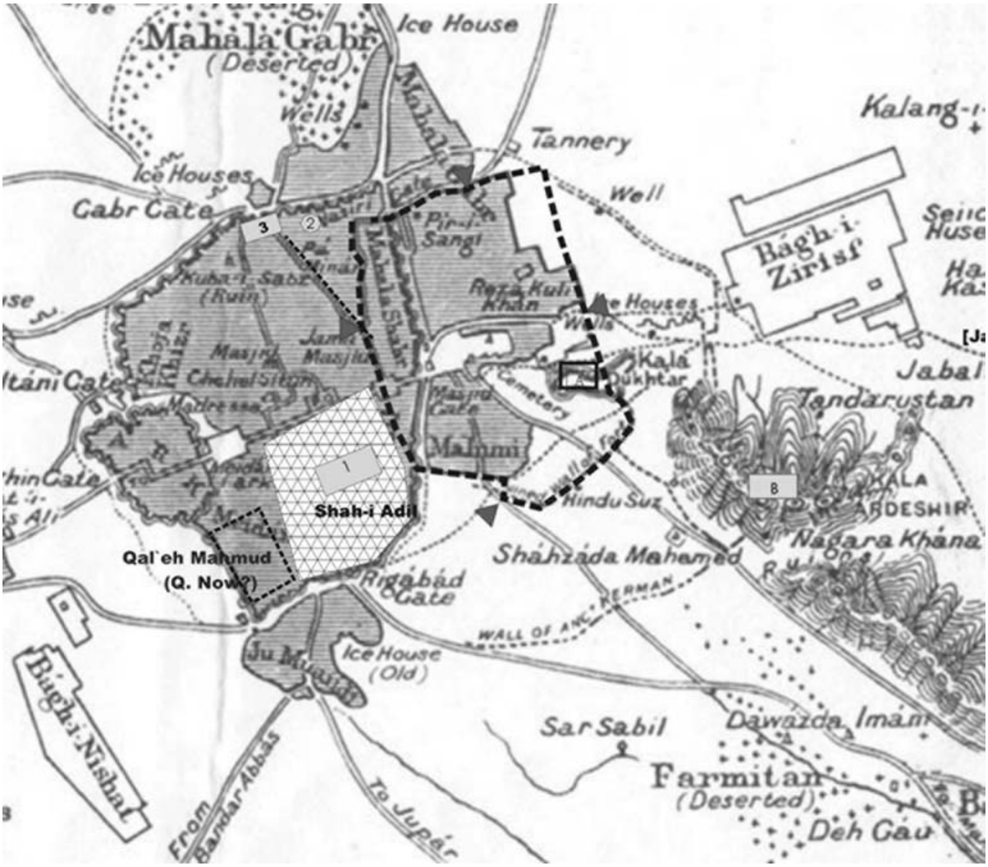

Mahala Gabr
(Deserted)
Wells
Ice House
Tannery
Kalang-i
Ice Houses
Gabr Gate
Well
3
2
Pir-i-Sangi
Bagh-i-Zirisf
Kuba-i-Sabz
(Ruin)
Reza Kuli Khan
Ice Houses
Wells
Jami Masjid
Masjid Chehel Situn
Madressa
Mahala Shahr
Kala Dukhtar
Jabal
Tandarustan
Cemetery
Masjid Gate
Mahmud
Arg
1
Shah-i Adil
Hindu Suz
8
KALA ARDESHIR
Nagara Khana
Qal`eh Mahmud
(Q. Now?)
Rigabad Gate
Shahzada Mahamed
WALL OF ANC. KERMAN
Ju Mu
Ice House
(Old)
Bagh-i-Nishat
Sar Sabil
Dawazda Imam
Farmitan
(Deserted)
Deh Gau
From Bandar Abbas
To Jupar

Fig. 13. Map of Kirman in the Saljuq period (based on Sykes, 1902). Legend: 1—Masjid-i Malik; 2—Khvajeh Atabek mausoleum; 3—Masjid-i Bazar-i Shah.

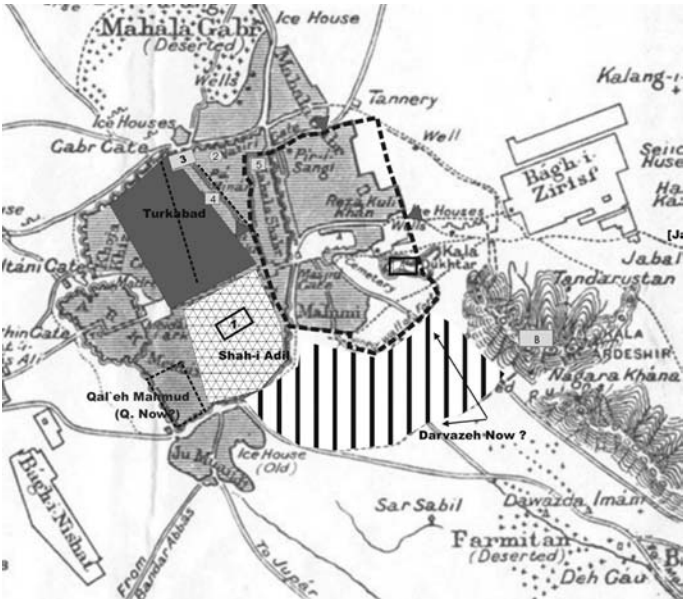

Mahala Gabr
(Deserted)
Ice House
Wells
Tannery
Kalang-i
Ice Houses
Cabr Gate
Well
Bagh-i-Zirisf
3
2
4
5
Turkabad
Pir-i Sangi
Reza Kuli Khan
Ice Houses
Wells
Kala Dukhtar
Cemetery
Jabal Tandarustan
Masjid Gate
Malmmi
1
B
Shah-i Adil
Nagara Khana
Qal`eh Mahmud
(Q. Now?)
Darvazeh Now ?
Ice House (Old)
Sar Sabil
Dawazda Imam
Farmitan
(Deserted)
Deh Gau
Bagh-i-Nishat
From Bandar Abbas
To Jupar

Fig. 14. Map of Kirman under the Qutlugh-Khanids (based on Sykes), showing new suburb “Turkabad” 4—Hawz-i Malik, late twelfth century).

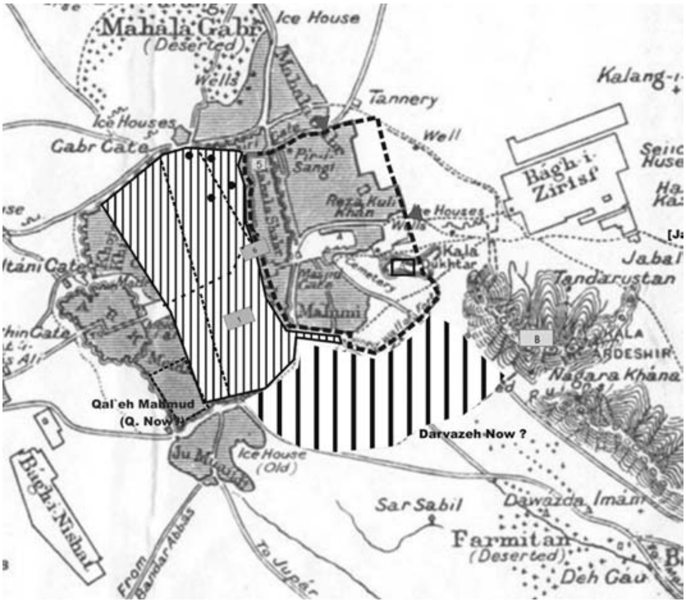

Mahala Gabr
(Deserted)
Ice House
Wells
Tannery
Kalang-i
Ice Houses
Cabr Gate
Well
Bagh-i-Zirisf
5
Pir-i Sangi
Reza Kuli Khan
Ice Houses
Wells
6
Kala Dukhtar
Cemetery
Jabal Tandarustan
Masjid Gate
Malmmi
1
B
Nagara Khana
Qal`eh Mahmud
(Q. Now?)
Darvazeh Now ?
Ice House (Old)
Sar Sabil
Dawazda Imam
Farmitan
(Deserted)
Deh Gau
Bagh-i-Nishat
From Bandar Abbas
To Jupar

Fig. 15. Map of Kirman under the Muzaffarids and Timurids (based on Sykes). Legend: 5—Shrine of Shaykh Davud; 6—Masjid-i Jami{ Muzaffari.

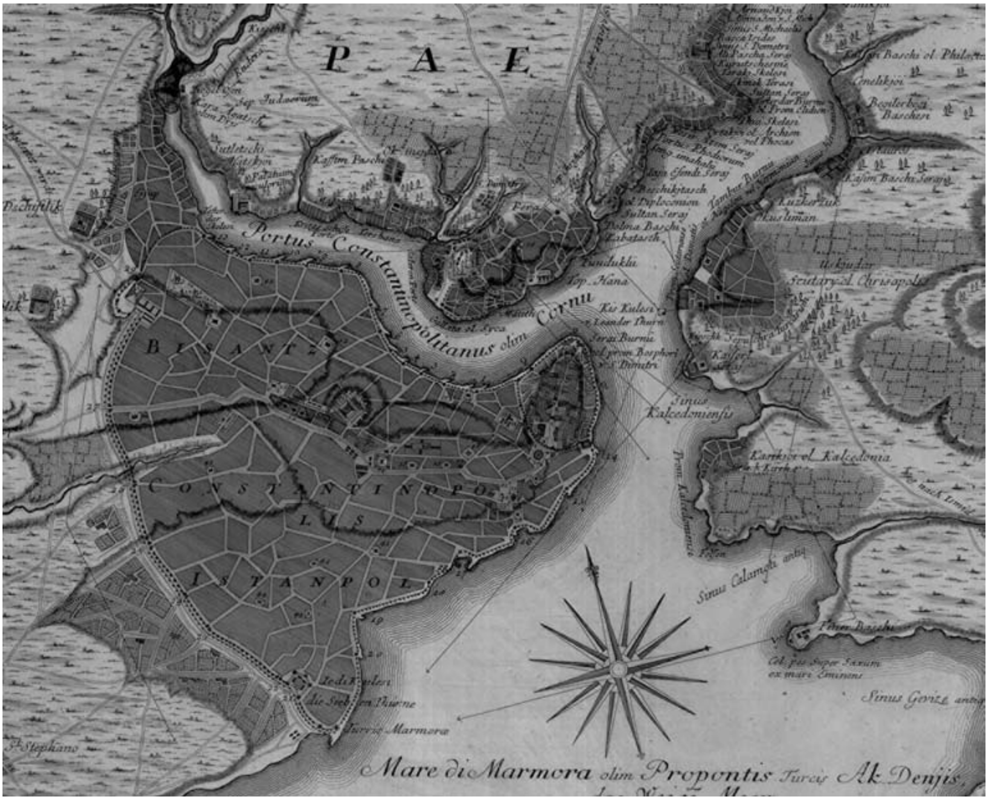

P A E
Pertus Constantinopolitanus olim Cornu
B I S A N T Z
C O N S T A N T I N O P O L I S
I S T A N P O L
Pera
Top Hana
Fundukli
Kabatasch
Dolma Baschi
Kiz Kulesi
Serai Burnu
Sinus Kalcedoniensis
Uskudar
Scutary ol. Chrisapolis
Kadikoi ol. Kalcedonia
Sinus Calamgli antiq
Jedi Kulesi
Turris Marmorea
S. Stephano
Mare di Marmora olim Propontis Turcis Ak Denjis

Fig. 1. Istanbul in a 1764 Reben-Homann map.

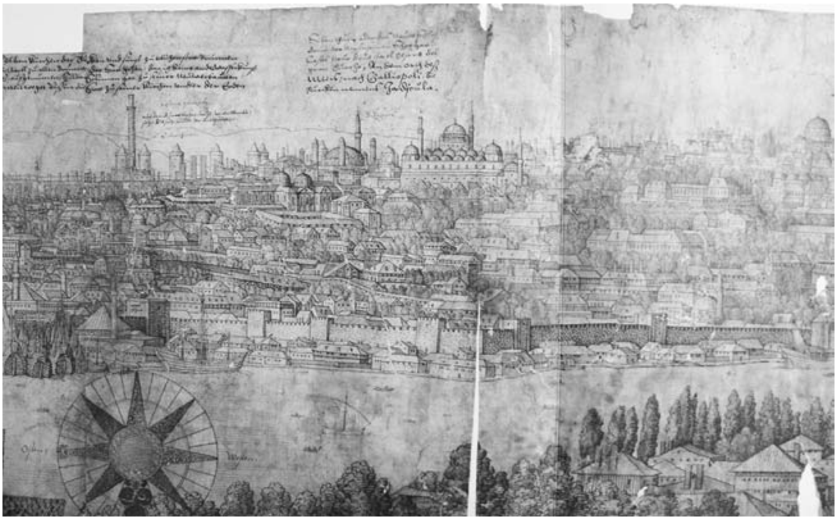


Fig. 2. View of central Istanbul drawn by Melchior Lorich around 1560.

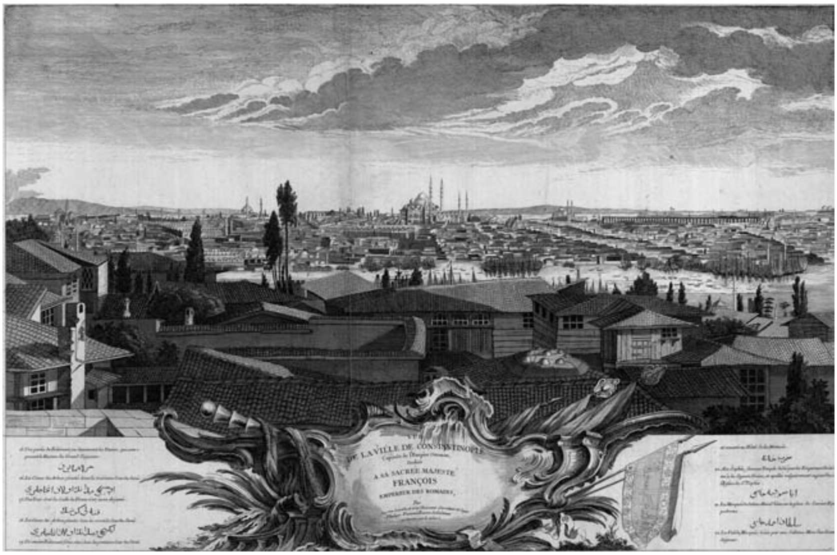

DE LA VILLE DE CONSTANTINOPLE
A SA SACRÉE MAJESTÉ
FRANÇOIS
EMPEREUR DES ROMAINS,

Fig. 3. View of central Istanbul drawn by the Baron von Gudenus around 1750.

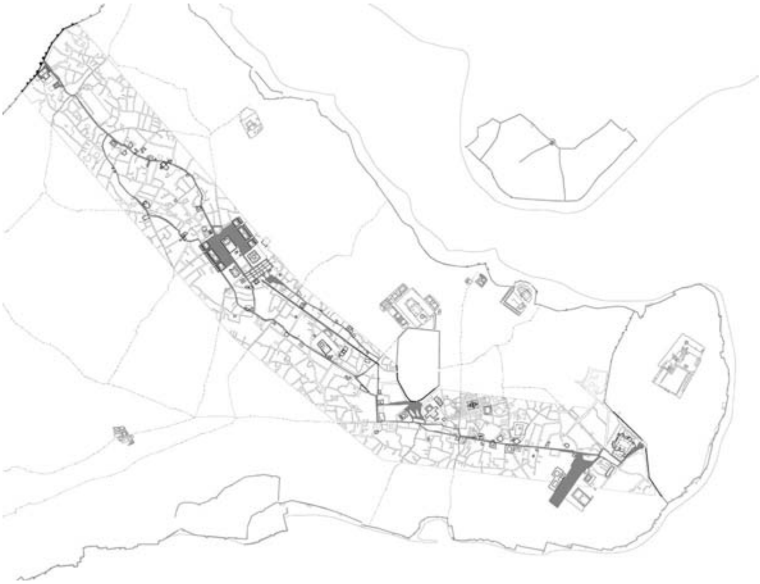


Fig. 4. The construction of the monumental Divanyolu axis. Monuments built in the 1610–1690 period (in red).

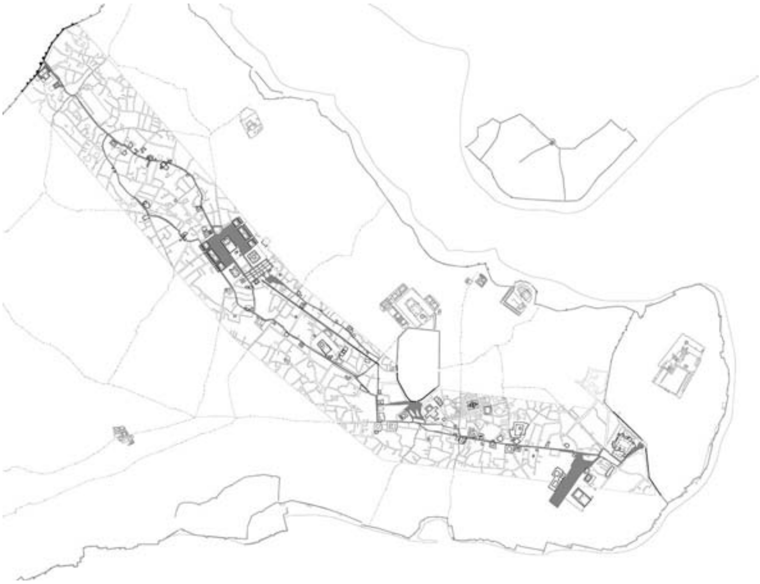


Fig. 5. The construction of the monumental Divanyolu axis. Monuments built in the 1690–1750 period (in red).

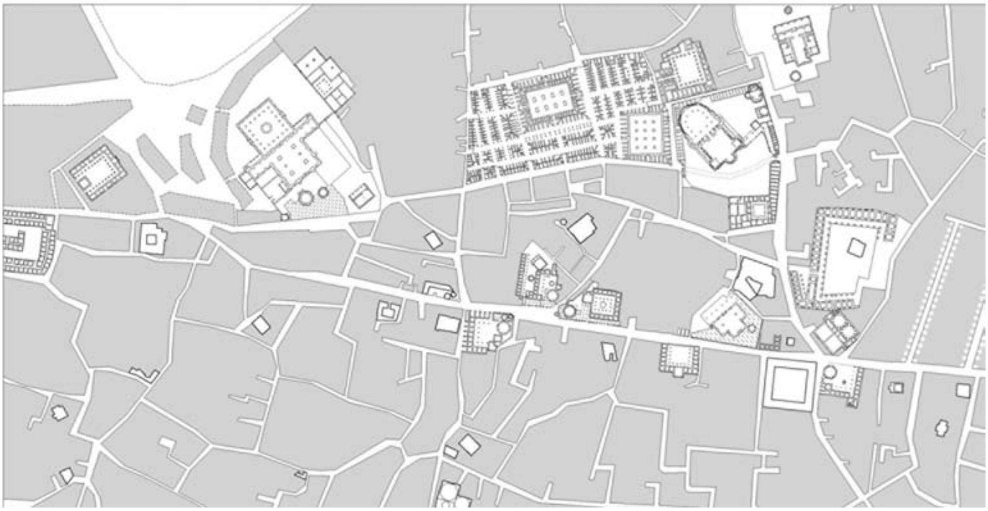


Fig. 6. Reconstruction of part of the monumental and street grid of central Istanbul from pre 1850 maps.

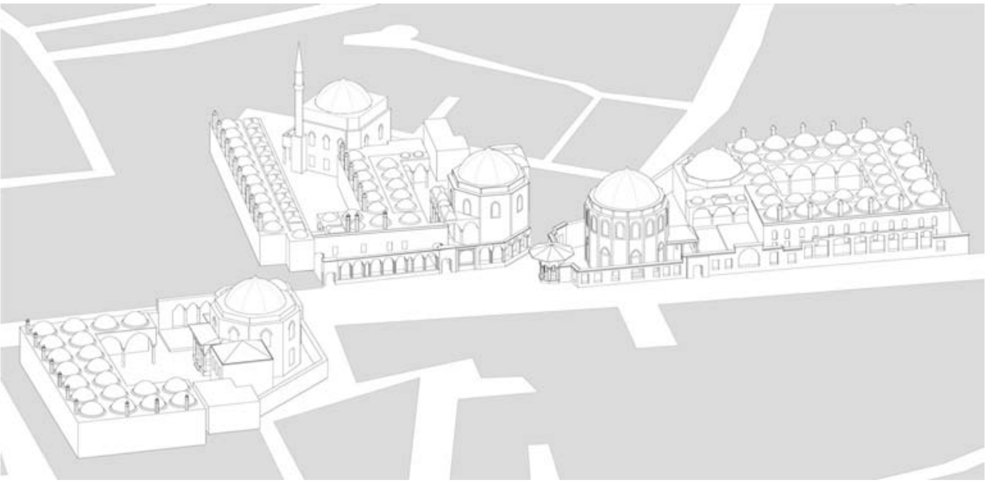


Fig. 7. Axonometric view of the Kara Mustafa, Çorlulu, Koca Sinan group of medreses along the Divanyolu built from the end of the sixteenth century to the first decade of the eighteenth.

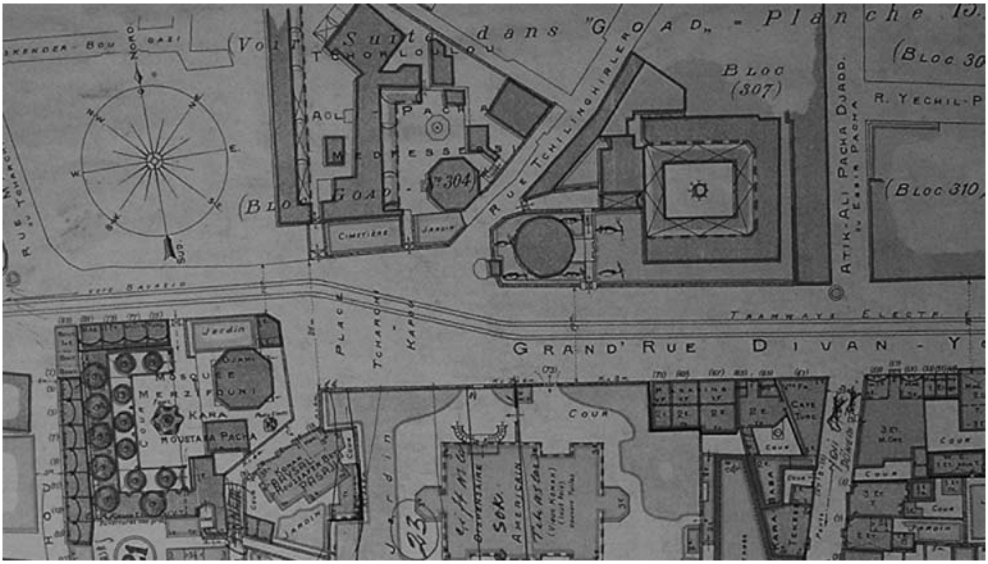

Voir Suite dans "GOAD" - Planche 15.
NORD
SUD
BLOC (307)
(BLOC 310
R. YECHIL-P
RUE TCHILINGHIRLER
ATIK-ALI PACHA DJADD.
CIMETIÈRE
MEDRESSE
GOAD - N° 304
PLACE
TCHARCHI KAPOU
TRAMWAYS ELECTR.
GRAND' RUE DIVAN - Y
Jardin
MOSQUÉE MERZIFOUNI KARA MOUSTAFA PACHA
COUR
SOK.

Fig. 8. The Kara Mustafa, Çorlulu, Koca Sinan group of medreses and aristocratic manors (konaks) along the Divanyolu in the Pervititch map of the 1920s.

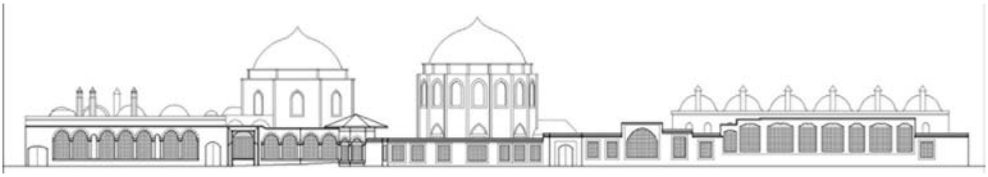


Fig. 9. Street profile of the Çorlulu and Koca Sinan medreses along the Divanyolu.

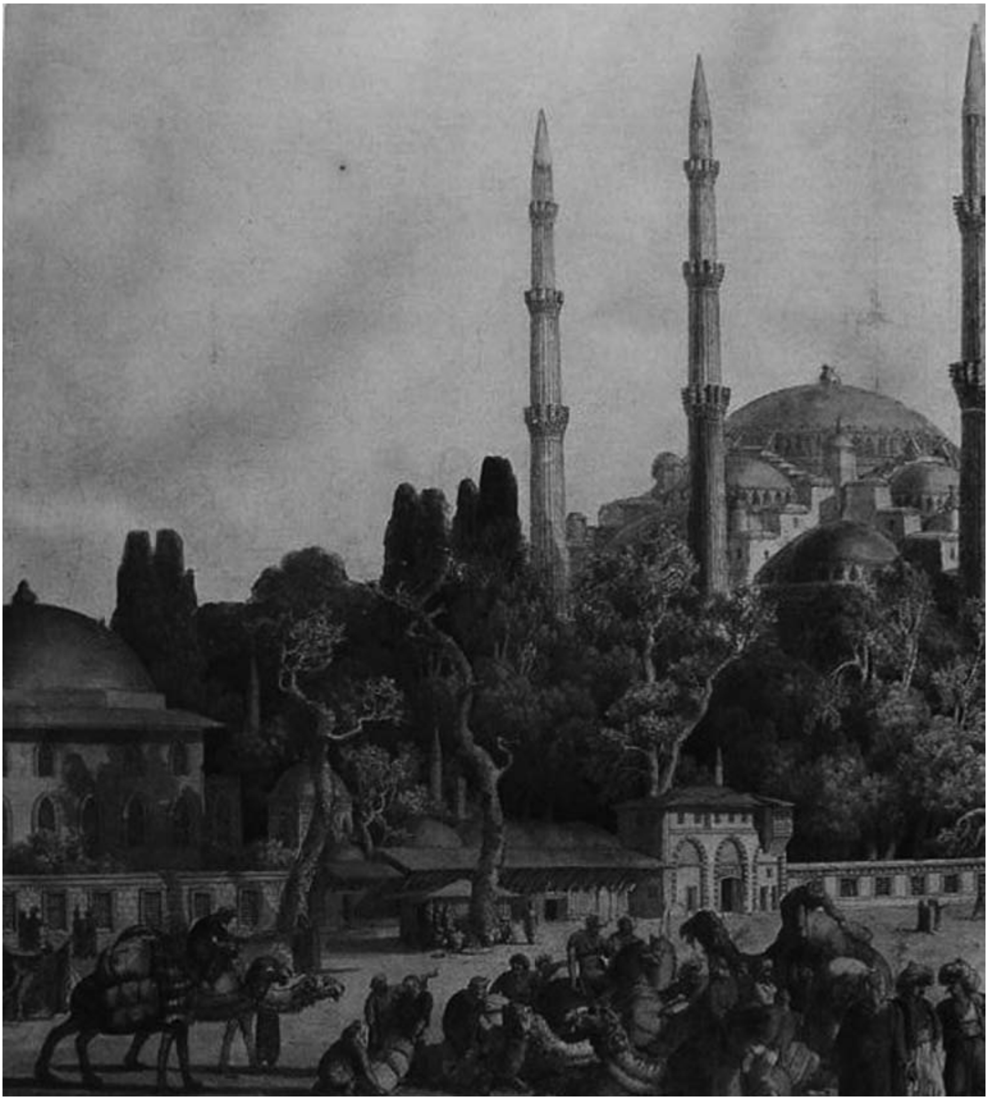


Fig. 10. Detail of the Sultan Ahmet Meydan (ancient Hippodrome) in the late eighteenth century view by Cassas.

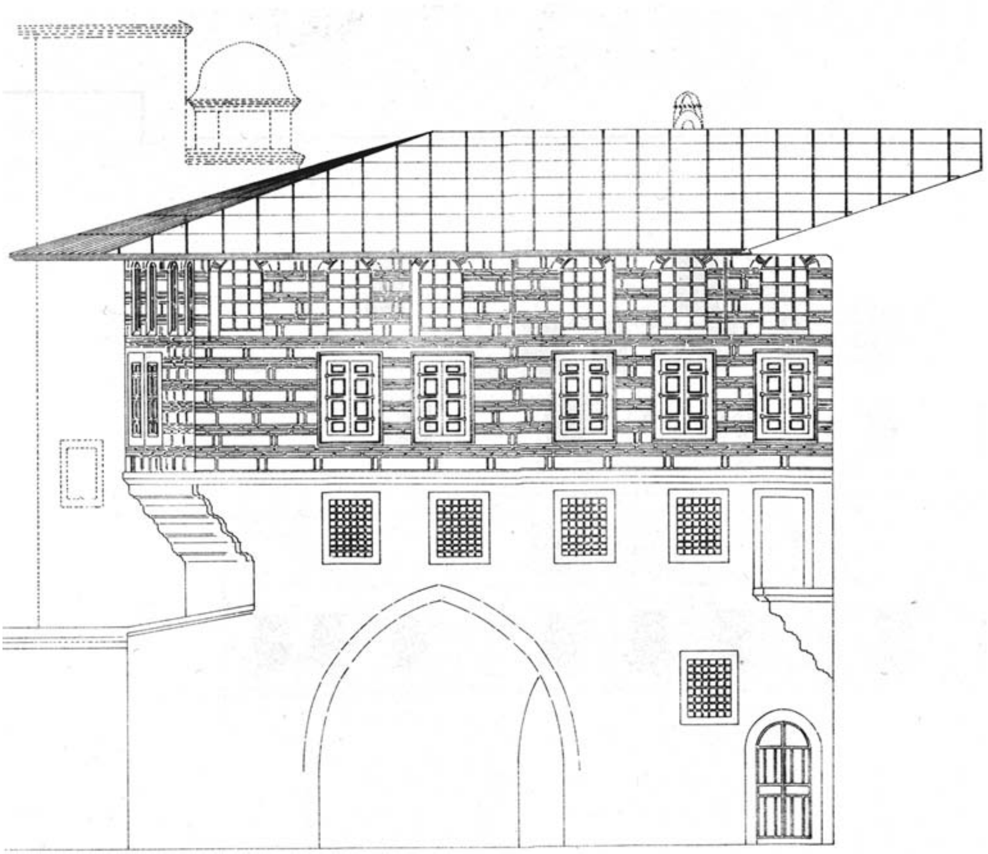


Fig. 11. Apartments of the Imperial ladies (Hünkar Kasrı) in the 1690 Valide Mosque complex.

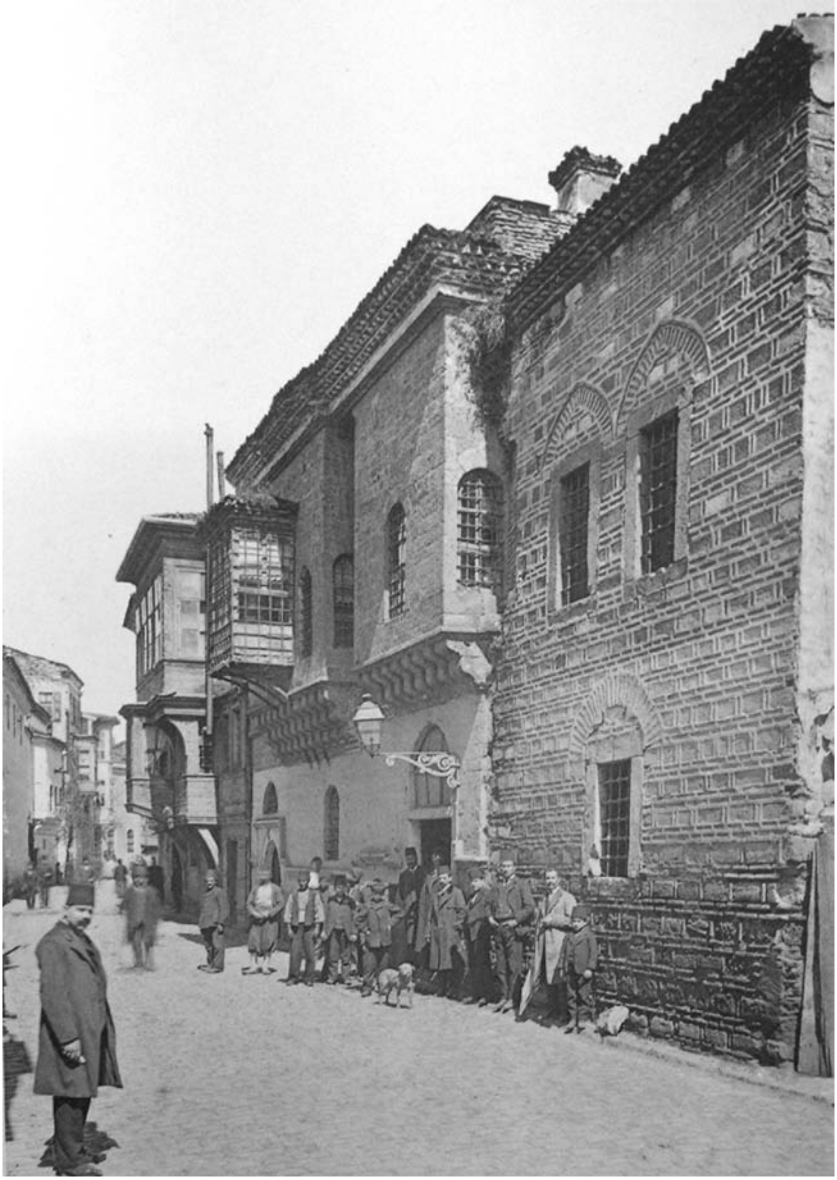


Fig. 12. Urban fabric with Greek housing in the Fener district.

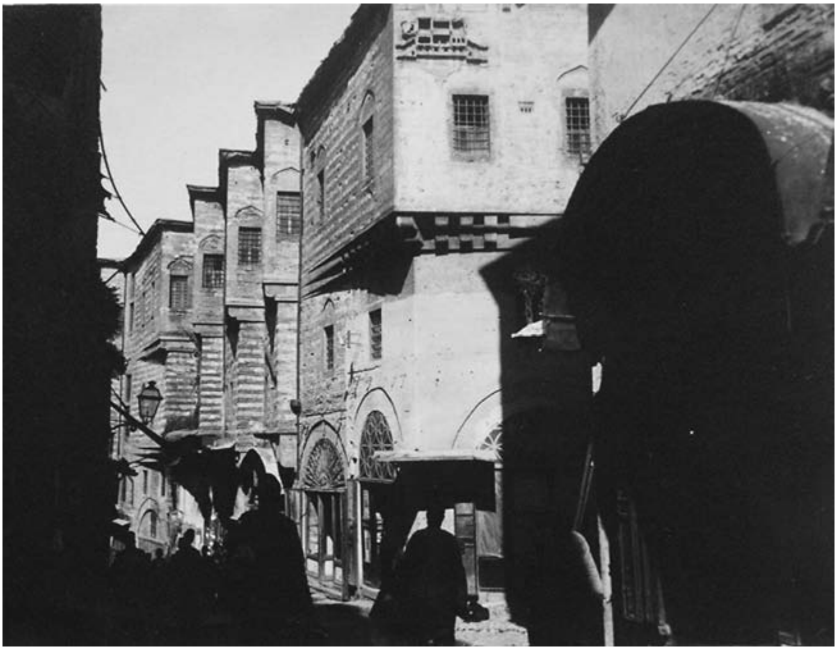


Fig. 13. The eighteenth century Yeni Han.

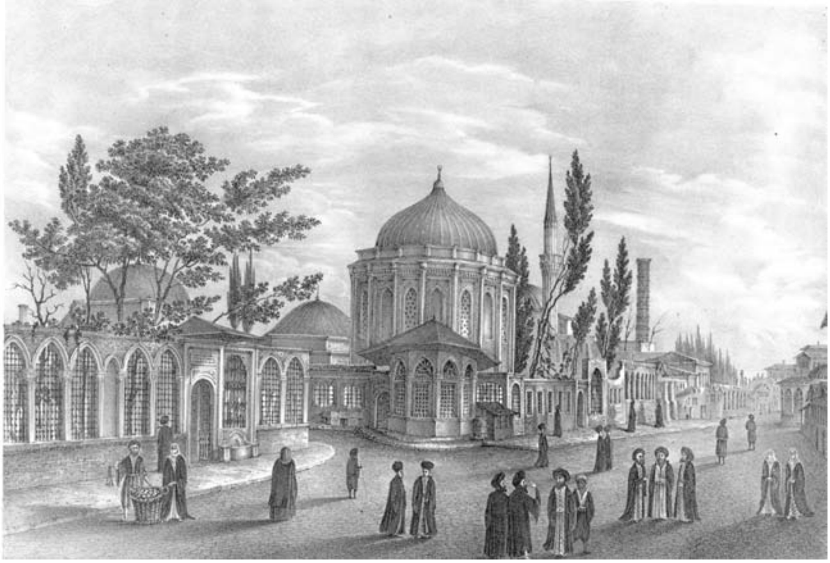


Fig. 14. The Divanyolu in a mid-nineteenth century lithograph.

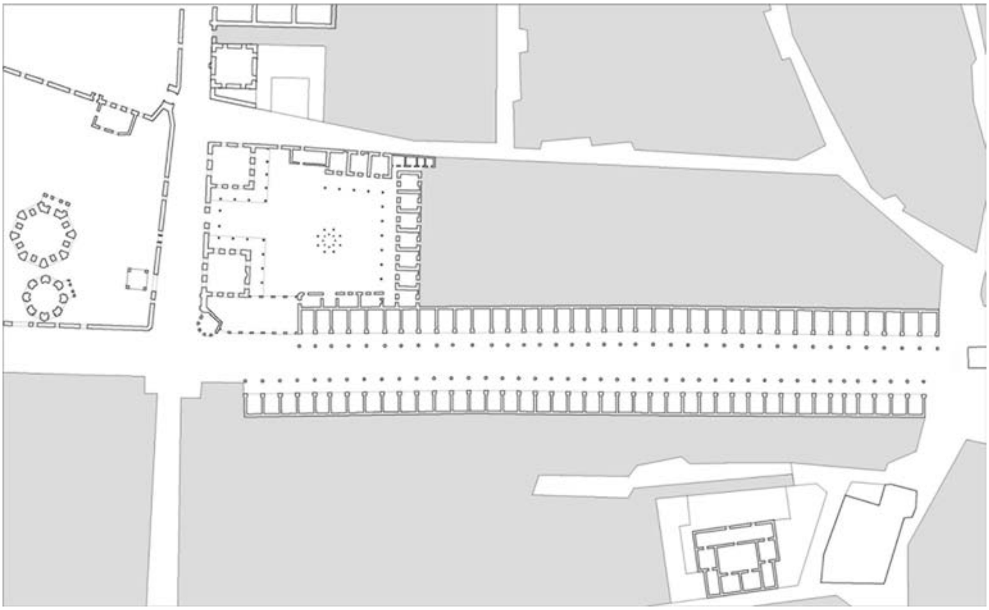


Fig. 15. The Damat Ibrahim medrese and arcade street complex. Reconstructed plan of the complex.

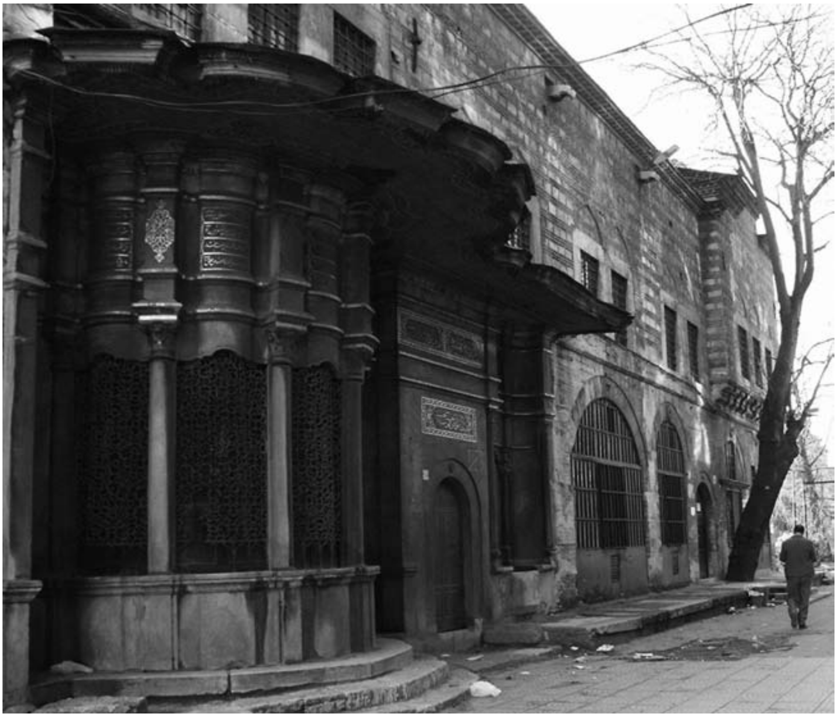


Fig. 16. The 1748 Seyyit Hasan Pasha medrese and fountain on the Divan axis.

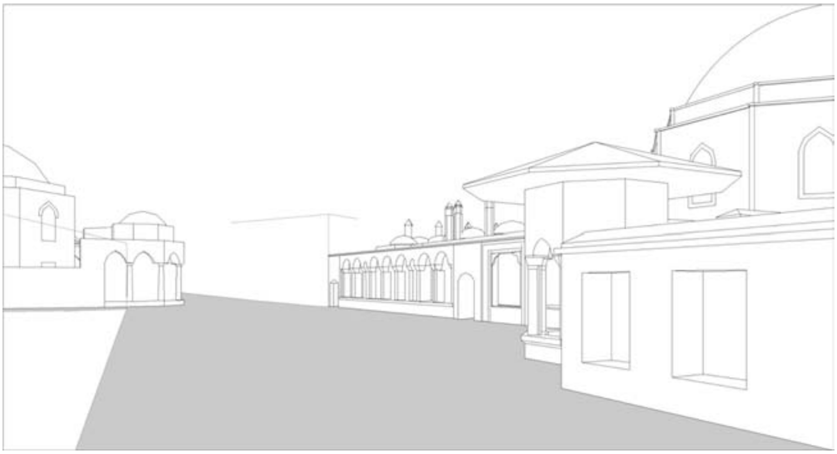


Fig. 17. The aesthetics of proximity: an interpretation of urban space defined by of the Kara Mustafa, Çorlulu, Koca Sinan complexes (1590–1710). Cfr. figures 7 and 8.

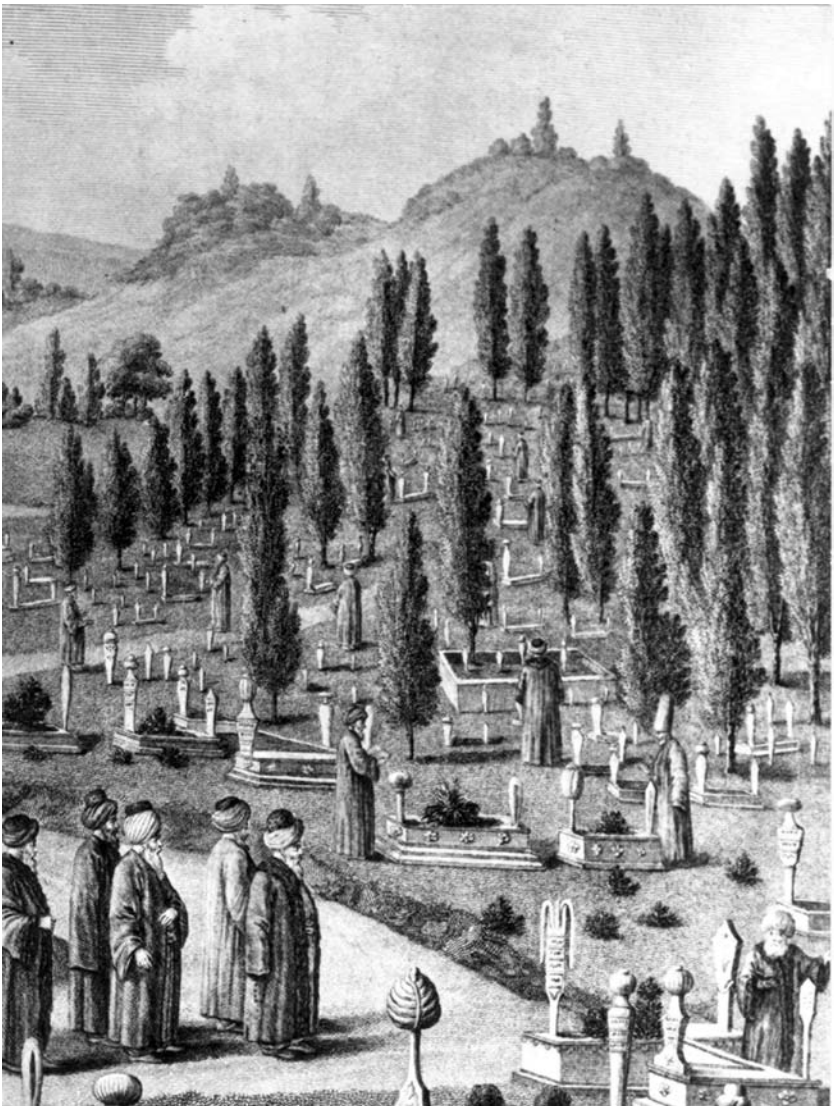


Fig. 18. Cemeterial grounds in the suburbs and outside the city walls. Cfr. figure 1 centre right.

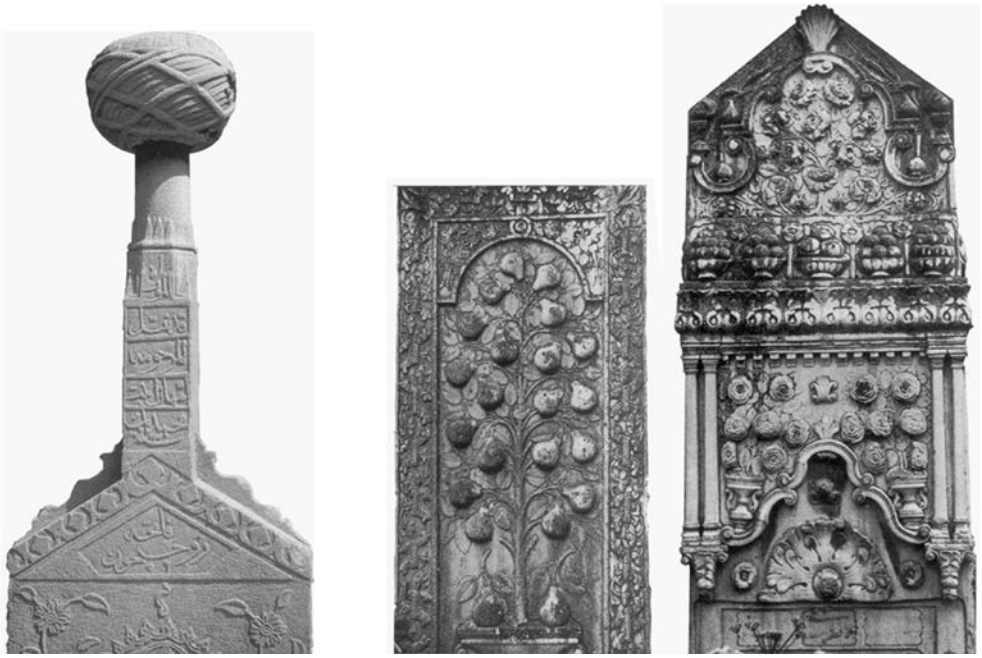


Fig. 19. Examples of seventeenth to eighteenth century tombs.

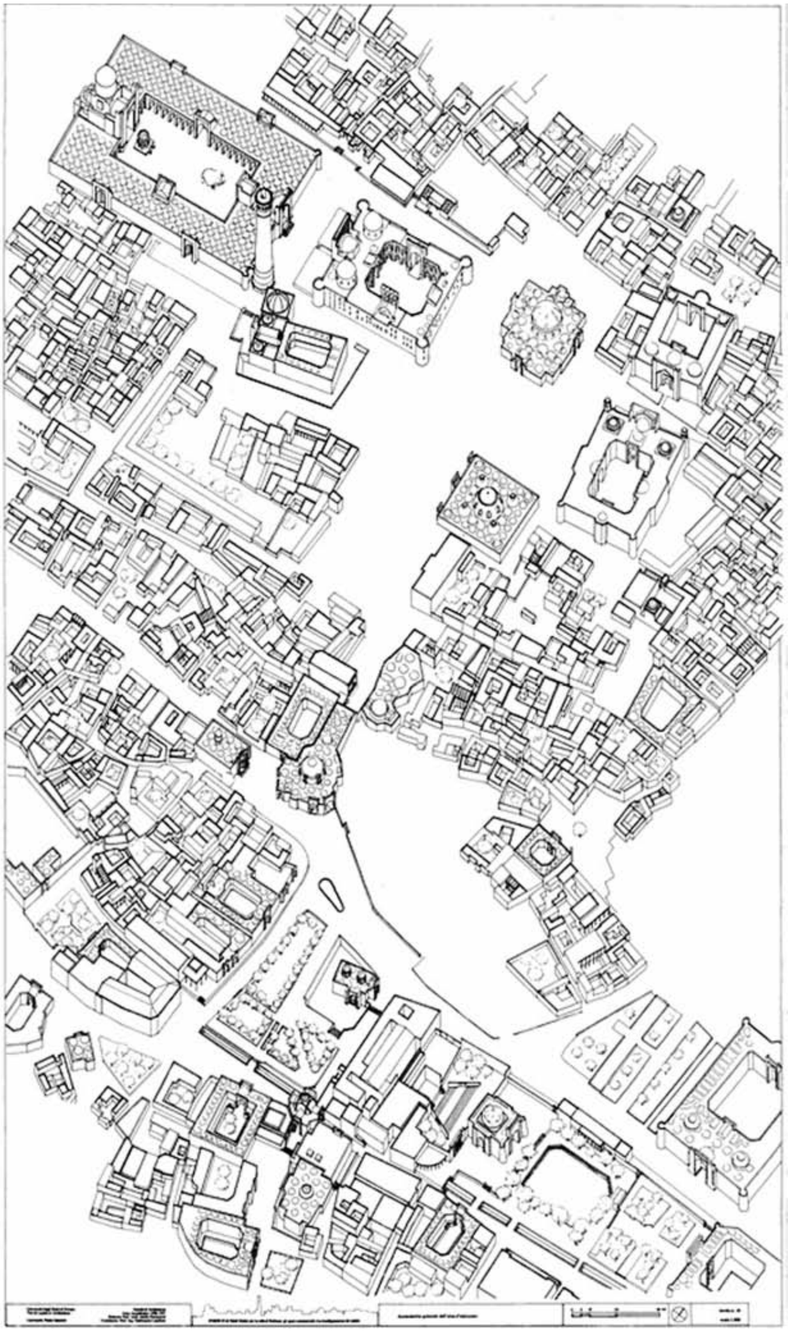


Fig. 1. Bukhara. Axonometrical view of the central core of the city, today.

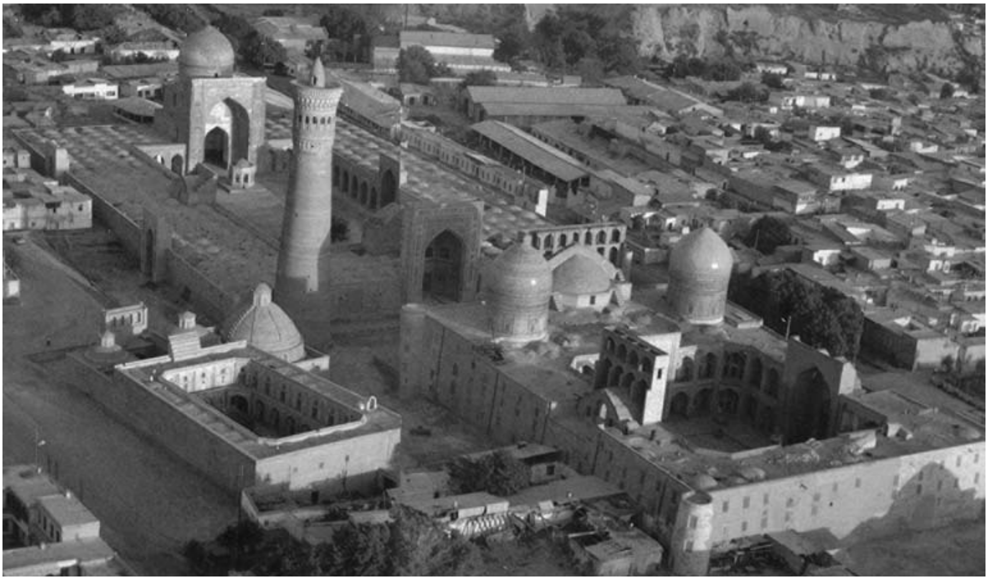


Fig. 2. The Kalyan ensemble.

The Poi-Kalyan ensemble (meaning “at the foot of the great” is a masterpiece of Central Asian architecture. The clear-cut layout and the monumental portals of the mosque, the medresseh and the Arslan-khan minaret have always aroused admiration by their grandeur and harmony.

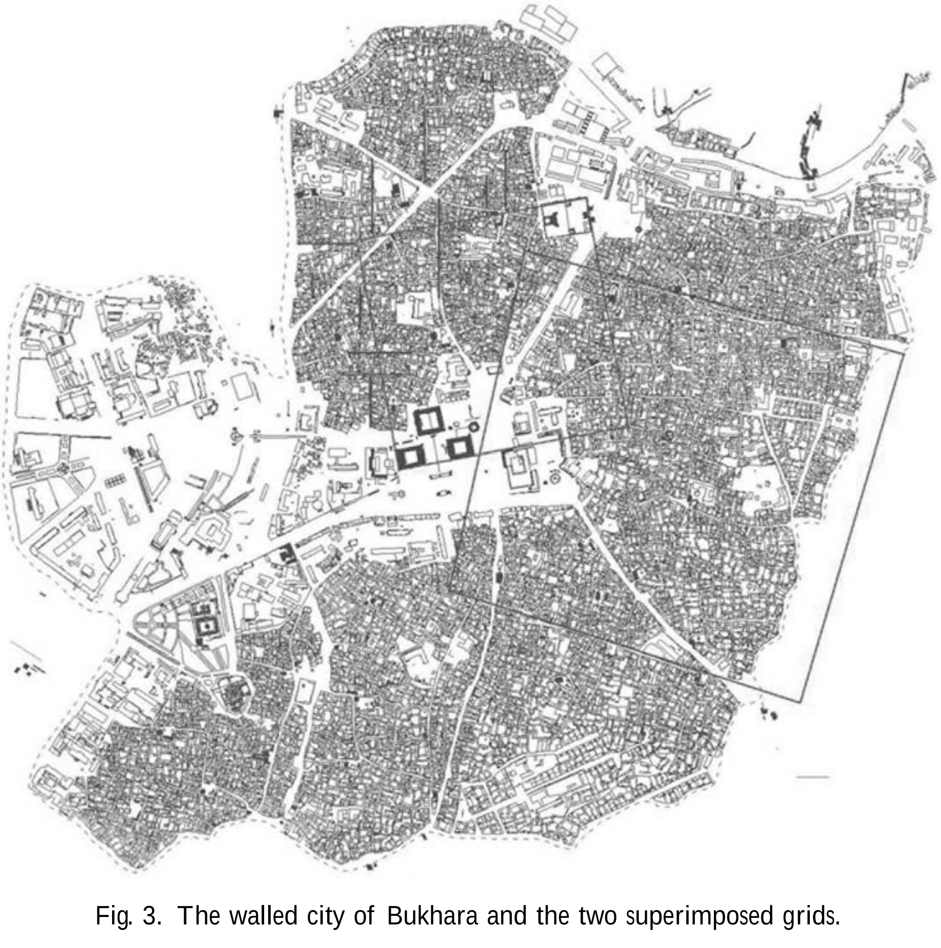


Fig. 3. The walled city of Bukhara and the two superimposed grids.

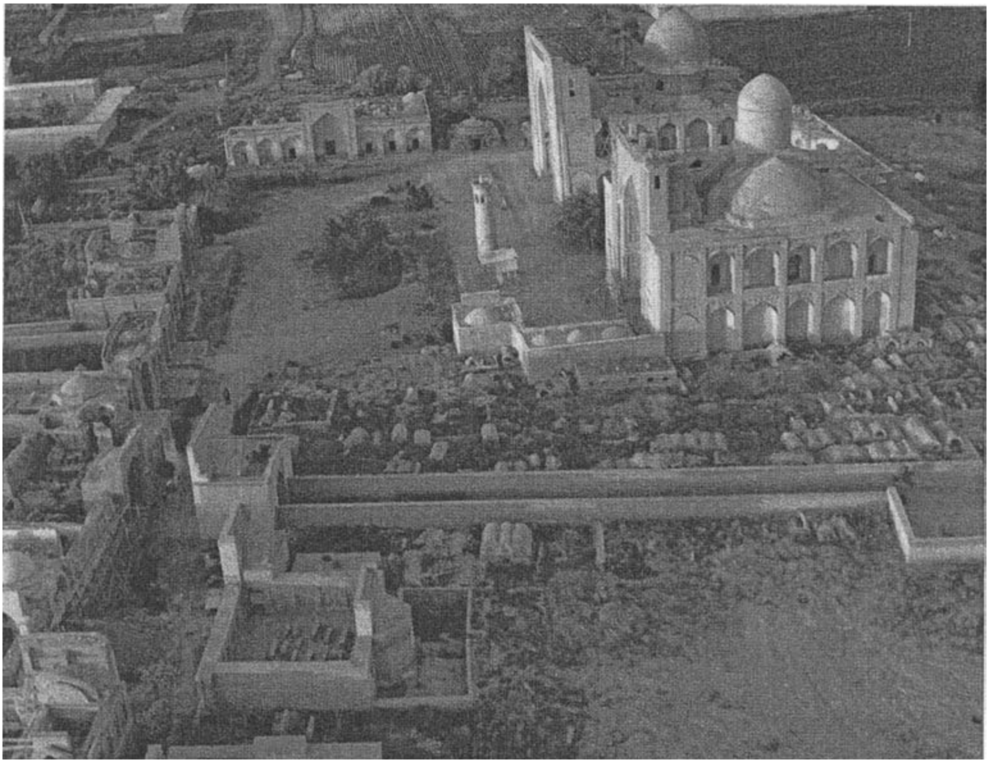


Fig. 4. The Chor-Bakr ensemble.
The entire history of formation of the ritual ensemble Chor-Bakr is associated with the dynasty of the Djubari sheikhs. The ensemble was built around the burial vault of Imam Abu Bakr.

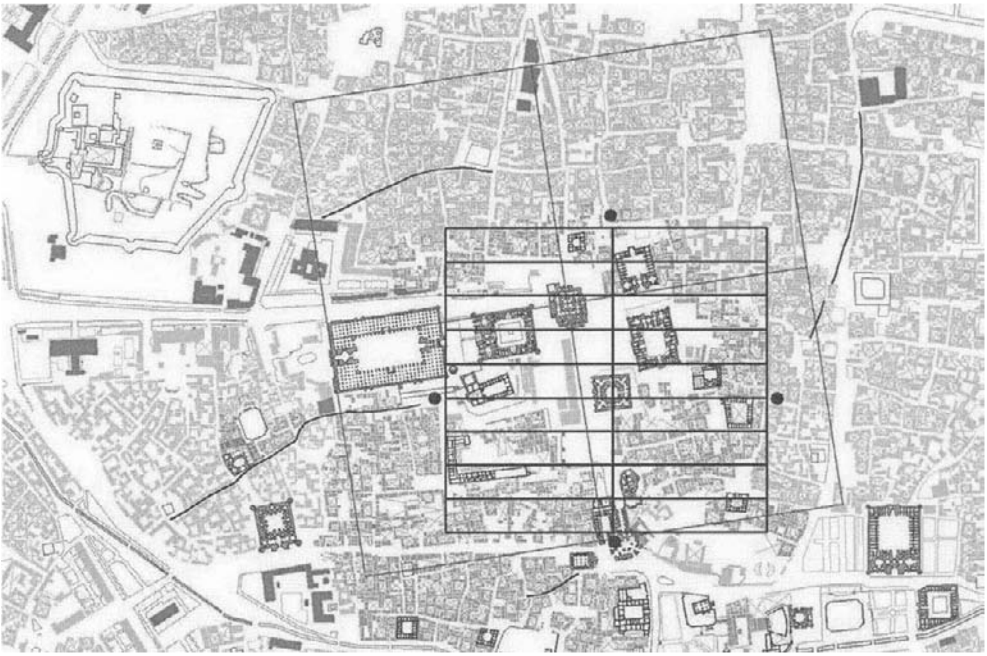


Fig. 5. The city of Bukhara. Singling out of a urban mesh.

FI

PO

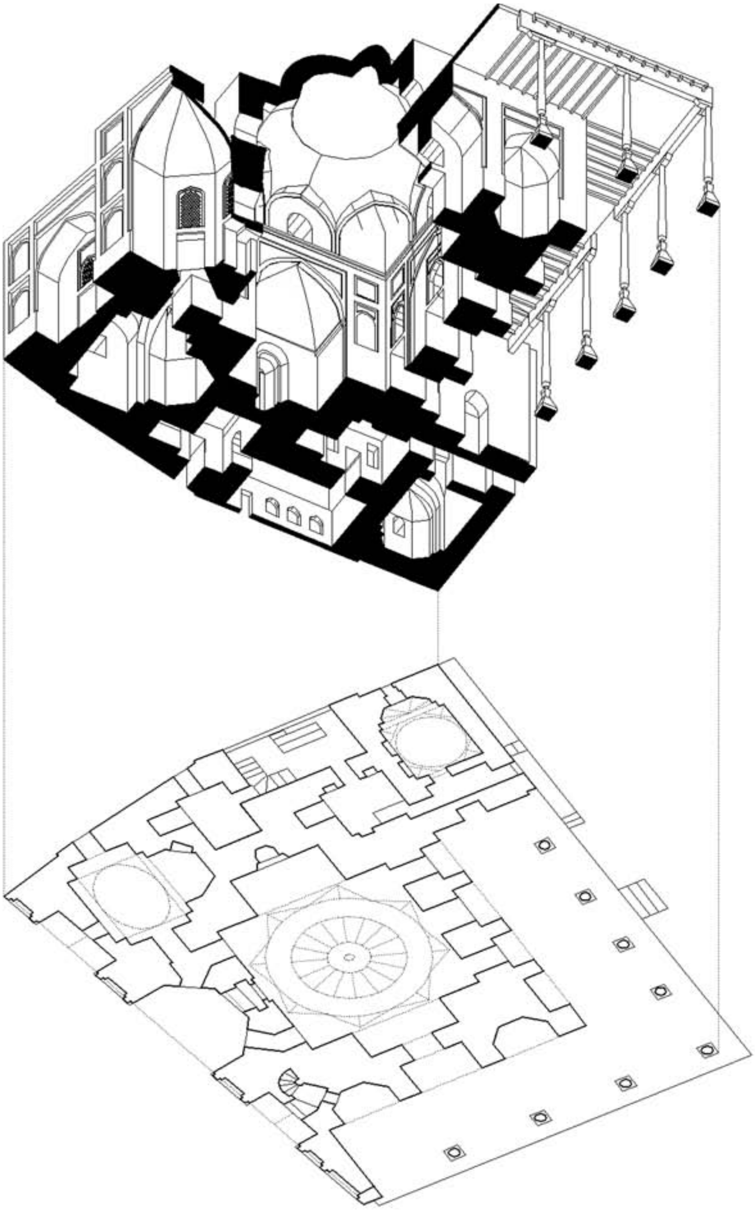


Fig. 6. The Khoja Zain al Din complex in Bukhara. Exploded axonometric view from below showing the prayer room, the portico, and the sanctuaries.

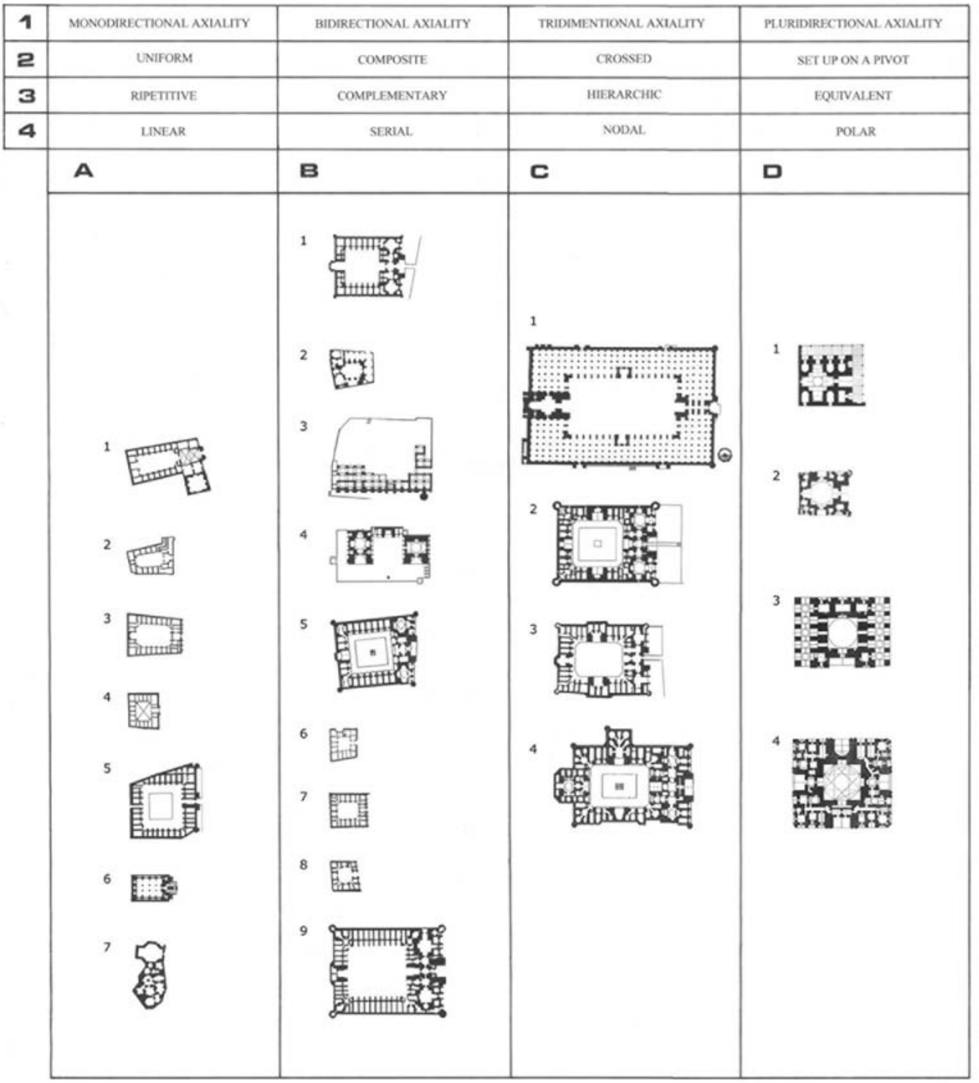

1
MONODIRECTIONAL AXIALITY
BIDIRECTIONAL AXIALITY
TRIDIMENTIONAL AXIALITY
PLURIDIRECTIONAL AXIALITY
2
UNIFORM
COMPOSITE
CROSSED
SET UP ON A PIVOT
3
RIPETITIVE
COMPLEMENTARY
HIERARCHIC
EQUIVALENT
4
LINEAR
SERIAL
NODAL
POLAR
A
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Fig. 7. Typological process of the main monuments of Bukhara.

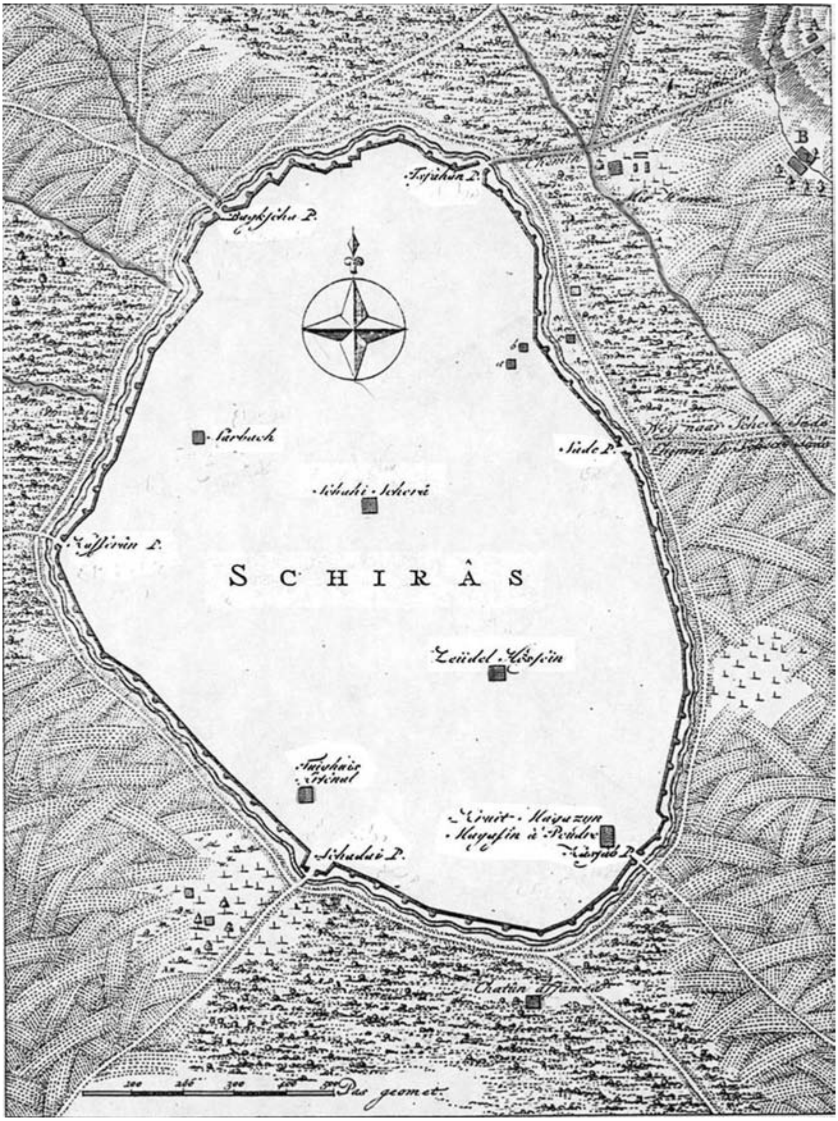

A
B
Ispahan P.
Mir Hamse
Chemin
Baghschah P.
Sarbach
Schahi Scherâ
a
b
Weg naar Schech Sade
Chemin de Schech Sade
Sade P.
Kasserûn P.
SCHIRÂS
Seïd el Hössein
Tuighane Arsenal
Kruit Magazyn
Magasin à Poudre
Schadai P.
Kassab P.
Chatûn Affamed
Pas geomet.

Fig. 1. 1765 plan of Shiraz by Carsten Niebhur.

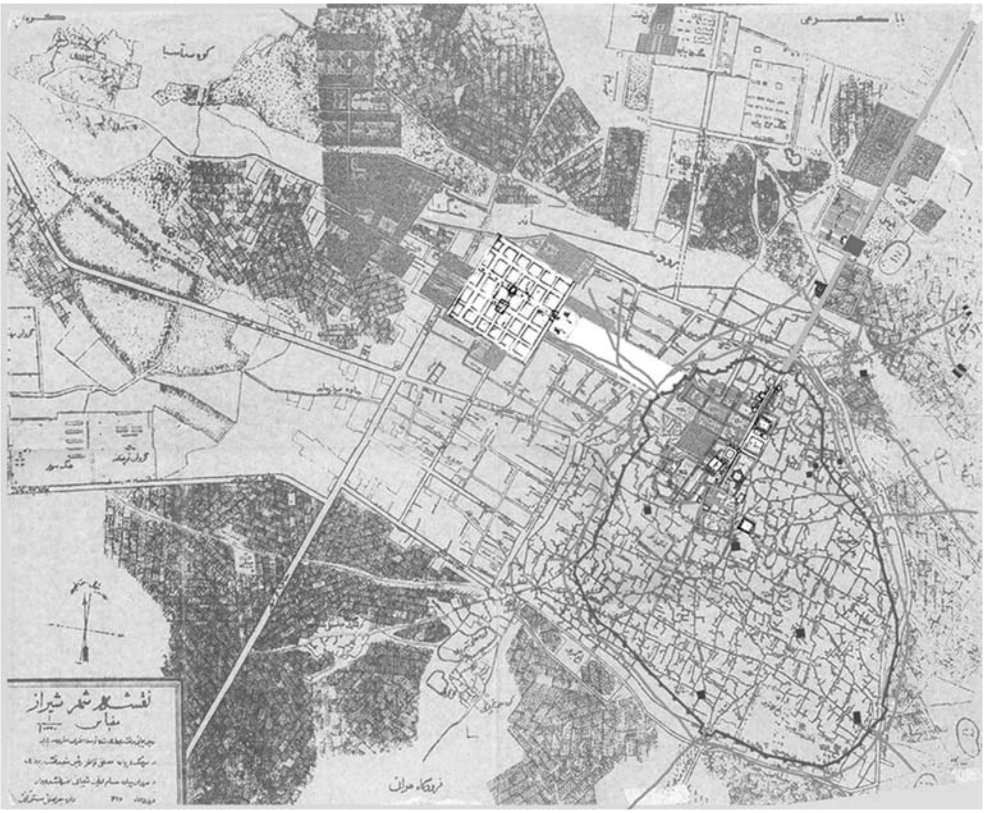


Fig. 2. Restored plan of Safavid Shiraz drawn by Mahvash Alemi on the background of 1946 plan of the city.

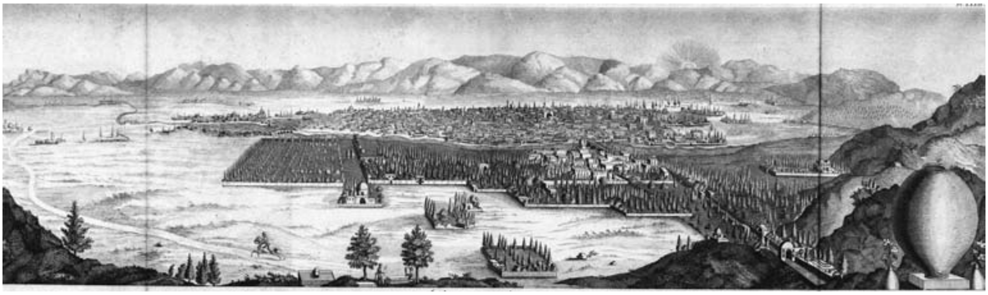


Fig. 3. View of Shiraz by Chardin from tang- e Allah-o Akbar.

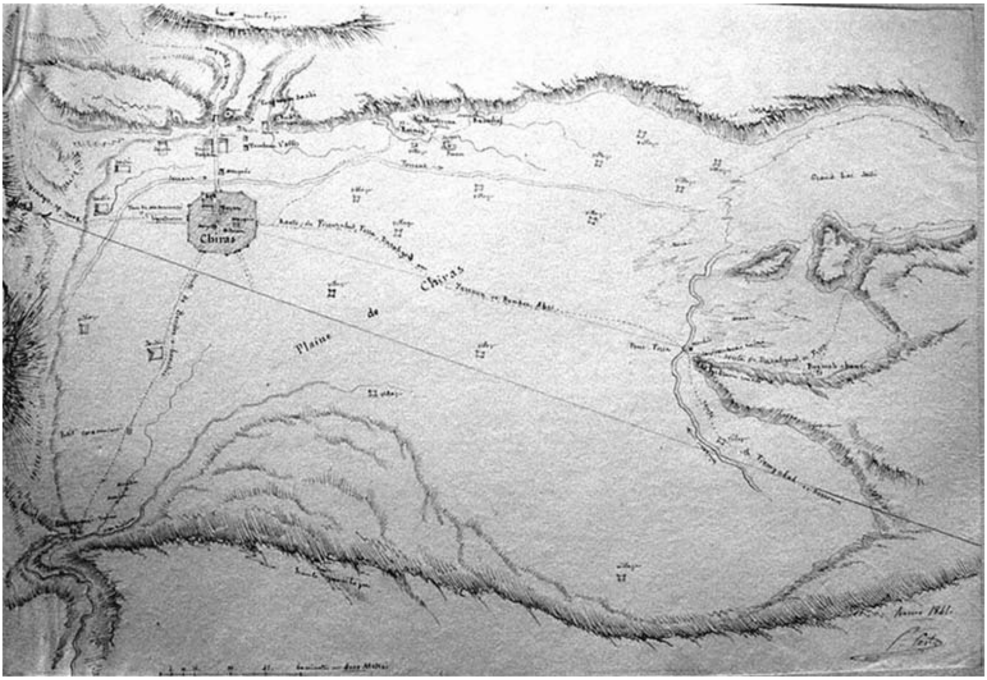

Chiras
Plaine de Chiras

Fig. 4. Plain of Shiraz by Pascal Coste (Bibliotheque Nationale de Marseille).

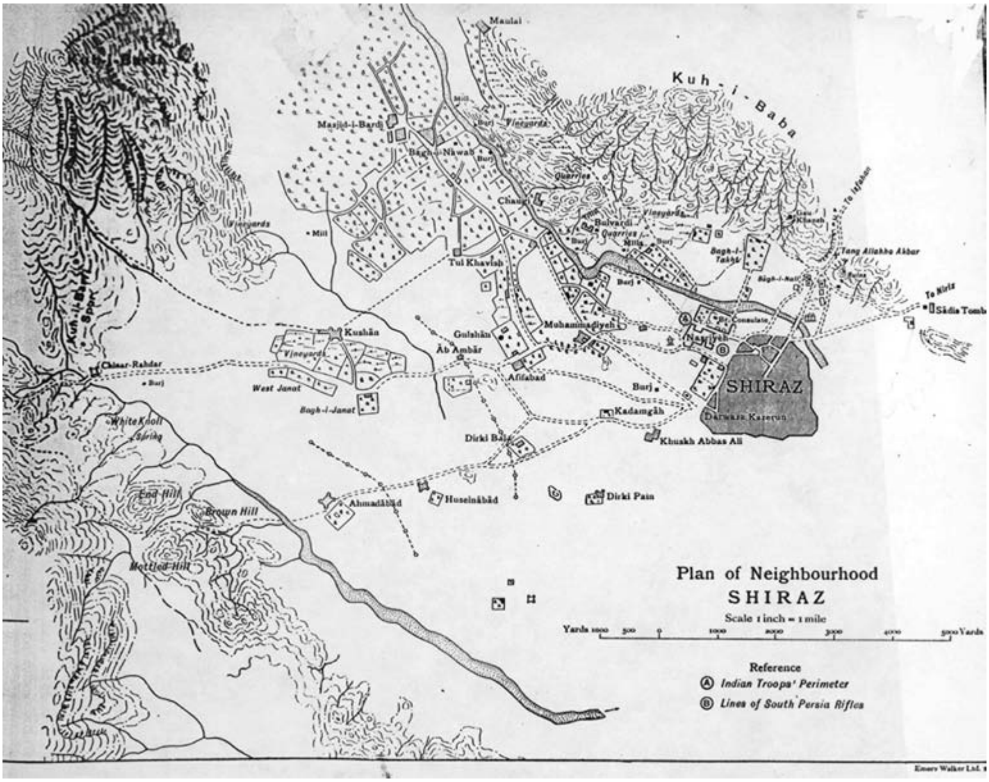
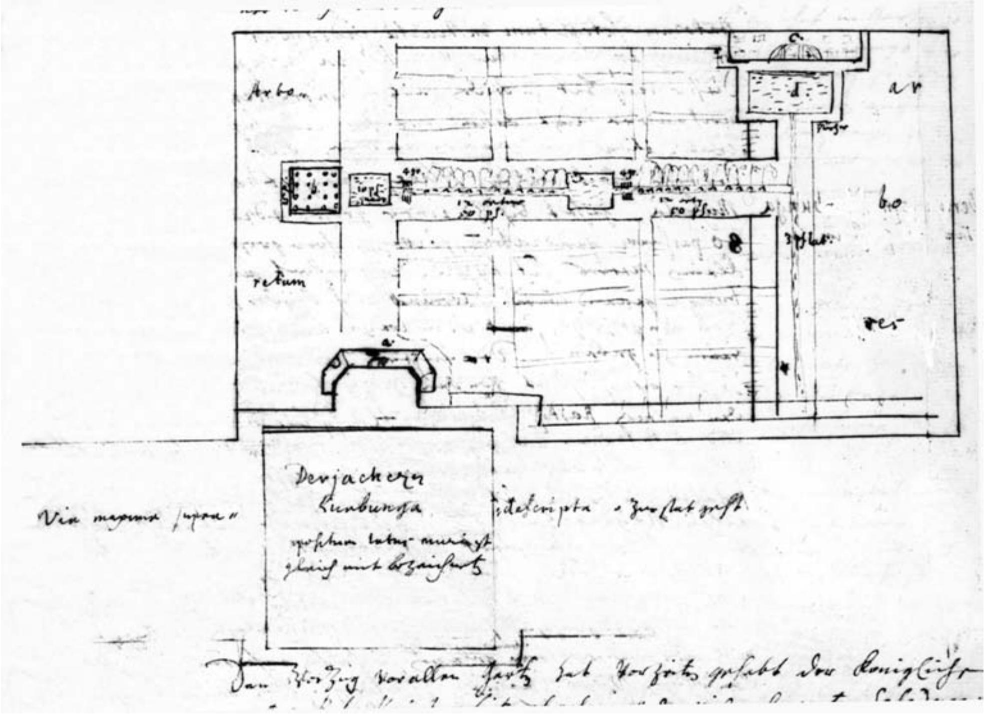

Maulai
Kuh-i-Bardi
Kuh-i-Bardi Spur
Masjid-i-Bardi
Bagh-i-Nawab
Mill
Burj
Vineyards
Kuh-i-Baba
Quarries
Chaugi
Bulvardi
Mills
Bagh-i-Takht
To Isfahan
Tang Allahhu Akbar
Bagh-i-Nau
Ruins
To Niriz
Sadis Tomb
Tul Khavish
Kushan
Gulshan
Ab Ambar
Muhammadiyeh
Br. Consulate
Nasriyeh
Chinar-Rahdar
West Janat
Bagh-i-Janat
Afifabad
SHIRAZ
Darwaza Kazerun
Kadamgah
Khuskh Abbas Ali
Dirki Bala
White Knoll
Spring
End Hill
Brown Hill
Ahmadabad
Huseinabad
Dirki Pain
Mottled Hill
Plan of Neighbourhood
SHIRAZ
Scale 1 inch = 1 mile
Yards 1000 500 0 1000 2000 3000 4000 5000 Yards
Reference
Ⓐ Indian Troops' Perimeter
Ⓑ Lines of South Persia Rifles
Emery Walker Ltd.

Fig. 5. 1918 plan of Shiraz by Sykes.


Arbo
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Devjacheza
Gurbunga
Via magna supra

Fig. 6. Plan of Daryache Qorbungah and Bagh-e Vizir Imani Beyk by Kaempfer (British Library).

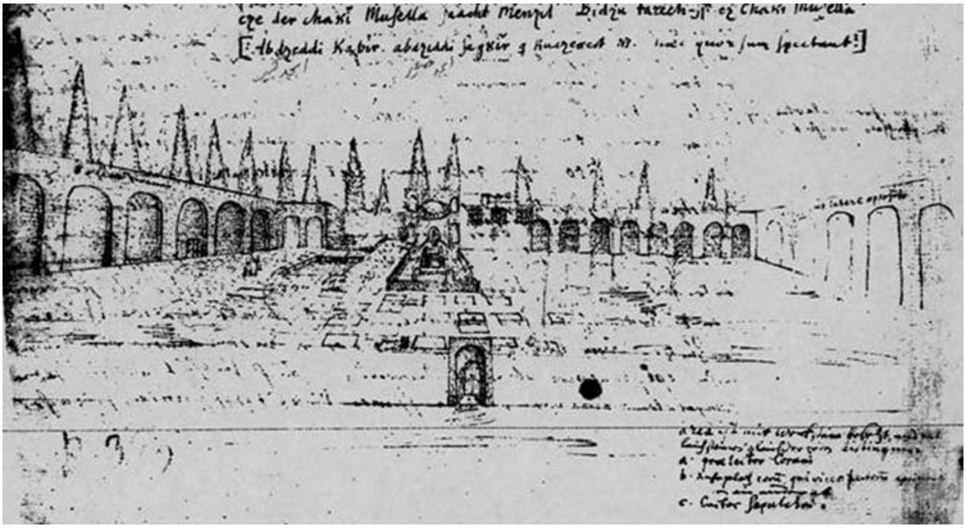
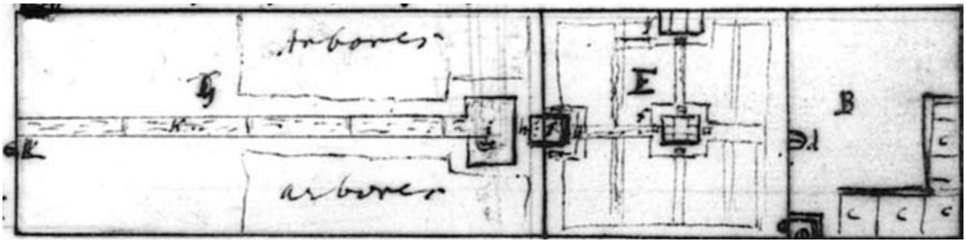

a. praelector Corani
c. Custos sepulchri

Fig. 7. View of the garden with the tomb of Hafez by Kaempfer (British Library).


Arbores
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E
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Fig. 8. Plan of Bagh-e Kalantar (Delgosha) by Kaempfer (British Library).

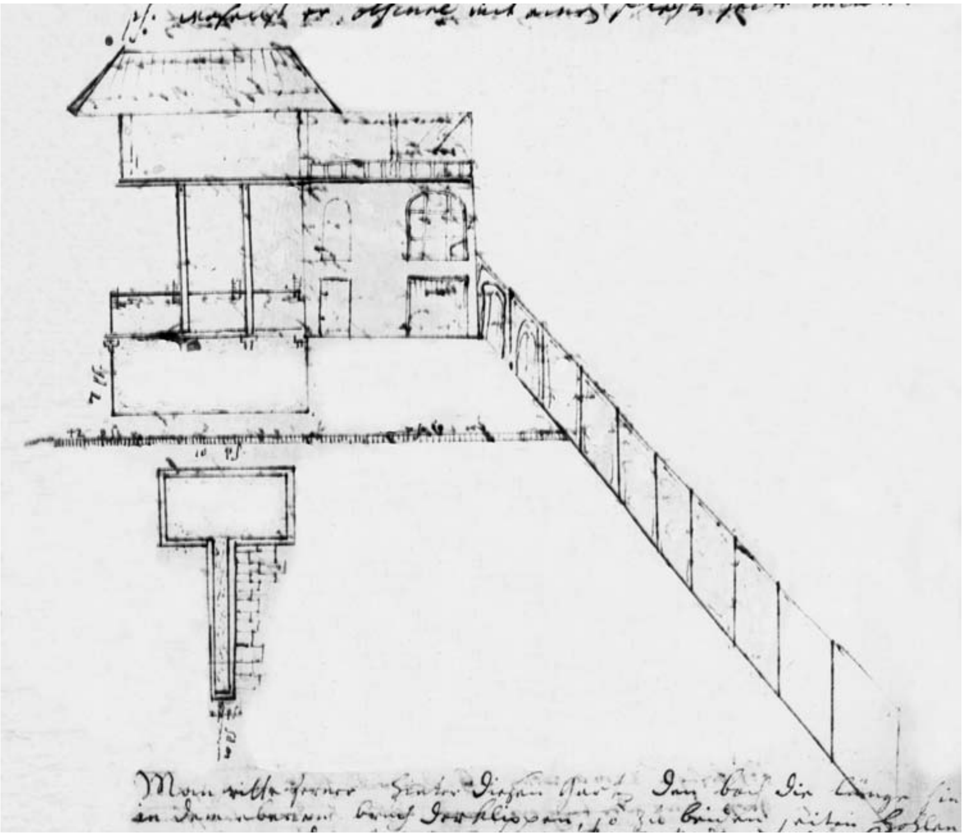

Fig. 9. View of the building in Bagh-e Kalantar by Kaempfer (British Library).

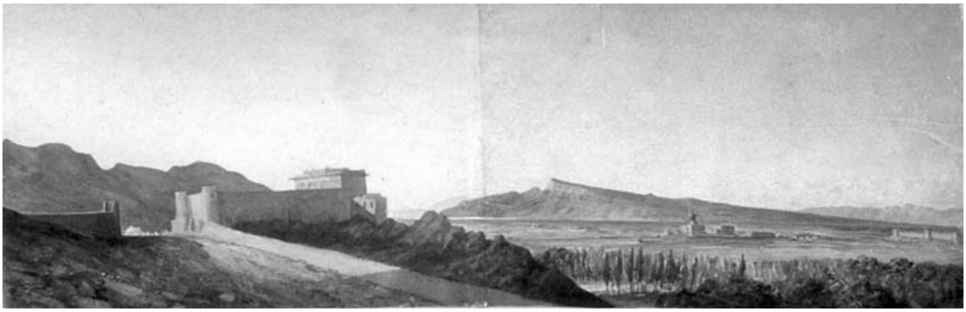

Fig. 10. View of Bagh-e Takht-e Qarache and the plain of Shiraz from the Album of D’Arcy (British Library).

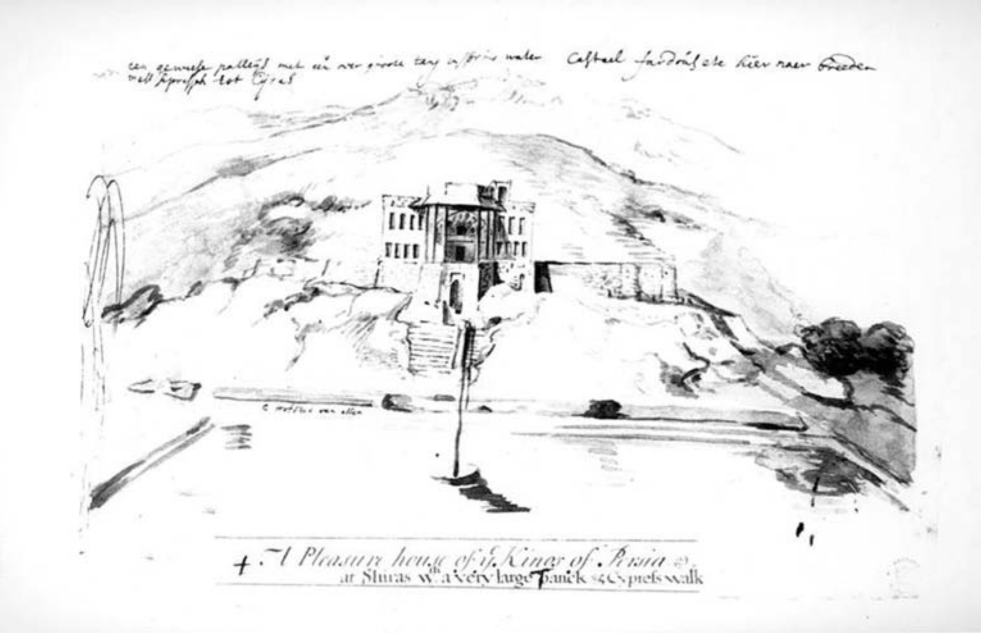
A Pleasure house of ye King of Persia
at Shiras wth a very large Banck & Cypress walk

Fig. 11. View of Bagh-e Ferdaws by Hofsted van Essen (British Library).

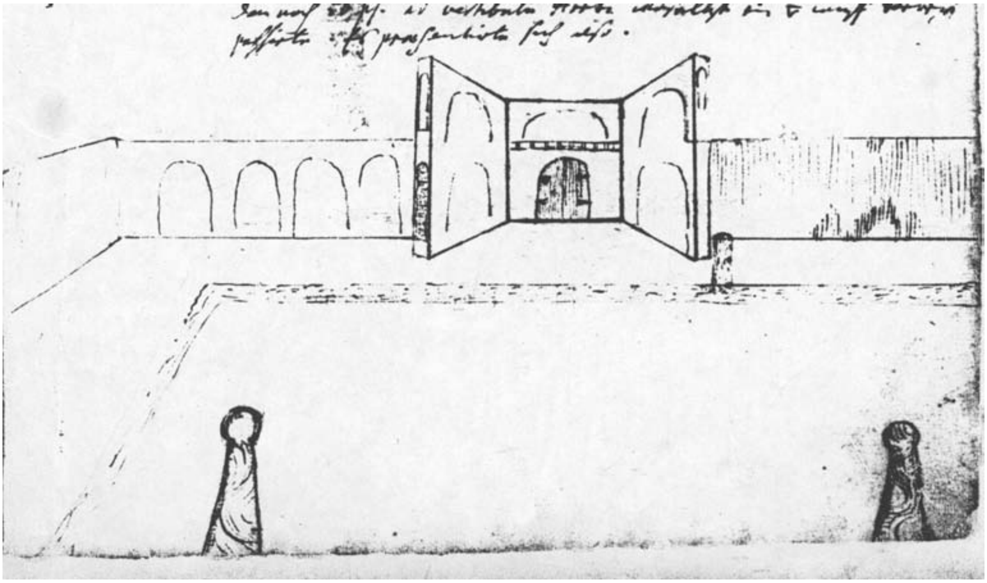

Fig. 12. View of the entrance building of Bagh-e Emamqoli Khan with the poles of Chawgan in the foreground by Kaempfer (British Library).

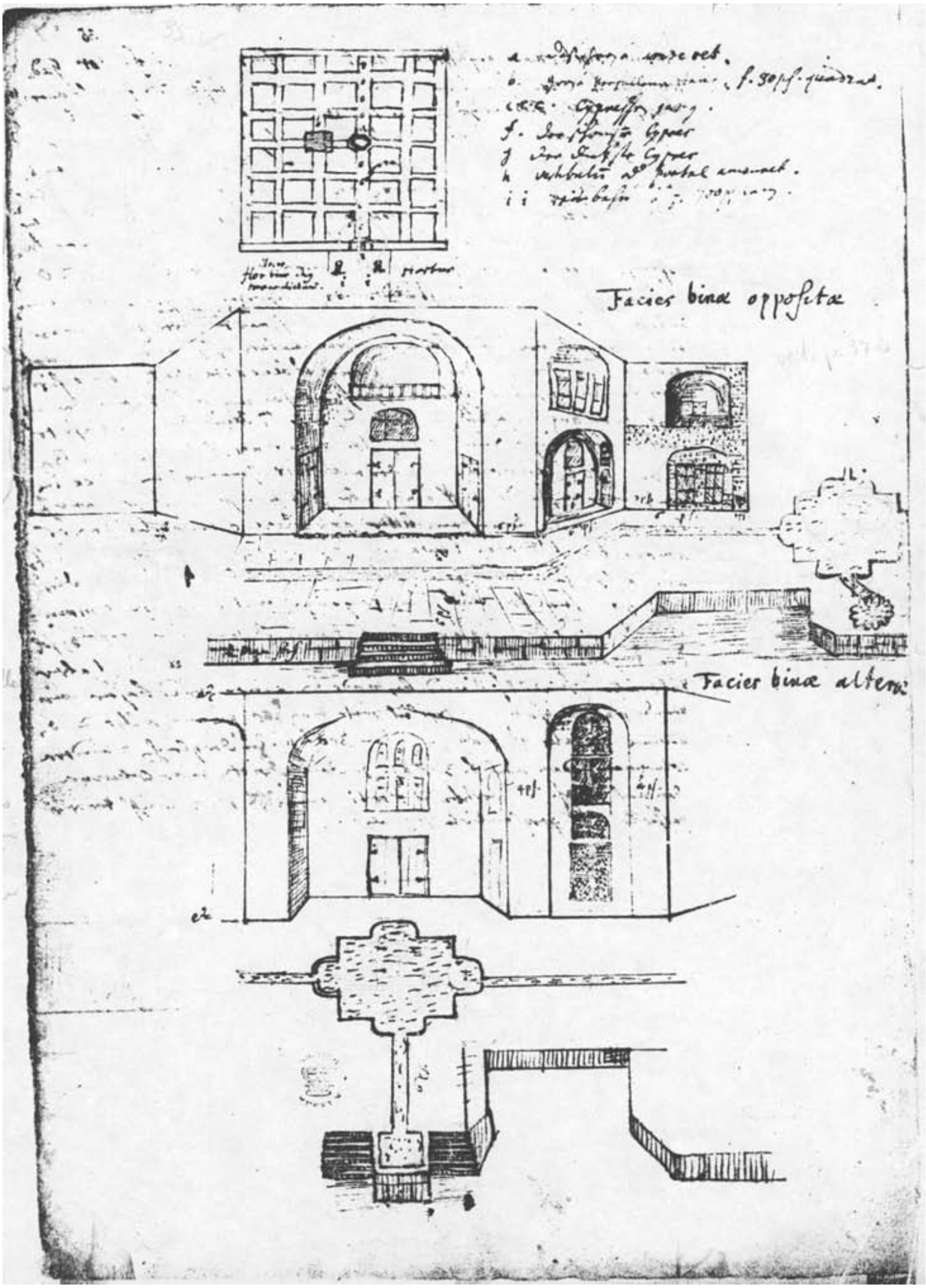
Facies binæ oppositæ
Facies binæ alteræ

Fig. 13. Plan of Bagh-e Emamqoli Khan and view of its building by Kaempfer (British Library).

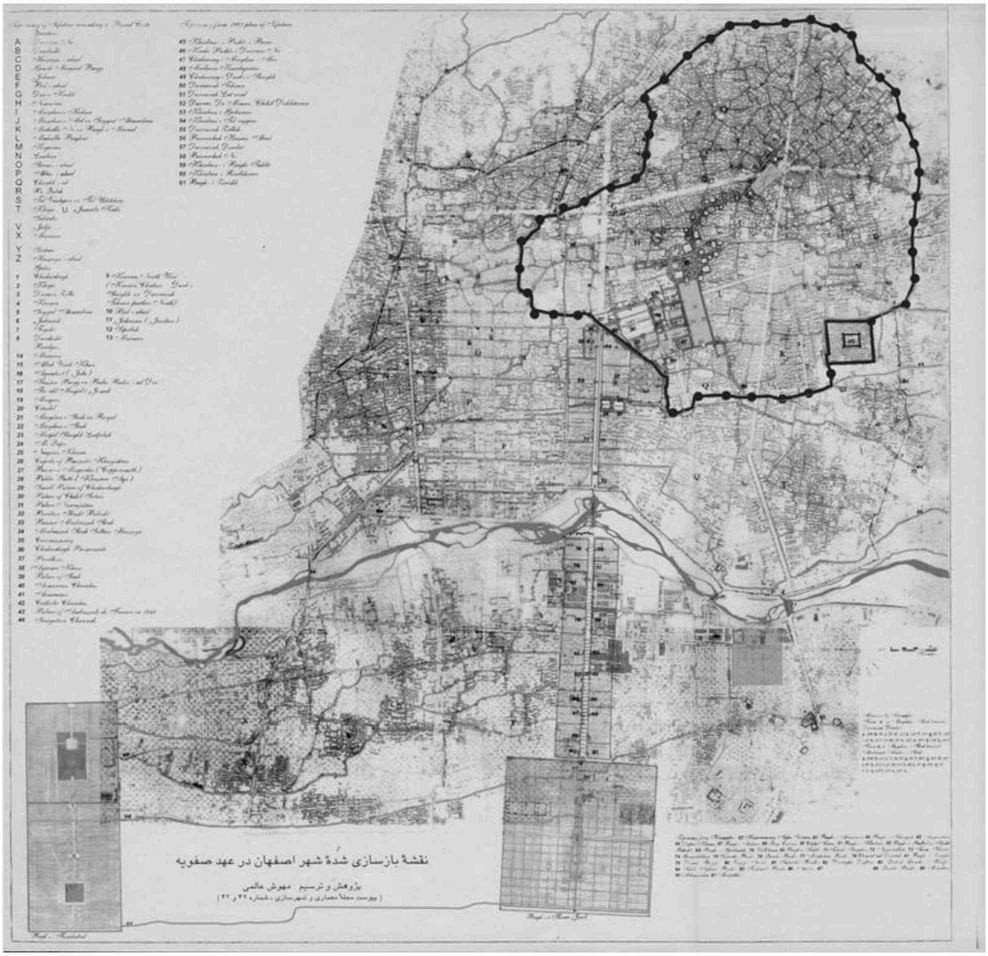
نقشهٔ بازسازی شدهٔ شهر اصفهان در عهد صفویه
پژوهش و ترسیم : مهوش عالمی
(پیوست مجلهٔ معماری و شهرسازی ، شماره ۴۲ و ۴۳)

Fig. 14. Restored plan of Safavid Esfahan drawn by Mahvash Alemi.

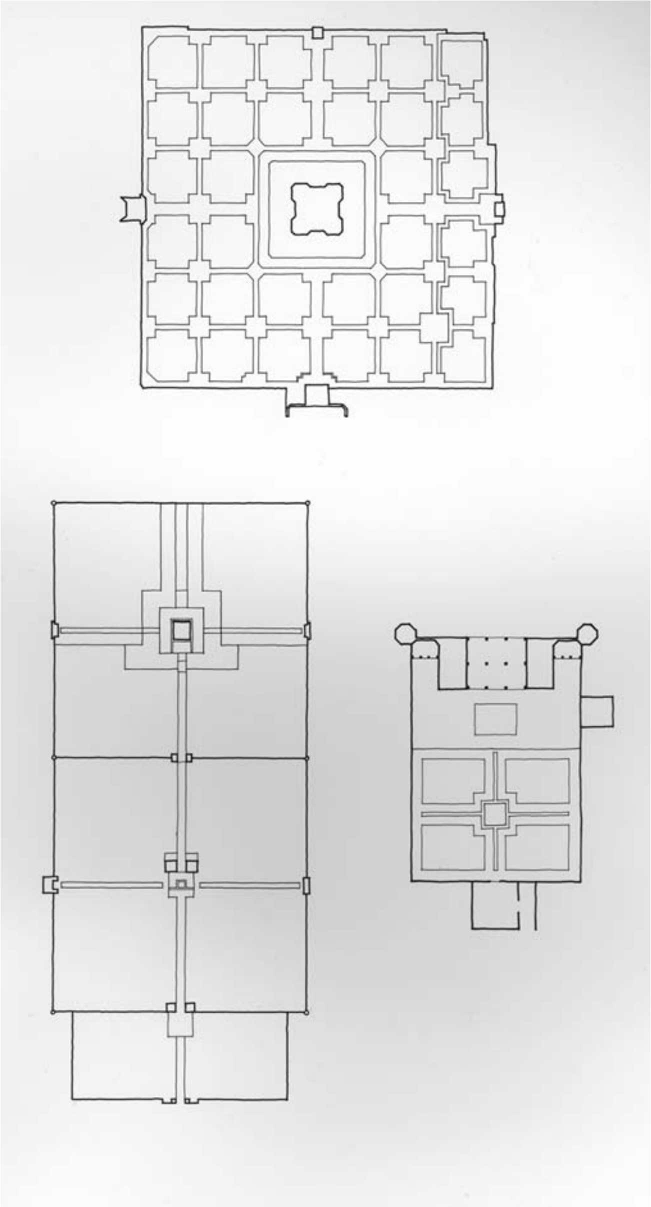

Fig. 1. The three formal types of the Mughal charbagh. On top: the canonical cross axial charbagh of Humayun's tomb, Delhi (1562–71); lower left: the terraced Shalimar gardens at Kashmir (1620 and 1634); lower right: a waterfront garden unit, forming part of Shah Jahan's palace at Bari (1637). (Drawing Richard A. Barraud and Ebba Koch.)

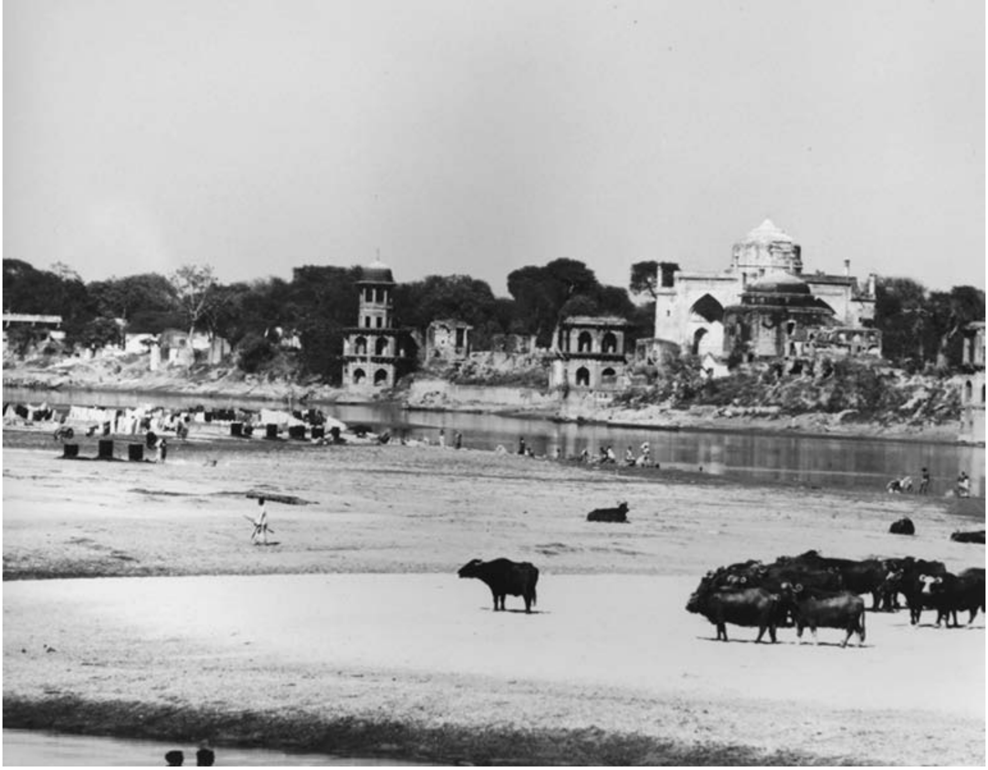

Fig. 2. Agra, left bank of the river with remains of Mughal gardens seen obliquely from the south-west across the river. In the foreground are the two riverfront towers of the Bagh-i Wazir Khan (or Bagh-i Muhammad Zakarya) (7) and between them the ruined pavilion. Behind the pavilion is an anonymous tomb known as Kala Gunbad. Beyond rises the large domed tomb of Afzal Khan Shirazi (Chini-ka-Rawza) (6); its fragmentary northern riverfront tower appears farther to the left. Just to the left of that is the tall southern riverfront tower of the Bagh-i Jahanara (Zahara Bagh) (4) (Photo by Ebba Koch taken in 1986).

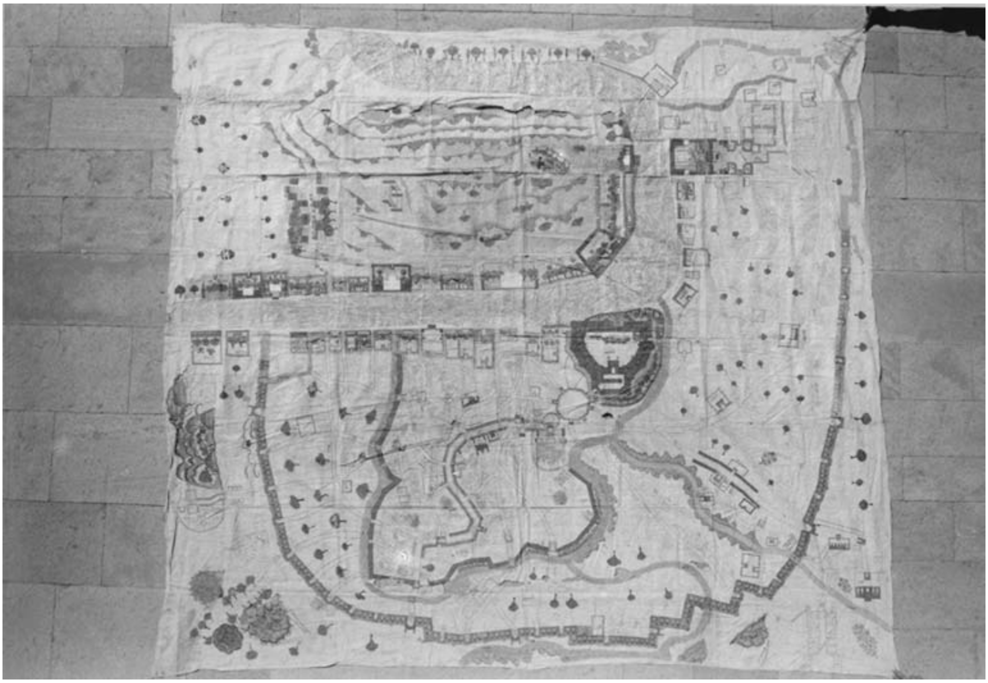

Fig. 3. Map of Agra, 1720s, water colour on cotton, 294 u 272 cm, Maharaha Sawai Man Singh II Museum, Jaipur, Cat. No. 126.

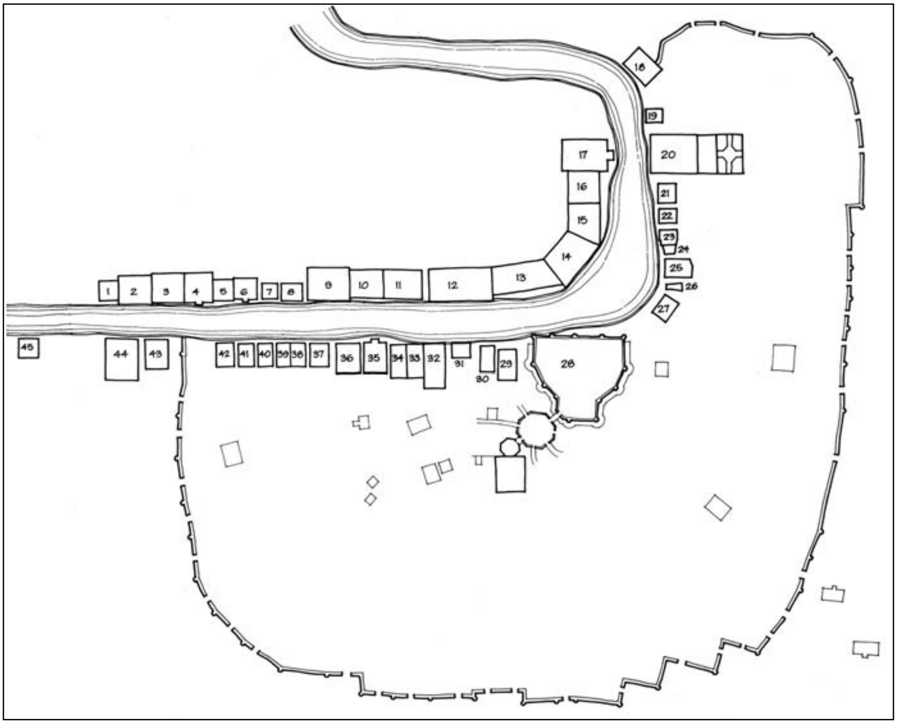
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Fig. 4. Line drawing of Map of Agra with numbering of the riverfront gardens.

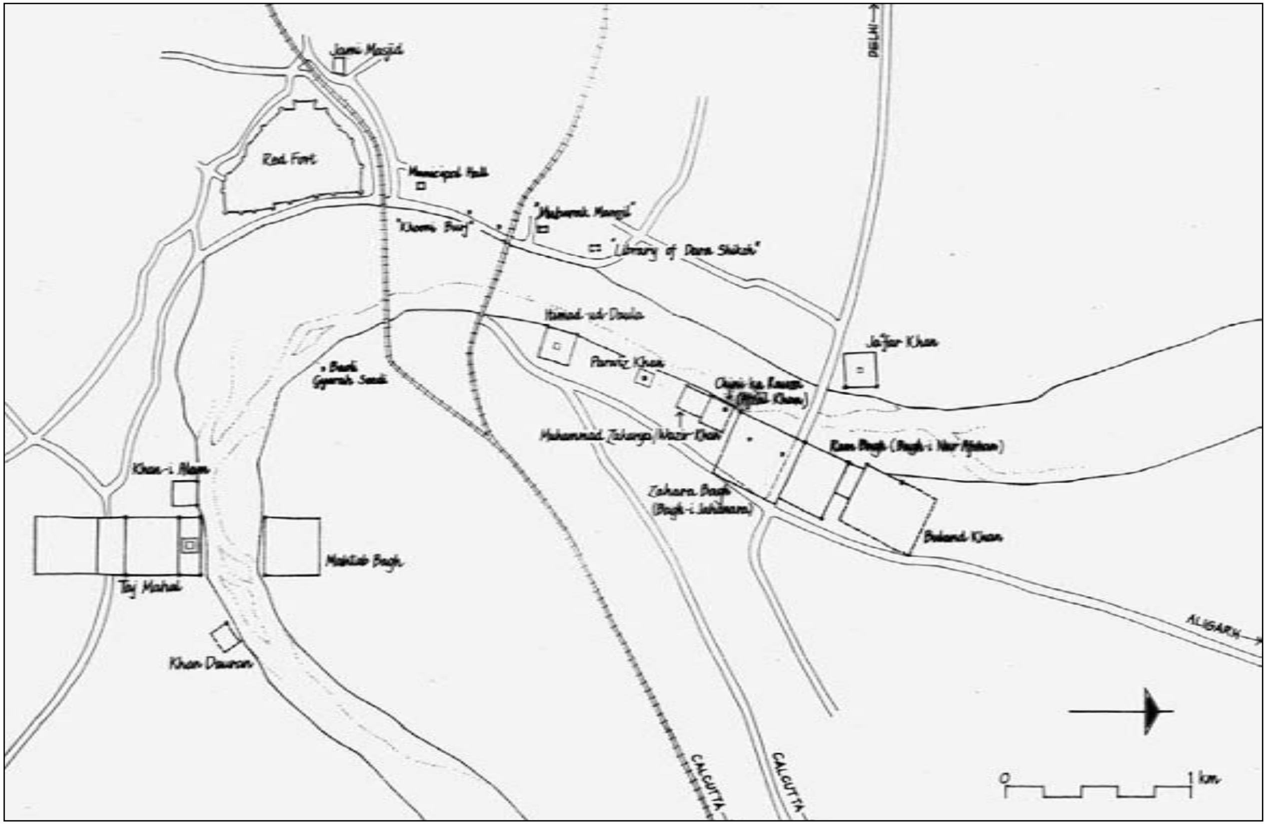

Jami Masjid
Red Fort
Municipal Hall
"Khoni Burj"
"Mubarak Manzil"
"Library of Dara Shikoh"
DELHI
Itimad-ud-Daula
Ja'far Khan
Parviz Khan
Chini ka Rauza (Afzal Khan)
Bagh Gyarah Sadi
Muhammad Zakarya / Wazir Khan
Ram Bagh (Bagh-i Nur Afshan)
Zahara Bagh (Bagh-i Jahanara)
Buland Khan
Khan-i Alam
Taj Mahal
Mahtab Bagh
Khan Dauran
ALIGARH
CALCUTTA
CALCUTTA
0
1 km

Fig. 5. Map of Agra indicating preserved Mughal structures of the riverfront scheme. (Drawing Richard A. Barraud and Ebba Koch.)

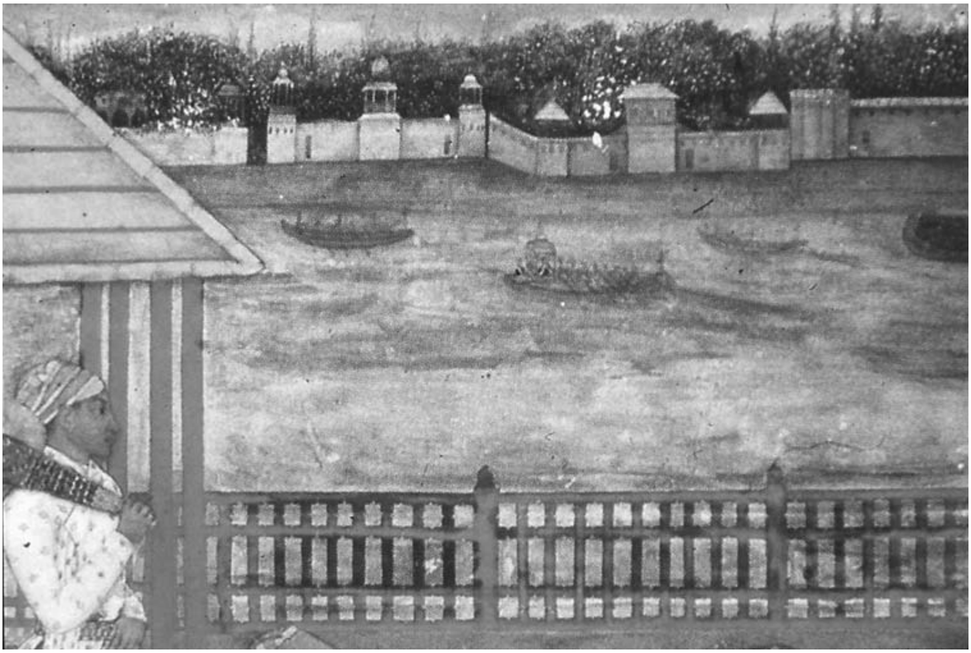


Fig. 6. View of a riverfront city (Agra ?), background of Nobleman with musicians, Collection of Howard Hodgkin.

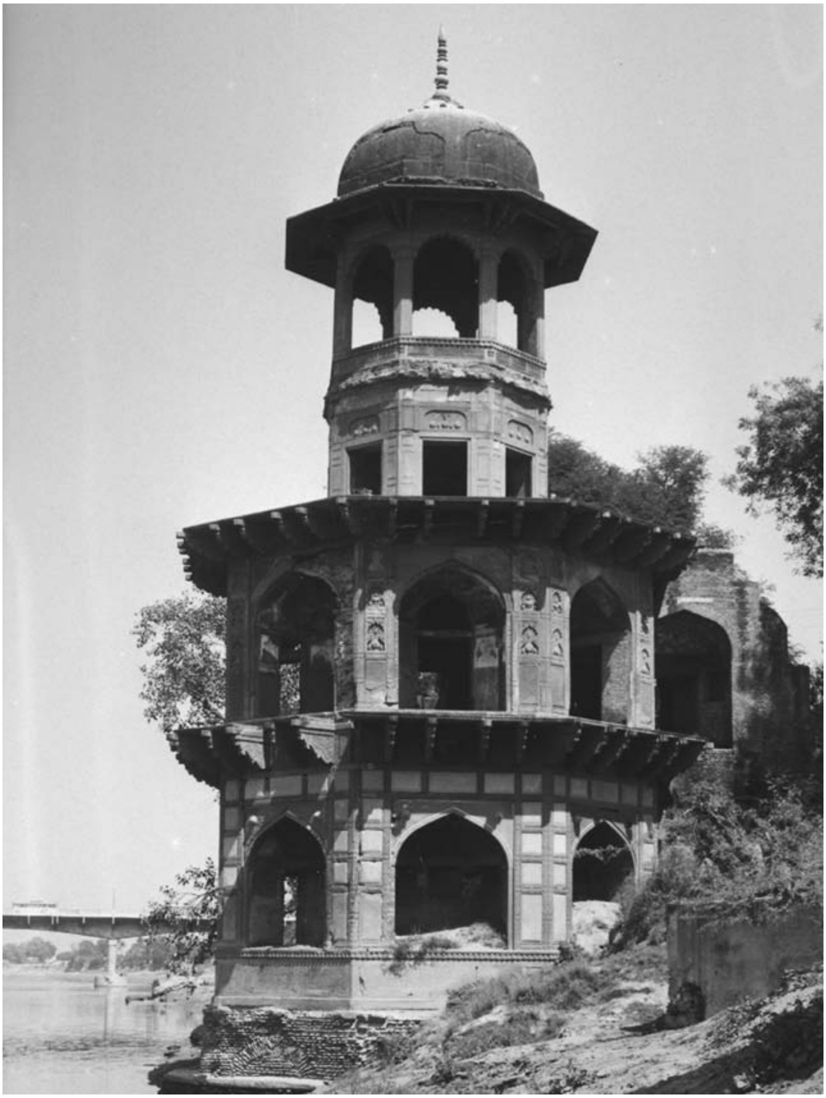


Fig. 7. Bagh-i Jahanara (Zahara Bagh), tower pavilion (burj), 1630s. (Photo Ebba Koch.)

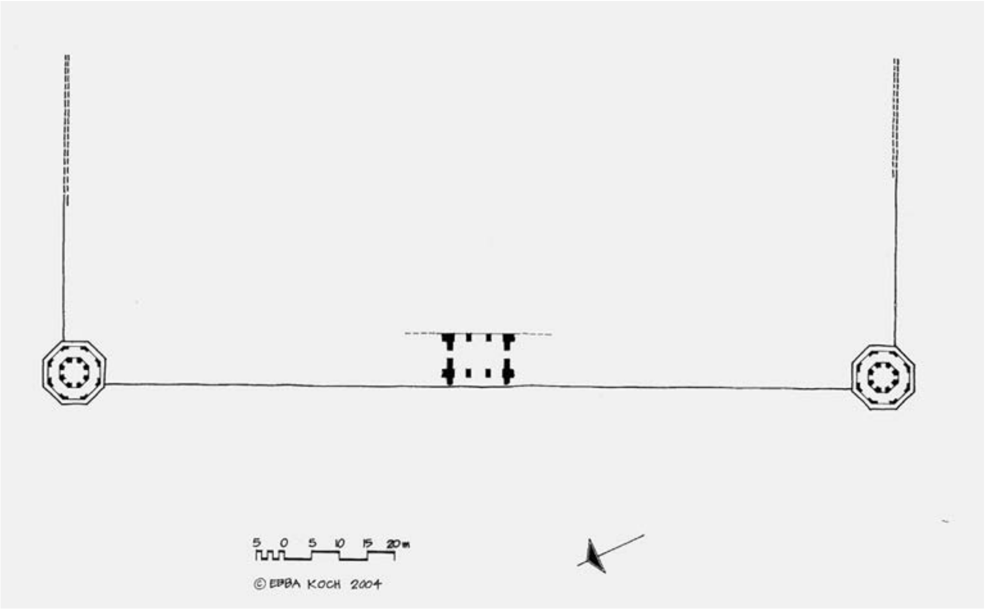
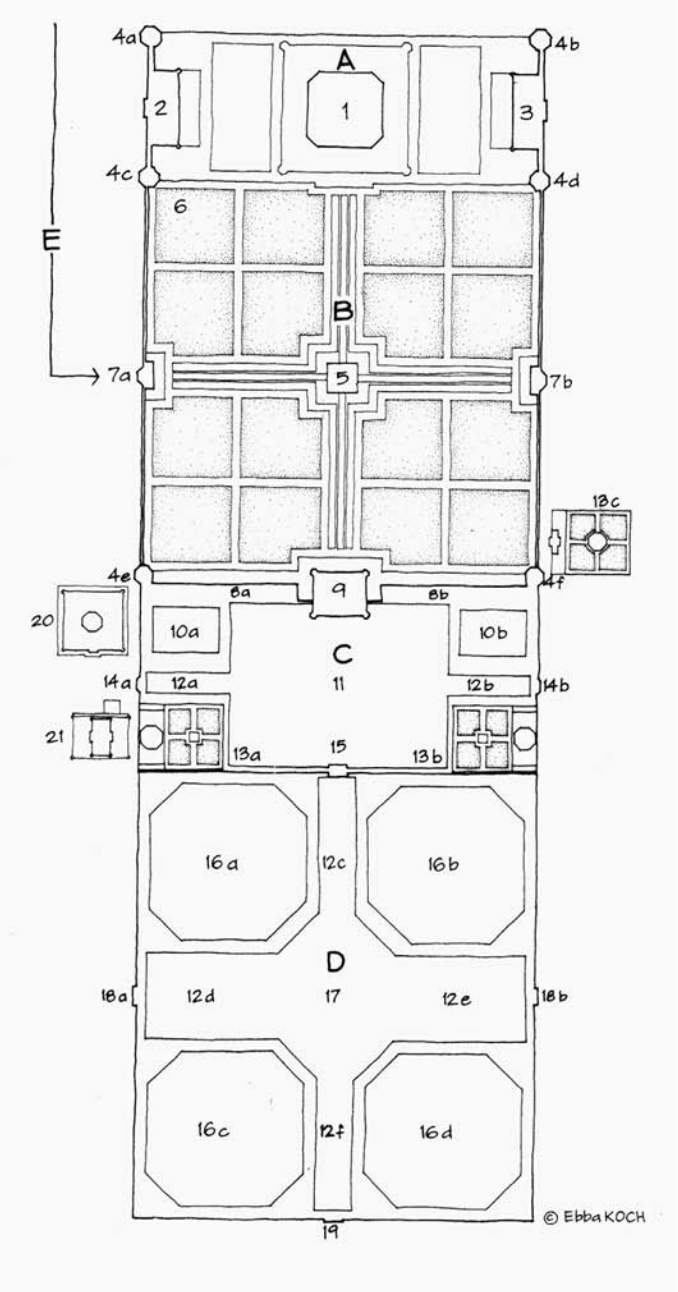

5 0 5 10 15 20m
© EBBA KOCH 2004

Fig. 8. Bagh-i Wazir Khan (or Bagh-i Muhammad Zakarya), plan, c. 1640. (Drawing Richard A. Barraud and Ebba Koch.)


4a
A
4b
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1
3
4c
4d
6
E
B
7a
5
7b
13c
4e
4f
8a
9
8b
20
10a
C
10b
14a
12a
11
12b
14b
21
13a
15
13b
16a
12c
16b
D
18a
12d
17
12e
18b
16c
12f
16d
© Ebba KOCH
19

Fig. 9. Taj Mahal, plan of entire complex, 1632–43 with numbering of buildings. (Drawing Richard A. Barraud and Ebba Koch.)

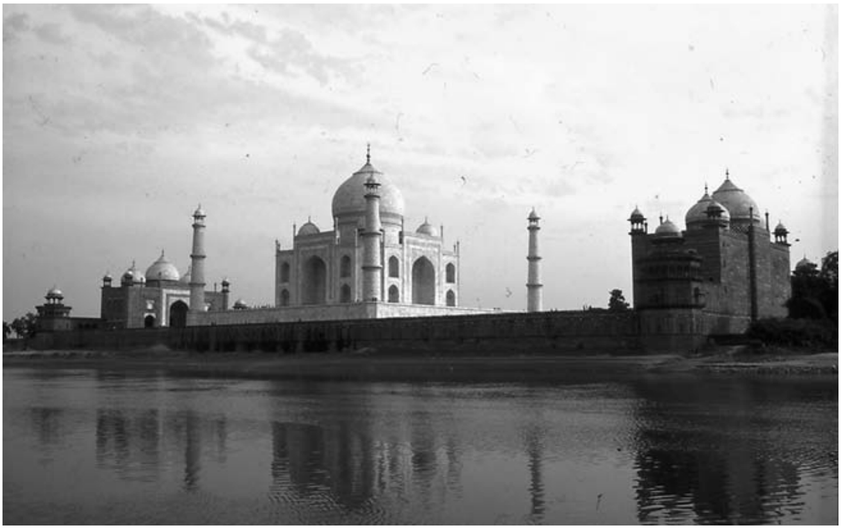


Fig. 10. Taj Mahal, group of riverfront buildings, in the centre the mausoleum flanked on the right by the mosque and on the left by the Mihman Khana, 1632–43. (Photo Ebba Koch.)

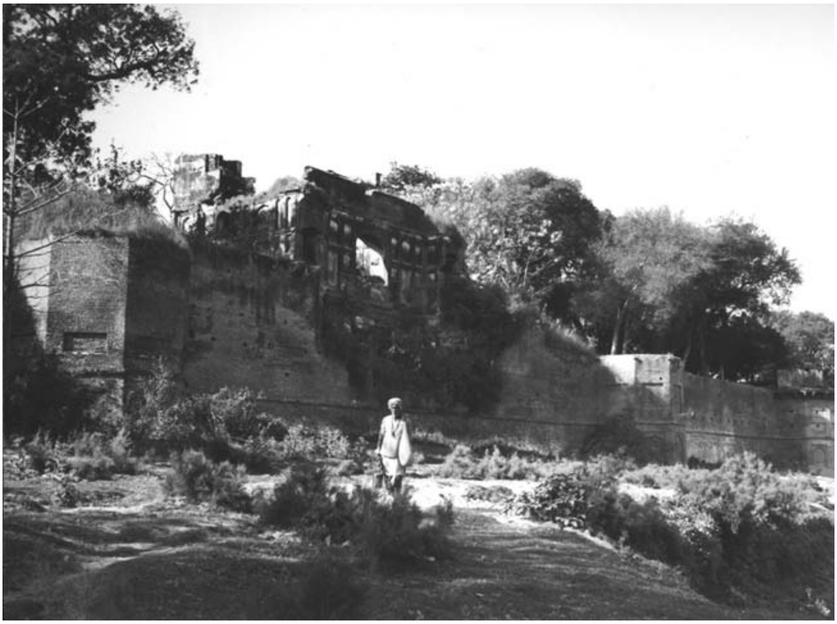


Fig. 11. Bagh-i Khan-i {Alam, ruined pavilion on riverfront terrace with projecting bases of flanking towers, 1630s. (Photo Ebba Koch.)

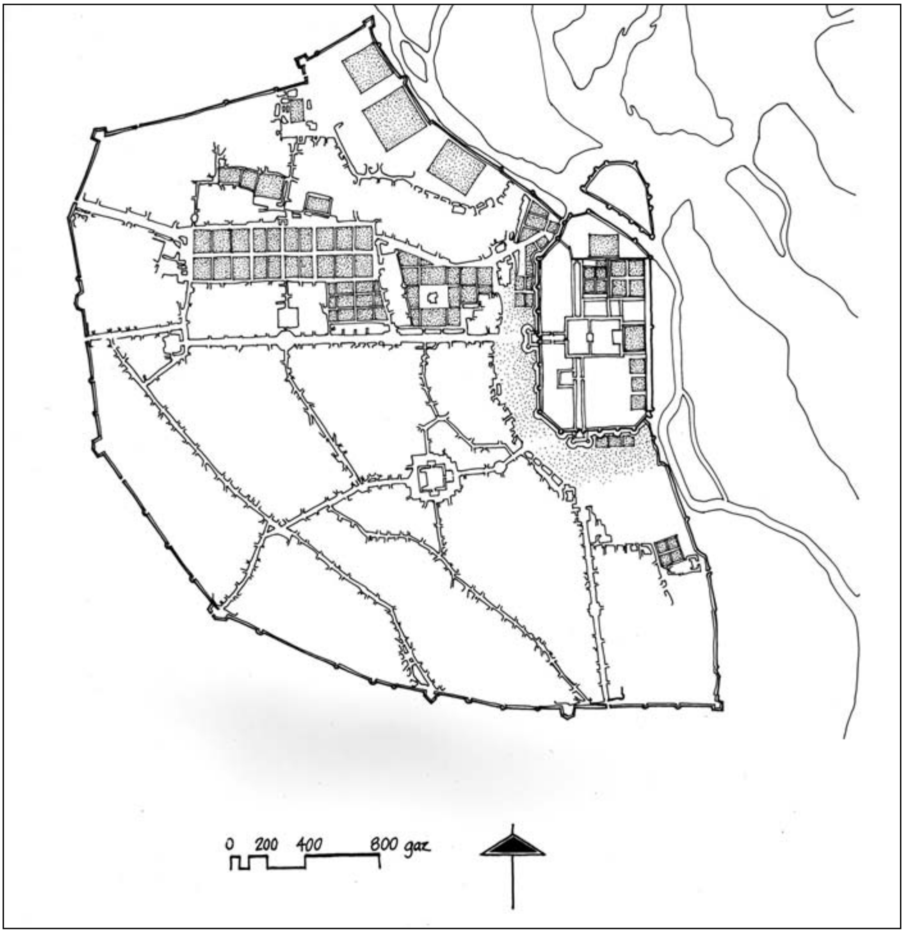


Fig. 12. Map of Shahjahanabad, begun in 1639, showing the gardens of Shah Johan's fortress palace, of Prince Dara Shikoh, and a few selected nobles on the bank of the Jamna, and the gardens of Princess Jahanara and other nobles inside the city. (Drawing Richard A. Barraud and Ebba Koch.)

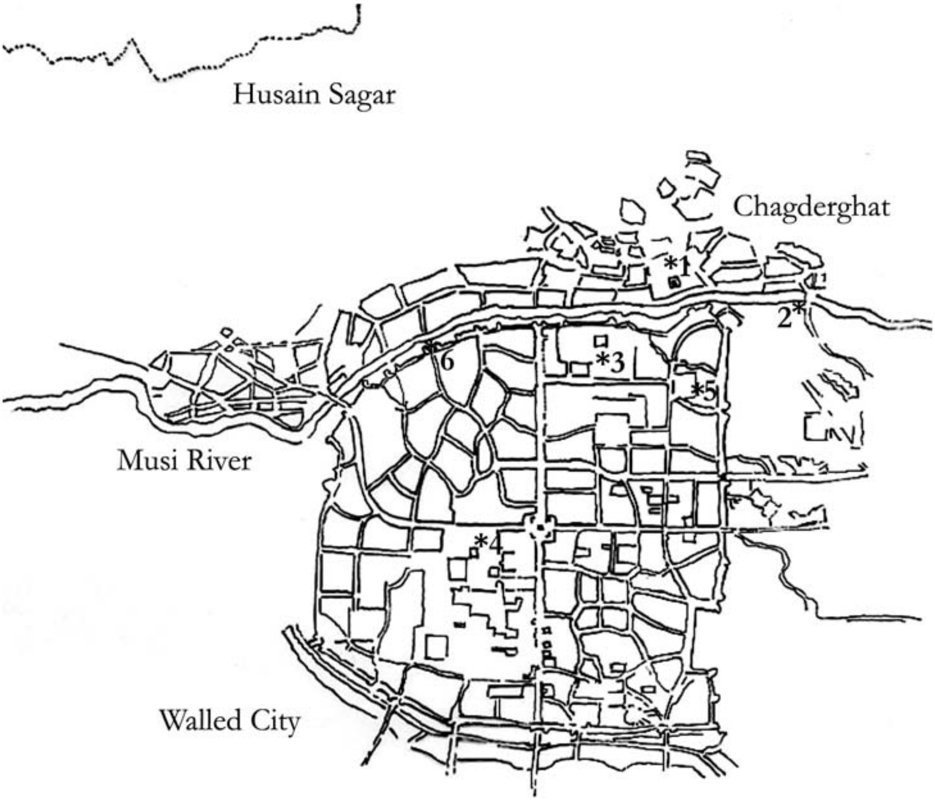

Husain Sagar
Chagderghat
*1
2*
*3
*5
6
*4
Musi River
Walled City

Fig. 1. Diplomatic Sites before 1858*.
(1) British Residency at Chaderghat; (2) Chaderghat Bridge (1831);
(3) Diwan Deodhi; (4) Nizam's Palaces at Motigalli; (5) Purani Haveli;
(6) Delhi Gate.
* Map of City based on S.P. Shorey's tracing of a "Map of the Hyderabad and Secunderabad around 1845 A.D." from the now dispersed collections of Shah Manzoor Alam.

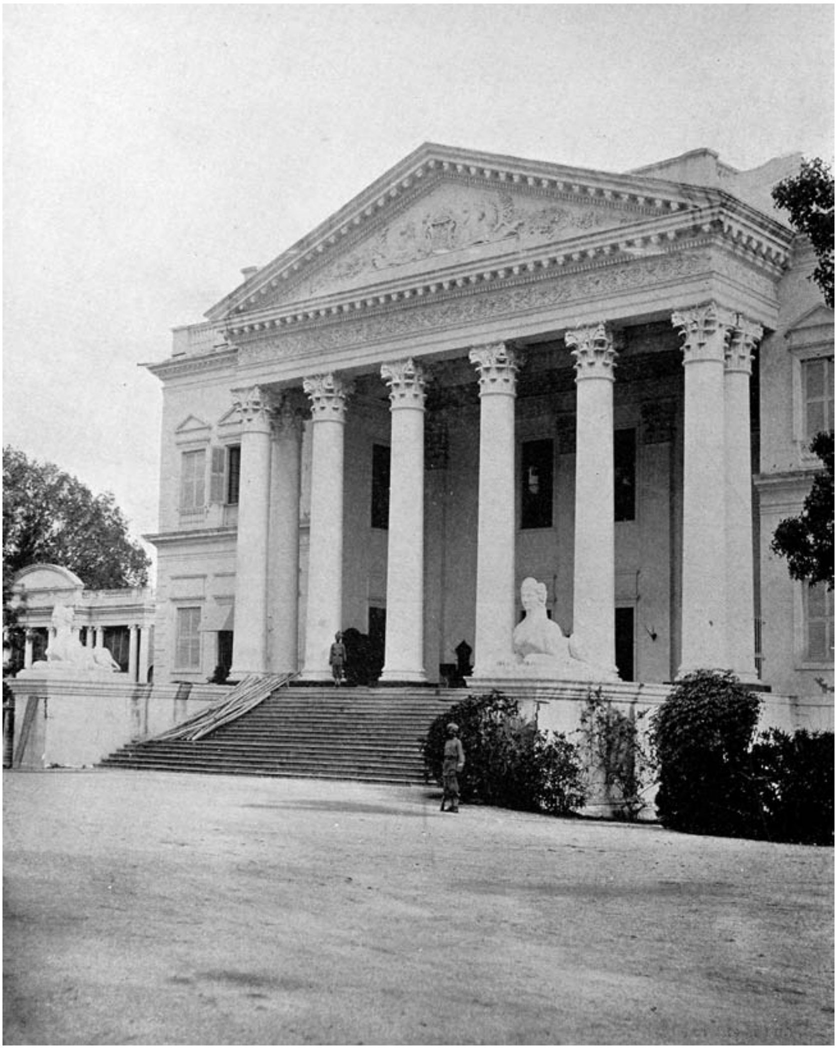


Fig. 2. The British Residency at Chaderghat, north facade, after Campbell.

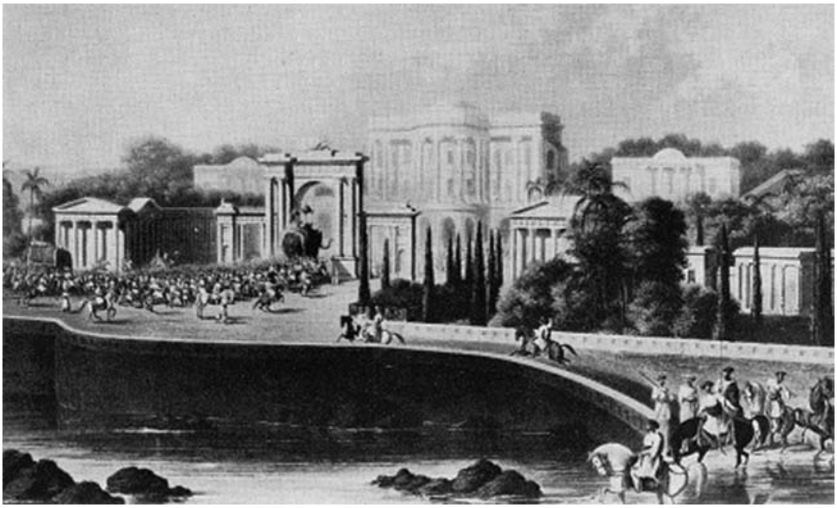


Fig. 3. Riverside (south) entrance to Chaderghat Residency, aquatint, after Grindlay.

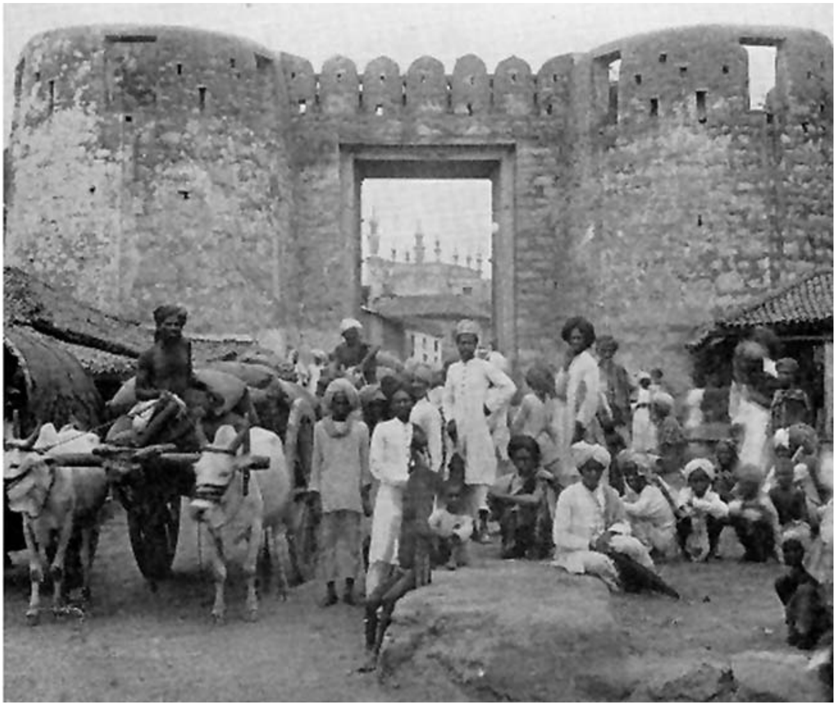


Fig. 4. The Delhi Gate, after Campbell.

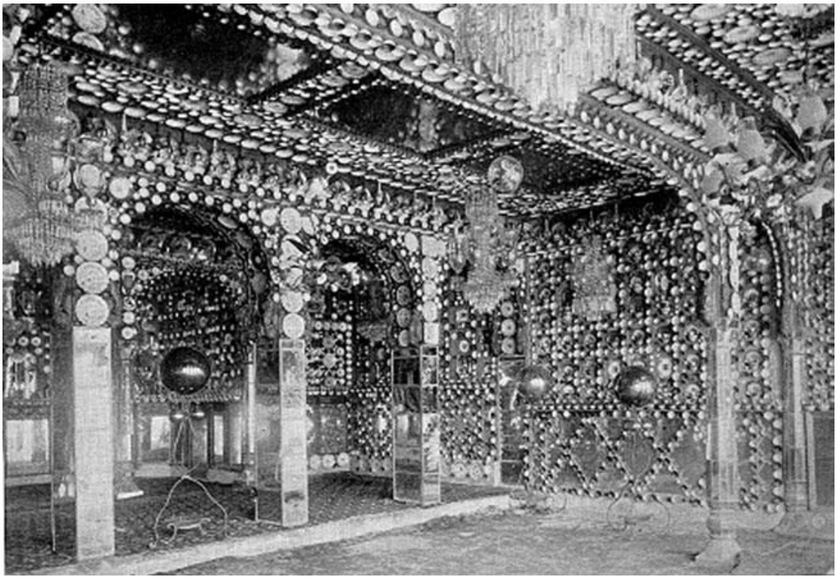


Fig. 5. The Chini Khana, Diwan Deodhi, after Campbell.

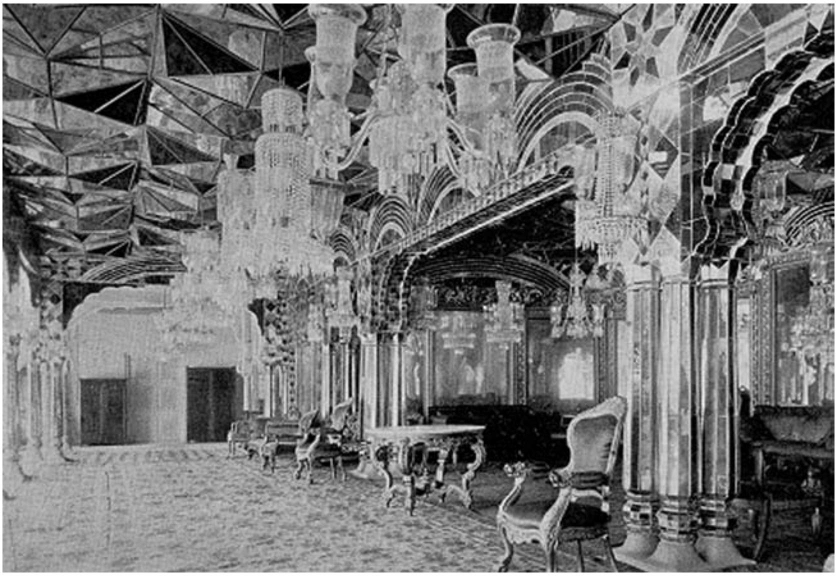


Fig. 6. The Aina Khana, Diwan Deodhi, after Campbell.

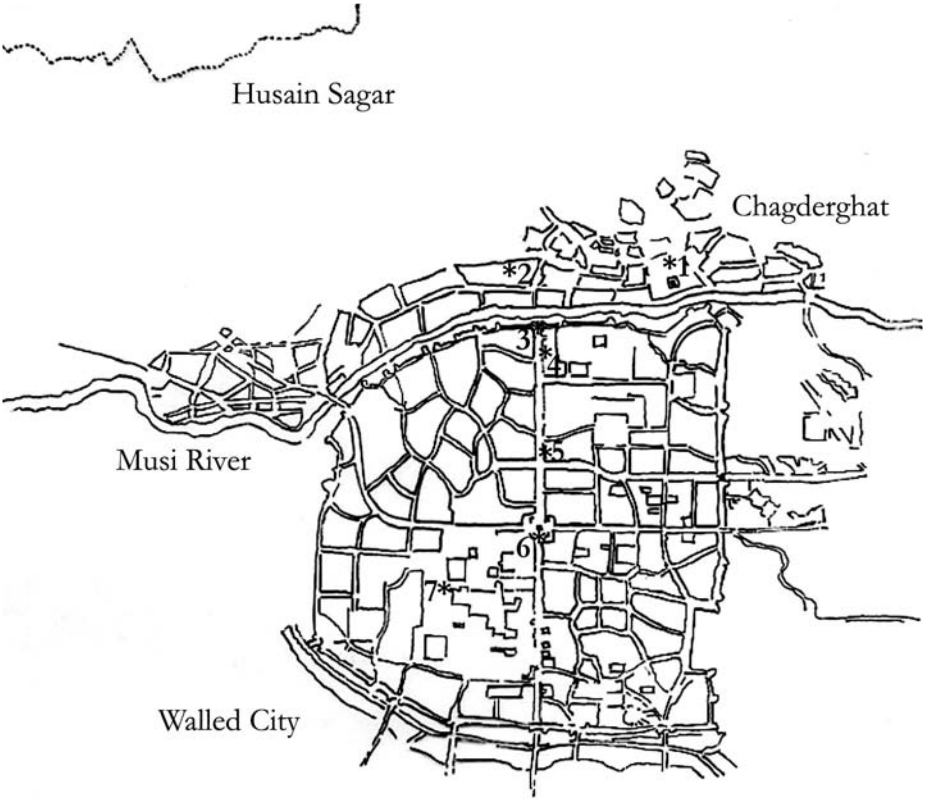

Husain Sagar
Chagderghat
Musi River
Walled City
*1
*2
3*
*4
*5
6
7*

Fig. 7. Diplomatic Sites after 1868*.
1. British Residency at Chaderghat; 2. Afzal Gunj Mosque; 3. Afzal Bridge/ Afzal Gate; 4. Diwan Deodhi, entrance; 5. Char Kaman; 6. Char Minar; 7. Chowmahallah Palace.
* Map of City based on S. P. Shorey's tracing of a "Map of the Hyderabad and Secunderabad around 1845 A.D." from the now dispersed collections of Shah Manzoor Alam.

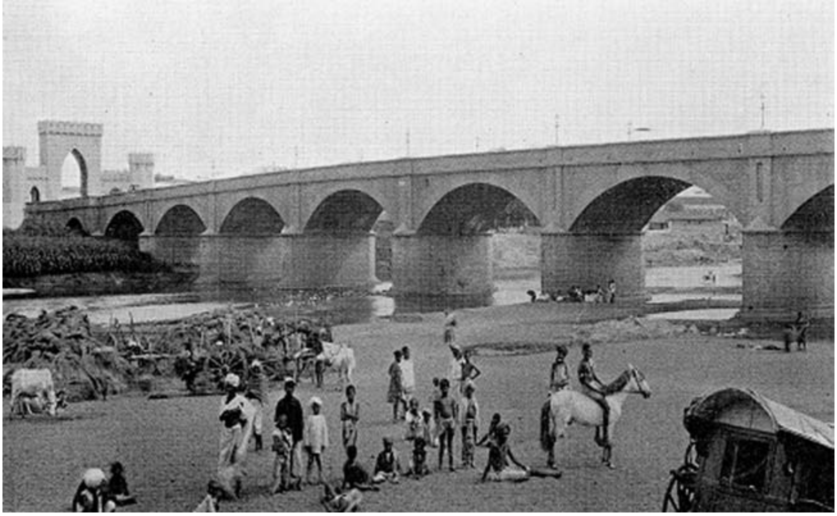


Fig. 8. The Afzal Bridge, after Campbell.

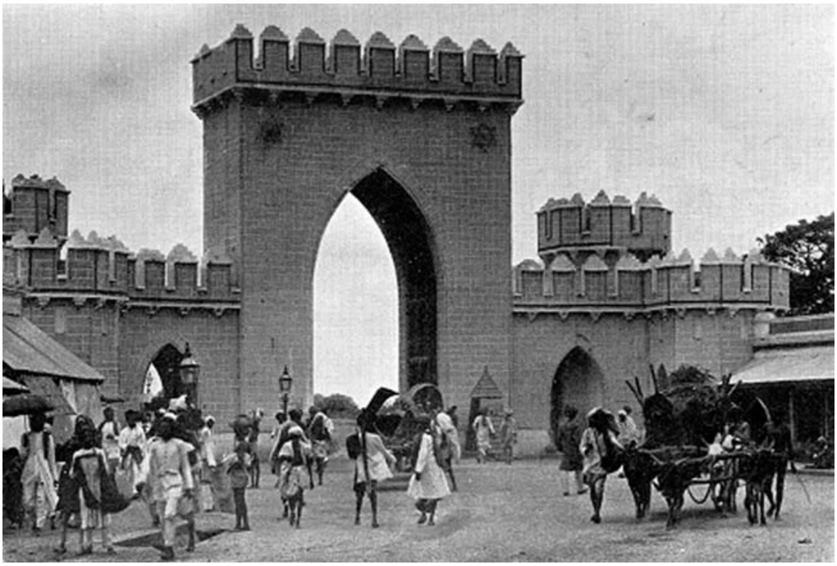


Fig. 9. The Afzal Gate, after Campbell.

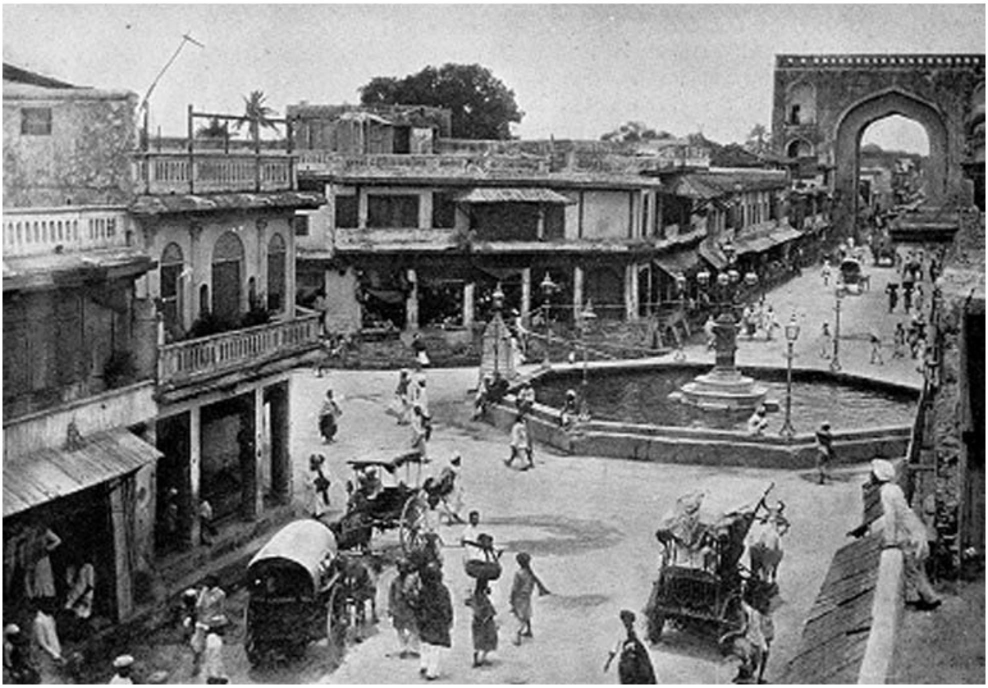


Fig. 10. Char Kaman, after Campbell.

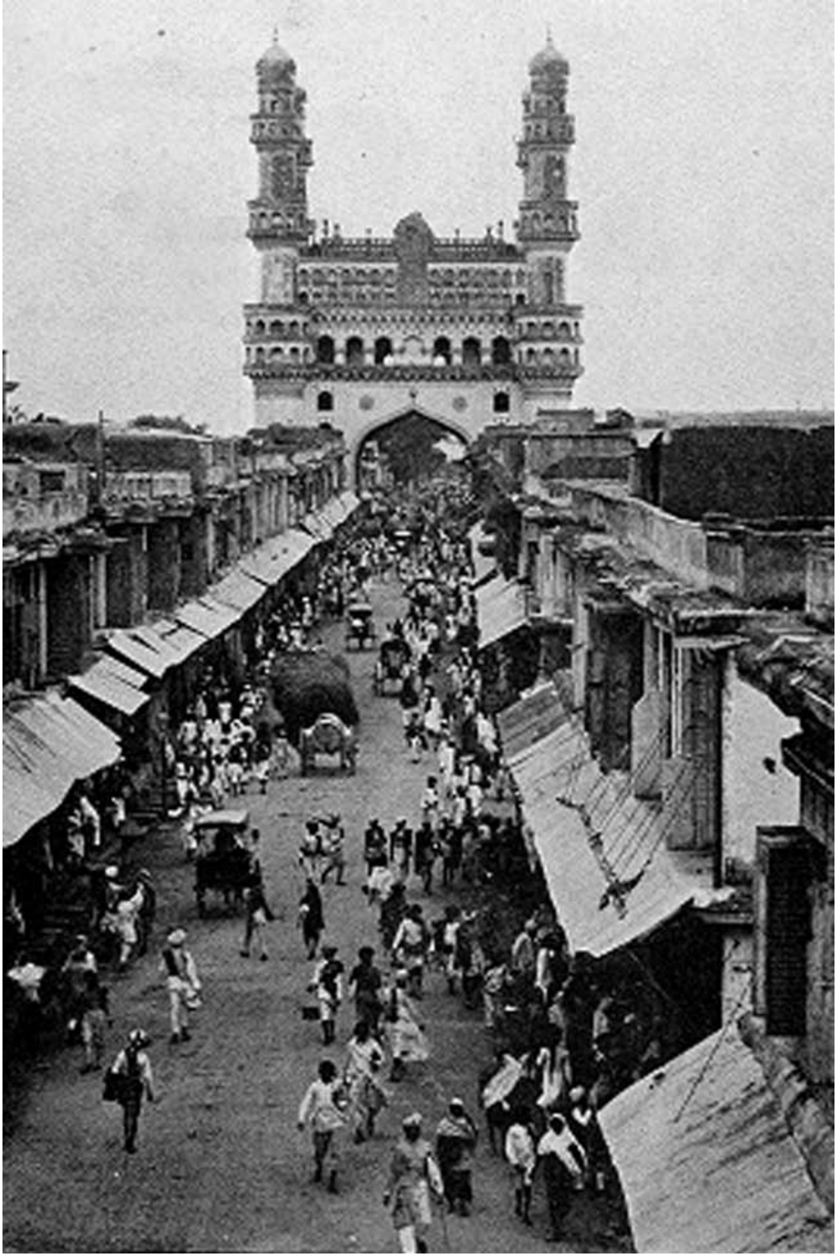


Fig. 11. The Char Minar, after Campbell.

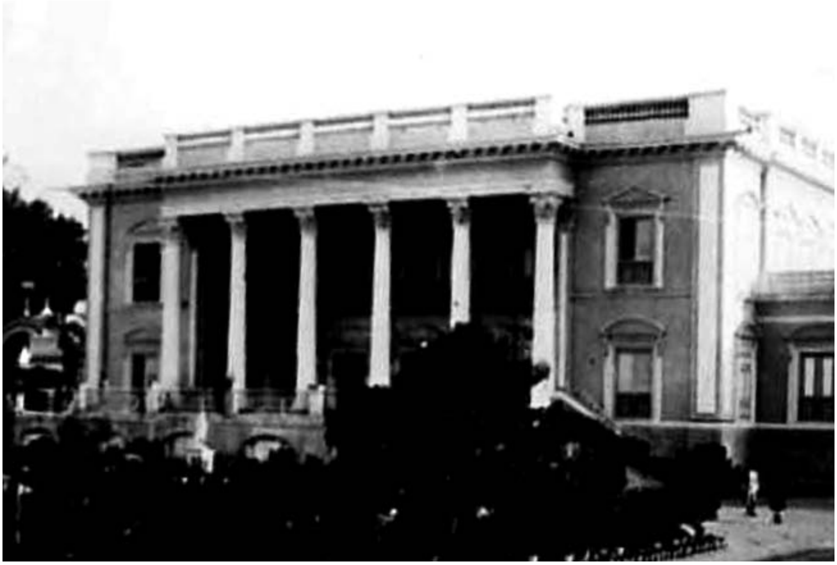


Fig. 12. Chowmahallah Palace, Afzal (south) pavilion, after Siyasat.

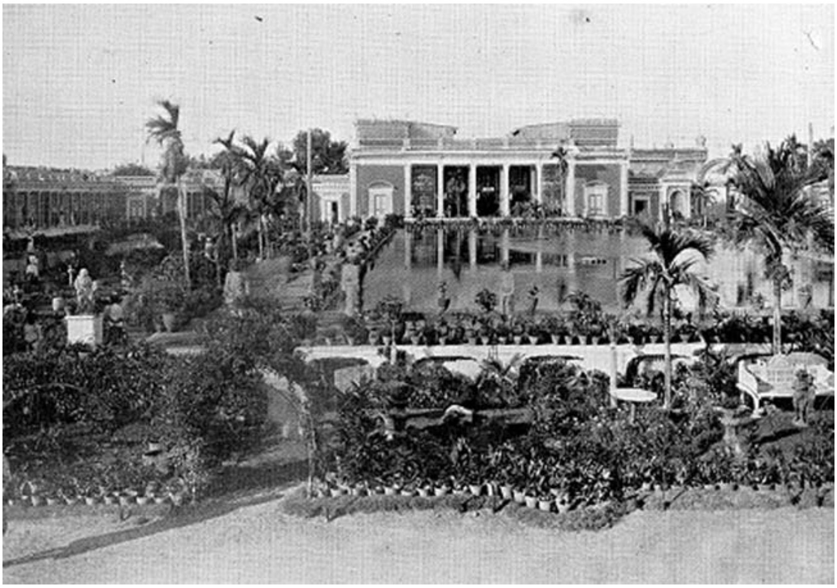


Fig. 13. Chowmahallah Palace, Tahniat (north) pavilion.

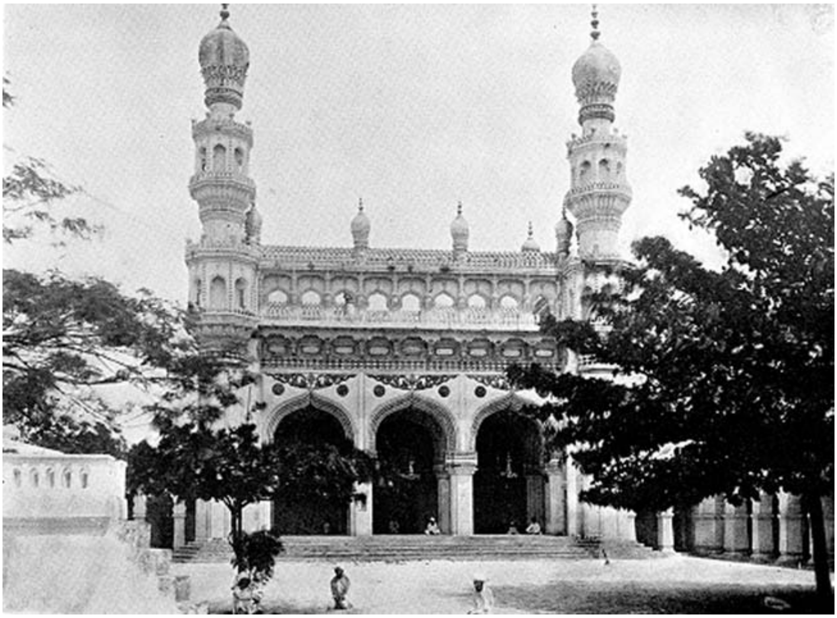


Fig. 14. Afzal Gunj Mosque, interior courtyard, after Campbell.

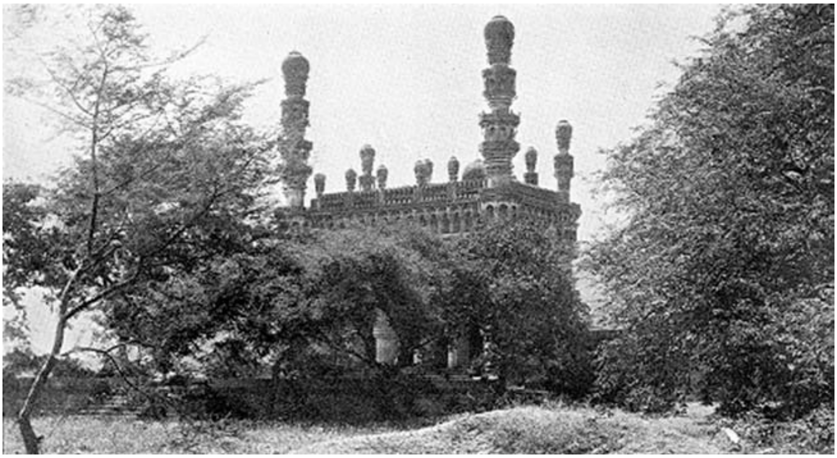


Fig. 15. The Toli Masjid, (17th century), after Campbell.

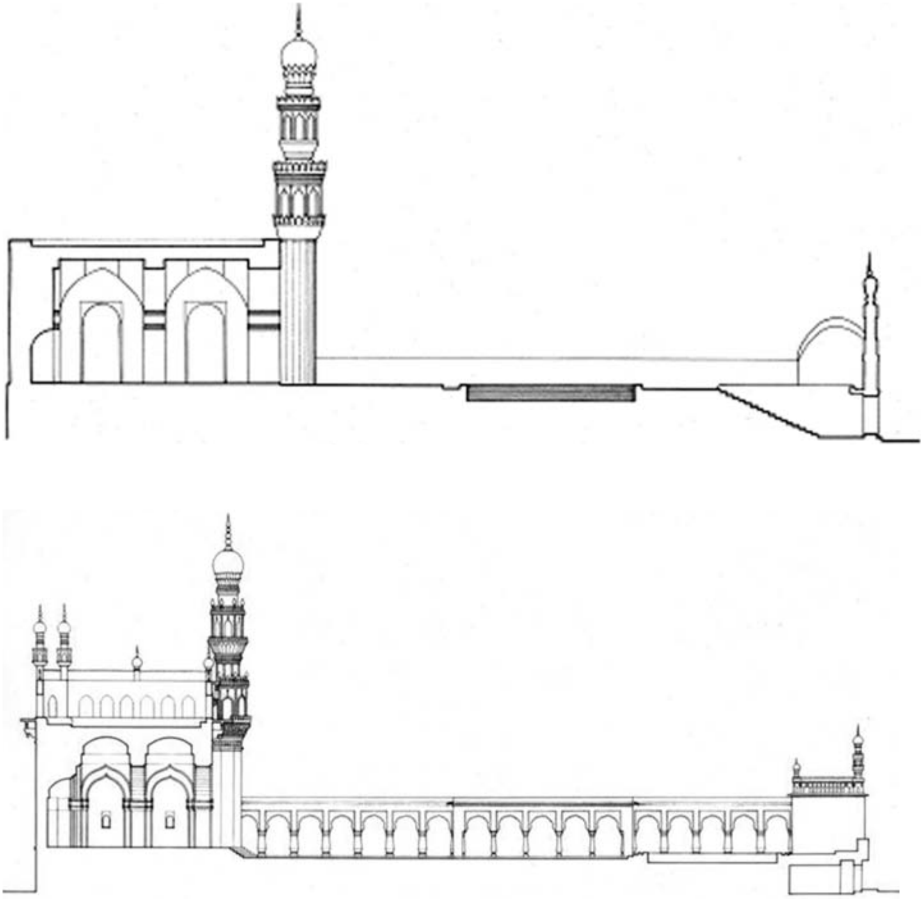


Fig. 16. Asaf Jahi Mosque Design.

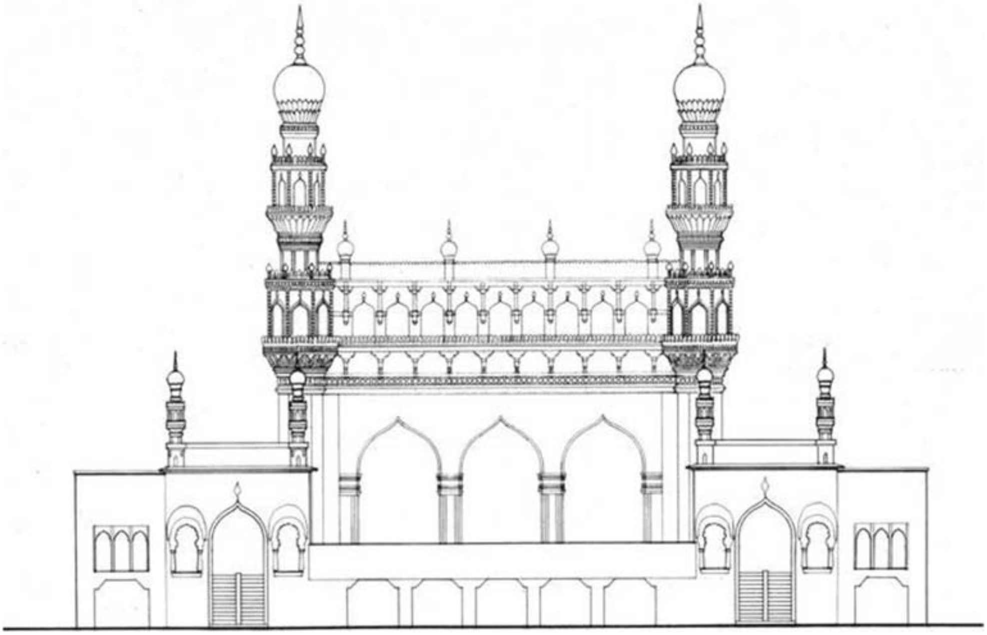


Fig. 17. The Afzal Gunj Masjid, original elevation (reconstructed).

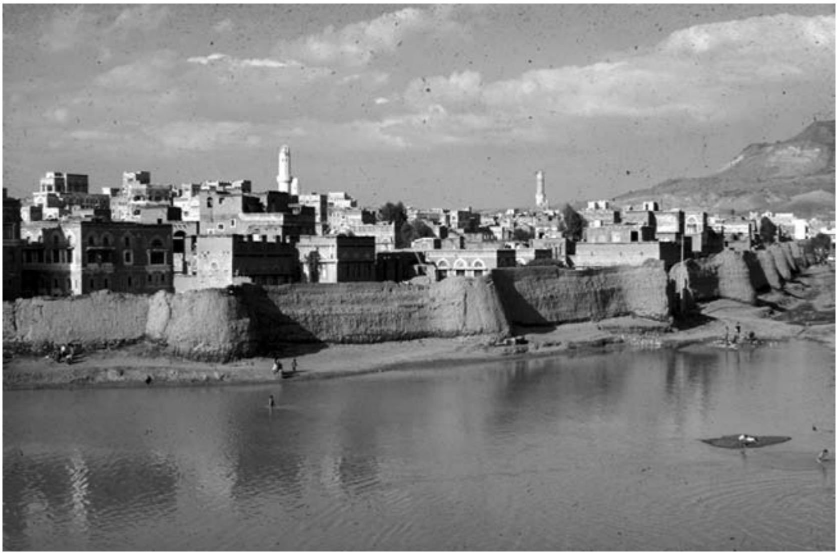


Fig. 1. The wall of Sana{a, with high houses and minarets rising above it. South Arabia was called Arabia Felix because it received heavy monsoon rains twice a year for short periods of time. The bi-annual flooding can be seen in the foreground.

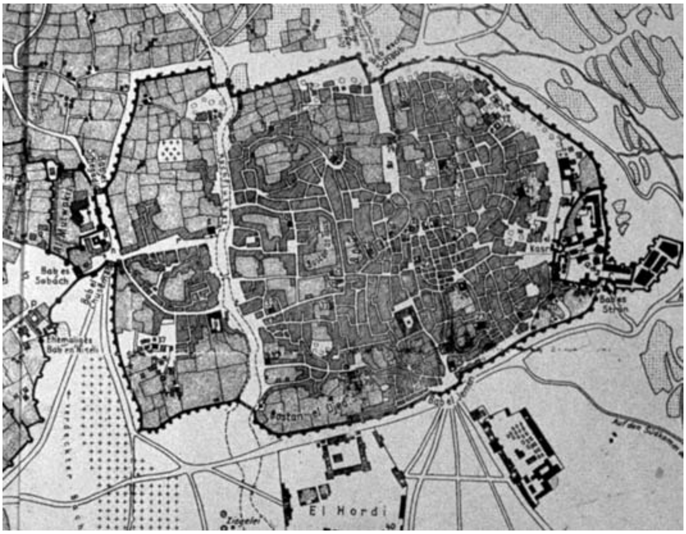

Bab es Sebach
Kasr
Bab es Stran
Bostan el Djed
El Hordi
Ziegelei

Fig. 2. Sana{a. Plan of the old city. The citadel is seen projecting to the east, and the Friday mosque more or less in the centre of the city, with the market to the northeast of it. (Source: von Wissman.)

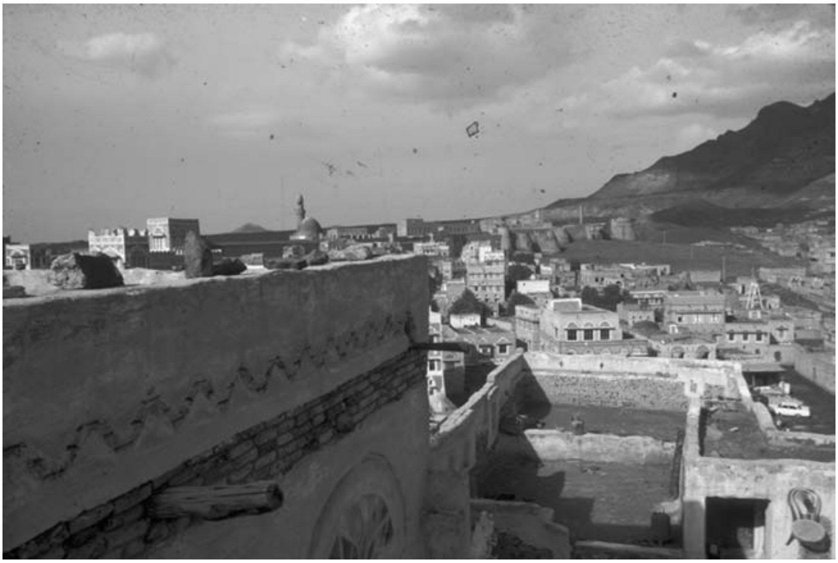


Fig. 3. The citadel, viewed from inside the city, could be plainly seen to dominate it from the outside, but was also linked so that it was accessible from the town.

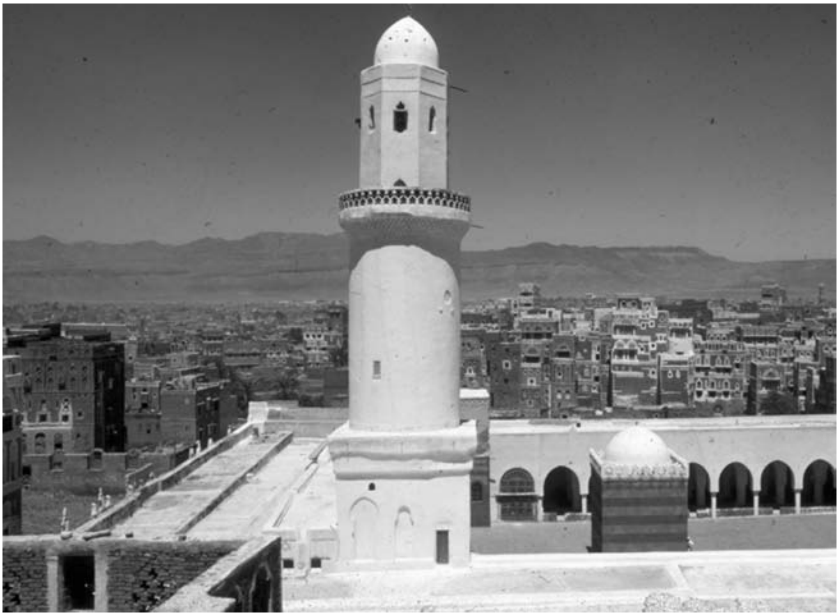


Fig. 4. The Friday mosque. An aerial view looking down into the courtyard, with the treasury in the centre. The broader of the two minarets on the left.

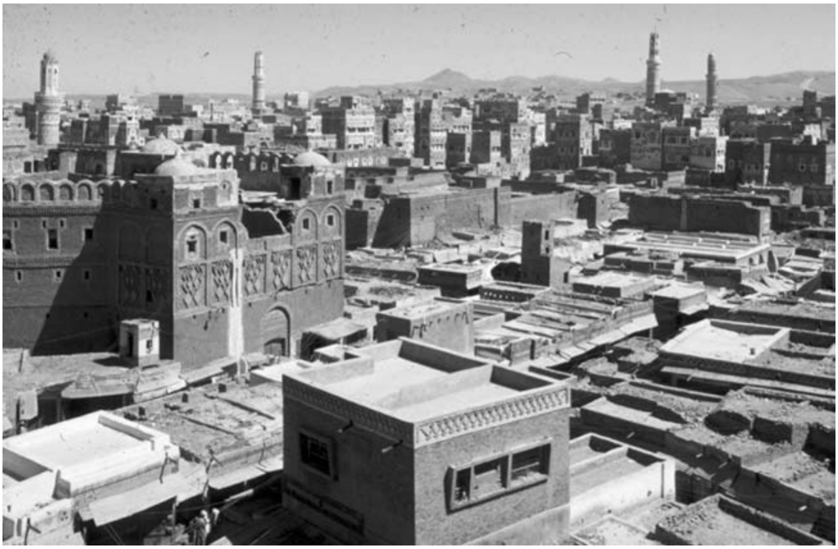


Fig. 5. General View of the market.

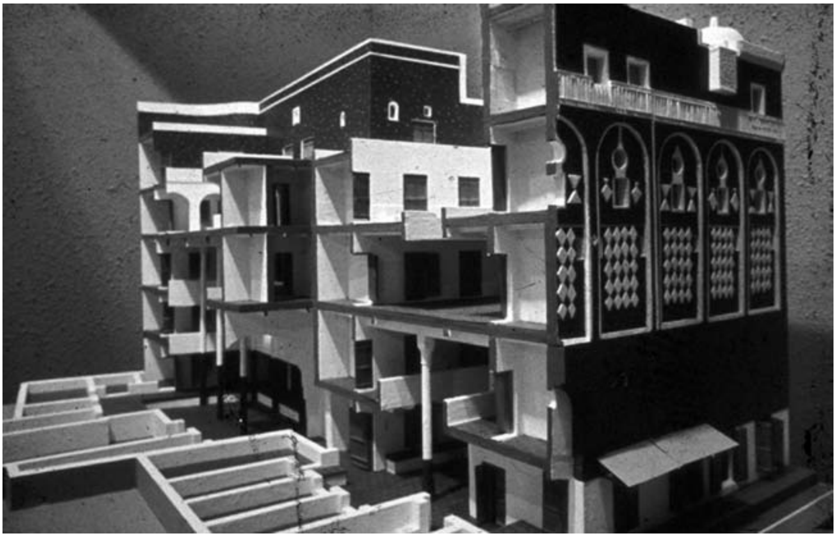


Fig. 6. A model of the caravanserai in figure 12. There were two large, multi-storied rooms which are the stables. That in front had high central columns, and the stable at the rear had even taller central columns. Around both there were storerooms for goods. Above were two inns for the merchants and drovers.

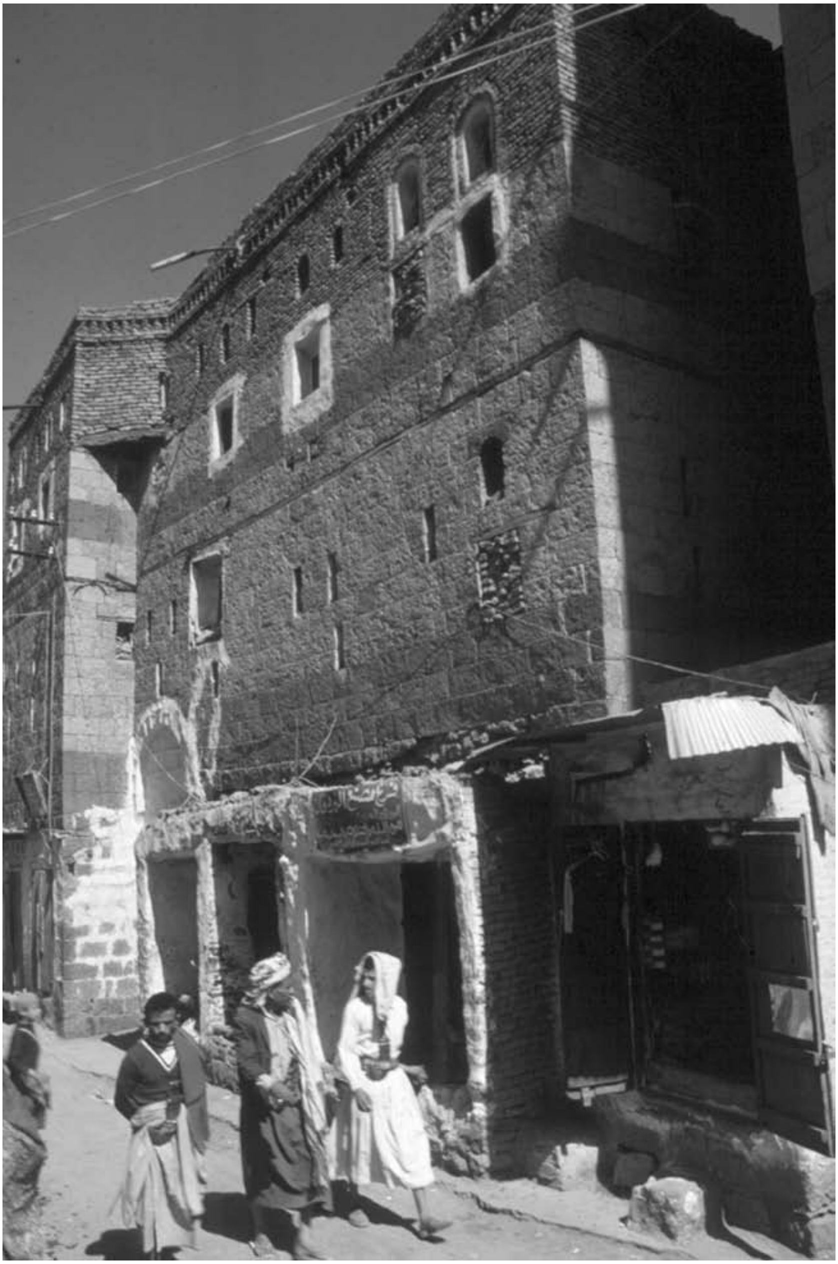


Fig. 7. A typical covered caravanserai from the outside. Note the shops built into its lower walls.

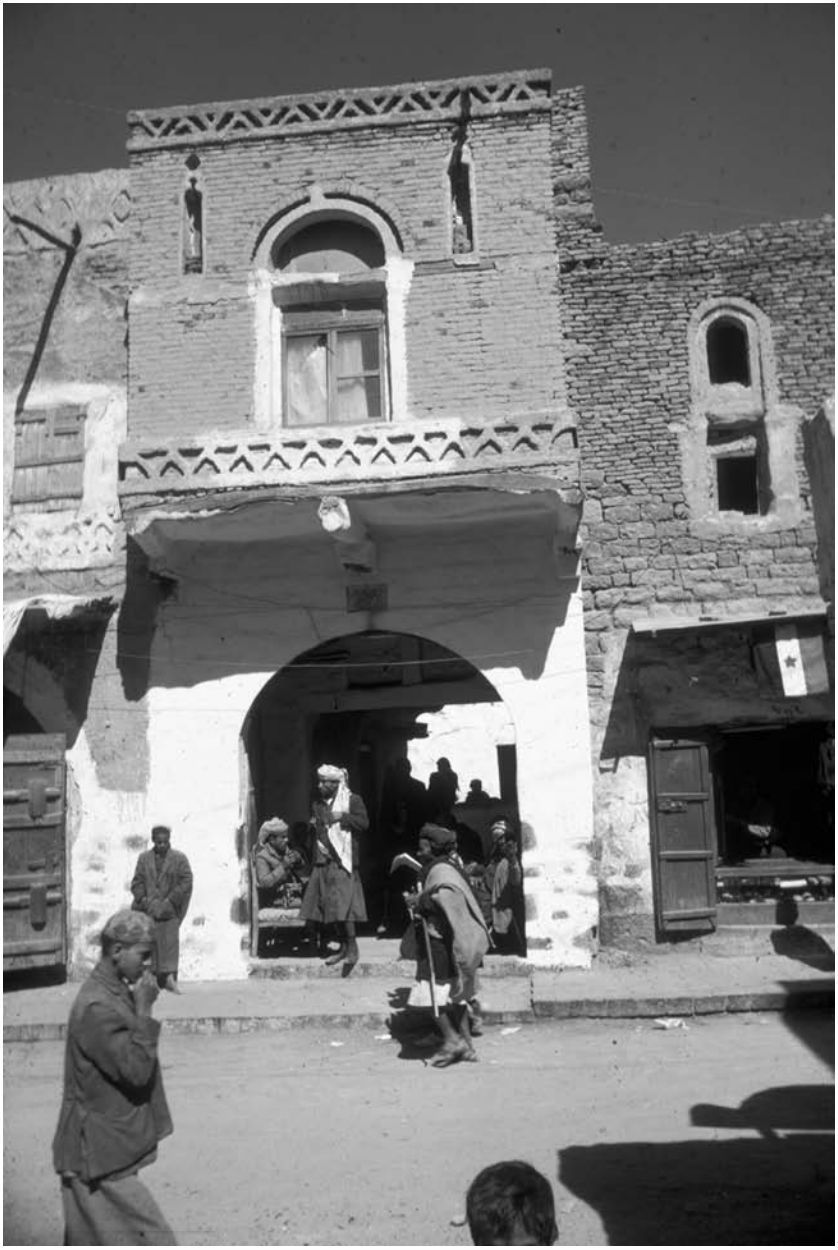


Fig. 8. Inn in the suq, with men sitting in the café at the entrance.

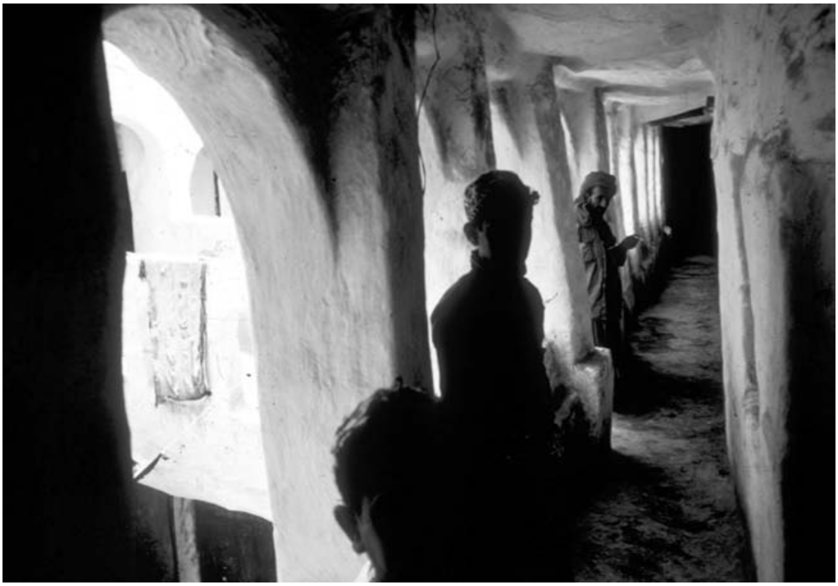


Fig. 9. Courtyard gallery in the residential part of the inn.

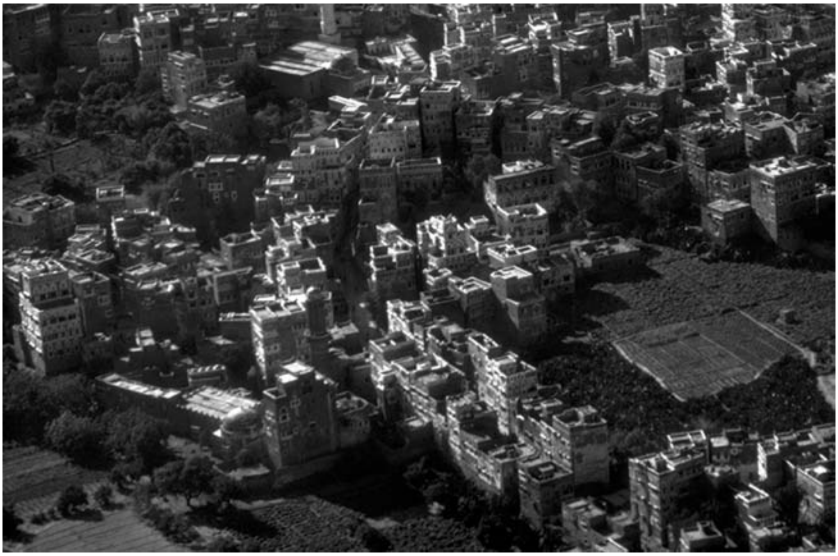


Fig. 10. Aerial view of Sana{a showing the market gardens hidden behind the houses lining the main streets of the quarters.

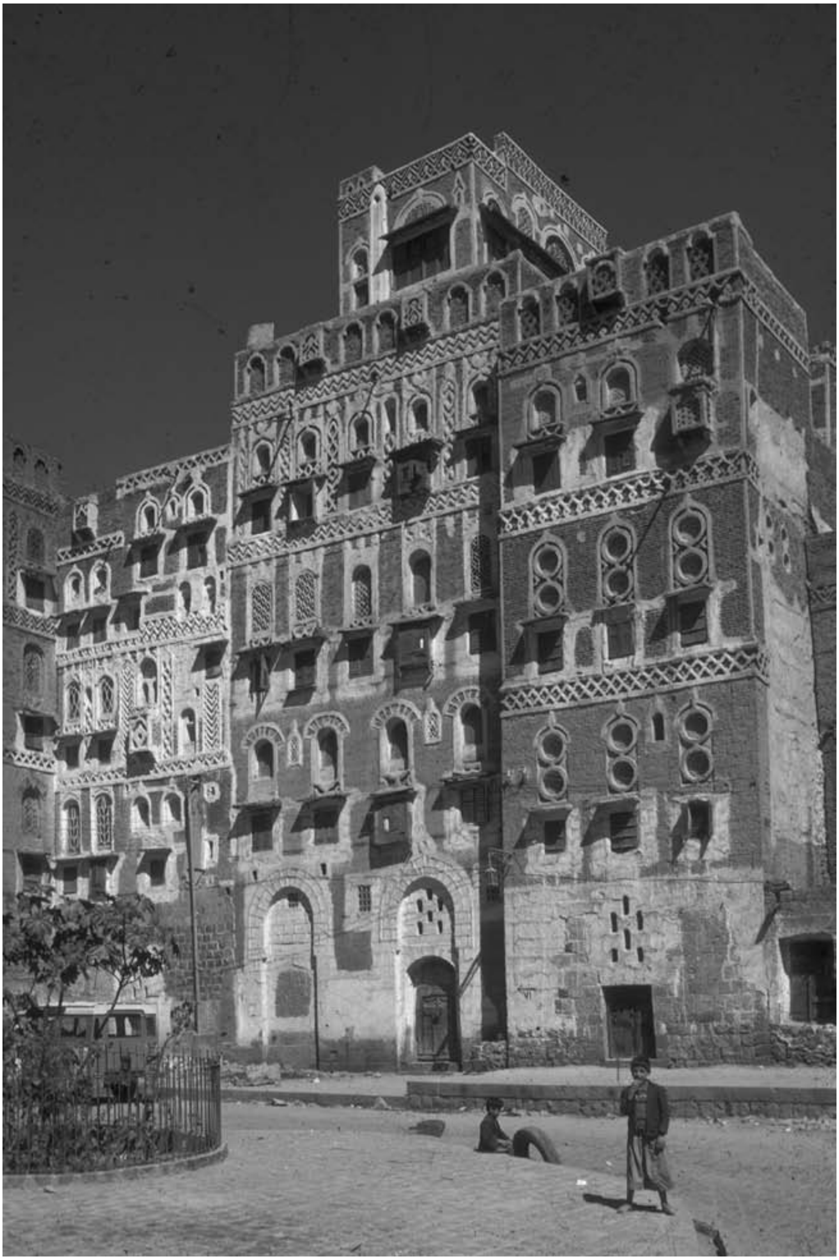


Fig. 11. Characteristics Sana{a houses.

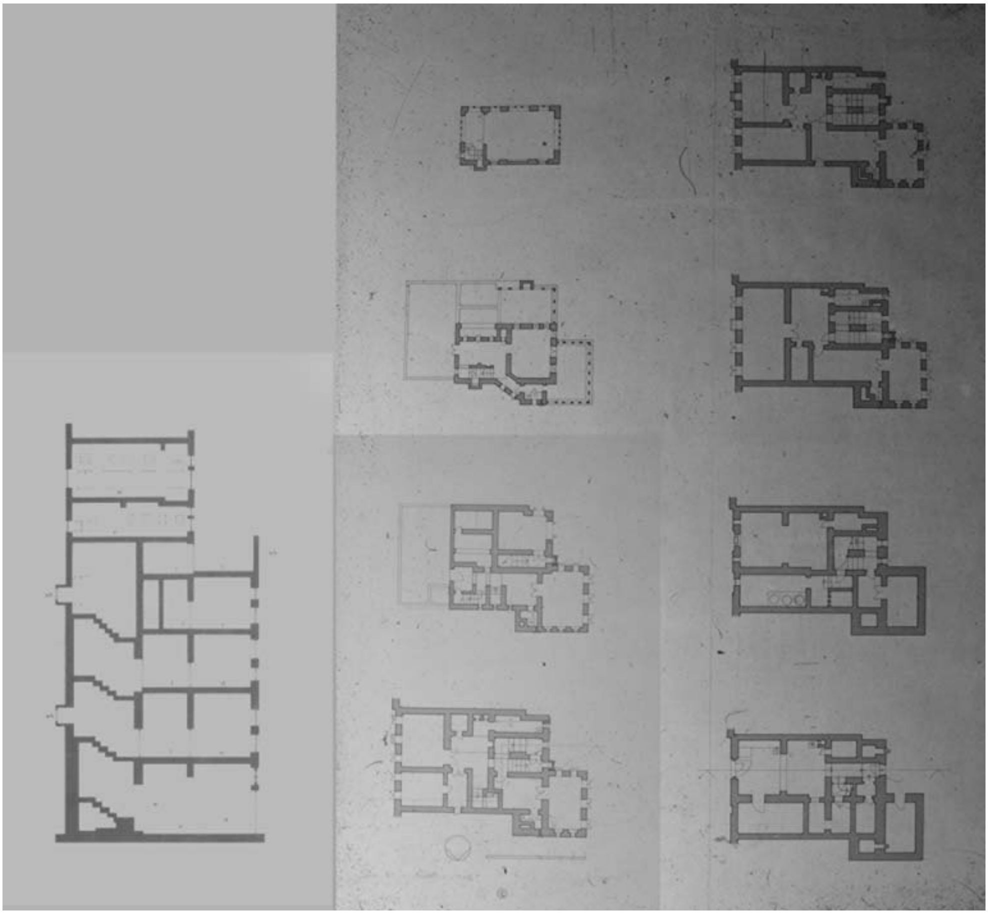


Fig. 12. Sana{a house. A typical plan and section.

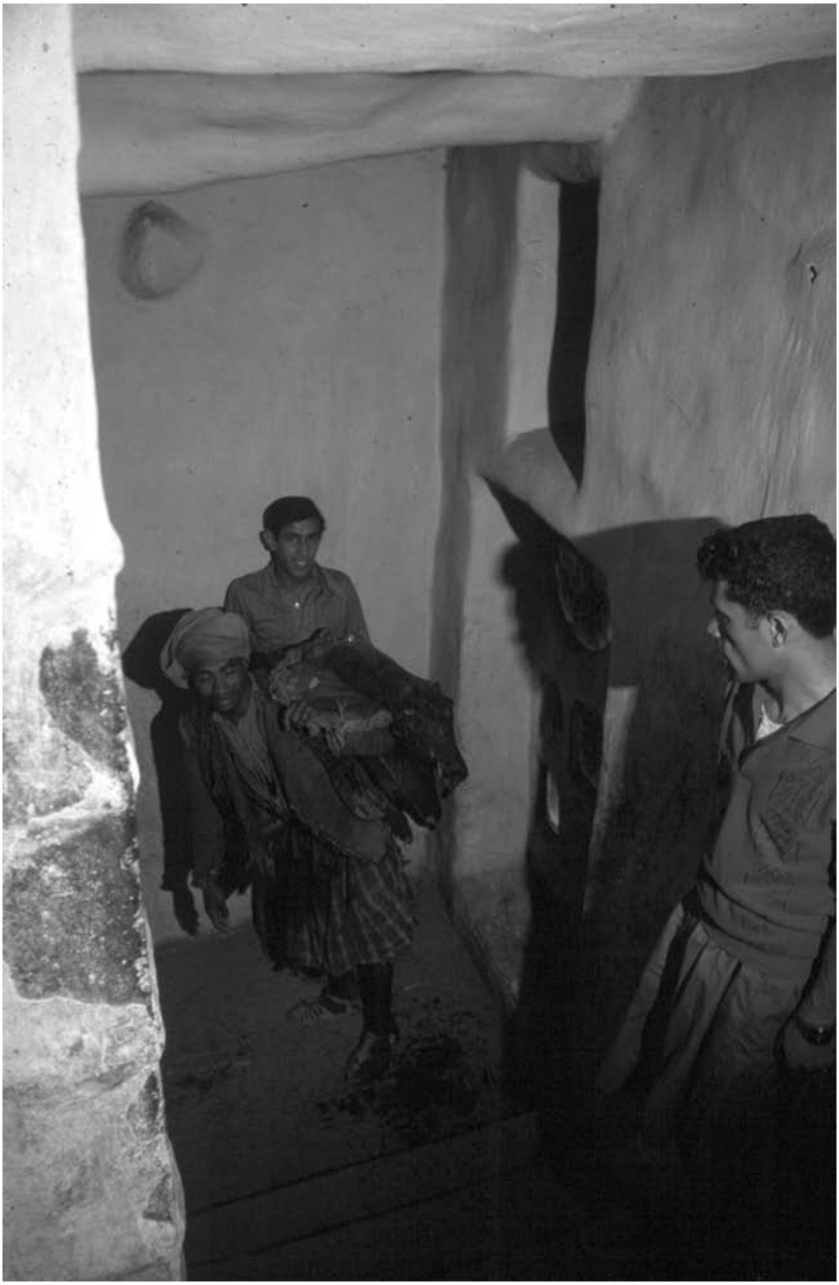


Fig. 13. A water carrier bringing a goatskin filled with water up the staircase inside a house.

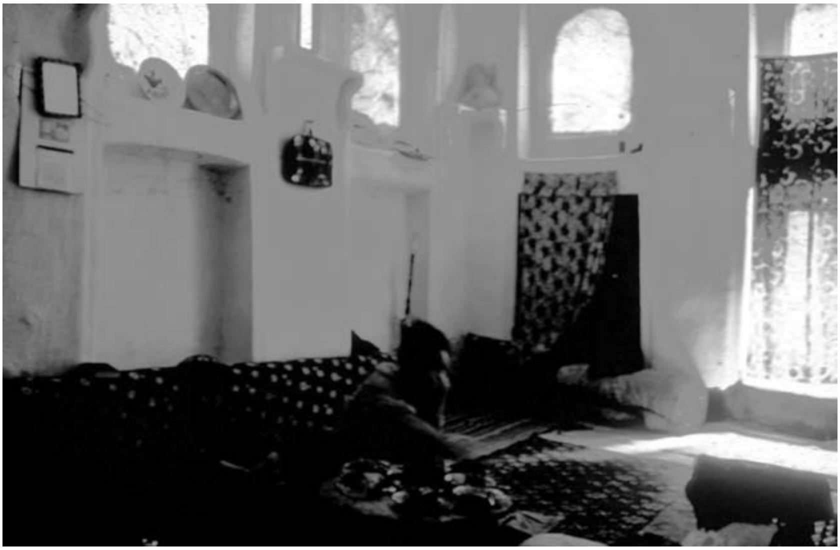


Fig. 14. A typical room with gypsum in the upper windows.

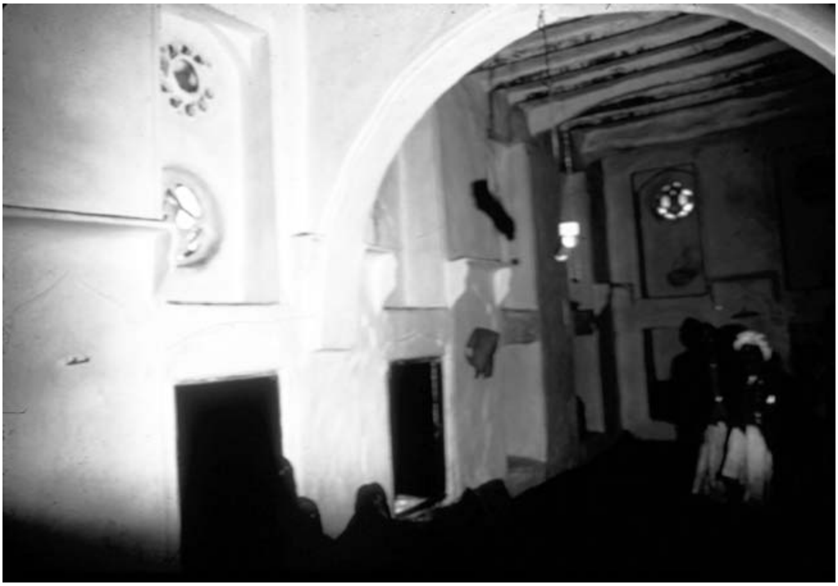


Fig. 15. The diwan of a large house; here the whole family clan could gather for deaths, births, engagements, or weddings.

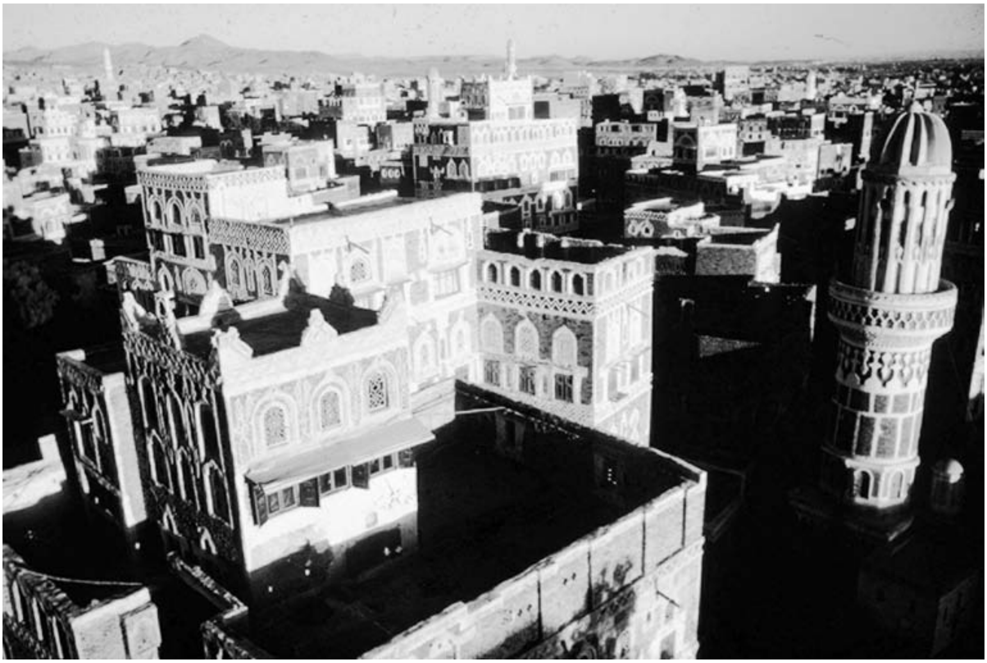


Fig. 16. Typical entertaining rooms on the roofs of houses taking advantage of the view and the cool airs. Note how the minarets are dwarfed by the houses.

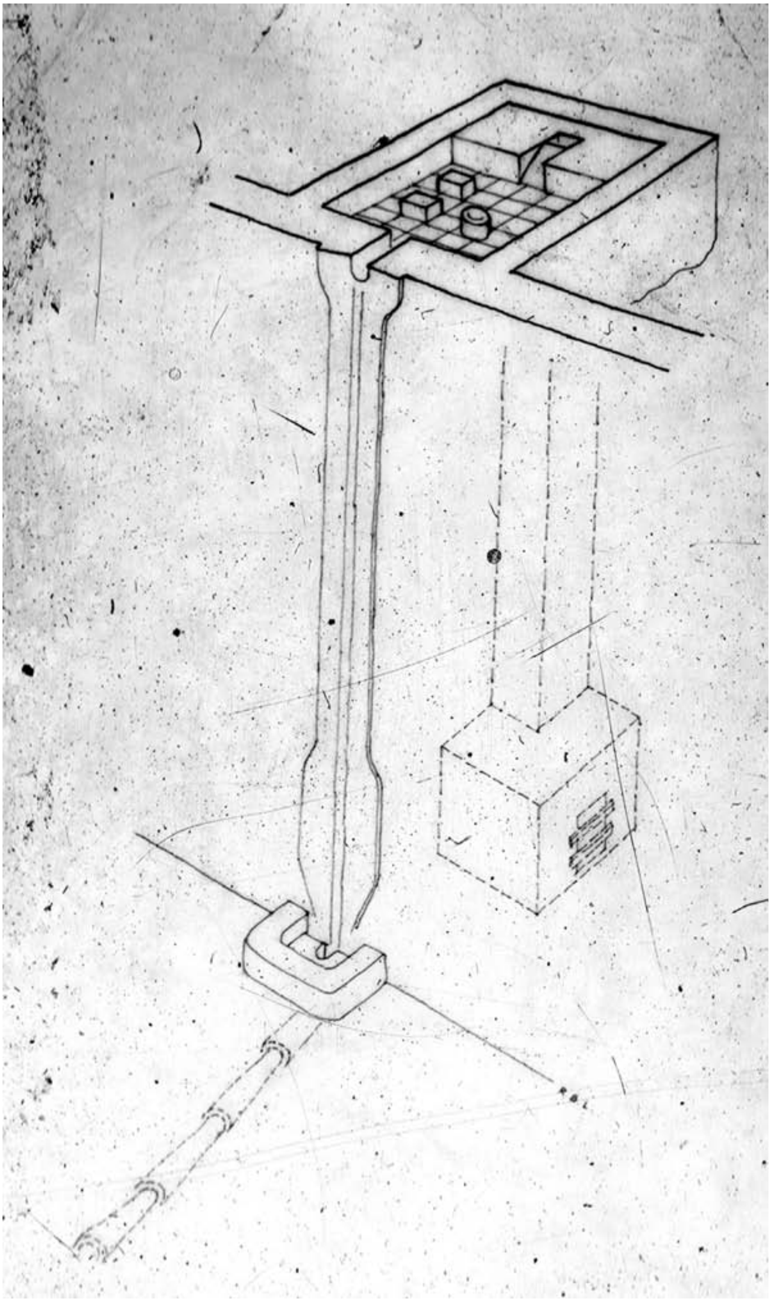


Fig. 17. Diagram of a typical bathroom, showing the disposal of solid and liquid water.

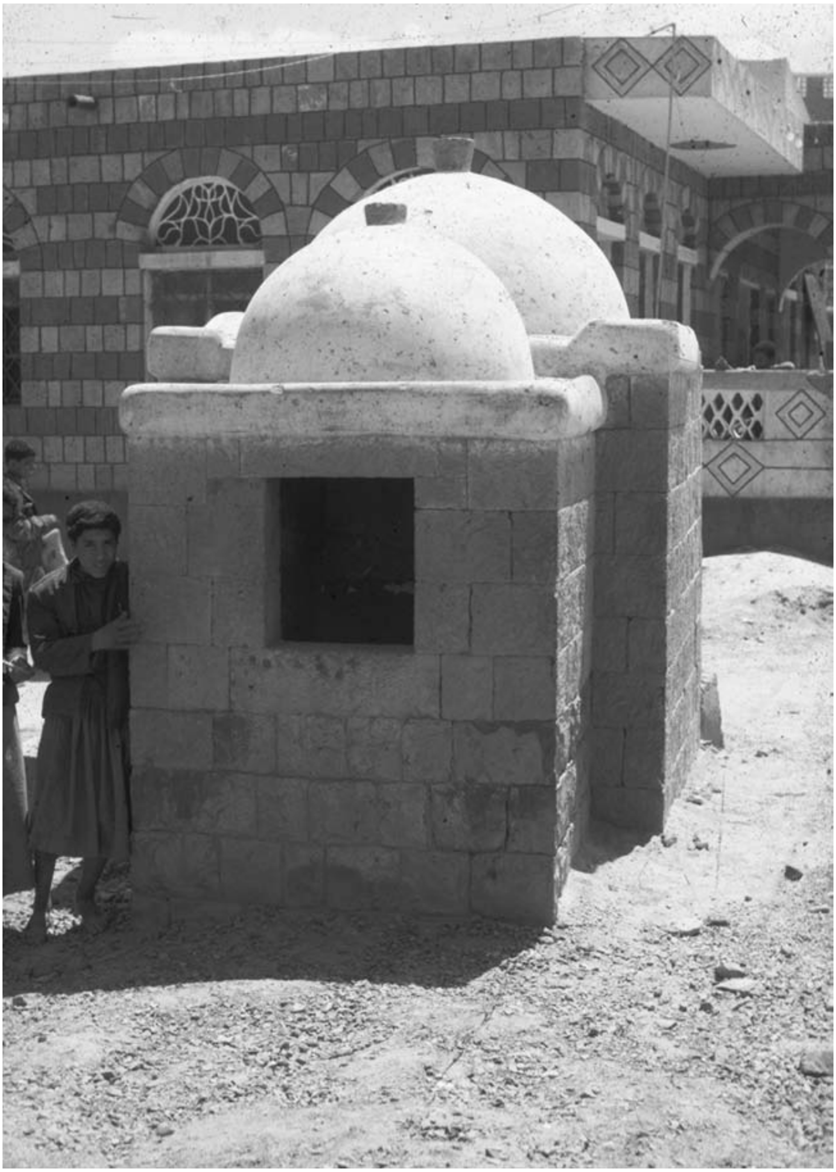


Fig. 18. A street corner cistern.

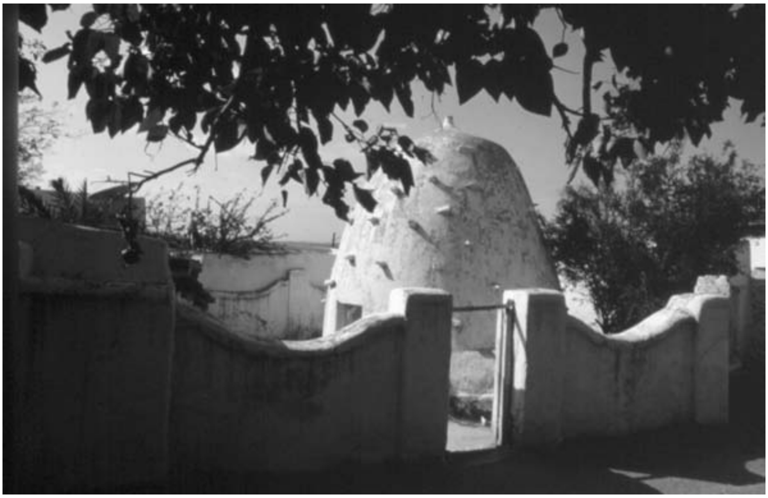


Fig. 1. The tomb of the Emir Nur.

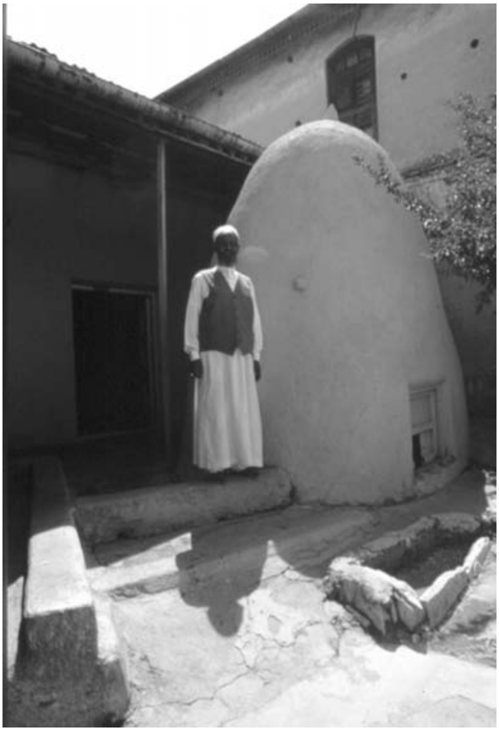


Fig. 2. A courtyard house.

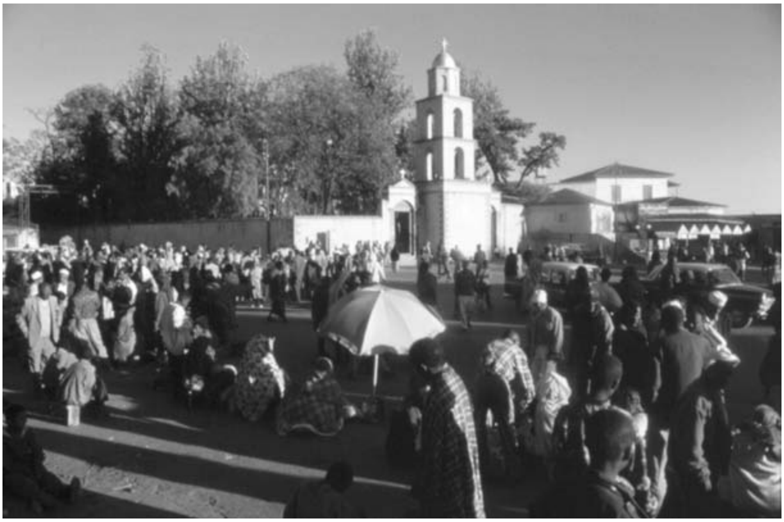


Fig. 3. Faras magala, view of the church.

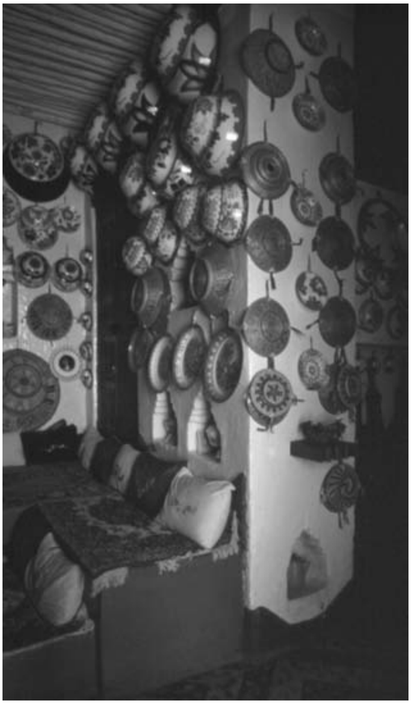


Fig. 4. Main room in the traditional house.

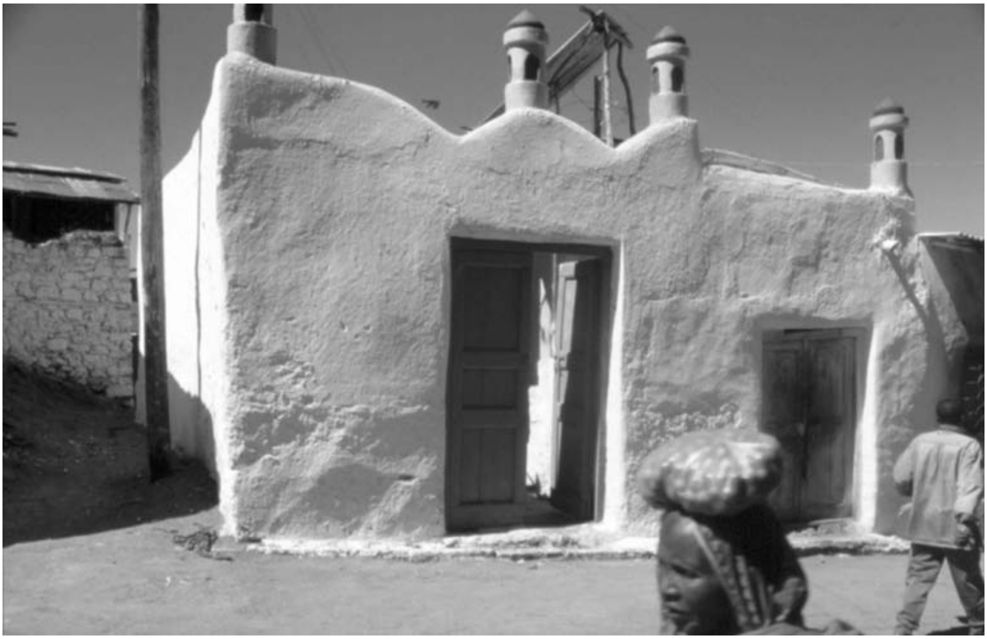


Fig. 5. View of a mosque.

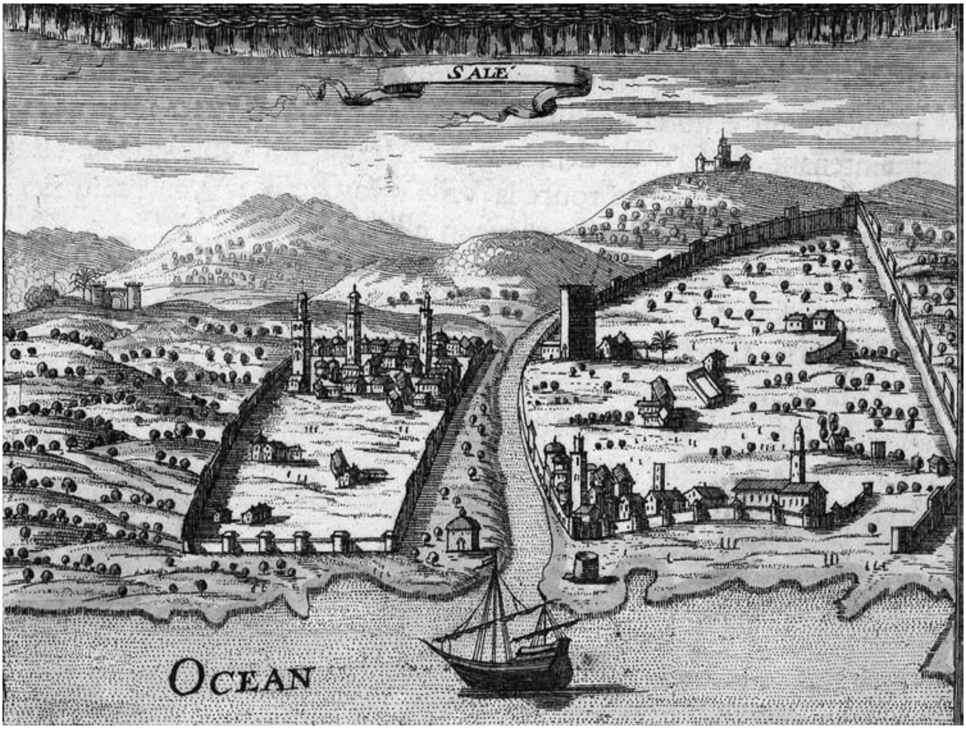


Fig. 1. Hand coloured copper plate engraving. Alain Manesson Maller 1603–1706, in Description de l'Univers, Paris, 1683.

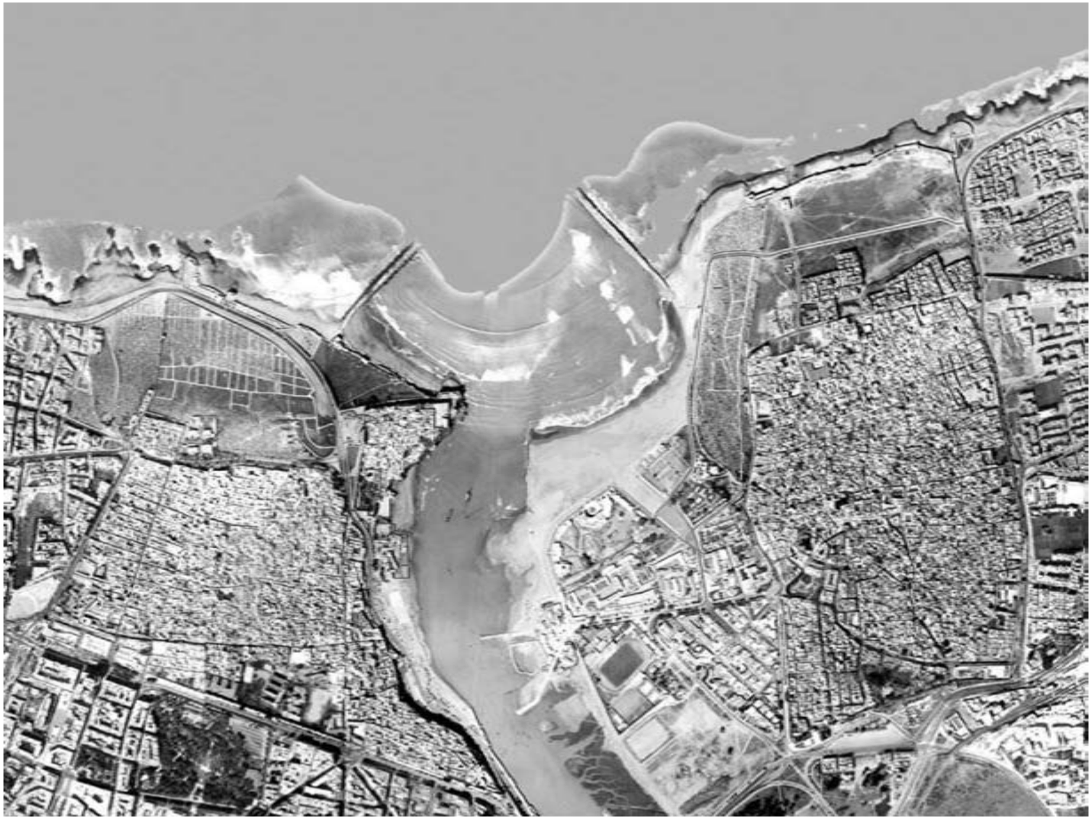


Fig. 2. Vertical aerophoto of the two sides of the river and the médinas of Rabat and Salé. Archives of the Ministry of Housing and Urbanism.

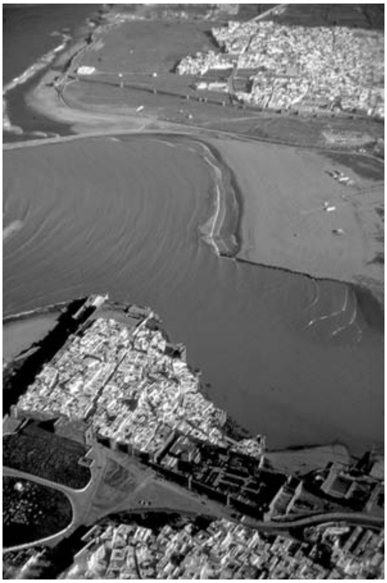


Fig. 3. Oblique view of the Qasba and the Médina of Salé.

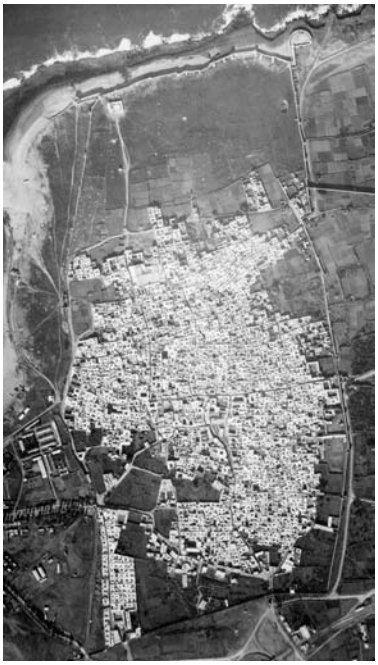


Fig. 4. Vertical aerophoto of the médina of Salé beginning of the century.

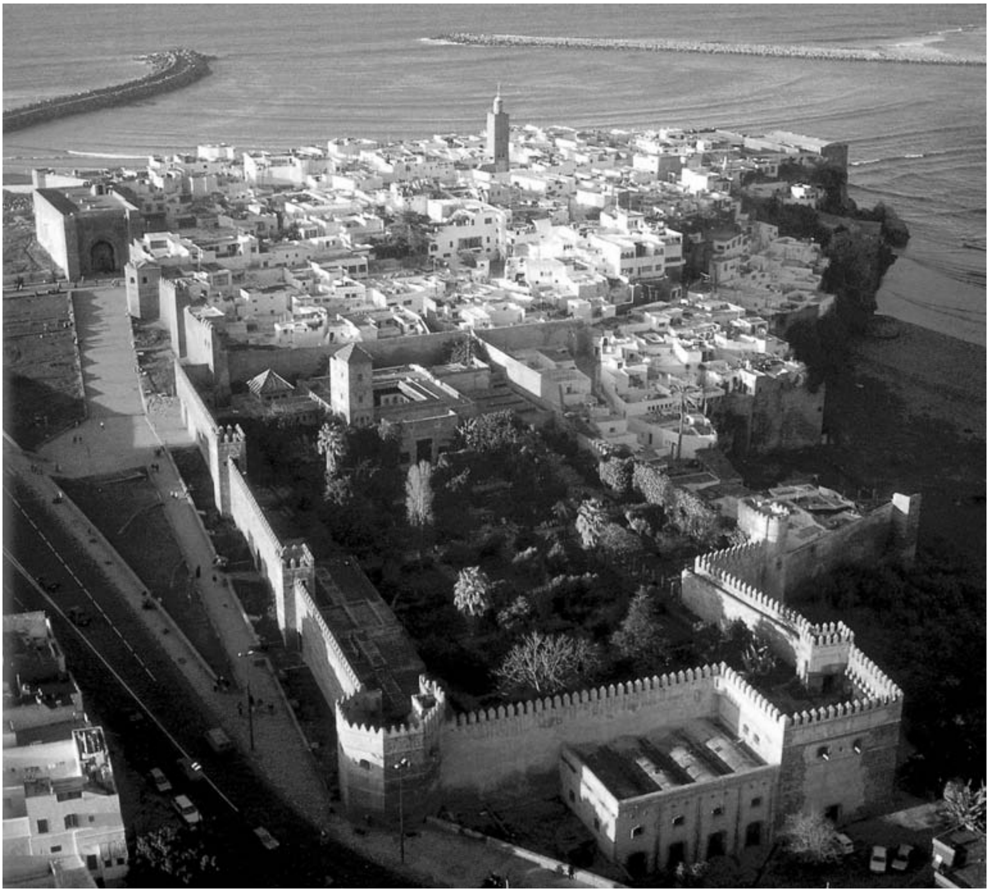


Fig. 5. Aerial view of the Qasba des Oudaya.

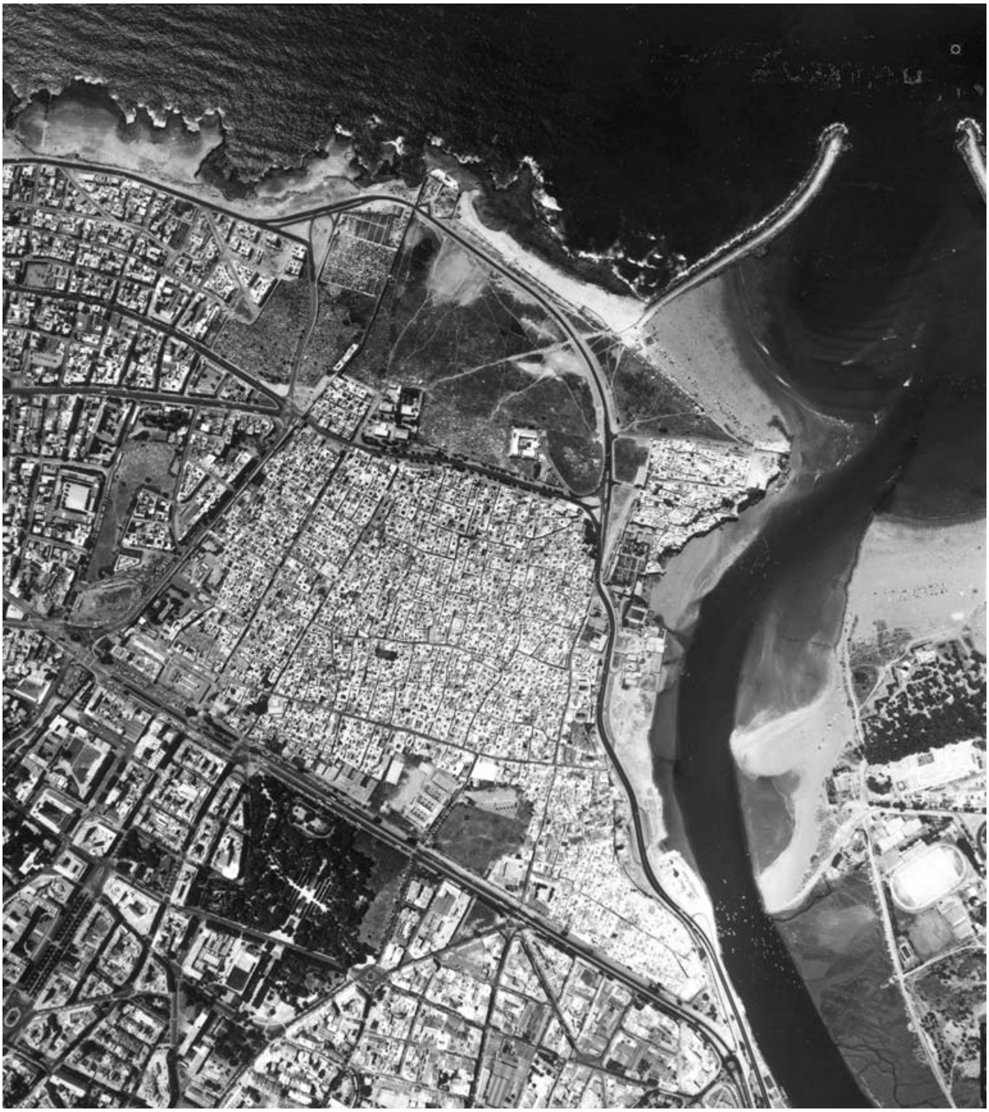


Fig. 6. Vertical aerophoto of the Médina of Rabat in 1980.

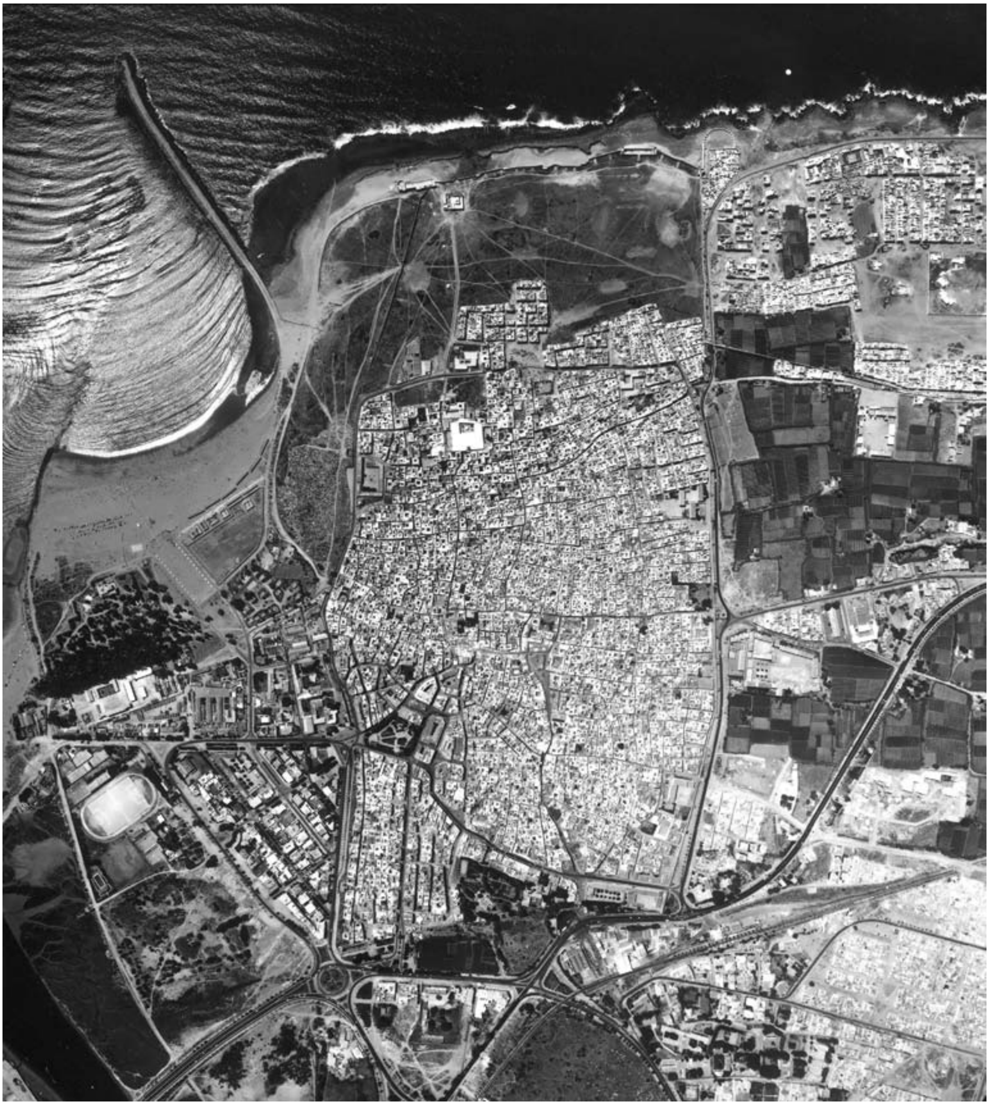


Fig. 7. Vertical aerophoto of the Médina of Salé in 1980.

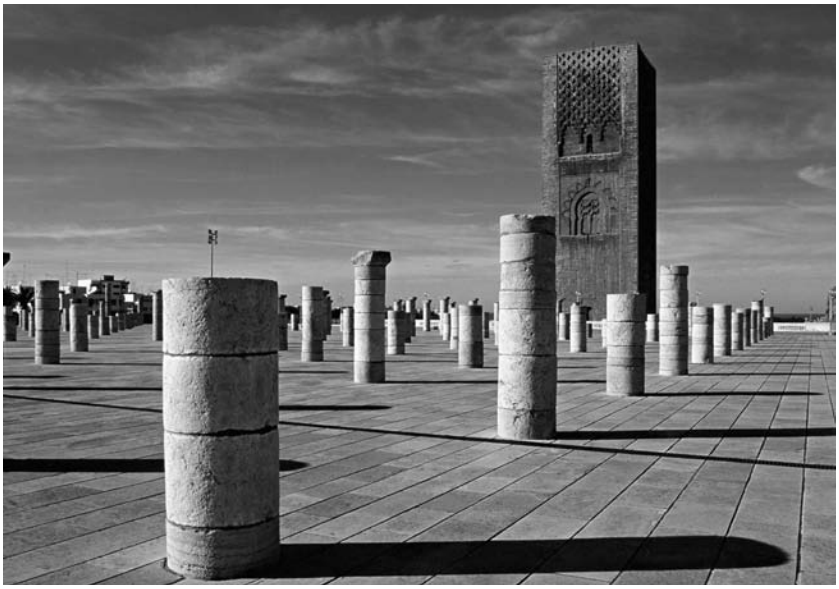


Fig. 8. View of the esplanade and the minaret of the Hassan Mosque.
Photos by Etienne Revault.

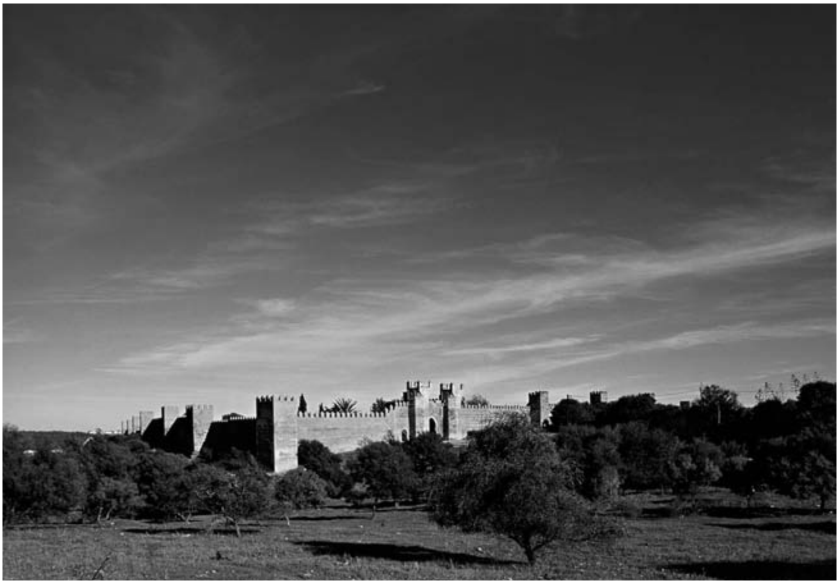


Fig. 9. General view of the Merinide necropolis, Chellah.
Photo by Etienne Revault.

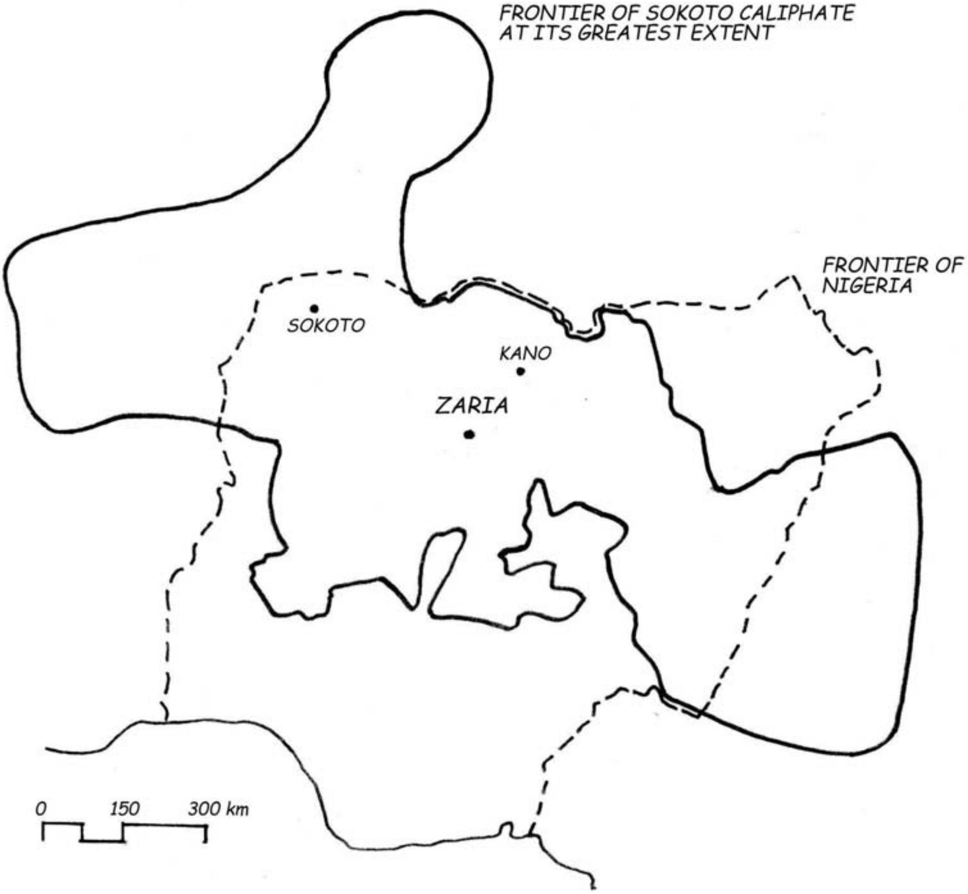

FRONTIER OF SOKOTO CALIPHATE AT ITS GREATEST EXTENT
FRONTIER OF NIGERIA
SOKOTO
KANO
ZARIA
0
150
300 km

Fig. 1. Frontier of the Sokoto Caliphate at its greatest extent. Zaria is located roughly in the middle. The dotted line represents the current frontiers of Nigeria.

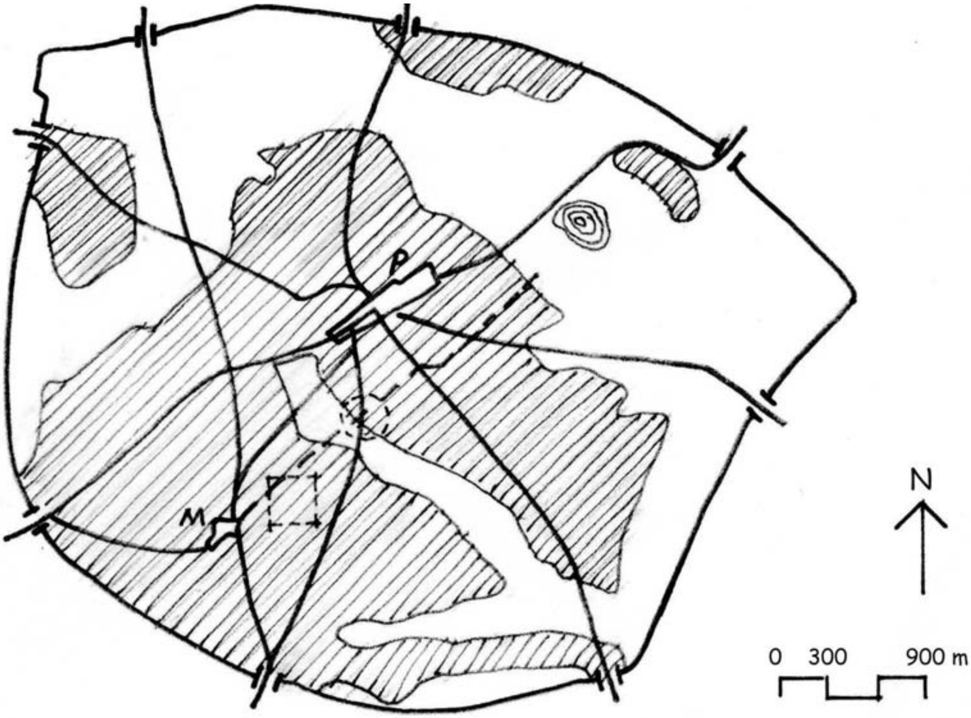


Fig. 2. Zaria old town, circa 1970, shows the primary streets linking the gates of the walled town to the market area (M), and to the Friday mosque and Emir's palace (P). The shaded portions of the plan denote the built up areas within the walls. The dotted square is the approximate location of the air photo in Figure 3, and the dotted circle indicates the location of the neighborhood cluster in Figure 5.

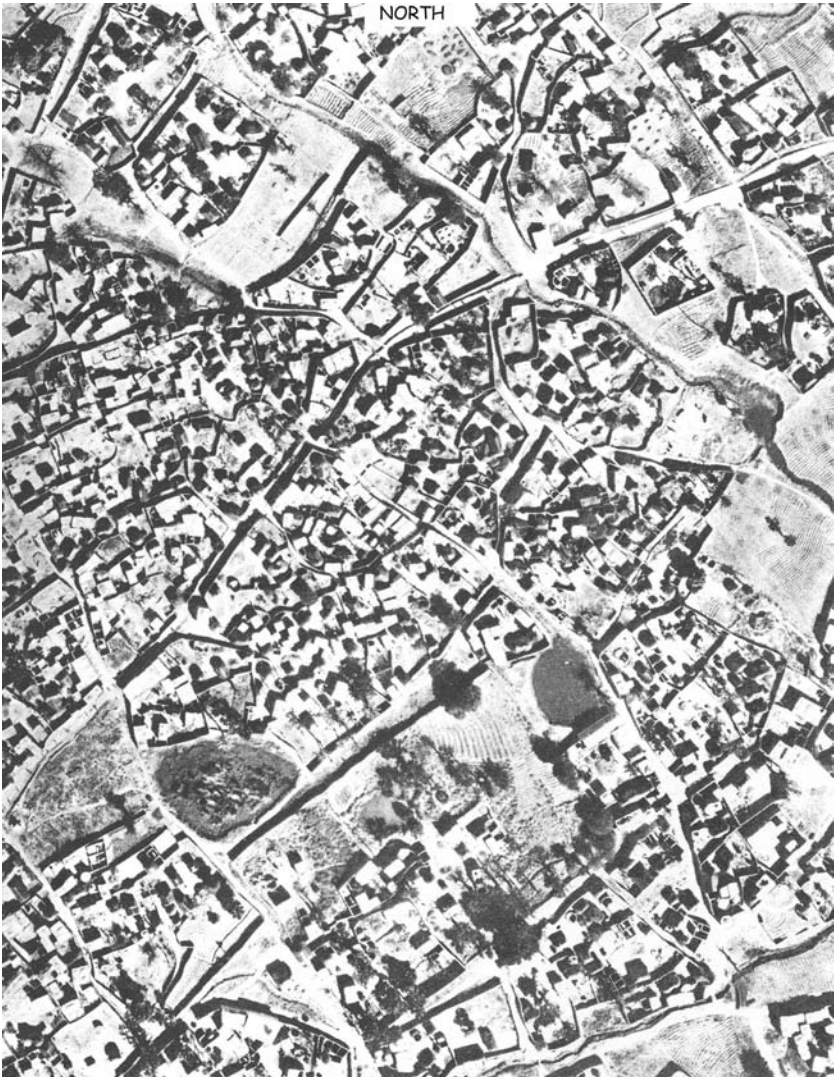


Fig. 3. Air photo, mid-1950s, of a typical pattern of clustered walled compounds and the numerous small farms within and between neighborhoods. Location of this photo is indicated in Figure 2. This and other air photos were commissioned by the previous Northern Nigerian government.

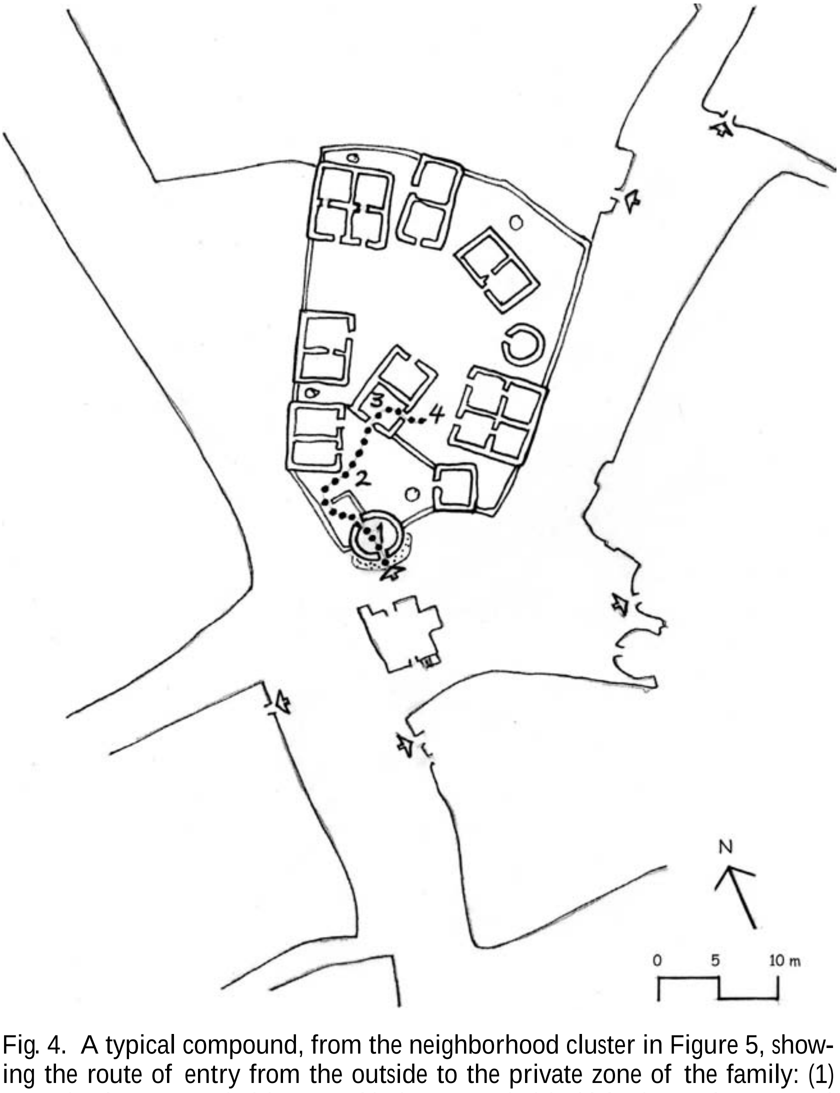


Fig. 4. A typical compound, from the neighborhood cluster in Figure 5, showing the route of entry from the outside to the private zone of the family: (1) Zaure (main entrance), (2) Kofar Gida (fore court), (3) Shiqifa (second entrance/ passage), (4) Cikin Gida (private area of the compound).

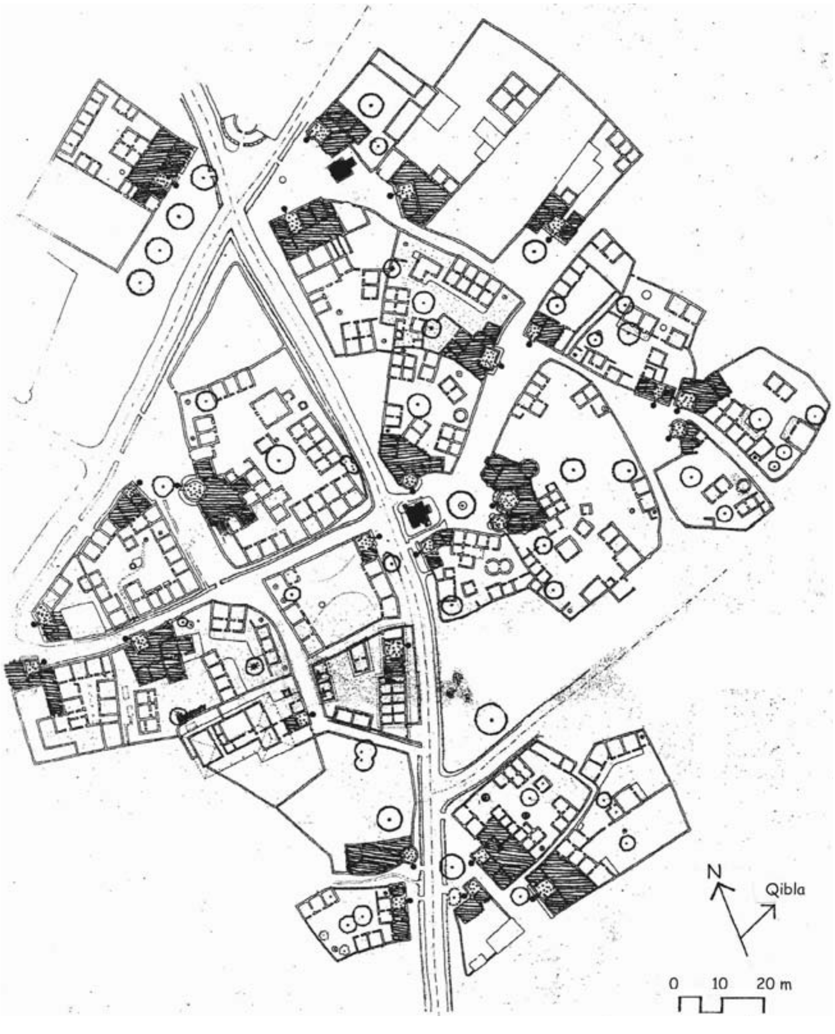


Fig. 5. A neighborhood cluster of 26 compounds, its location within the town is indicated in Figure 2. Entrance to the Zaure of each compound in indicated by a black dot. Two small neighborhood mosques are shown in black. One is located centrally and the other is in far north of the cluster. The dotted areas are the Zaure (main entrance huts) of each compound. The hatched areas within each compound are the male zone of the compound. After B. A. Urbanowicz's study (reference cited in note 22), and on-site investigation by Z. Ahmed.

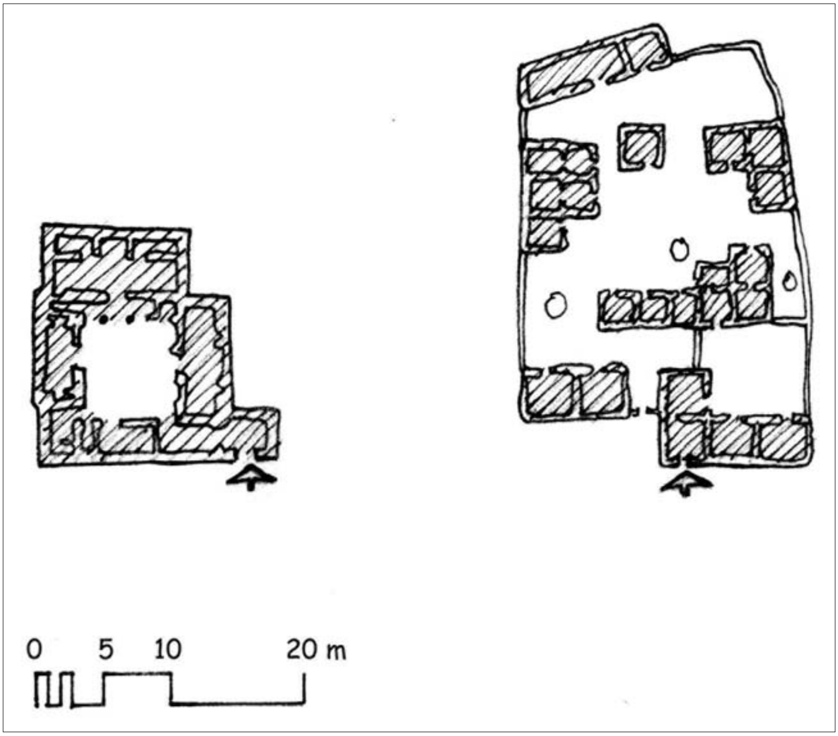
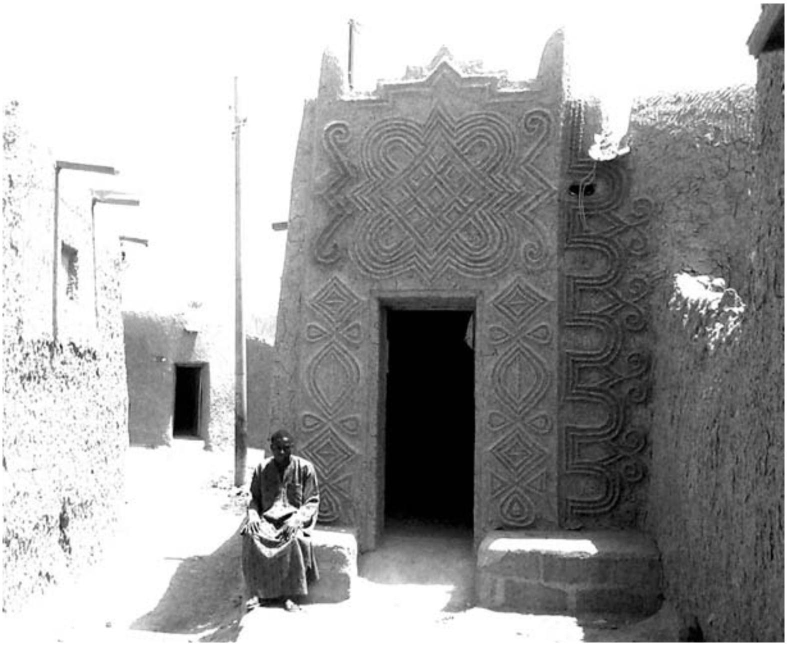


Fig. 6. Comparative study of the covered areas and space allocations, drawn to the same scale, between a typical house configuration from North Africa and a compound from Hausaland in sub-Sahara Africa. The example on the left is from Tunis, on the right from Zaria.



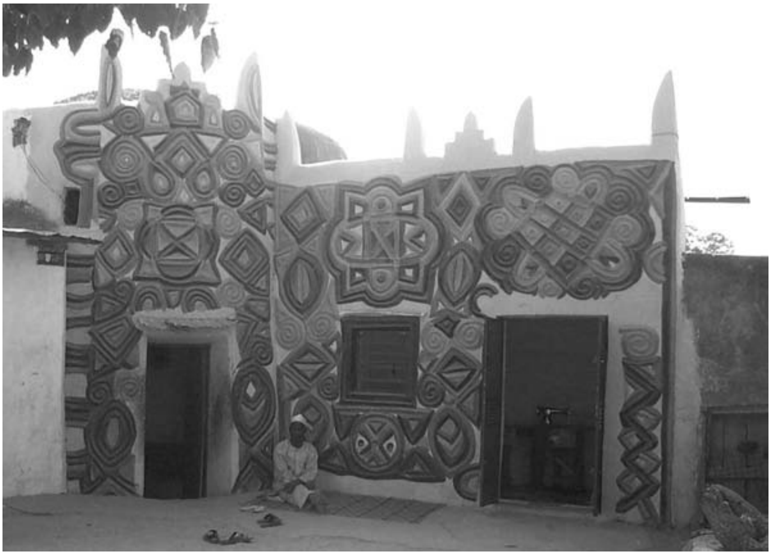


Fig. 7. Exterior view of the main entrance Zaure of two houses in Zaria. Above (a) is a house with modest treatment of the front elevation. Below (b) is an example of an elaborately decorated façade of the Zaure. Photos by Z. Ahmed, 2001.

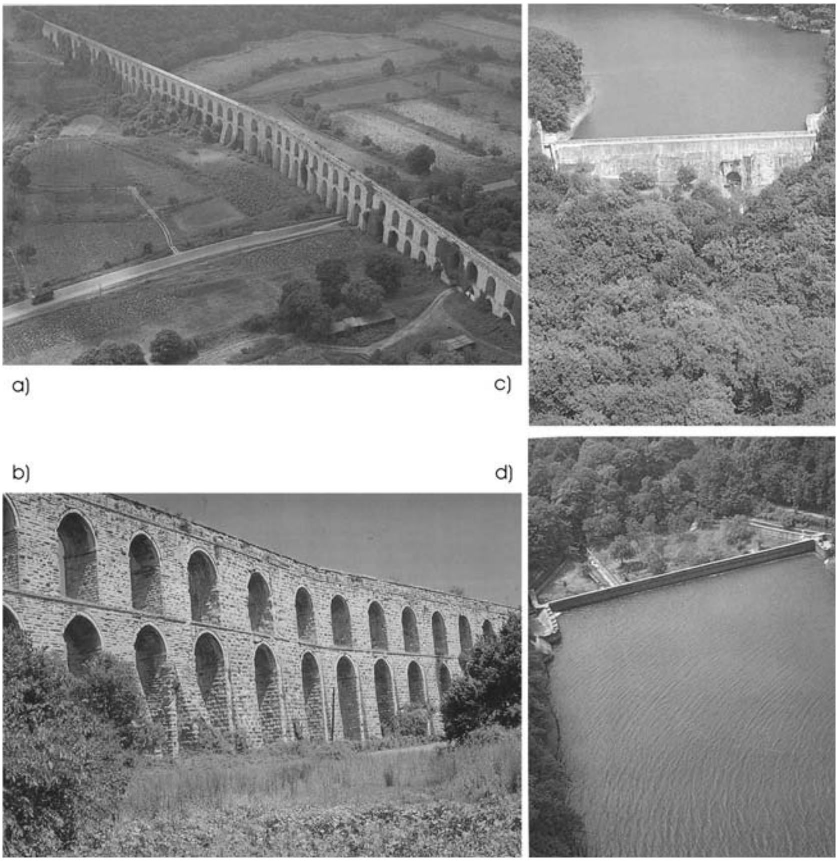


Fig. 1. a–b) A view of Uzunkemer Aqueduct (from: K. Çeçen, *Sinan's Water Supply System in Istanbul*, p. 92).
c–d) A view of Buyuk Dam (from: K. Çeçen, *Sinan's Water Supply System in Istanbul*, p. 130).

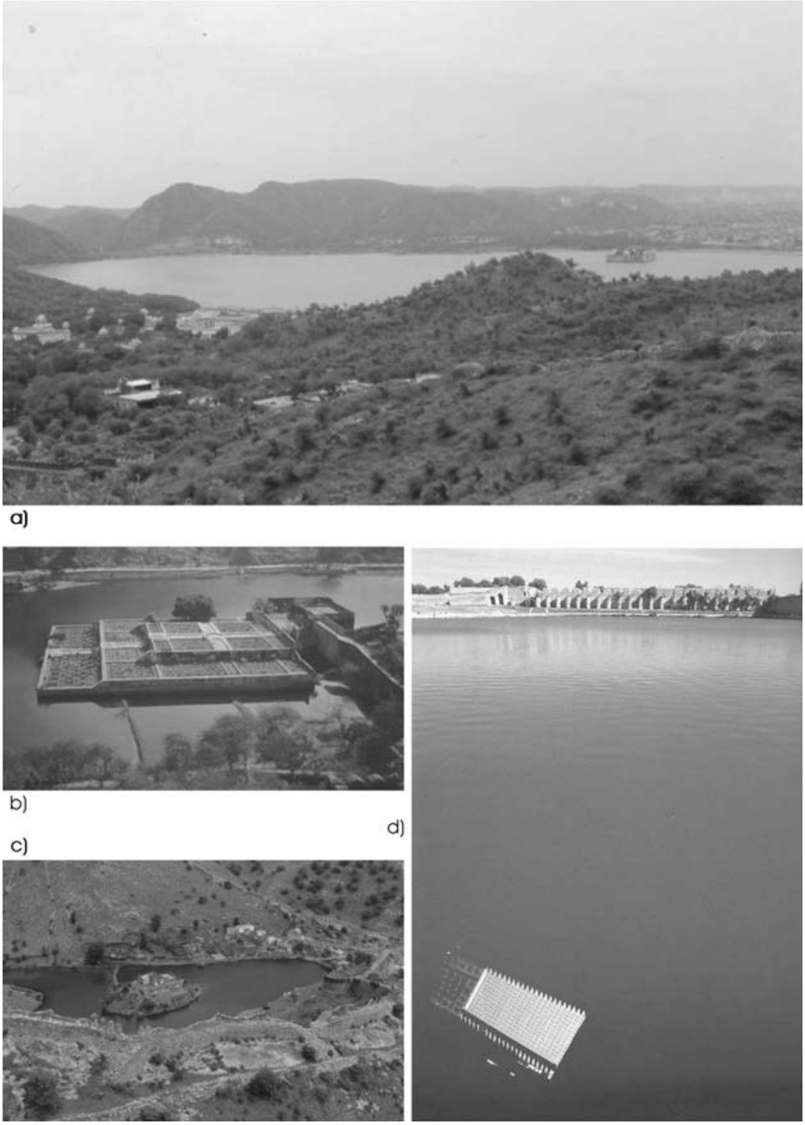


Fig. 2. a) The Pichola lake and the Lake Palace, Udaipur, Rajasthan (Prof. Attilio Petruccioli's archive);
b) View of the roof garden in the lake of Amber in the Rajasthan (from: A. Petruccioli, Il giardino islamico. Architettura, Natura, Paesaggio [Milano: Electa, 1994], 264);
c) View of the basin of Amber (Prof. Attilio Petruccioli's archive);
d) View of the basin of the Agdal of Meknes and axonometric section of the DÊr al-MÊ (from: A. Petruccioli, Il giardino islamico. Architettura, Natura, Paesaggio [Milano: Electa, 1994], 164).

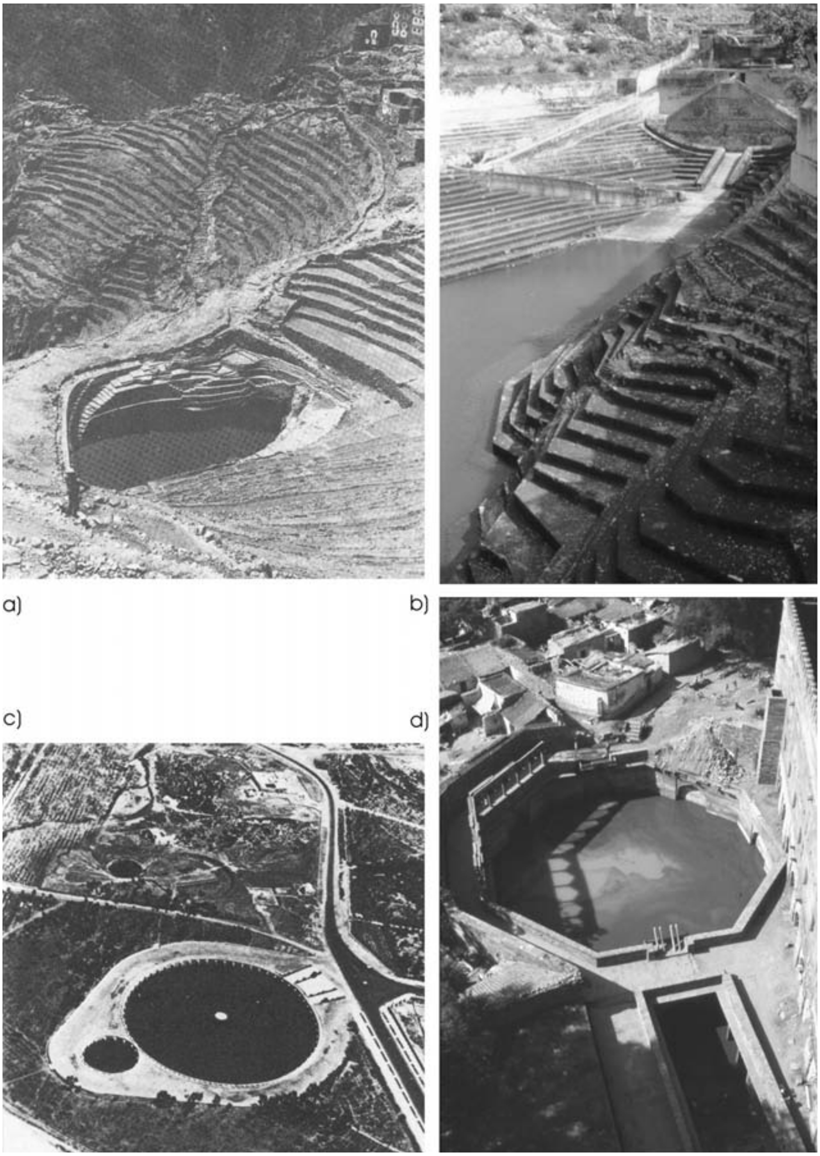


Fig. 3. a) A tank dug in the rock to Shahara, Yemen (from: A. Petruccioli, Dar Al Islam. Architetture del territorio nei paesi islamici [Rome: Carucci, 1985], 90);
b) A big tank dug in the rock to Jaipur (Prof. Attilio Petruccioli's archive);
c) The big tank aghlabita of Kairuan (from: A. Petruccioli, Dar Al Islam. Architetture del territorio nei paesi islamici [Carucci: Roma, 1985], 89);
d) The big Jhalra, octagonal well (Baoli) (10,36 m), in the area of Rang Mahal, Fathpur Sikri (Prof. Attilio Petruccioli's archive).

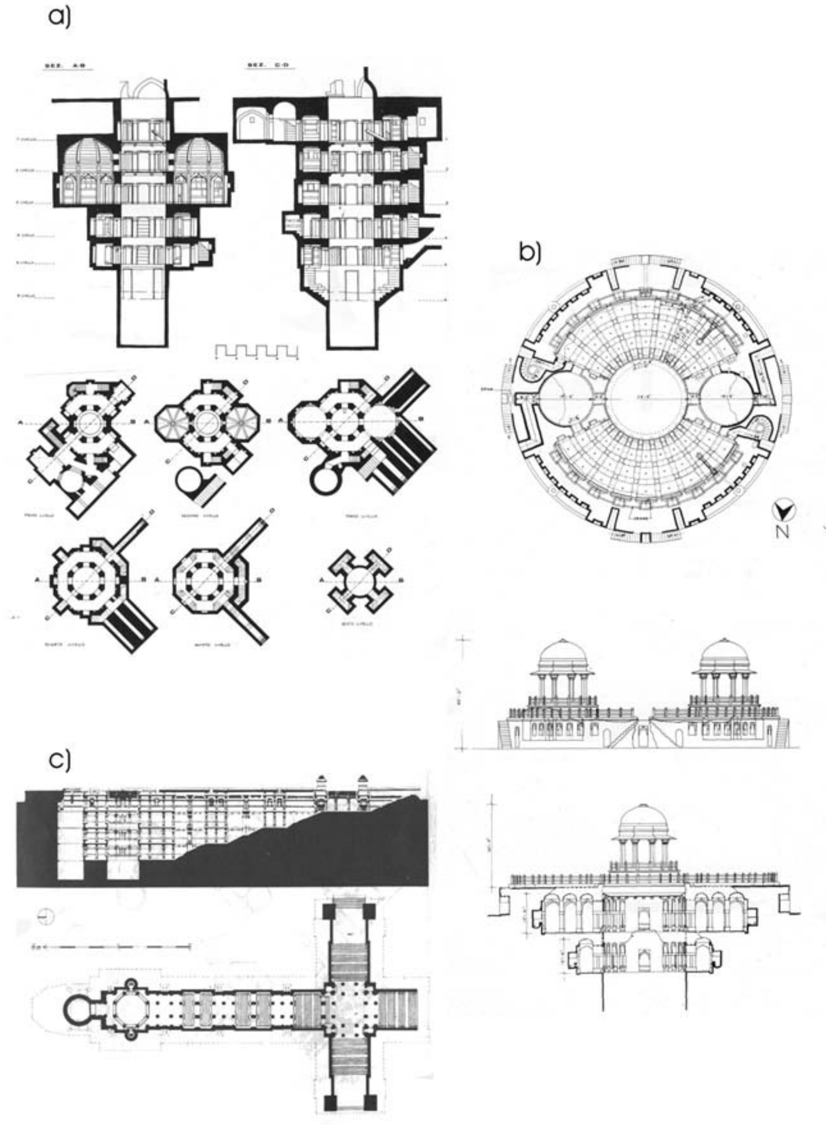


Fig. 4. a) The Kupagar of Agra. Plans and sections (from: A. Petruccioli, Dar Al Islam. Architetture del territorio nei paesi islamici [Rome: Carucci, 1985], 99); b) Circular well (Baoli) in citadel of Firuzabad, Delhi, c. 1354 (from: A. Petruccioli, ed., Environmental Design: Journal of the Islamic Environmental Design Research Centre, 2 [Rome: Carucci, 1985], 77); c) The baoli of Adalaj in Gujarat (from: A. Petruccioli, Dar Al Islam. Architetture del territorio nei paesi islamici [Rome: Carucci, 1985], 100).

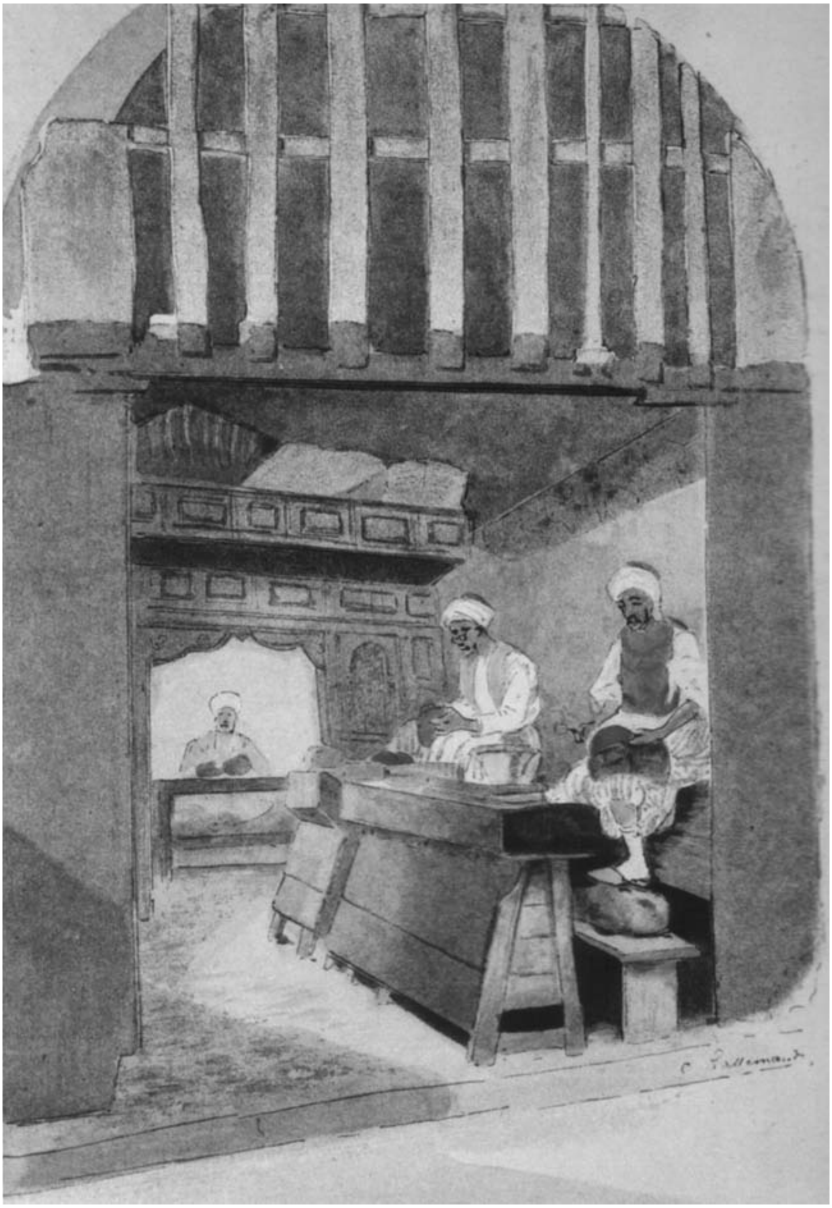


Fig. 1. Sheshia makers in Tunis
(from Ch. Lallemand, Tunis, 1890).

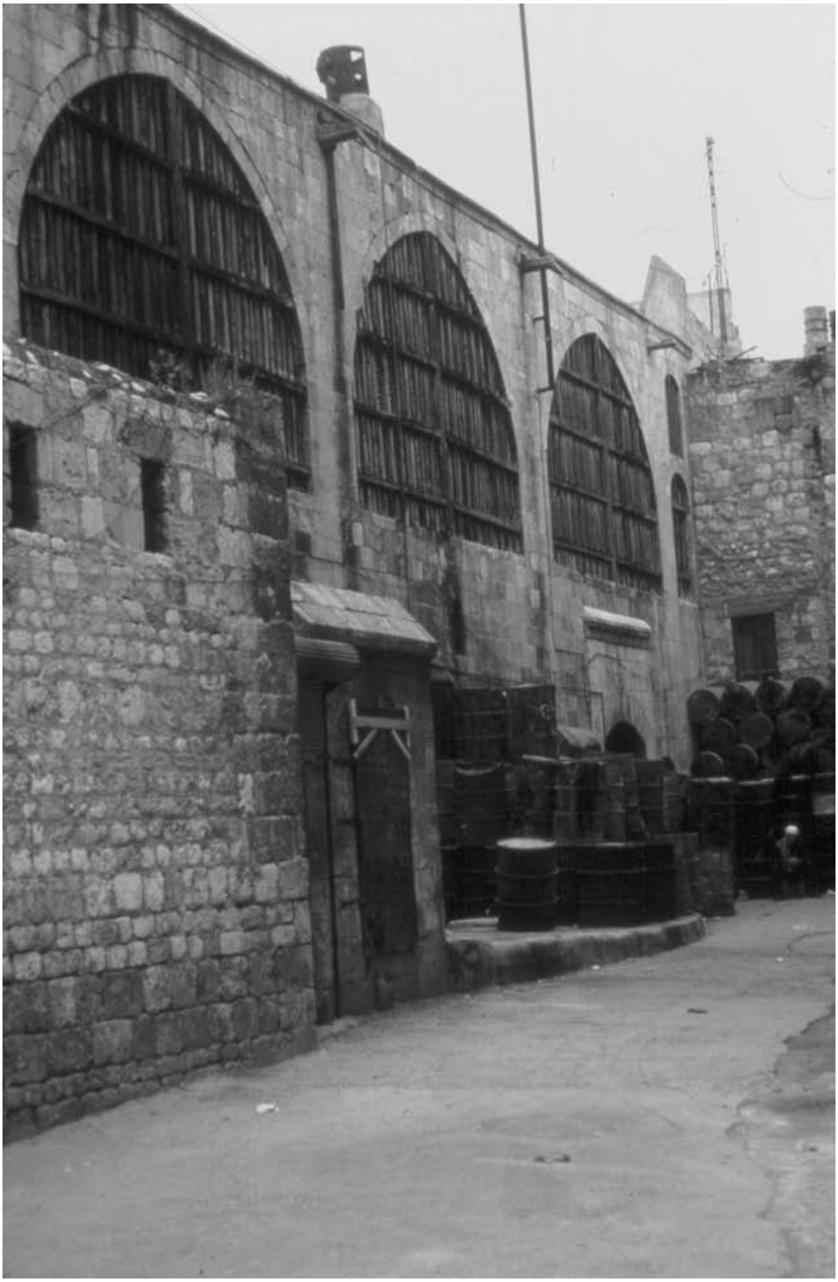
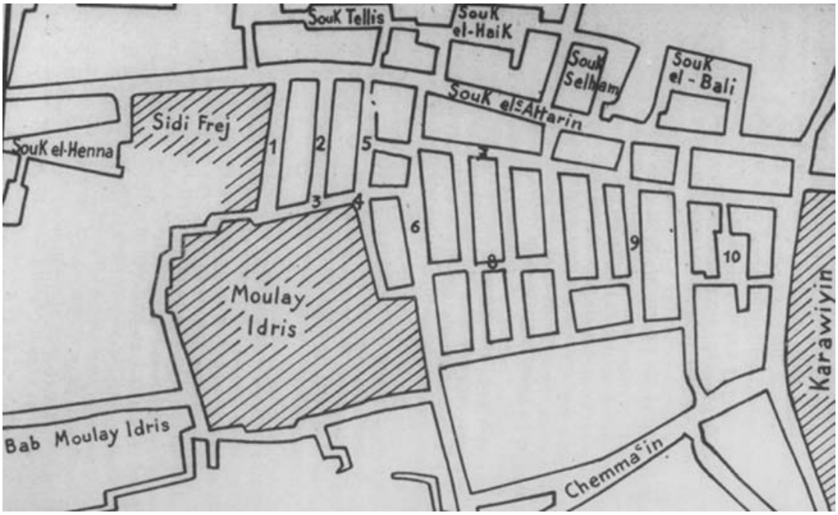


Fig. 2. Soap factory in Aleppo.


Souk Tellis
Souk el-Haik
Souk Selham
Souk el-Bali
Souk el-ᶜAttarin
Sidi Frej
Souk el-Henna
1
2
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4
5
6
8
9
10
Moulay Idris
Karawiyin
Bab Moulay Idris
Chemmaᶜin

Fig. 3. "Kisariya" of Fez. (From R. Le Tourneau, *Fès*, 1949.)

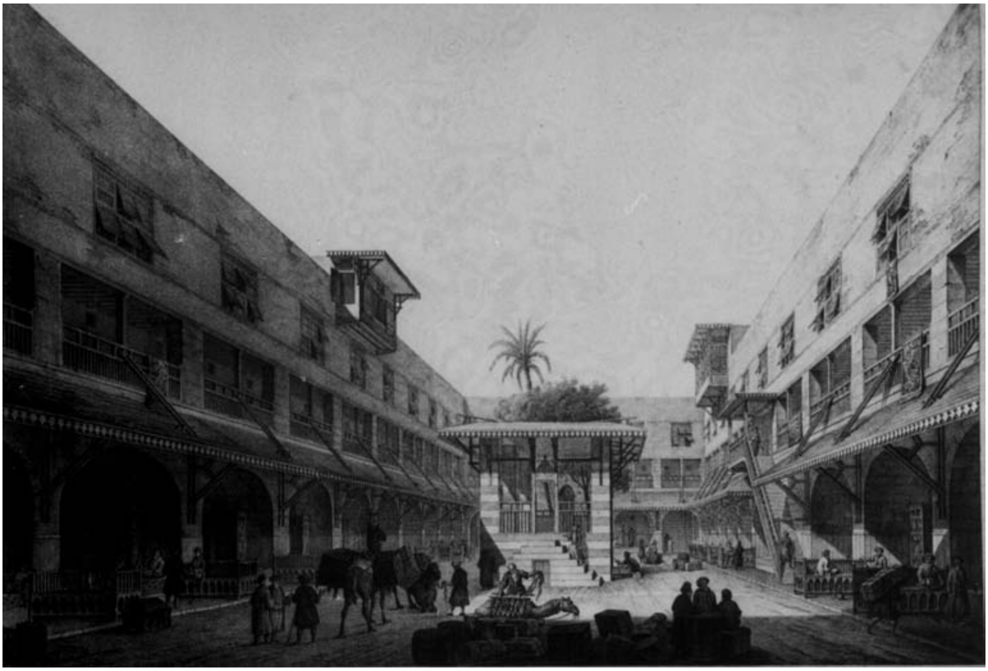


Fig. 4. Wakâla Dhulfiqar in Cairo. (From P. Coste, *Architecture arabe*, 1839.)

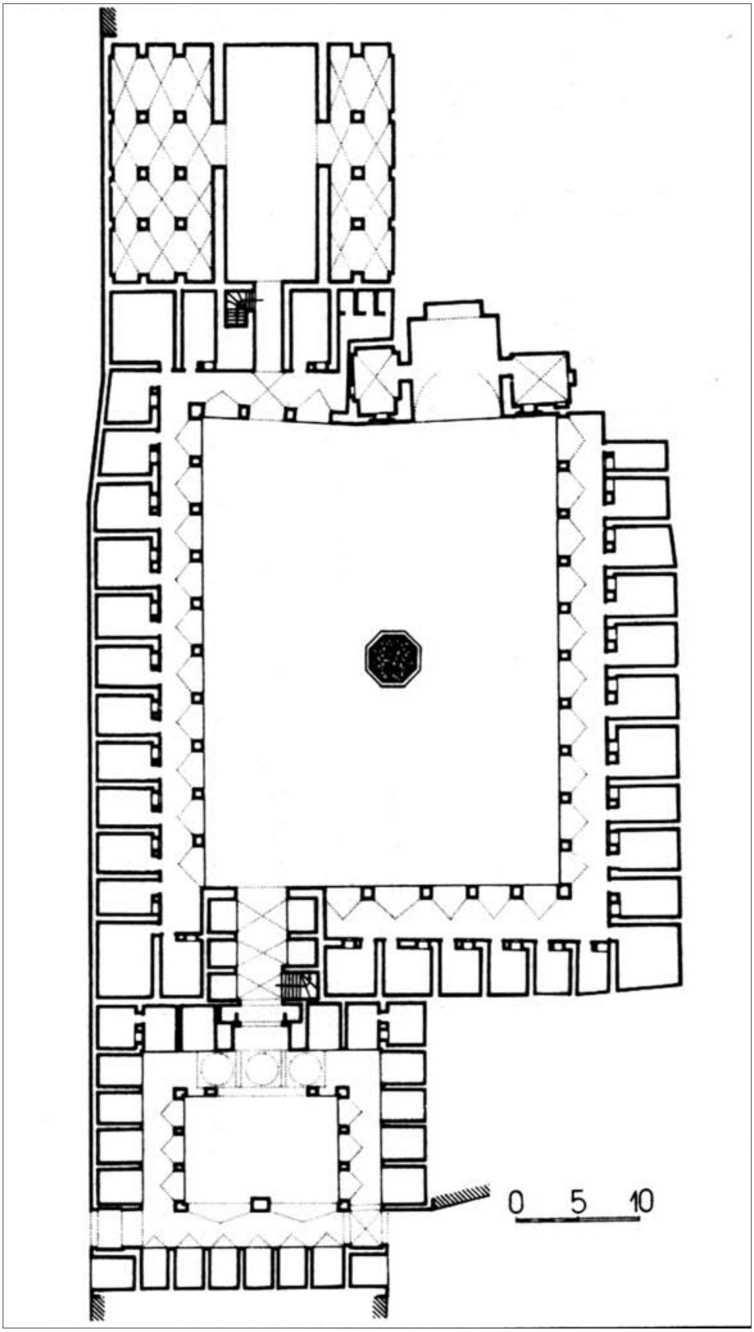


Fig. 5. Khan Qurt-bey in Aleppo. (From J. Sauvaget, Aleppo, 1941.)

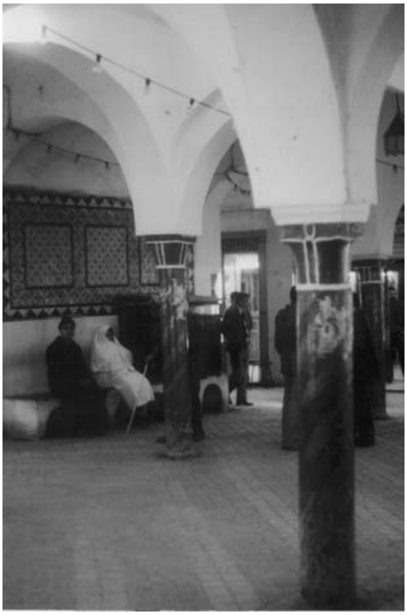


Fig. 6. Souq al-Birka in Tunis.

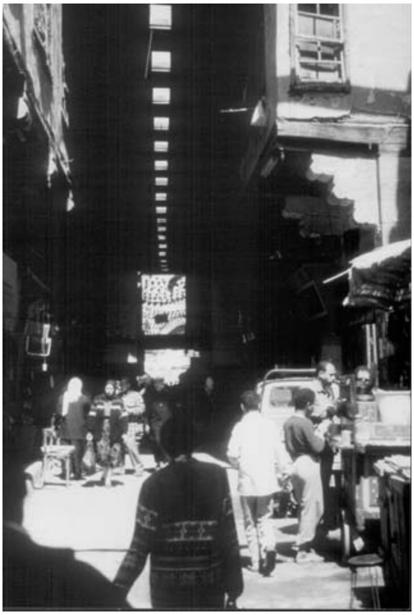


Fig. 7. Qasabat Ridwan in Cairo.

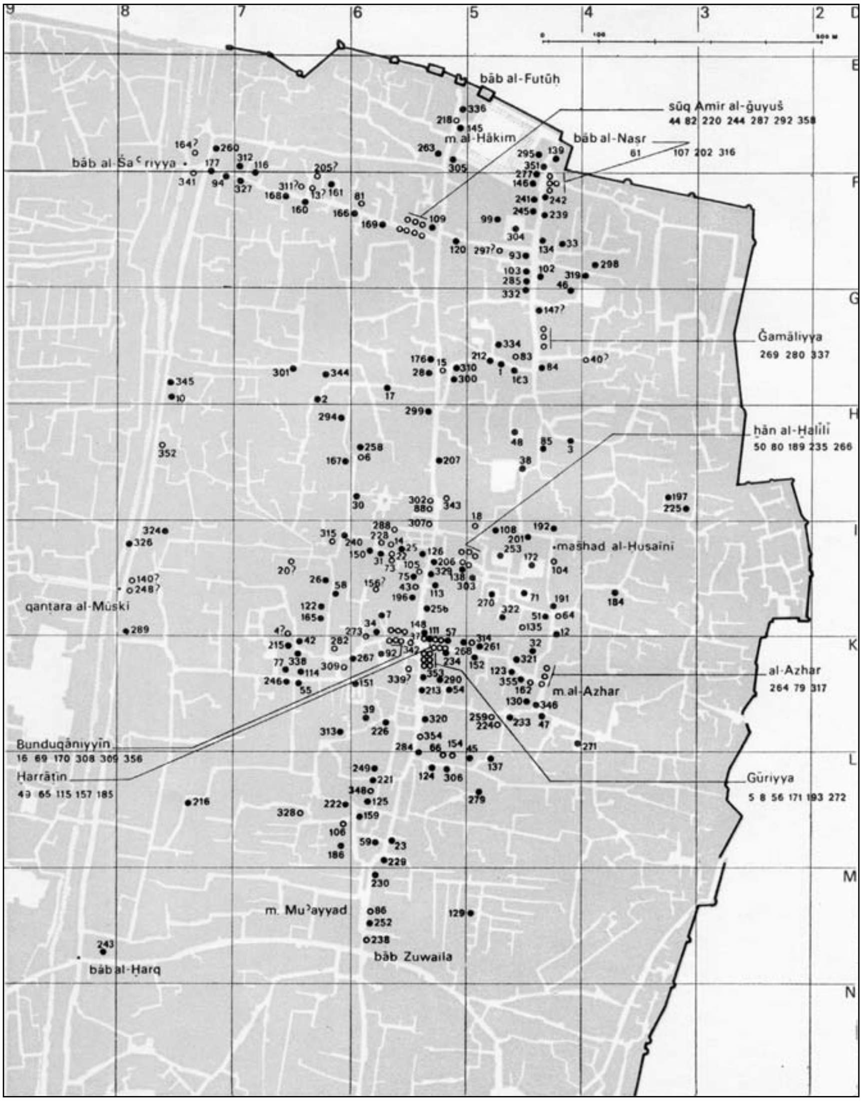
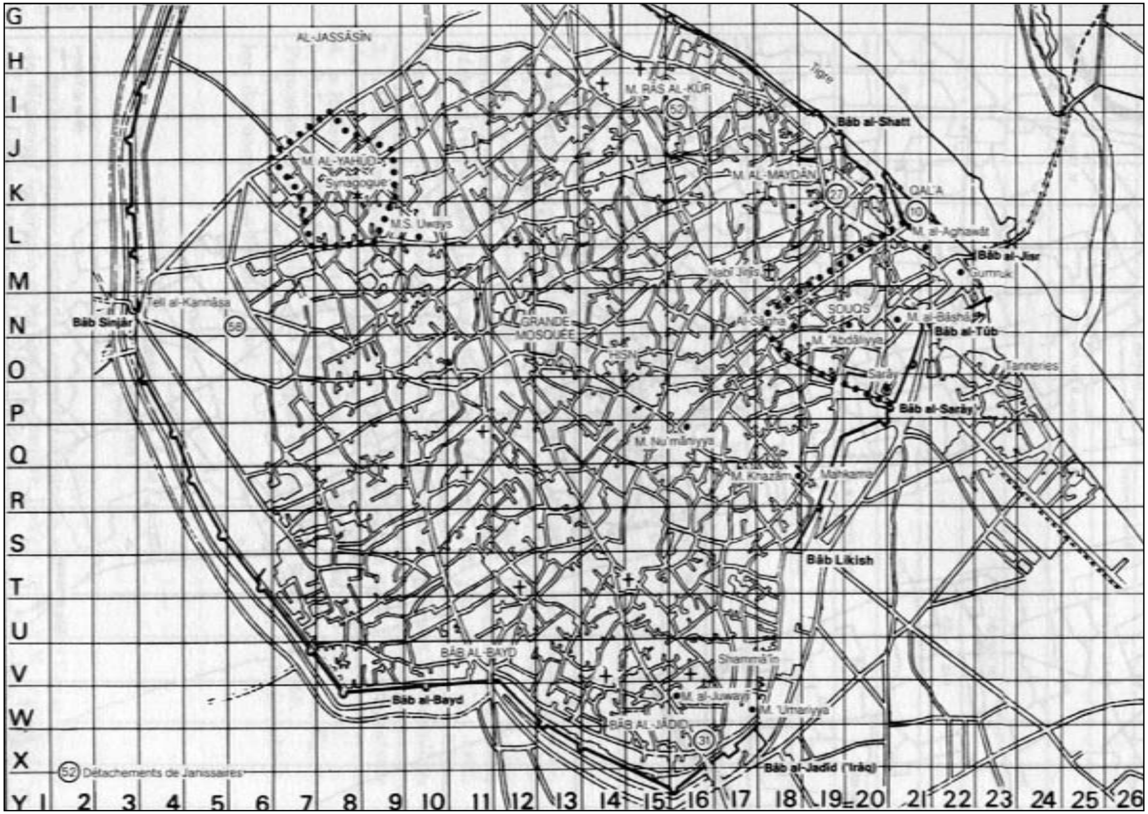

bāb al-Futūḥ
sūq Amīr al-ǧuyuš
44 82 220 244 287 292 358
m. al-Ḥākim
bāb al-Naṣr
61 107 202 316
bāb al-Šaᶜrıyya
Ǧamāliyya
269 280 337
ḫān al-Ḫalīlī
50 80 189 235 266
mašhad al-Ḥusainī
qanṭara al-Mūski
al-Azhar
264 79 317
m. al-Azhar
Bunduqāniyyīn
16 69 170 308 309 356
Ḥarrāṭīn
49 65 115 157 185
Ġūriyya
5 8 56 171 193 272
m. Muᵓayyad
bāb Zuwaila
bāb al-Ḫarq
9
8
7
6
5
4
3
2
D
E
F
G
H
I
K
L
M
N
0
100
500 m

Fig. 8. Caravanserai in the Qahira district of Cairo.


AL-JASSĀSĪN
M. RĀS AL-KŪR
Tigre
Bāb al-Shatt
M. AL-YAHŪD
Synagogue
M. AL-MAYDĀN
QAL'A
M.S. Uways
M. al-Aghawāt
Bāb al-Jisr
Gumruk
Nabī Jirjis
Tell al-Kannāsa
Bāb Sinjār
GRANDE MOSQUÉE
Al-Sagha
SOUQS
M. al-Bāshā
Bāb al-Tūb
M. 'Abdāliyya
HISN
Sarāy
Tanneries
Bāb al-Sarāy
M. Nu'māniyya
M. Khazām
Mahkama
Bāb Likish
BĀB AL-BAYD
Shammā'īn
Bāb al-Bayd
M. al-Juwayjī
M. 'Umariyya
BĀB AL-JĀDID
Bāb al-Jadīd ('Irāq)
52 Détachements de Janissaires
58
52
27
10
31
G
H
I
J
K
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P
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Fig. 9. Displacement of the markets of Mosul.

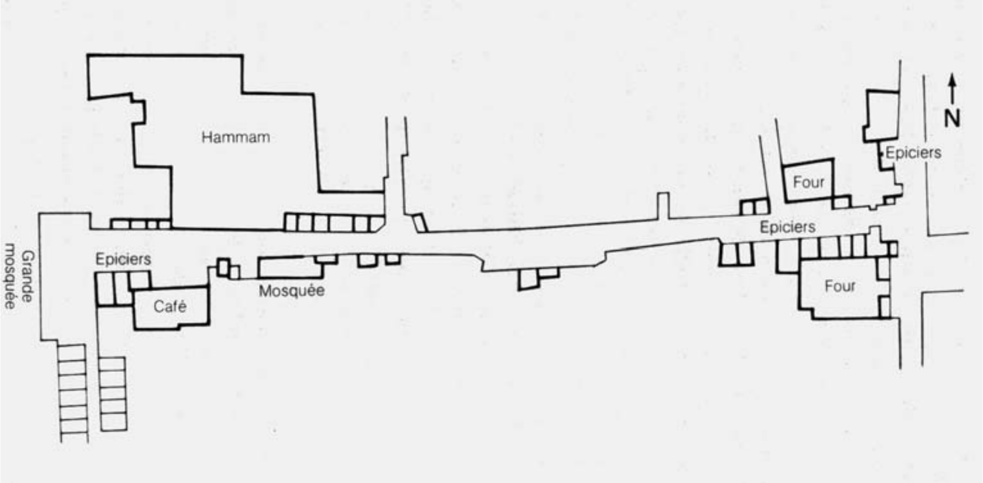

Hammam
N
Epiciers
Four
Epiciers
Grande mosquée
Epiciers
Café
Mosquée
Four

Fig. 10. Suwayqa of Jayrun in Damascus. (From J. Sauvaget, "Esquisse," 1934.)

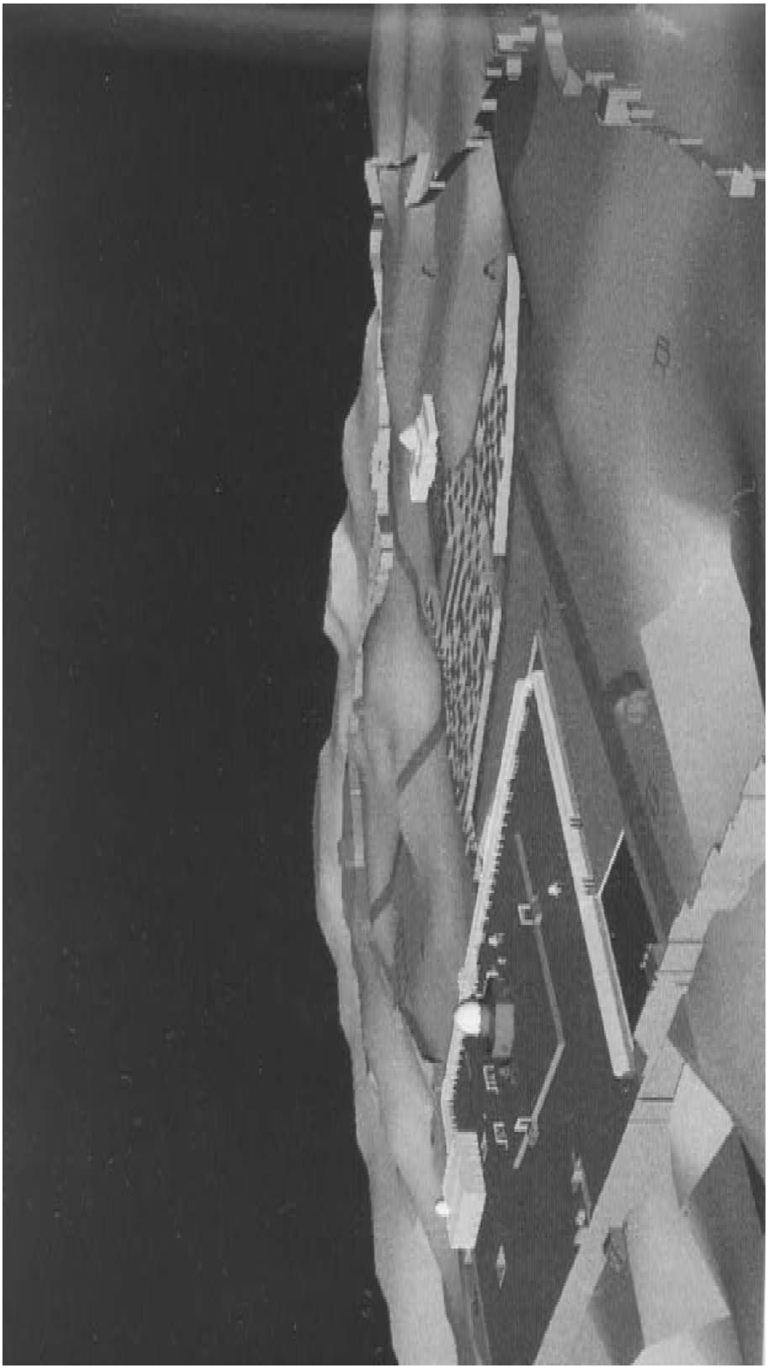


Fig. 1. Jerusalem in the eleventh century, schematic view from the northeast. From Oleg Grabar, *The Shape of the Holy*, fig 70. (GRABAR, Oleg, *The Shape of the Holy*, © 1996 Princeton University Press. Reprinted by permission of Princeton University Press.)

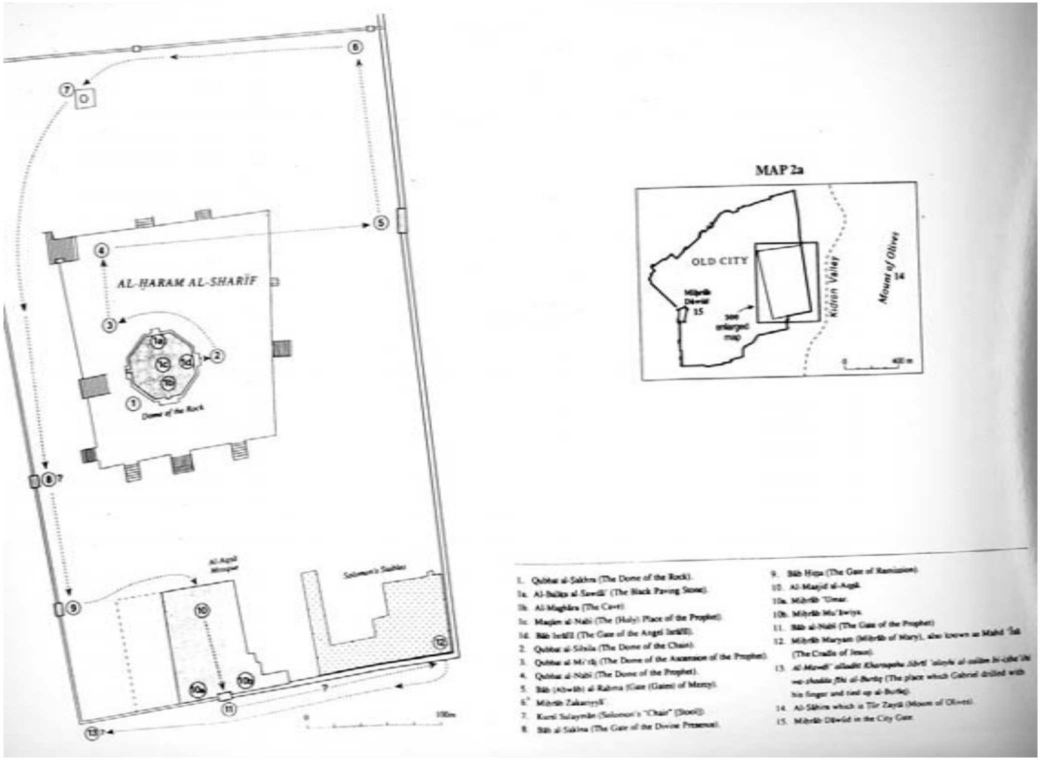

AL-HARAM AL-SHARIF
Dome of the Rock
Al-Aqsa Mosque
Solomon's Stables
0
100m
MAP 2a
OLD CITY
Mihrab Dawud
15
see enlarged map
Kidron Valley
Mount of Olives
14
0
400 m
1. Qubbat al-Sakhra (The Dome of the Rock).
1a. Al-Balata al-Sawda' (The Black Paving Stone).
1b. Al-Maghara (The Cave).
1c. Maqam al-Nabi (The (Holy) Place of the Prophet).
1d. Bab Israfil (The Gate of the Angel Israfil).
2. Qubbat al-Silsila (The Dome of the Chain).
3. Qubbat al-Mi'raj (The Dome of the Ascension of the Prophet).
4. Qubbat al-Nabi (The Dome of the Prophet).
5. Bab (Abwab) al-Rahma (Gate (Gates) of Mercy).
6.? Mihrab Zakariyya.
7. Kursi Sulayman (Solomon's "Chair" (Stool)).
8. Bab al-Sakina (The Gate of the Divine Presence).
9. Bab Hitta (The Gate of Remission).
10. Al-Masjid al-Aqsa.
10a. Mihrab 'Umar.
10b. Mihrab Mu'awiya.
11. Bab al-Nabi (The Gate of the Prophet).
12. Mihrab Maryam (Mihrab of Mary), also known as Mahd 'Isa (The Cradle of Jesus).
13. Al-Mawdi' alladhi kharaqahu Jibril 'alayhi al-salam bi-isba'ihi wa-shadda fihi al-Buraq (The place which Gabriel drilled with his finger and tied up al-Buraq).
14. Al-Sahira which is Tur Zayta (Mount of Olives).
15. Mihrab Dawud in the City Gate.

Fig. 2. The Itinerary of the Muslim Pilgrim to the Holy Places of Jerusalem According to Ibn al-Murajja (Beginning and Mid-eleventh Century). From Amikam Elad, *Medieval Jerusalem and Islamic Worship: Holy Places, Ceremonies, Pilgrimage* (Leiden: Brill, 1999), maps 2 and 2a.

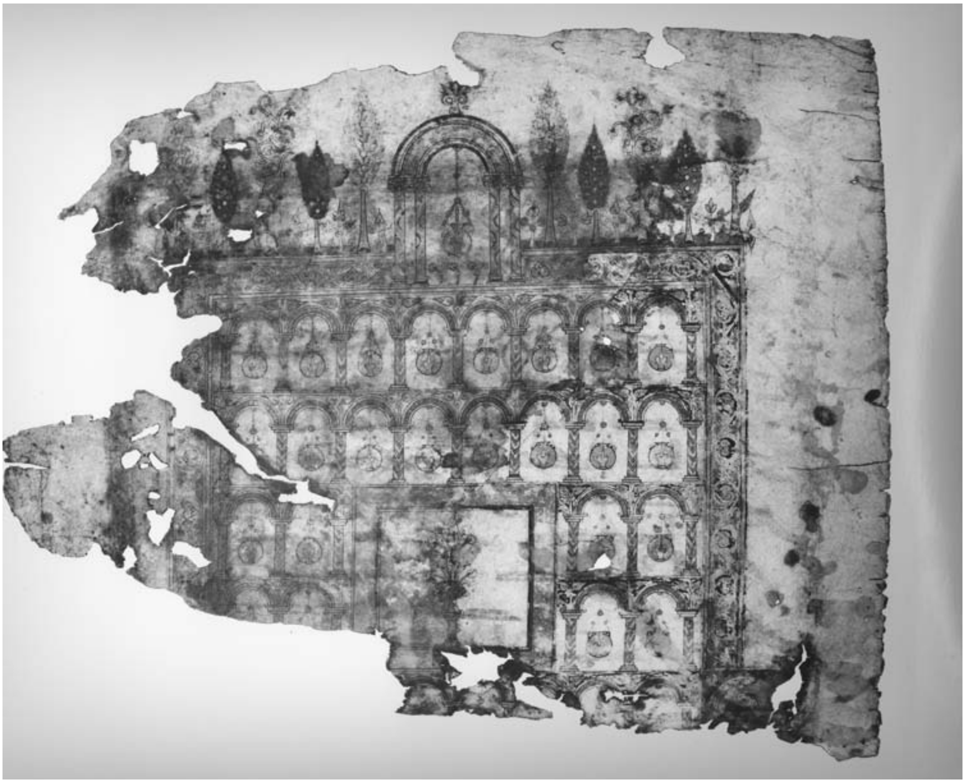


Fig. 3. Frontispiece from a Qur'an, parchment, eighth century. Sana{a Dar al-Makhtutat. (Courtesy of Hans-Caspar Graf von Bothmer.)

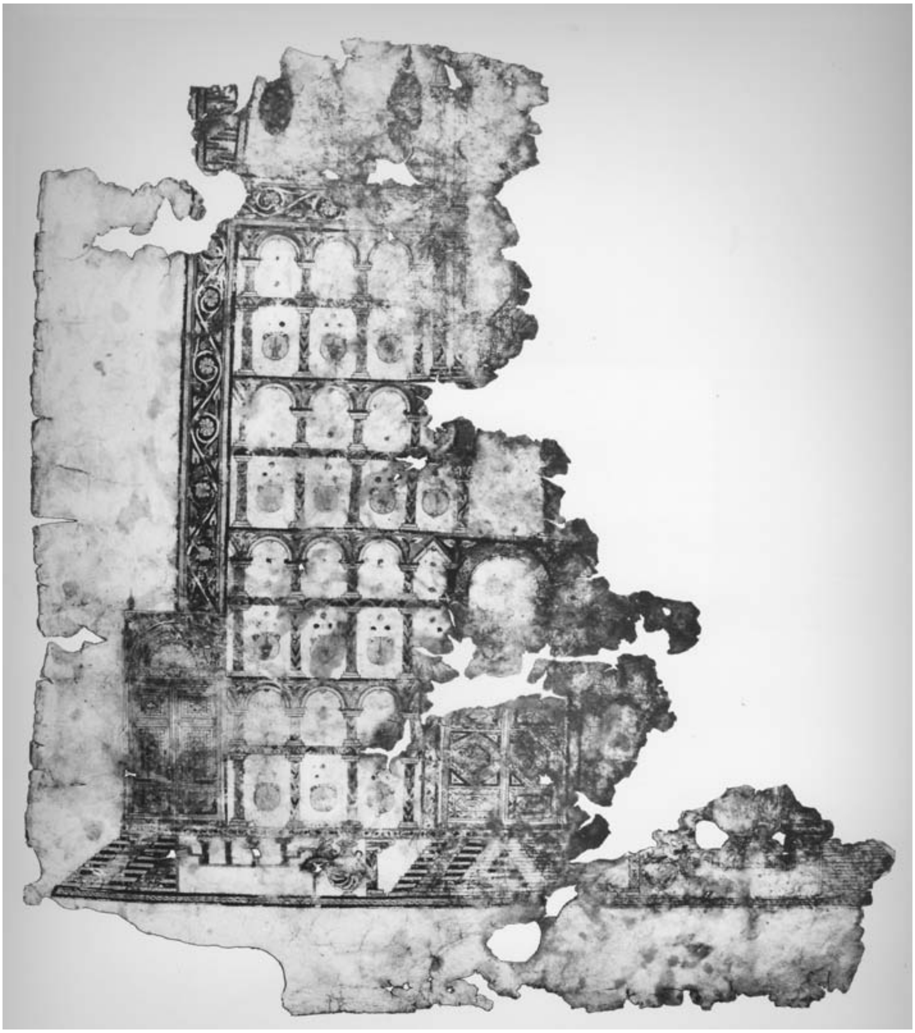


Fig. 4. Frontispiece from a Qur'an, parchment, eighth century. Sana{a Dar al-Makhtutat. (Courtesy of Hans-Caspar Graf von Bothmer.)

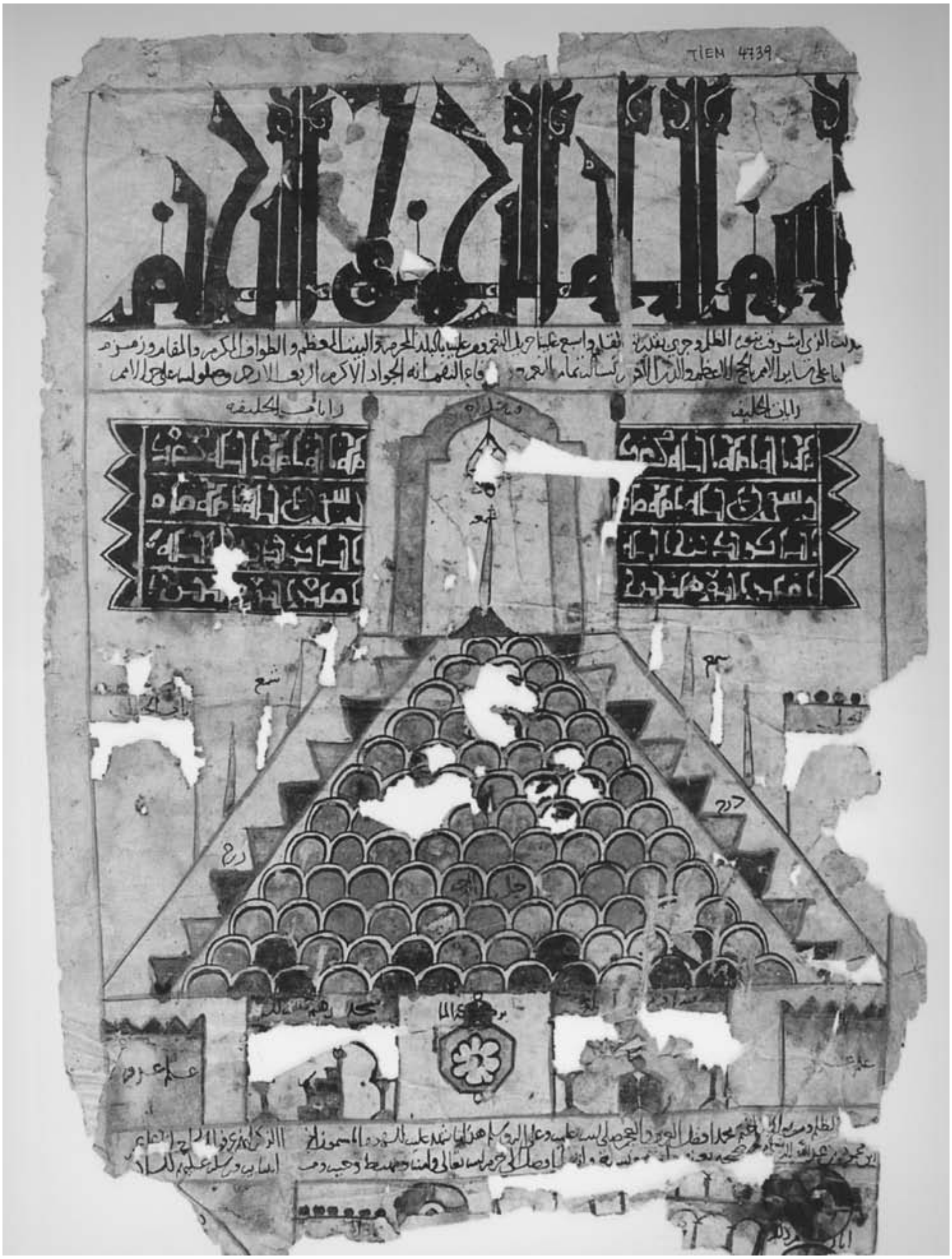


Fig. 5. Head of a pilgrimage scroll showing the basmala and Mt. Arafa. (Istanbul, Museum of Turkish and Islamic Art, no. 4739. After Aksoy and Milstein, "Collection of Thirteenth-Century Illustrated Hajj Certificates," pl. 4.)

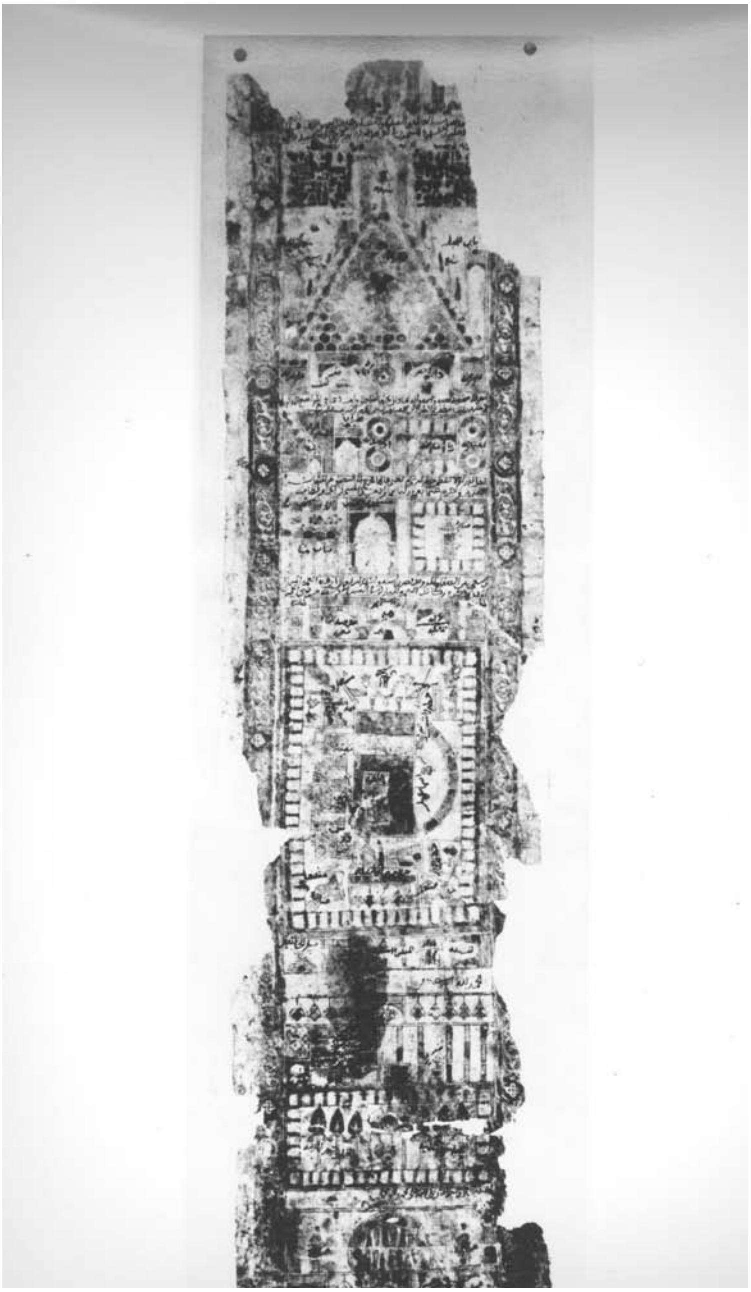


Fig. 6. Pilgrimage scroll, dated 608 (1211–12). (Istanbul, Museum of Turkish and Islamic Art, no. 4091.)

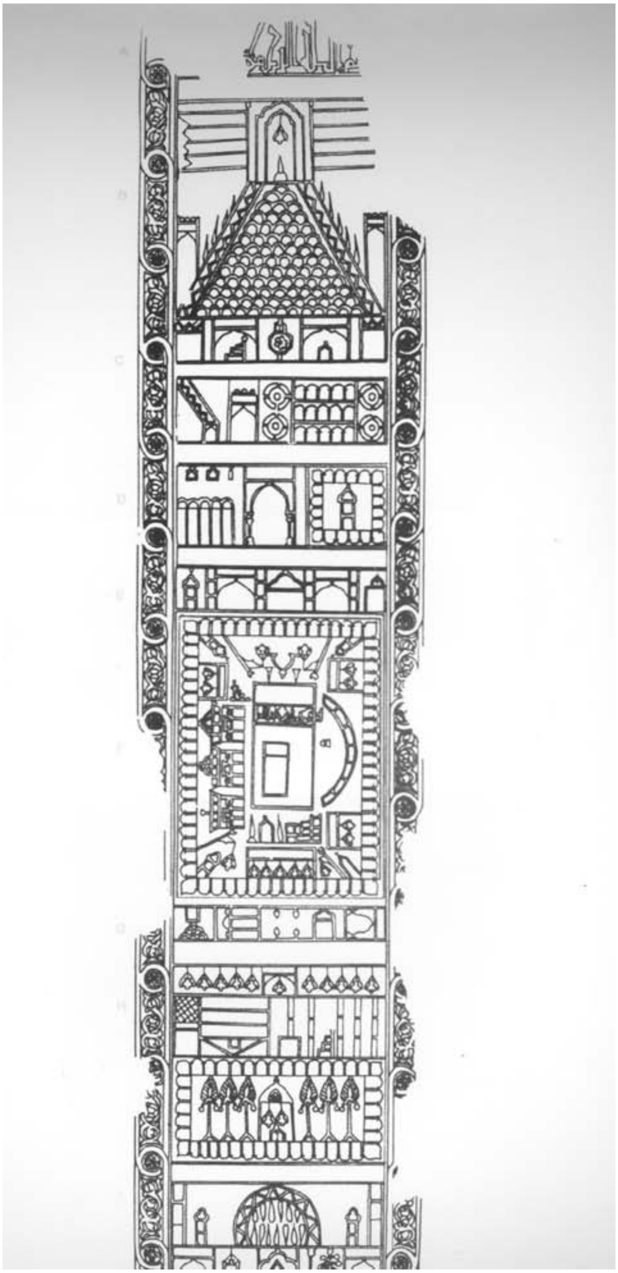


Fig. 7. Line drawing from a pilgrimage scroll dated 608 (1211–12). (Istanbul, Museum of Turkish and Islamic Art, no. 4091. After Aksoy and Milstein, “Collection of Thirteenth-Century Illustrated Hajj Certificates,” figure 1.)

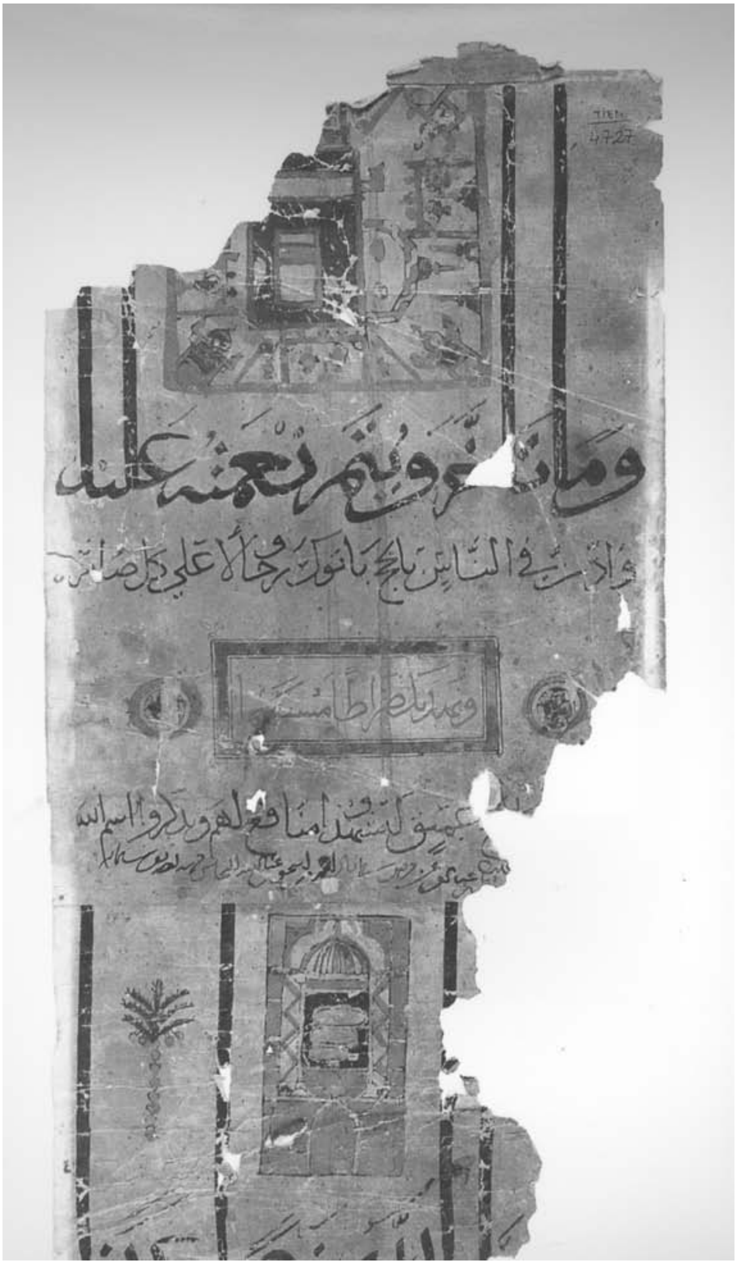


Fig. 8. Fragment of a pilgrimage scroll depicting the Kaʿba in Mecca and the Prophet's Tomb in Medina, Mamluk, dated 691 (1291–92). (Istanbul, Museum of Turkish and Islamic Art, no. 4727. After Aksoy and Milstein, "Collection of Thirteenth-Century Illustrated Hajj Certificates," pl. 12.)

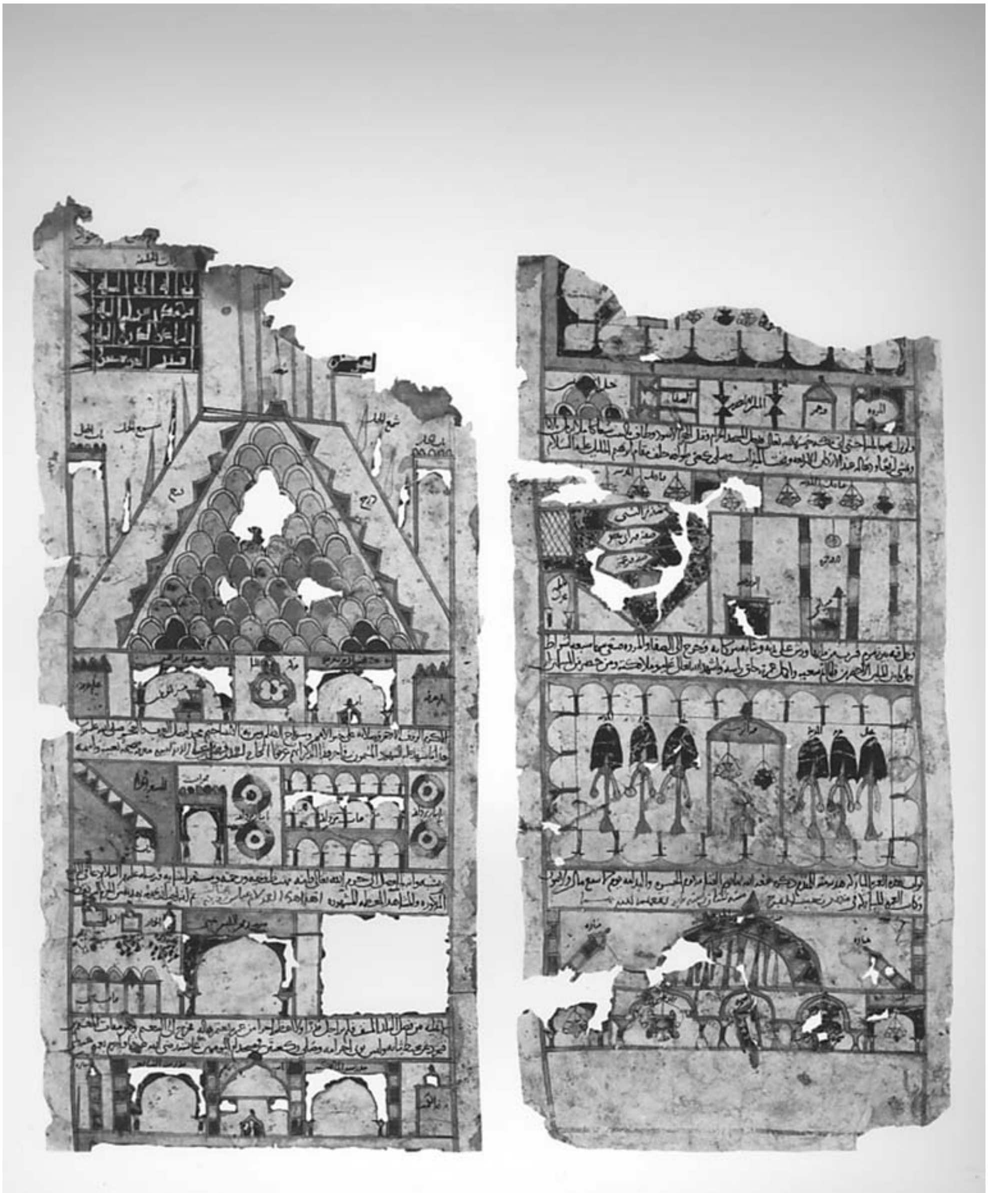
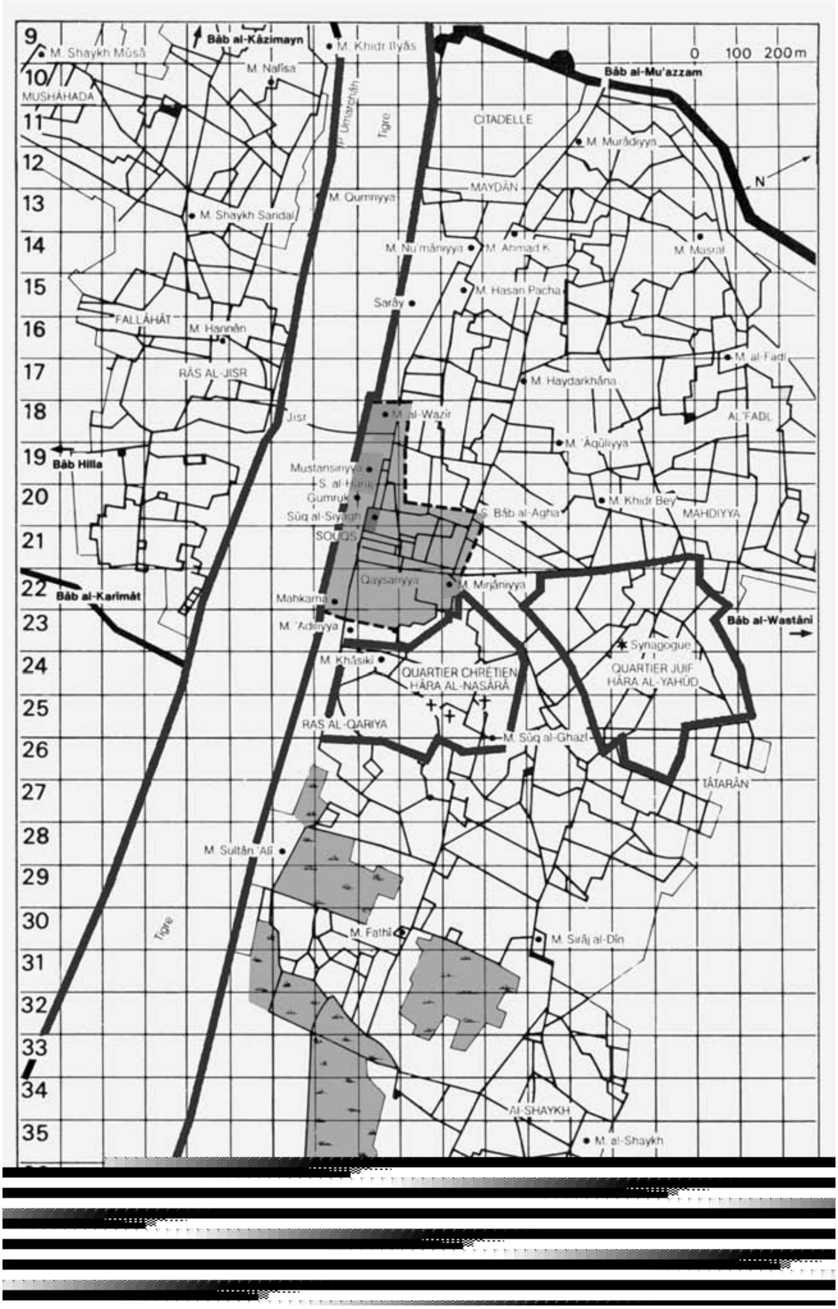


Fig. 9. Pilgrimage scroll, Ayyubid, dated 602 (1205–06). (Istanbul, Museum of Turkish and Islamic Art, nos. 4737 and 4746.)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M. Shaykh Mūsā
Bāb al-Kāzimayn
M. Khidr Ilyās
M. Nafīsa
MUSHĀHADA
0 100 200m
Bāb al-Mu'azzam
CITADELLE
M. Murādiyya
N
P. Umarshān
Tigre
MAYDĀN
M. Qumriyya
M. Shaykh Sandal
M. Nu'māniyya
M. Ahmad K.
M. Masraf
M. Hasan Pacha
Sarāy
FALLĀHĀT
M. Hannān
M. al-Fadl
RĀS AL-JISR
M. Haydarkhāna
Jisr
M. al-Wazir
AL-FADL
M. 'Āqūliyya
Bāb Hilla
Mustansiriyya
S. al-Harj
Gumruk
M. Khidr Bey
Sūq al-Siyāgh
S. Bāb al-Agha
MAHDIYYA
SOUQS
Qaysariyya
M. Mirjāniyya
Bāb al-Karimāt
Mahkama
Bāb al-Wastāni
M. 'Adiliyya
Synagogue
M. Khāsiki
QUARTIER CHRÉTIEN
HĀRA AL-NASĀRĀ
QUARTIER JUIF
HĀRA AL-YAHŪD
RAS AL-QARIYA
M. Sūq al-Ghazl
TĀTARĀN
M. Sultān 'Alī
Tigre
M. Fathī
M. Sirāj al-Dīn
AL-SHAYKH
M. al-Shaykh

Fig. 1. Christian and Jewish quarters in Baghdad.

Fig. 2. Greek quarter in Cairo.
(From the Description de l'Egypte.)

Fig. 3. Residential Quarter in Damascus.
(From J. Sauvaget, “Esquisse”, 1934.)

Fig. 4. Quarter gate in Damascus.

Fig. 5. Damascus: elevation of the street level in a residential quarter.

Fig. 6. The tells in the east of Cairo.

Fig. 7. Localization of the Cairene fountains.

Fig. 8. Sabil Abd al-Rahman Katkhuda in Cairo (1744).

Fig. 9. Aqueducts of Algiers.

Fig. 1. Anjar, city plan. (After Creswell.)

Fig. 2. Rusafa, garden plan. (Ruggles, after T. Ulbert.)

Fig. 3. Zaghouan, aqueduct at the Temple des Eaux. (Ruggles.)

Fig. 4. Aghlabid basins of Kairouan. (Ruggles.)

Fig. 5. Map of the Roman sites in the Guadalquivir valley.
(Variava and Ruggles.)

Fig. 6. Aqua Augustana, Cordoba. (Ruggles.)

Fig. 7. Remains of a Roman aqueduct on the west side of Cordoba. (Ruggles.)

Fig. 8. Madinat al-Zahra's water supply. (Ruggles.)

Fig. 9. River-powered waterwheel. (Variava, after Schioler.)

Fig. 10. Saqiya waterwheel. (Variava, after Schioler.)

Fig. 11. Screw pump. (Variava, after Hillel.)

Fig. 12. Elephant fountain with tank and channel. (Ruggles.)

Fig. 13. Cordoba bridge. (Ruggles.)

Fig. 14. Landscape of olive trees. (Ruggles.)

Fig. 1. The village of Ait Lahsen in Kabilia, Algeria: repetition of the cell downhill.

Fig. 2. Village of Ait Lahsen in Kabilia, Algeria: lateral extension of the axxam.

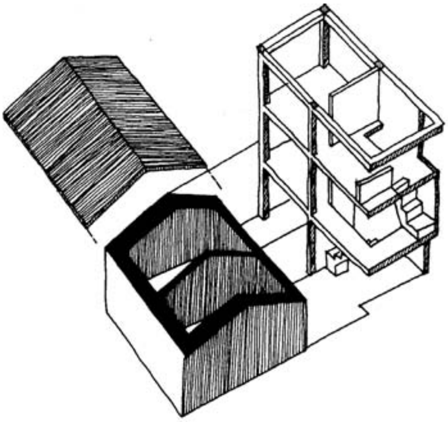


Fig. 3. Village of Ait Lahsen in Kabilia, Algeria: lateral duplication, but with a reinforced concrete building. Compare to the building types in figs. 36 ff.

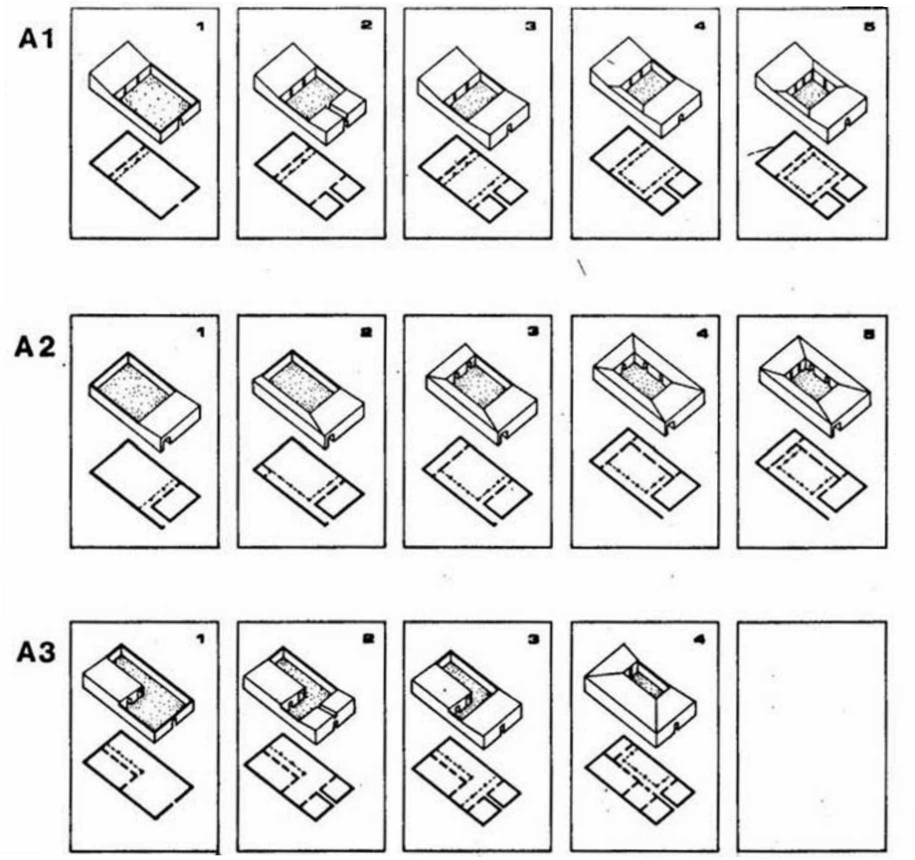


Fig. 4. Typological process of the courtyard house. The A series synthesizes the variants of the single-family house within the limits of the original plot and with minimum specialization: (A1) entrance and path to the opposite covered part; (A2) entrance and path from the opposite covered part; (A3) layout of the covered part along the enclosure's longer wall. From left to right: (A1,2) the phasing of the construction of the accessory spaces on the side opposite the cell; (A1,3) consolidation of the accessory spaces with the construction of a portico; (A1,4) unification of the distributive system with a covered passage; (A1,5) tendency to form a courtyard around the centre.

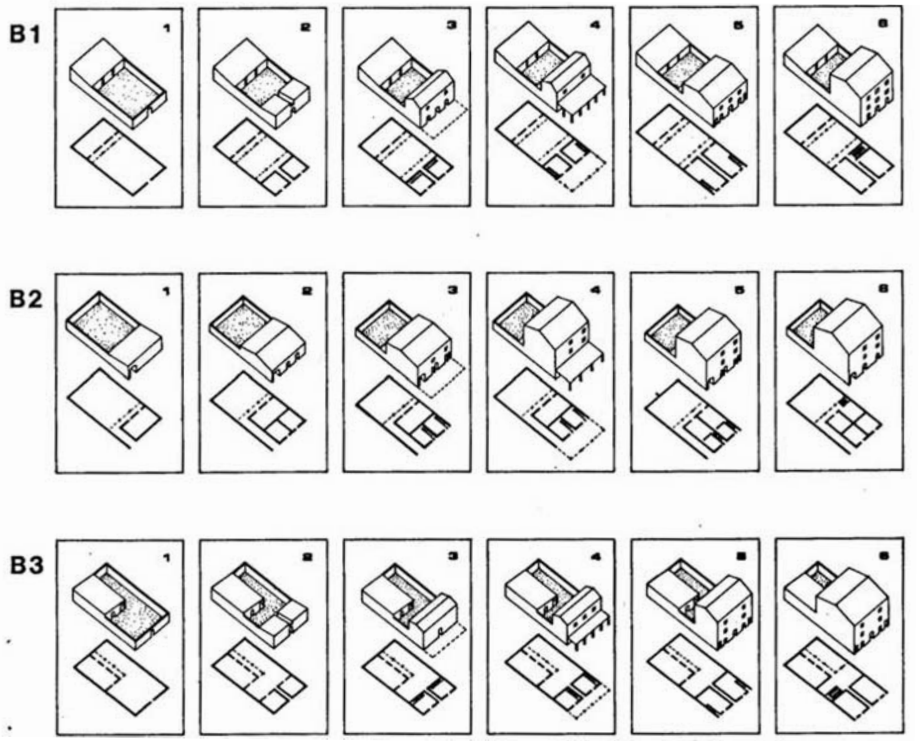


Fig. 5. The B1, B2, B3 series describes the taberna process: in (B1,2) two shops are created by duplicating two of the elementary cells of the house on the outside of the plot. The taberna develops autonomously until it constitutes the row-house type along the street, thus behaving as an isolated elementary cell: it could then double its height (B1,3) with the introduction of a stairwell; then grow sideways (B2 and B3) to form an embryo of row-house tissue and, where possible, double its front facade by encroaching with a portico onto the public route (B1,2,3,4). The process continues incrementally towards the inside of the original plot (B5), and the tabernized rows are changed into apartments (B6).

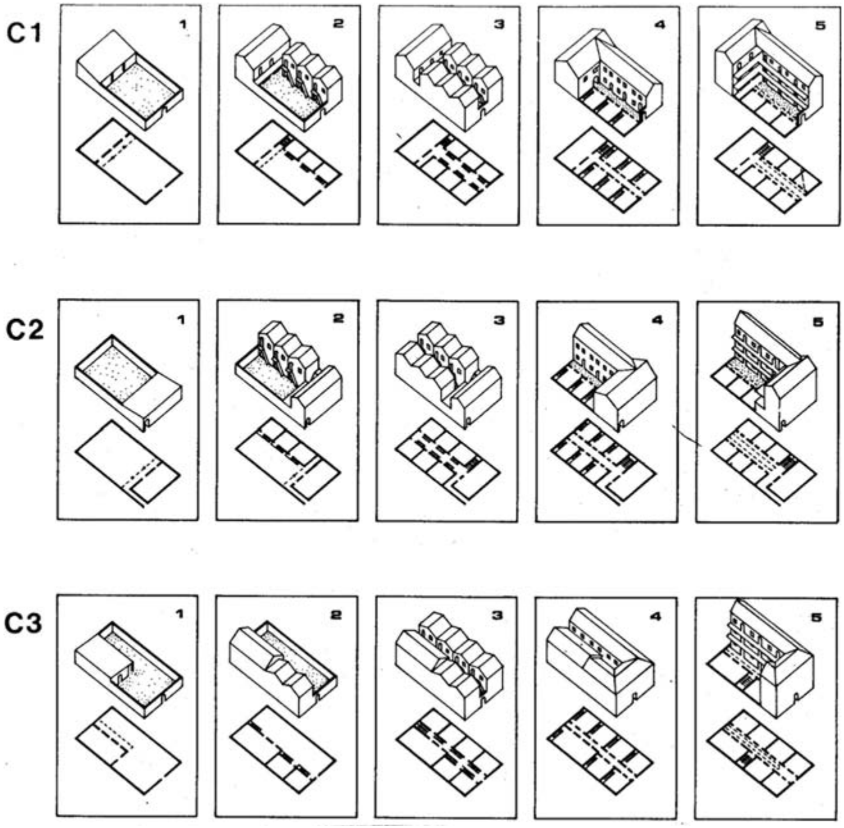


Fig. 6. The C1, C2, C3 series represents the insula process starting with the occupation of one side of the courtyard (C1,2) with a row of cells soon to be extended vertically (C2,2). To increase the living space, the single cells eliminate the exterior staircase and adopt a collective balcony served by a common stairwell strategically placed in the portico of the original elementary cell; then the row is mirrored on the opposite side (C1,3). This leads to the construction of a second balcony served by the same stairwell (C1,5). Another version embeds the staircase inside every elementary cell of the two rows, and the cells protrude another four feet on both sides (A1,4).

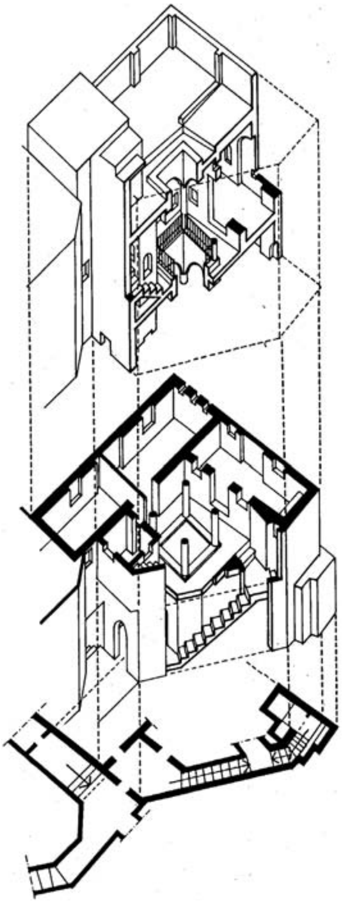


Fig. 7. House in the casbah of Algiers at 5 impasse des Pyramides. Despite its exiguous dimensions, this example presents all the components of the leading type. The series of paths shows the whole distributive matrix of the building: entrance, patio, stairway, balconies. Rooms have no access to each other either directly or through accessory spaces, but only through a filter of balcony and stairways.

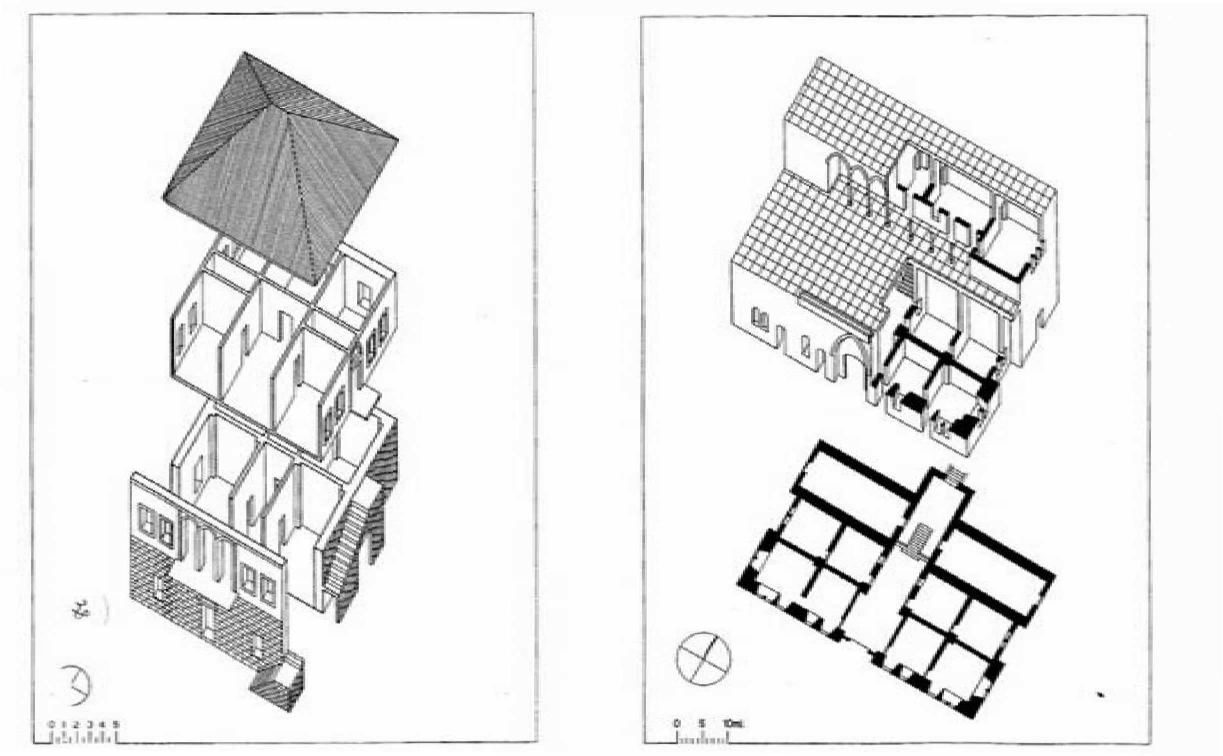

0 1 2 3 4 5
0 5 10m.

Fig. 8. Sheik Adil Husn-Eddin house in Moukhtara, Lebanon. Plan of the ground floor and axonometric section.

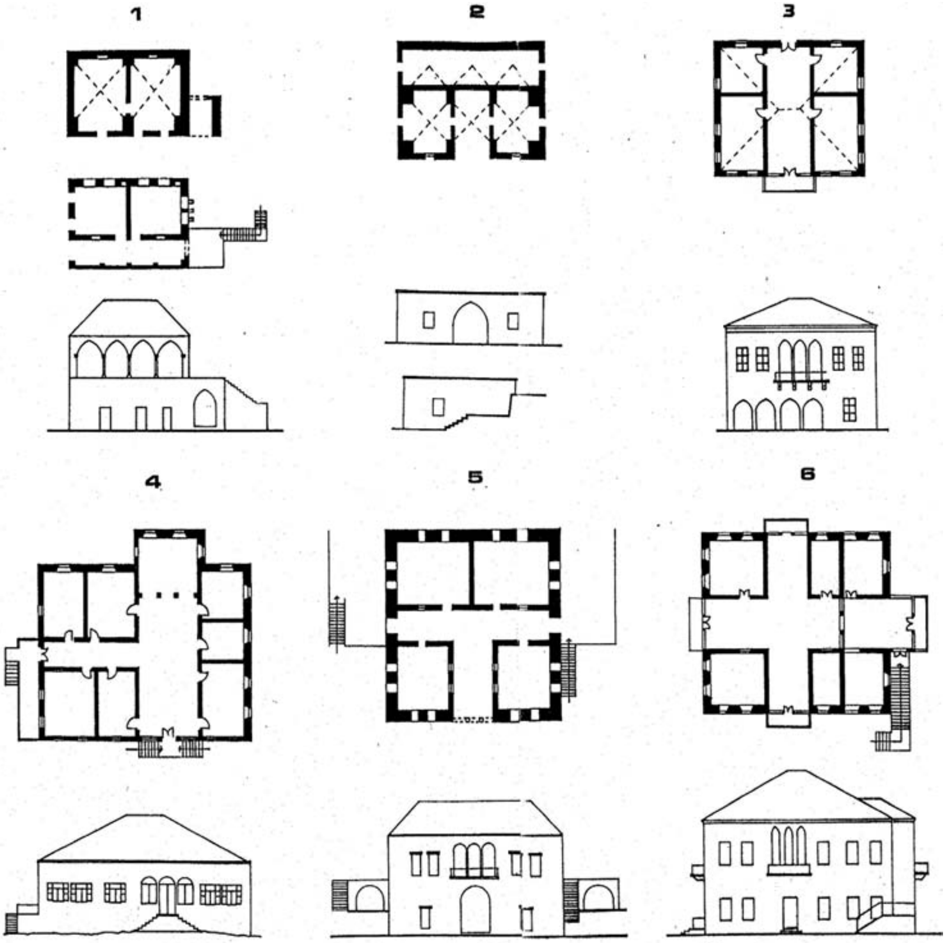


Fig. 9. Lebanon. From the elementary cell to the house with cross-shaped central hall. (1) Abd el-Baki house in Ain Baal: double elementary cell and replica with loggia on the upper floor. The loggia itself is not a type but a synchronic variation. (2) House in Ain Touffaha: split in two by the cells and formation of a central square hall. (3) Mansour Daniel house in Brissa: doubling in depth and formation of the crossing hall with windows on the two opposite facades serves all the other rooms. (4) Muallim house in Kfar Hazir: secondary access creates two systems of distribution, the crossing hall is specialized with formation of an alcove. (5) Adel Tay house in Kfar Him: next passage with a T-form room. (6) Hanna Shikhani house in Bikfaya: mature implant with central crossing hall, part of which serves as a vestibule.

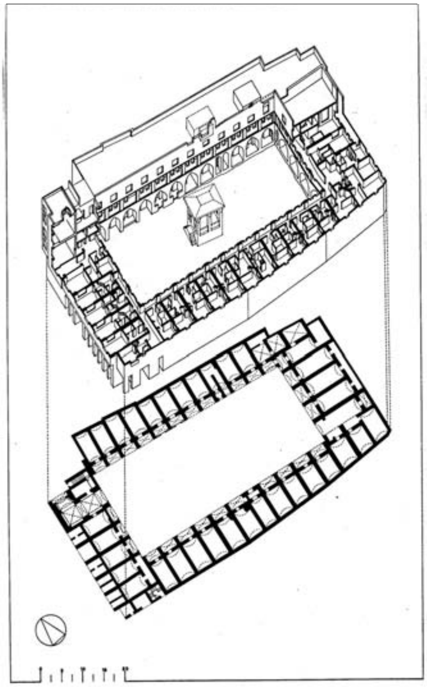


Fig. 10. The wakala and rab{ of Zulficar. Axonometric section and ground-floor plan. The plan is similar to a specific serial building that grew in phases like a residential block. Note the inconsistencies of the corner solution. To the left is the matrix tissue, then the stripes of two planned tissues perpendicular to the formal tissue, and later a closing as a tissue of connection.

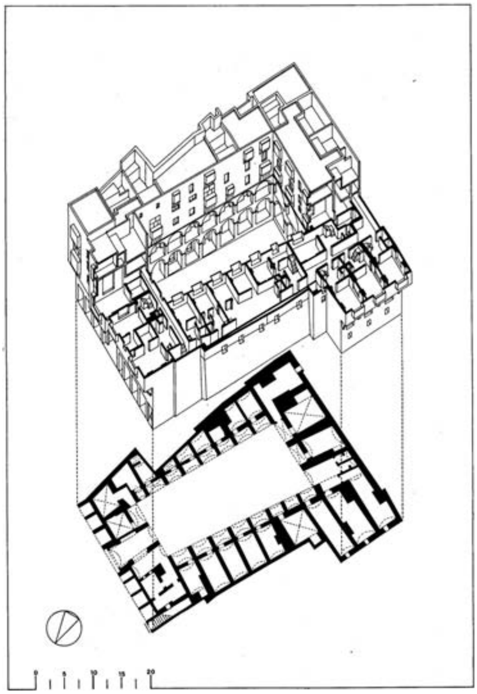


Fig. 11. The figure shows in axonometric section and ground-floor plan the wakala and so-called rab{ bazaar in Cairo; one of the most monumental examples, it was probably built at the end of the seventeenth century. On the third floor, the exterior corridor leads to nineteen apartments organized on three floors and varying in size between 700 and 1,400 square feet. The organization of the whole building favours social contact and creates a gradual transition from private to public space.

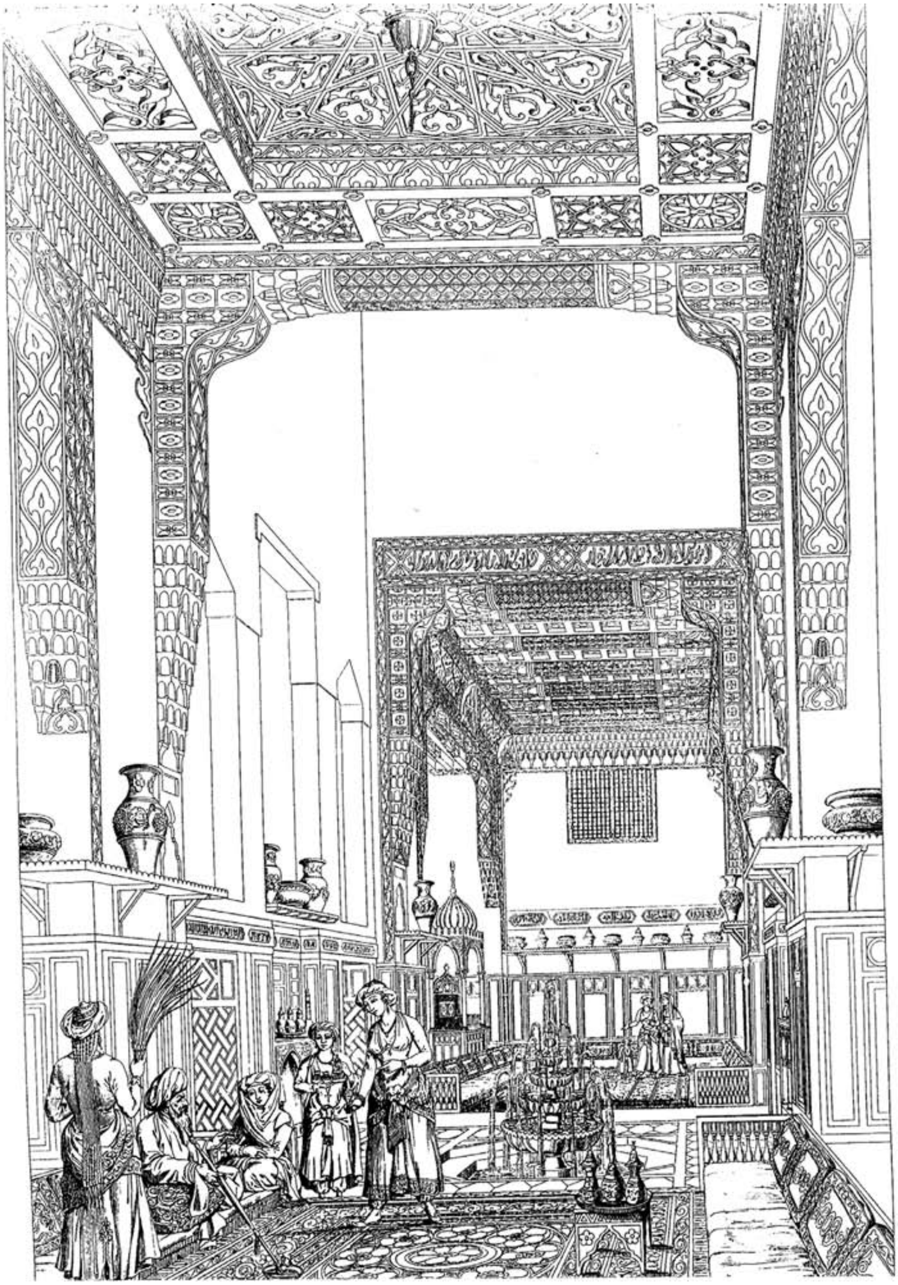


Fig. 12. Summer hall (qa{a) of a house in the Hauch-Kadan neighbourhood in Cairo. (From P. Coste.)

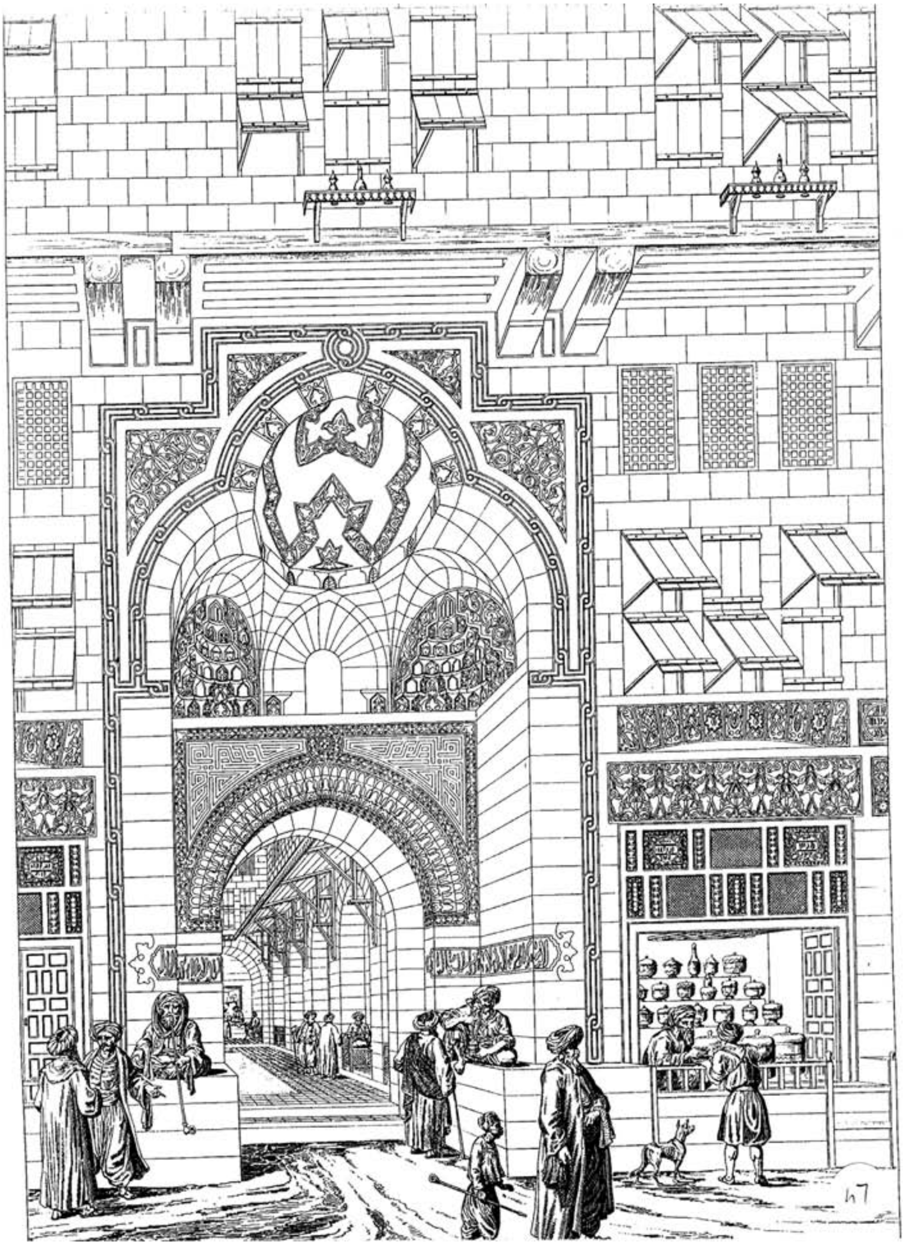


Fig. 13. The rab{ of Kait Bey in Cairo. Monumental entrance. (From P. Coste.)

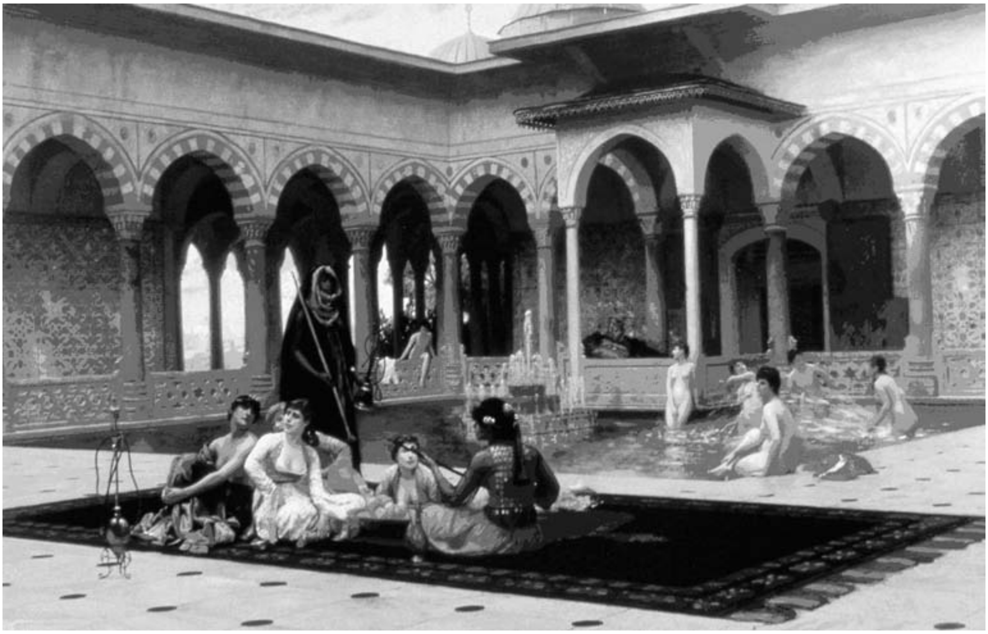


Fig. 1. Jëan-Lëon Gerôme, *The Terrace of the Seraglio*, 1886. Oil on canvas. Private collection. A traditional orientalist depiction of the Ottoman harem as an exotic but isolated prison for the sultan's concubines.

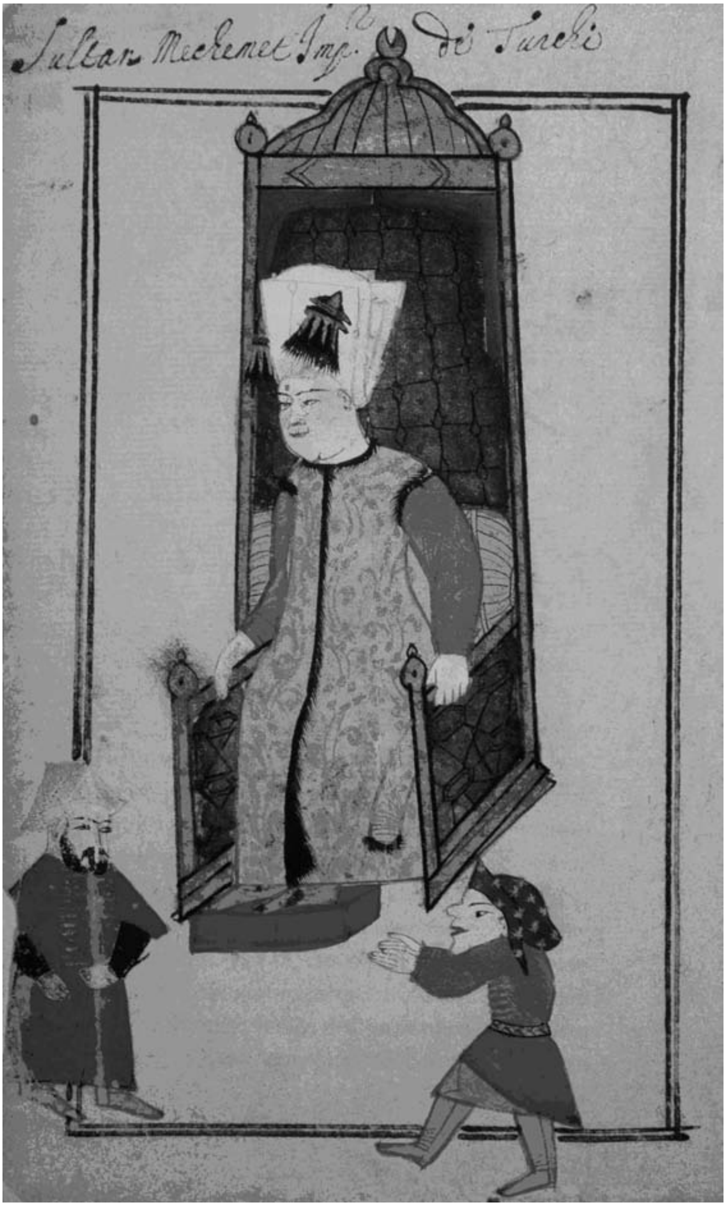

Sultan Mechemet Imp.re de' Turchi

Fig. 2. Mehmed IV as a Young Boy, enthroned, watches while two court dwarves entertain him. Anonymous ca. 1650, Miniature Painting, Berlin Staatliche Museen, Kunstbibliothek, Lipperheide OZ 52, fol. 1v.

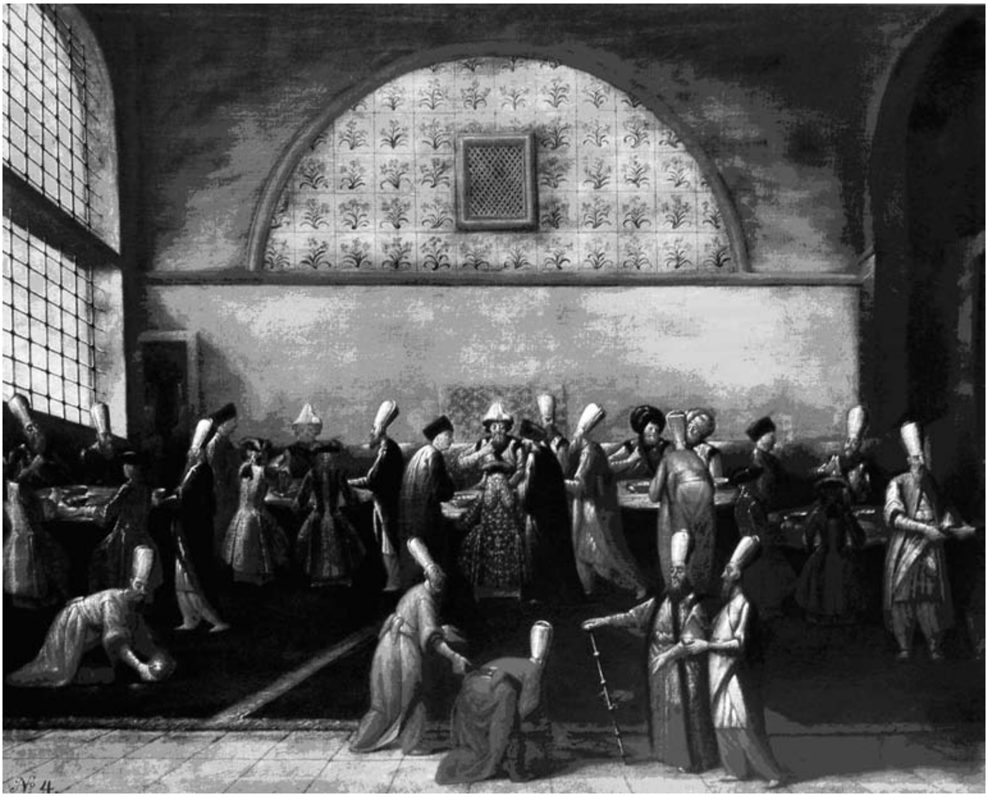


Fig. 3. Repast Given in Honour of an Ambassador in the Public Council Hall. Oil on canvas. Jean-Baptiste Van Mour, Koç Holding Collection, Istanbul, 1671–1737. In the arch is the grated window from which the sultan could observe secretly the activities of the Divan below him.

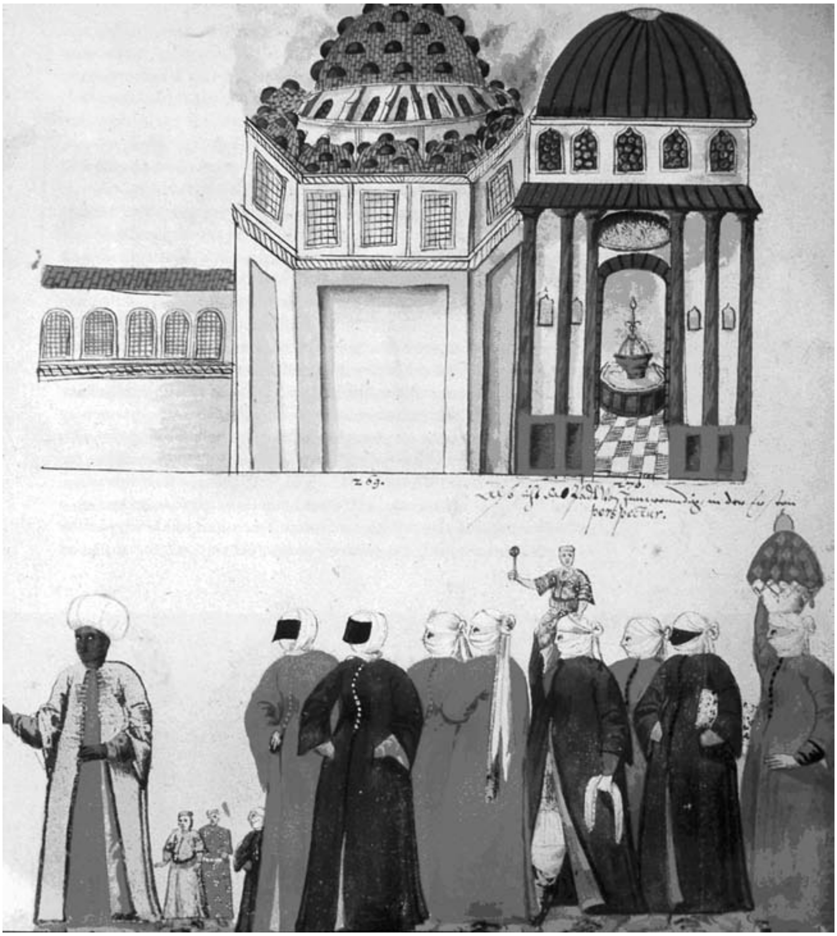


Fig. 4. Women proceed to a public bath, from Johannes Lewenklaw’s Codex Vindobonensis 8615, Vienna’s Österreichische Nationalbibliothek.

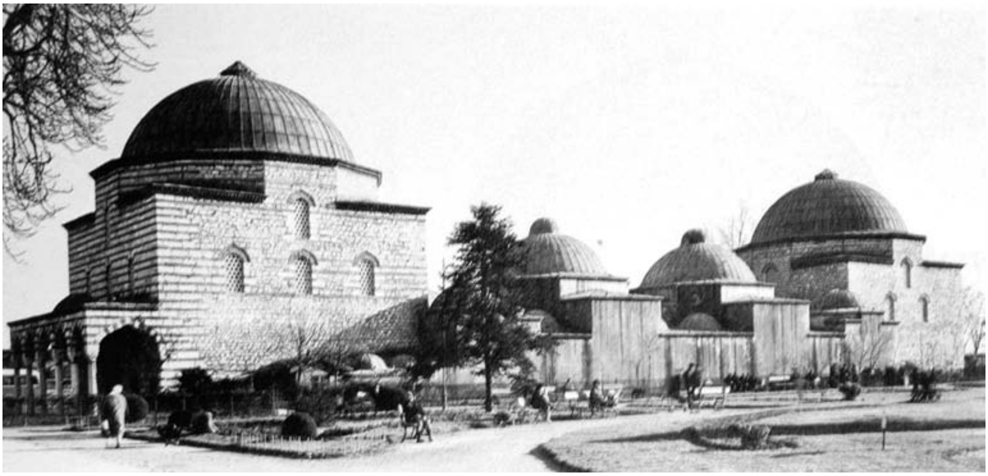


Fig. 5. The double chambered bath for men and women was built by Süleyman's wife, Haseki Hurrem and is located on the grounds of the Byzantine hippodrome in Istanbul, view from the west. (From the Istanbul German Archaeological Institute.)

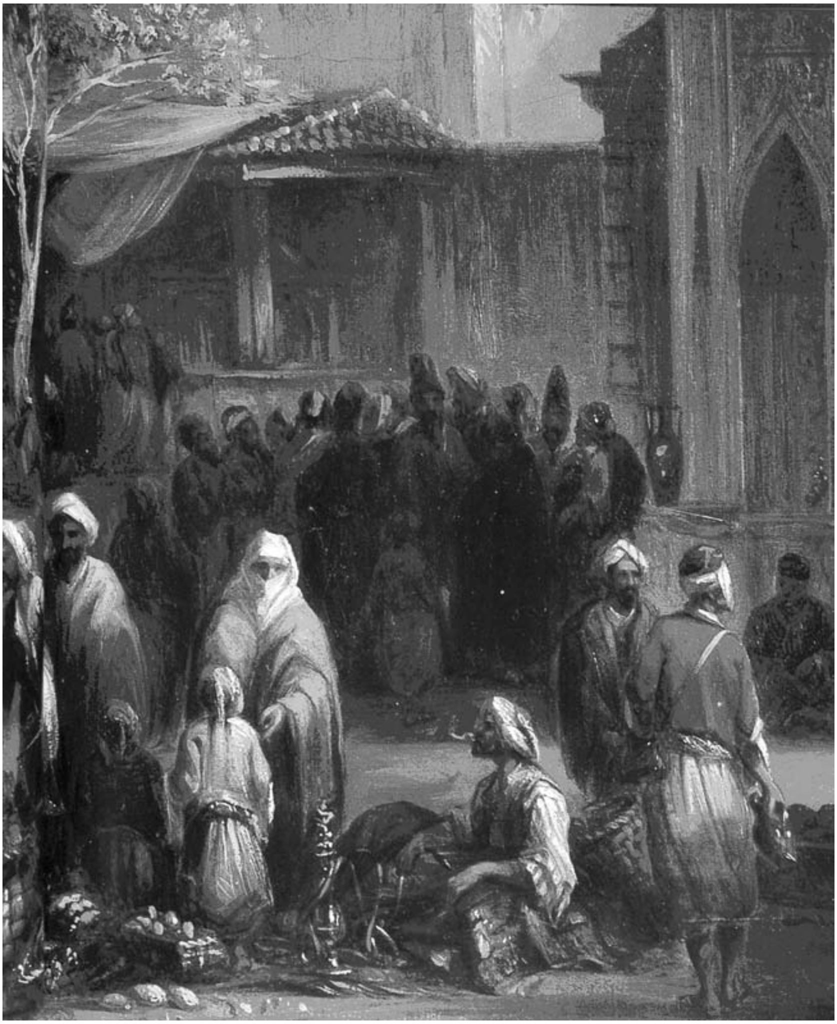


Fig. 6. Etienne Raffort, *Tophane Fountain* (detail), 1849 Oil on canvas. Collection of Emine Renda, Istanbul. Women, particularly non-elite urban women, were often seen in the markets of Istanbul.

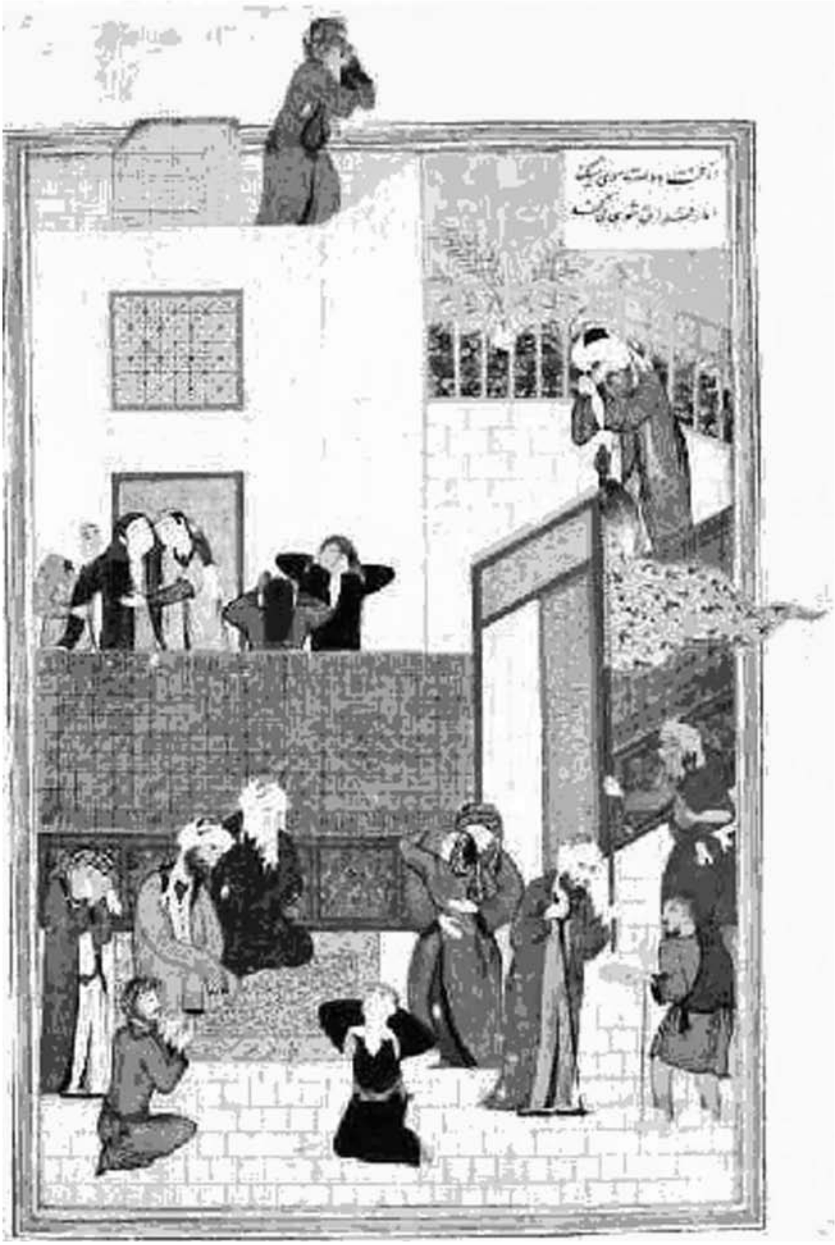


Fig. 7. Women were expected to partake in mourning rituals such as this scene from a miniature from the Khamsa of Nizami where men and women are grieving over the death of Laila's husband, Majnun. Herat, 1494 (British Museum).

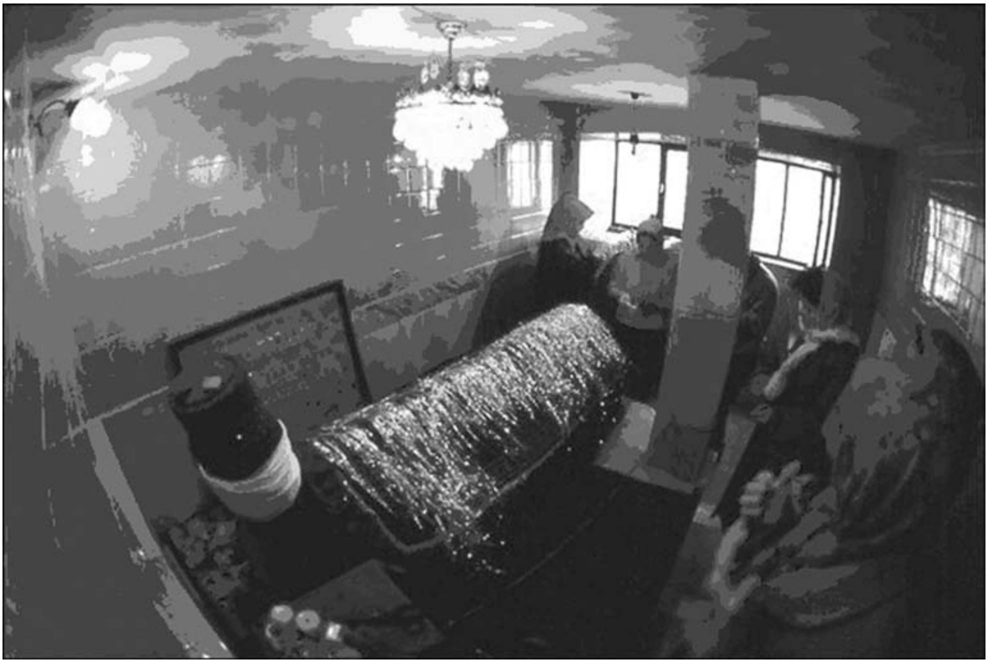


Fig. 8. The tomb of Telli Baba on the European shore of the Bosphorus in Istanbul is a frequent place of pilgrimage for women praying for a happy marriage and future children.

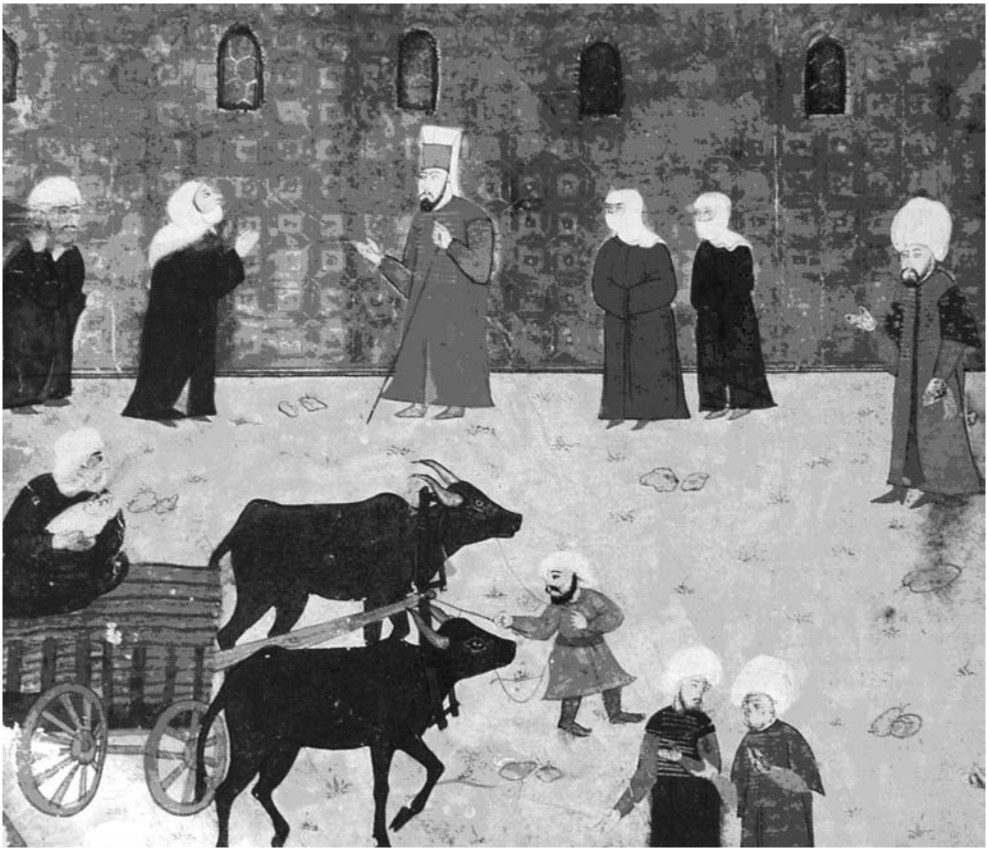


Fig. 9. Court records attest to the fact that women in the Ottoman Empire in the early modern era took their legal complaint to the qadi and other officials in the empire. Detail from a Hünername miniature, dated to 1588. (Topkapı Palace Museum Archives H.1524.)

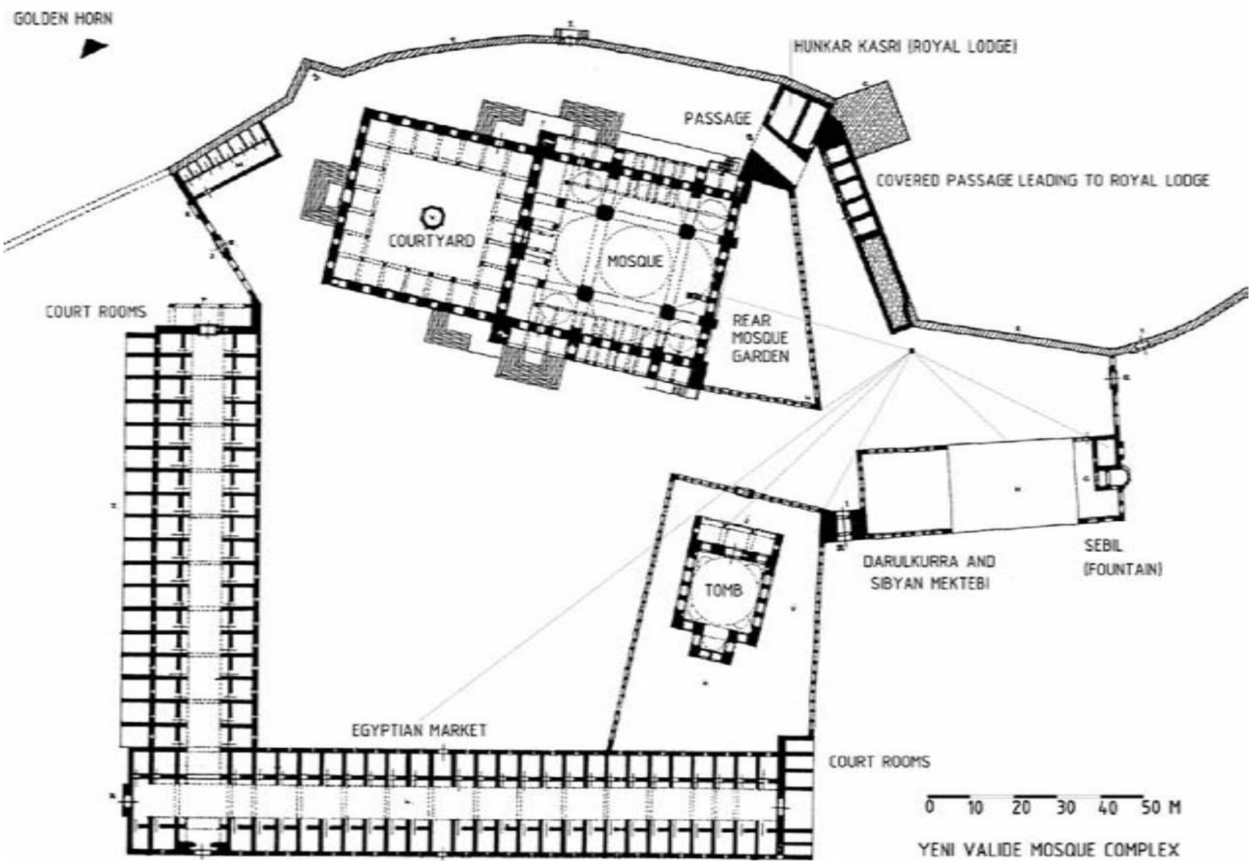

GOLDEN HORN
HUNKAR KASRI (ROYAL LODGE)
PASSAGE
COVERED PASSAGE LEADING TO ROYAL LODGE
COURTYARD
MOSQUE
REAR
MOSQUE
GARDEN
COURT ROOMS
TOMB
DARULKURRA AND
SIBYAN MEKTEBI
SEBIL
(FOUNTAIN)
EGYPTIAN MARKET
COURT ROOMS
0 10 20 30 40 50 M
YENI VALIDE MOSQUE COMPLEX

Fig. 10. The plan for the Yeni Valide Mosque complex in Eminönü, Istanbul.

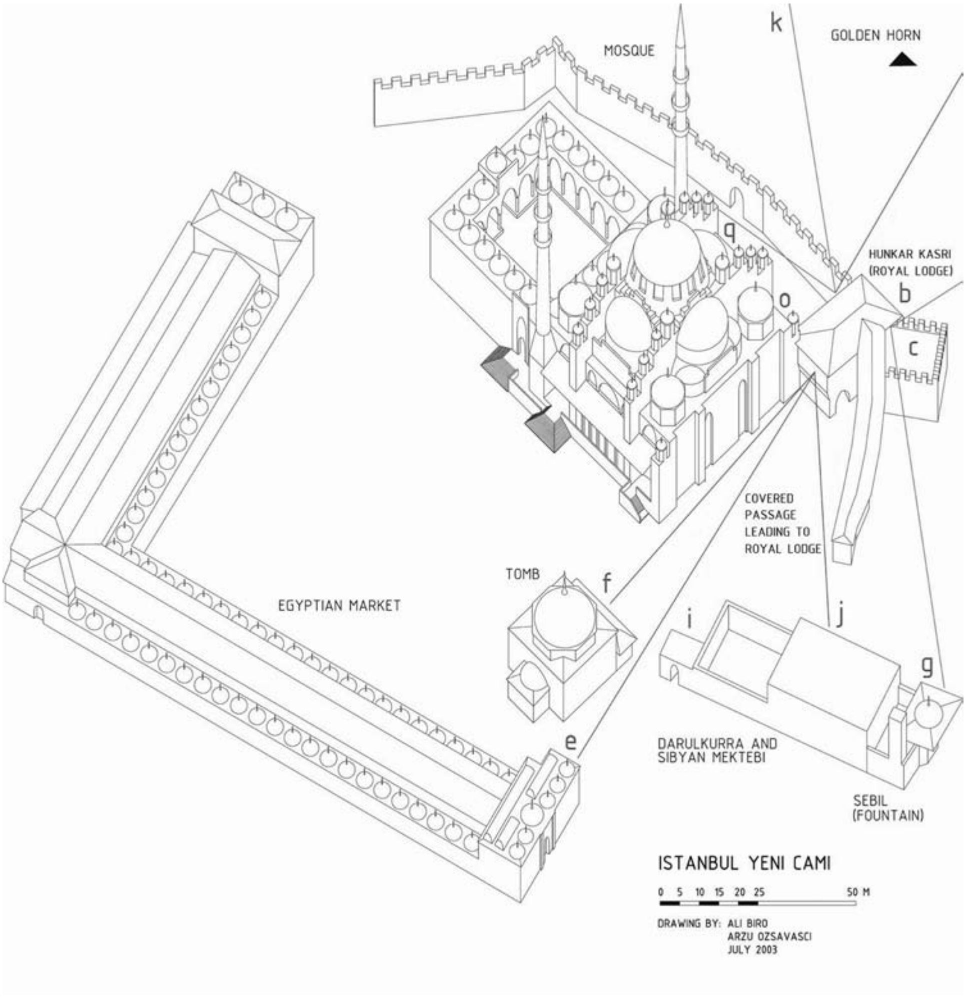

MOSQUE
k
GOLDEN HORN
q
HUNKAR KASRI
(ROYAL LODGE)
o
b
c
COVERED
PASSAGE
LEADING TO
ROYAL LODGE
TOMB
f
EGYPTIAN MARKET
i
j
g
e
DARULKURRA AND
SIBYAN MEKTEBI
SEBIL
(FOUNTAIN)
ISTANBUL YENI CAMI
0 5 10 15 20 25 50 M
DRAWING BY: ALI BIRO
ARZU OZSAVASCI
JULY 2003

Fig. 11. Plan of the Yeni Valide Mosque complex showing the various parts of Turhan Sultan's foundation which were visually accessible to the valide from her royal pavilion.

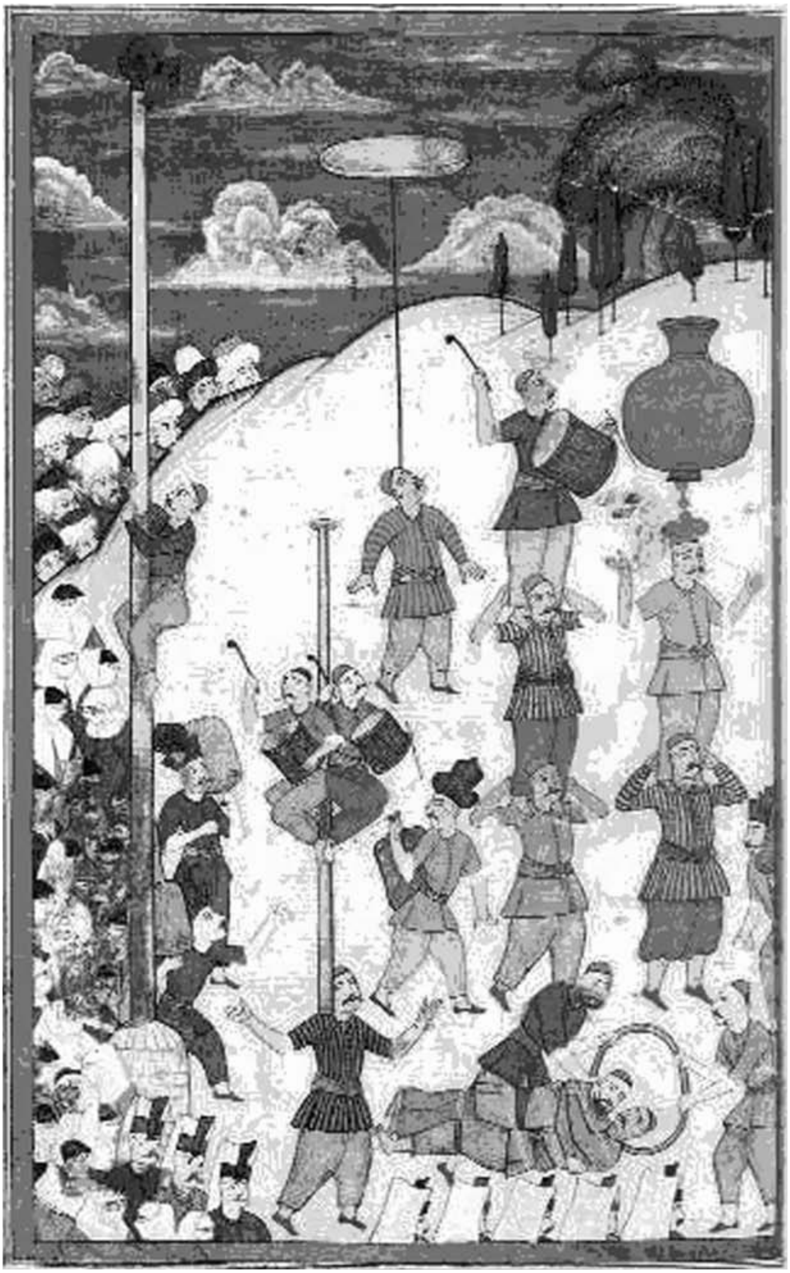


Fig. 12. Women can often be seen participating, albeit in the margins, in public events such as the festivities depicted in the Book of the Circumcision Festival, or Surname-i Vehbi of 1720. Folio 55°.

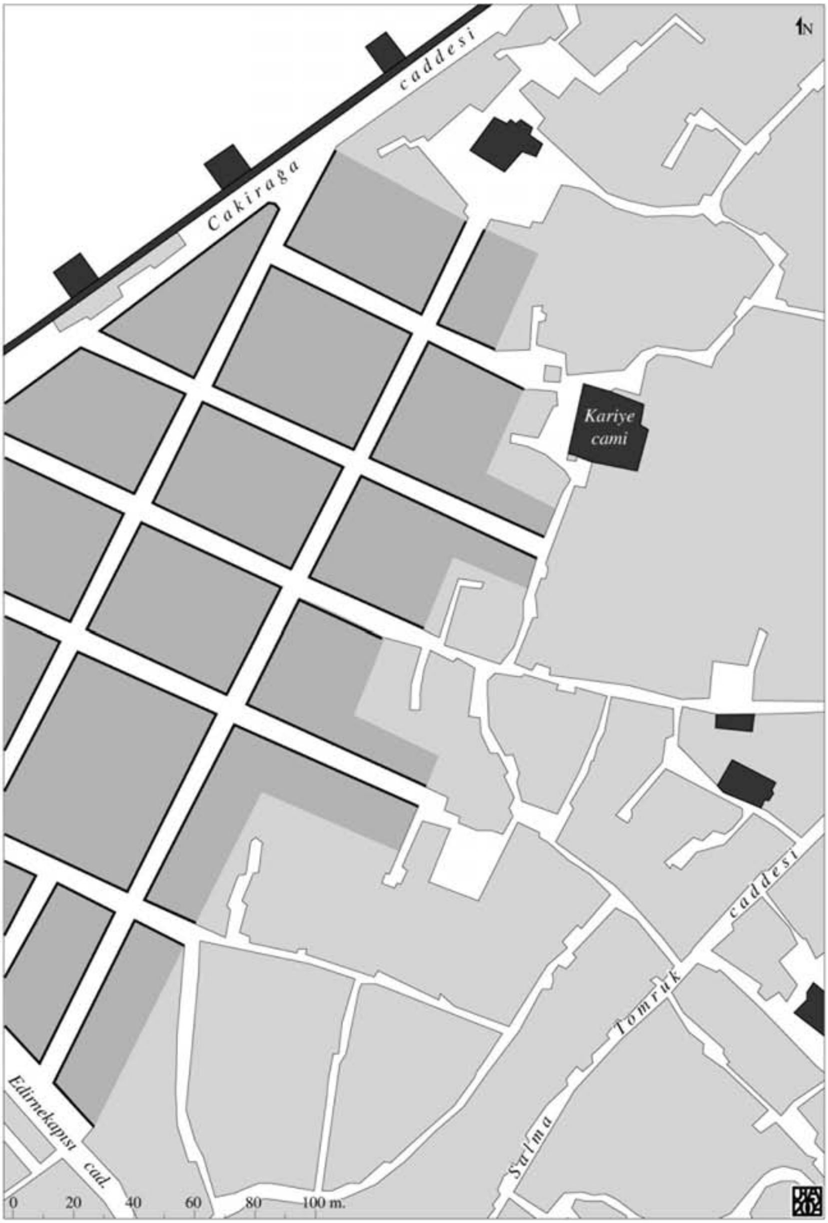

N
Cakiraga caddesi
Kariye cami
Edirnekapısı cad.
Tomruk caddesi
Salma
0 20 40 60 80 100 m.

Fig. 1. Istanbul, Edirnekapı quarter, land division prior to 1882. The width and layout of the streets is in conformity with the tanzimat. While this quarter is well connected to the road network along the wall and on its south roadway, to the east and the north it is serviced by small alleyways. According to an 1882 map of Istanbul, published by E. H. Ayverdi in 1978, sheet D6.

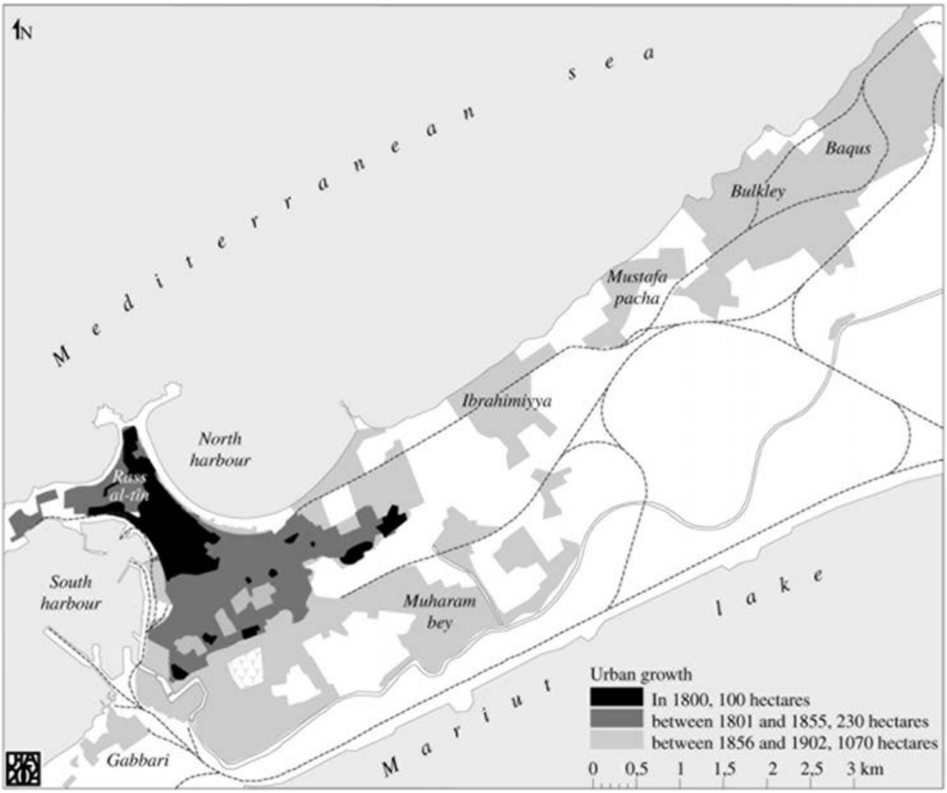

N
Mediterranean sea
Baqus
Bulkley
Mustafa pacha
Ibrahimiyya
North harbour
Rass al-tin
South harbour
Muharam bey
lake
Mariut
Gabbari
Urban growth
In 1800, 100 hectares
between 1801 and 1855, 230 hectares
between 1856 and 1902, 1070 hectares
0 0,5 1 1,5 2 2,5 3 km

Fig. 2. Alexandria, a very early movement of growth. The city, which was of some hundred hectares in 1800, had 330 in 1855 and 1,400 in 1902. According to: “Alexandrie, Plan général des deux ports, de la ville moderne et de la ville des arabes,” Description de l’Egypte (Paris, 1809), E. M., vol. 2, pl. 84; Charles Müller, Plan d’Alexandrie comprenant toutes ses fortifications rues et édifices principaux par Charles Müller 1855 (Trieste, 1855); Plan de la ville d’Alexandrie dressé par les services techniques de la municipalité, 1902 (Alexandria, 1902).

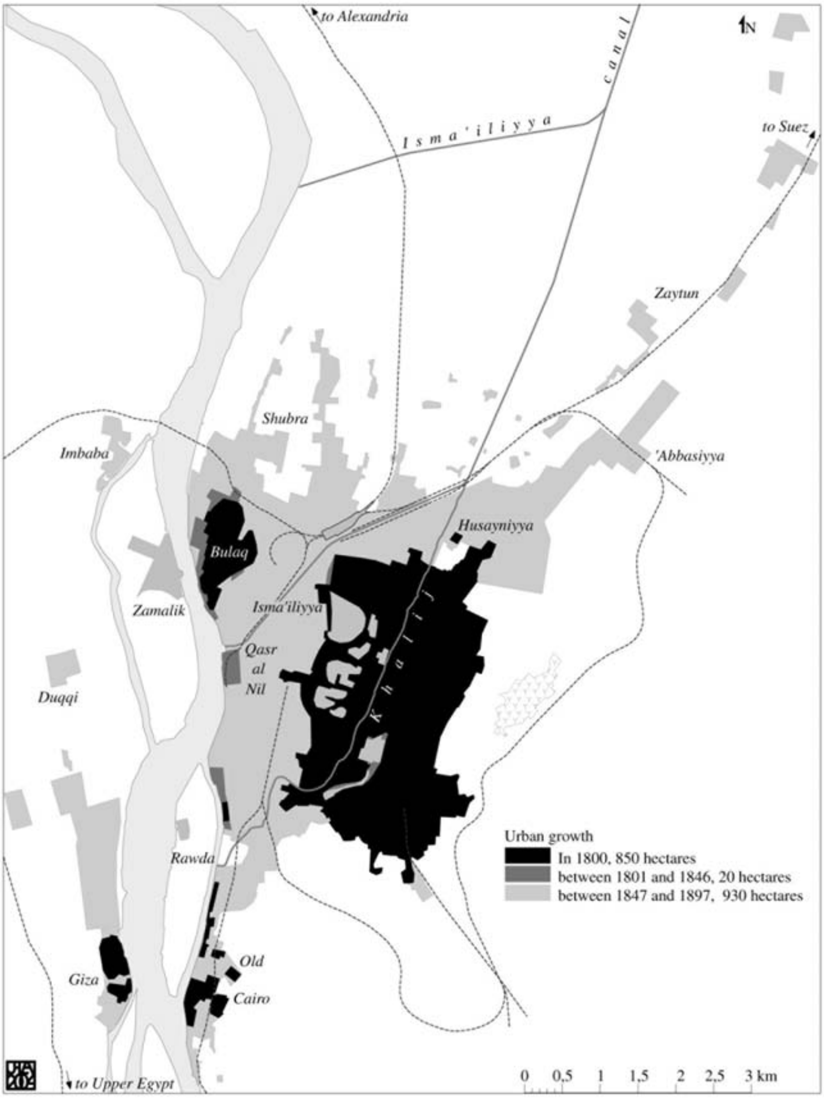

to Alexandria
N
Isma'iliyya canal
to Suez
Zaytun
Shubra
Imbaba
'Abbasiyya
Husayniyya
Bulaq
Zamalik
Isma'iliyya
Qasr al Nil
Khalij
Duqqi
Rawda
Old Cairo
Giza
to Upper Egypt
Urban growth
In 1800, 850 hectares
between 1801 and 1846, 20 hectares
between 1847 and 1897, 930 hectares
0 0,5 1 1,5 2 2,5 3 km

Fig. 3. The urban growth of Cairo in the nineteenth century. The city was of 850 hectares in 1800, acquired some dozens more fifty years later and had reached 1,800 by the end of the nineteenth century. According to: Jacotin, ed., "Environs du Kaire—Plan général de Boulâq, du Kaire, de l'île de Roudah, du Vieux-Kaire et de Gyzeh," Description de l'Egypte (Paris, 1809), E. M., vol. 1, pl. 15; "Plan général de la ville du Caire et des environs," laid out in F. Pruner, Topographie médicale du Caire avec le plan de la ville et des environs (Munich, 1847); Plan général de la ville du Caire et des environs, dressé par le service de la ville du Caire (Cairo, 1897).

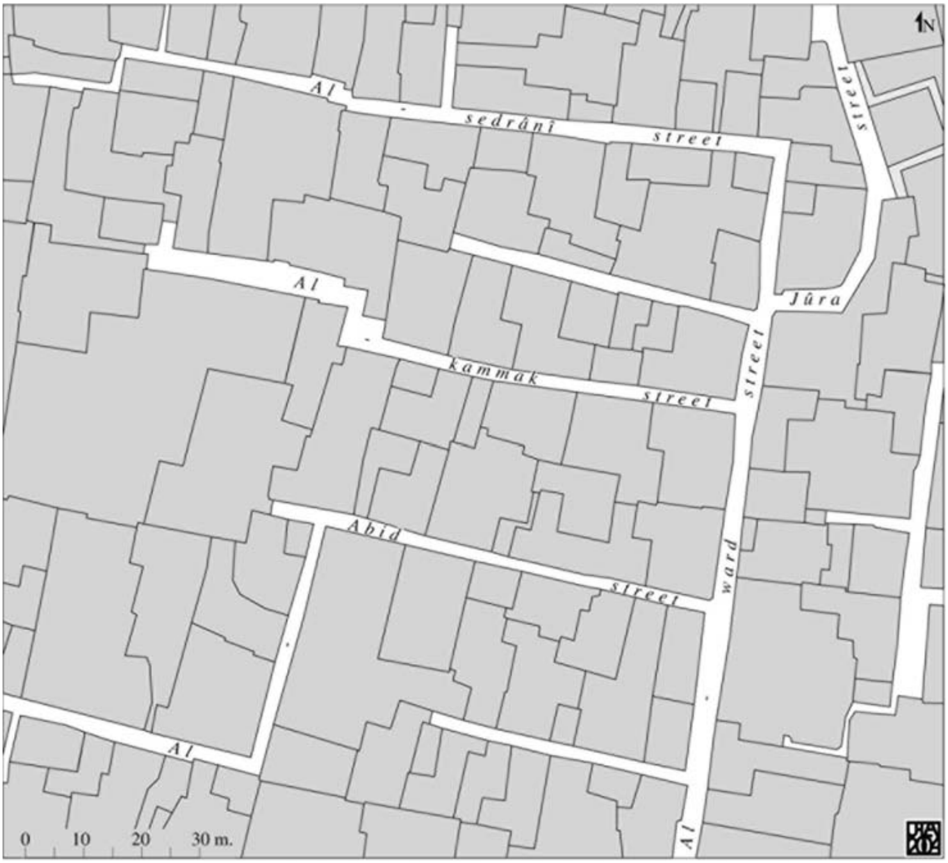

N
Al
sedrânî
street
street
Jûra
Al
kammak
street
street
ward
Abid
street
Al
Al
0 10 20 30 m.

Fig. 4. Damascus, example of the old urban fabric, Souq Saruja quarter. The irregularity of land division makes for highly varied property values within a single quarter. According to Ville de Damas, division VI, Souq Sarouja, section 1, sheet 1 (Damascus 1933).

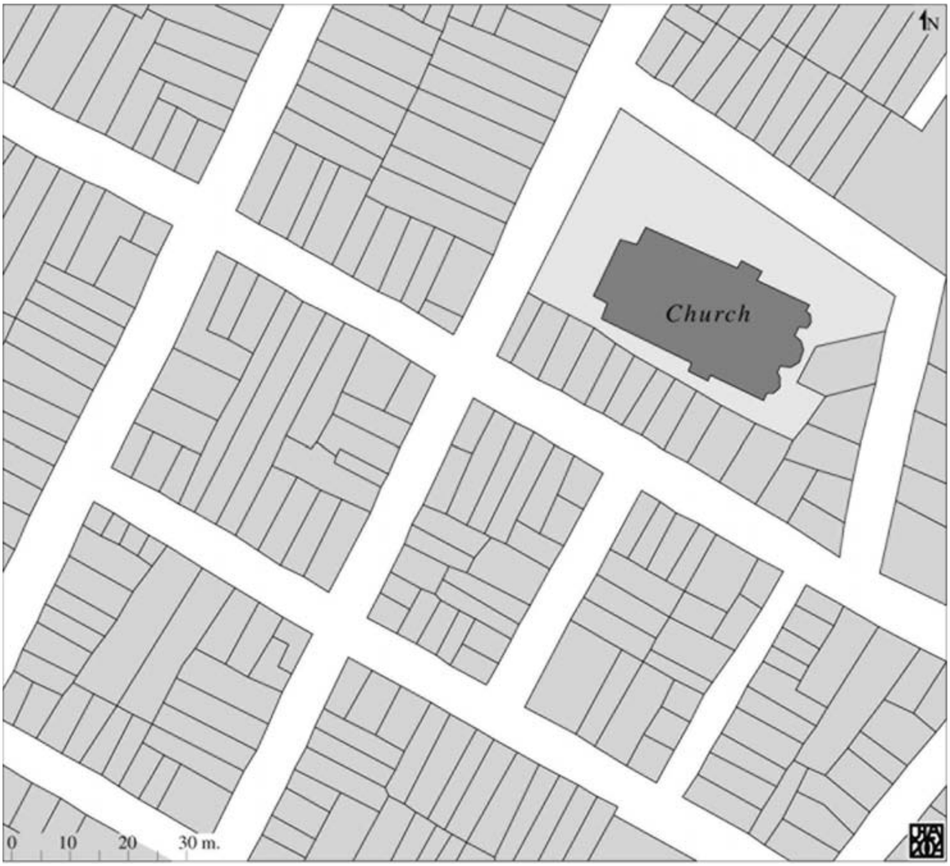


Fig. 5. Istanbul, example of a regular land division, Kumkapı quarter. Major land division laid out following the 1864 fire in Istanbul. According to Borie et al., *L'Occidentalisation d'Istanbul*, pl. A8.

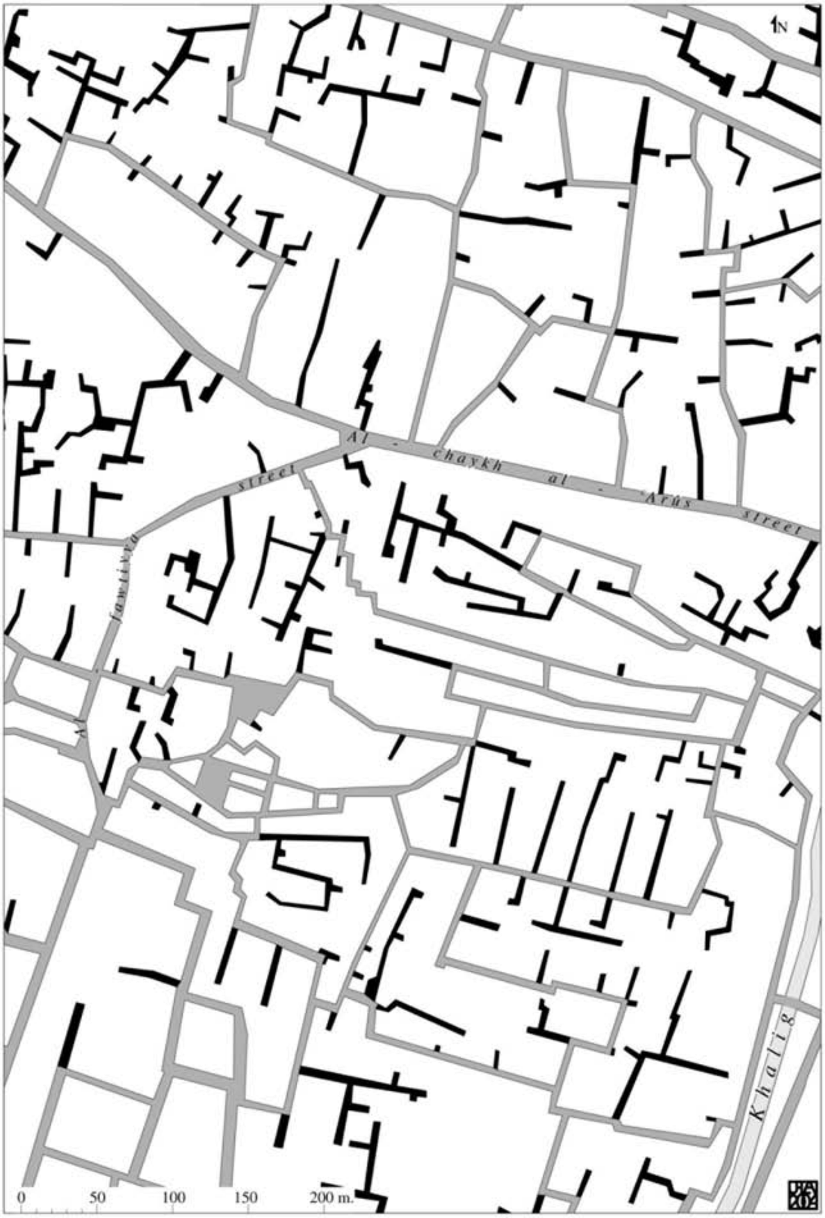

N
Al - chaykh al - 'Arūs street
Al fawtiyya street
Khalig
0
50
100
150
200 m.

Fig. 6. Cairo, streets and cul-de-sacs, quarters to the northwest of the old city. According to the Plan général de la ville du Caire et des environs (Cairo, 1896).

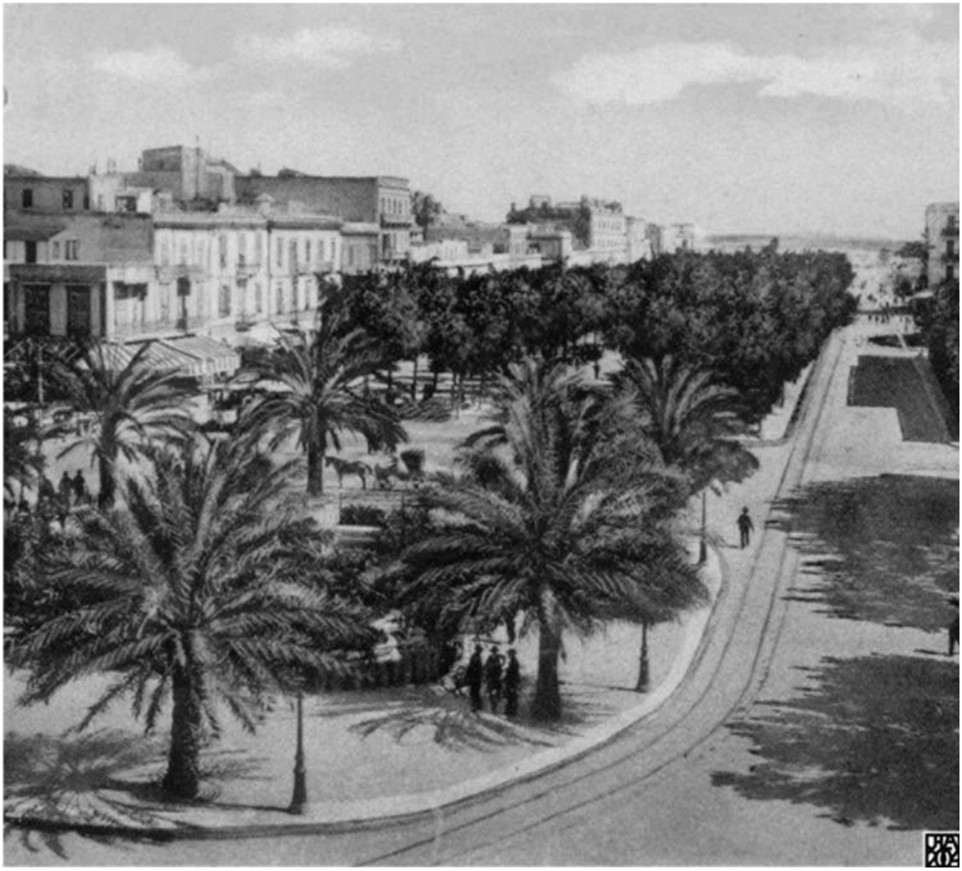


Fig. 7. Tunis, Marine Avenue, around 1910. This avenue, inaugurated during the 1850s, links a gate of the old city with the banks of the lagoon. Author’s collection.

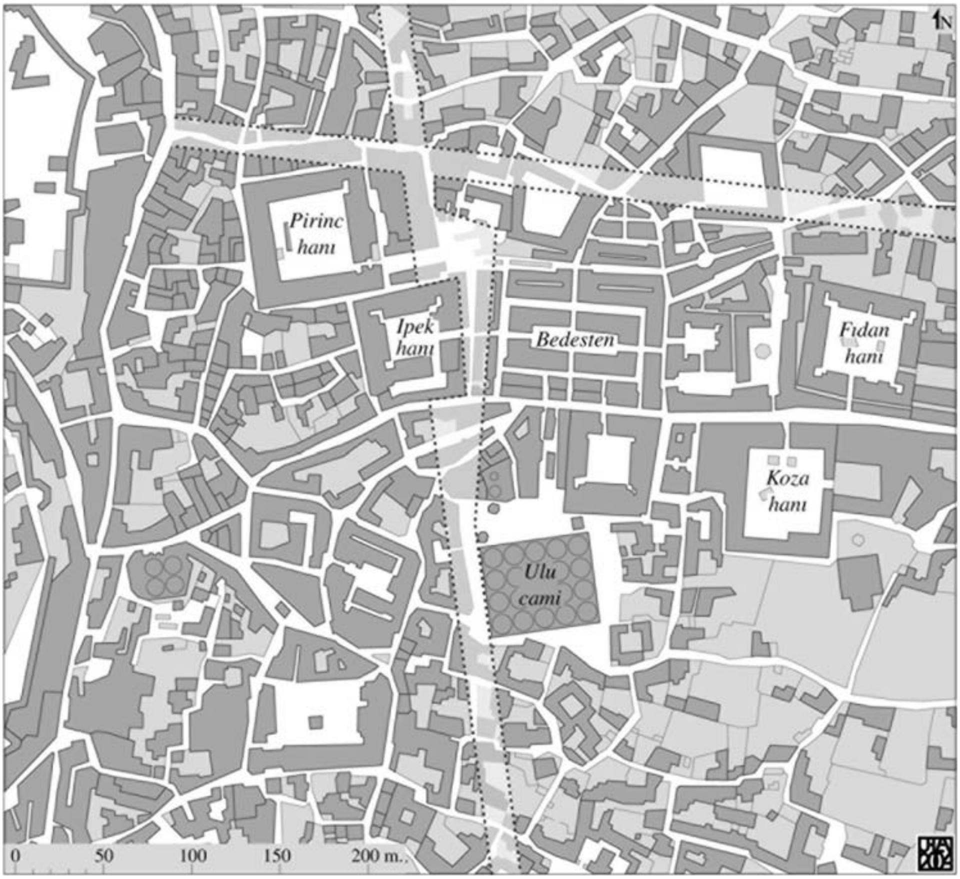

N
Pirinc hanı
Ipek hanı
Bedesten
Fıdan hani
Koza hanı
Ulu cami
0
50
100
150
200 m.

Fig. 8. Bursa, the intersection of streets opened in the bazaar quarter following the 1855 earthquake. According to two maps published by Mustafa Cezar, Typical Commercial Buildings of the Ottoman Classical Period and the Ottoman Construction System (Istanbul, 1983), pp. 38 and 316.

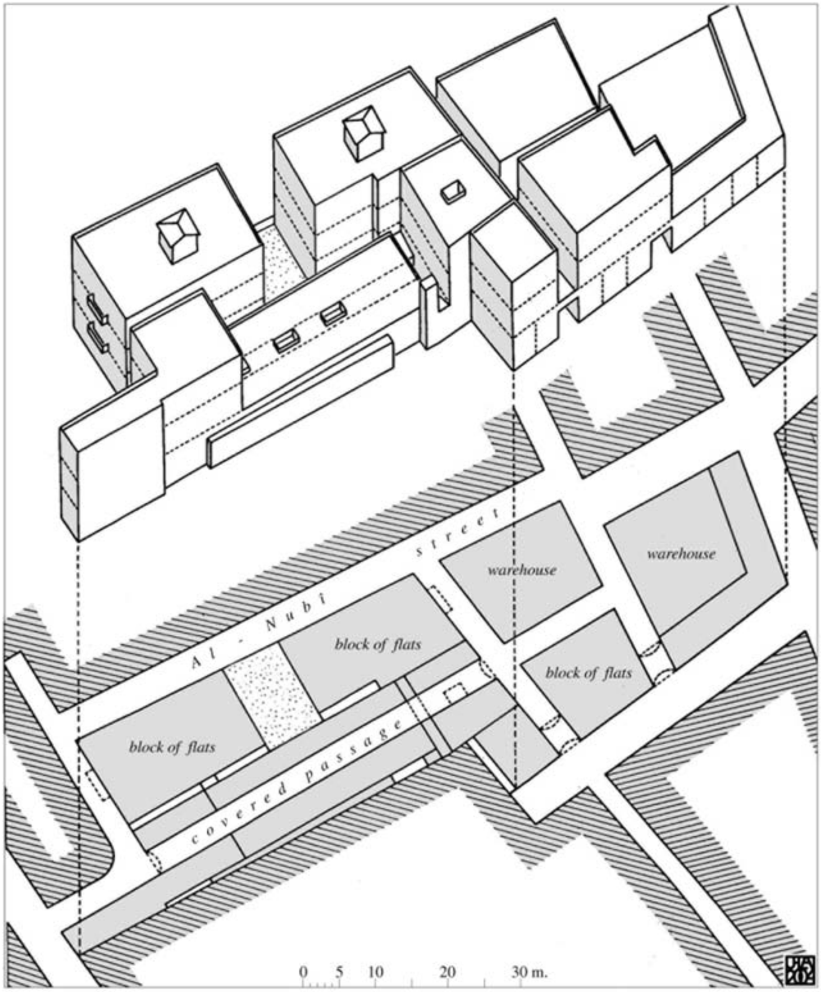

Al - Nubi street
warehouse
warehouse
block of flats
block of flats
block of flats
covered passage
0 5 10 20 30 m.

Fig. 9. Cairo, covered passageway, Franc quarter. This assemblage, built around 1890, comprises five blocks, a warehouse, workshops, and some thirty shops. Author's restitution and drawing, after E. Goad, Insurance plan of Cairo—Egypt—March 1905 (London, Toronto, 1905).

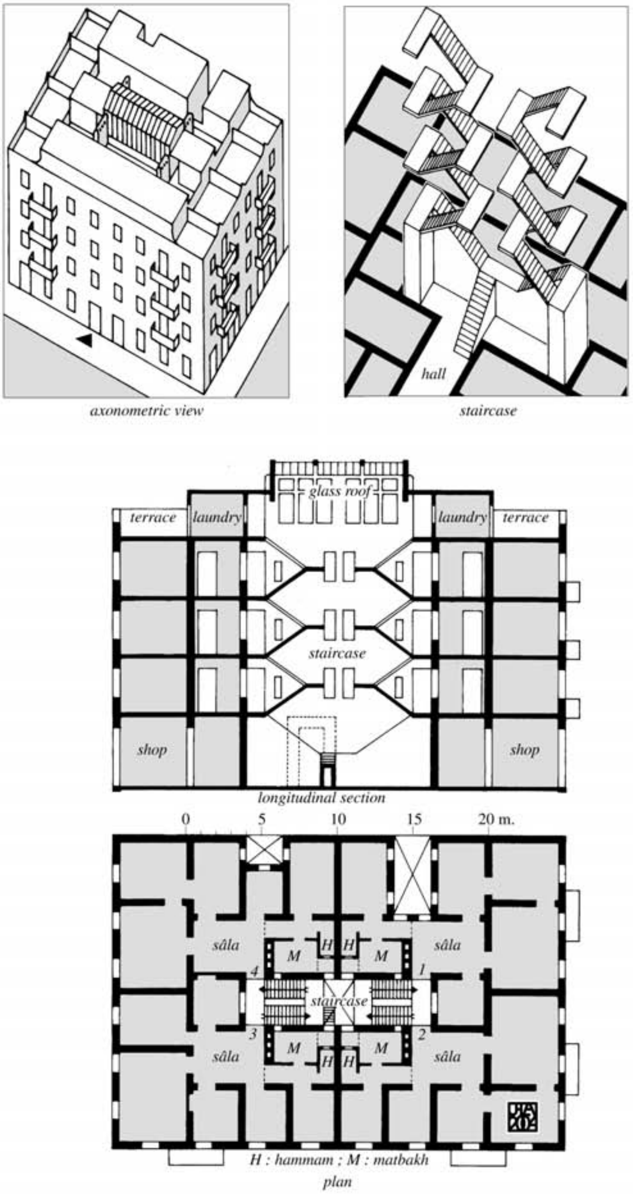

axonometric view
hall
staircase
glass roof
terrace
laundry
laundry
terrace
staircase
shop
shop
longitudinal section
0
5
10
15
20 m.
sâla
sâla
H
H
M
M
4
1
staircase
3
2
M
M
H
H
sâla
sâla
H : hammam ; M : matbakh
plan

Fig. 10. Alexandria, apartment block, Kum al-Nadura quarter. This block, built before the end of the 1880s, comprises 12 dwellings, each of between 100 and 120 square metres. It is part of a compound of four identical blocks arranged around passageways and cul-de-sacs. Plotted and drawn by the author.

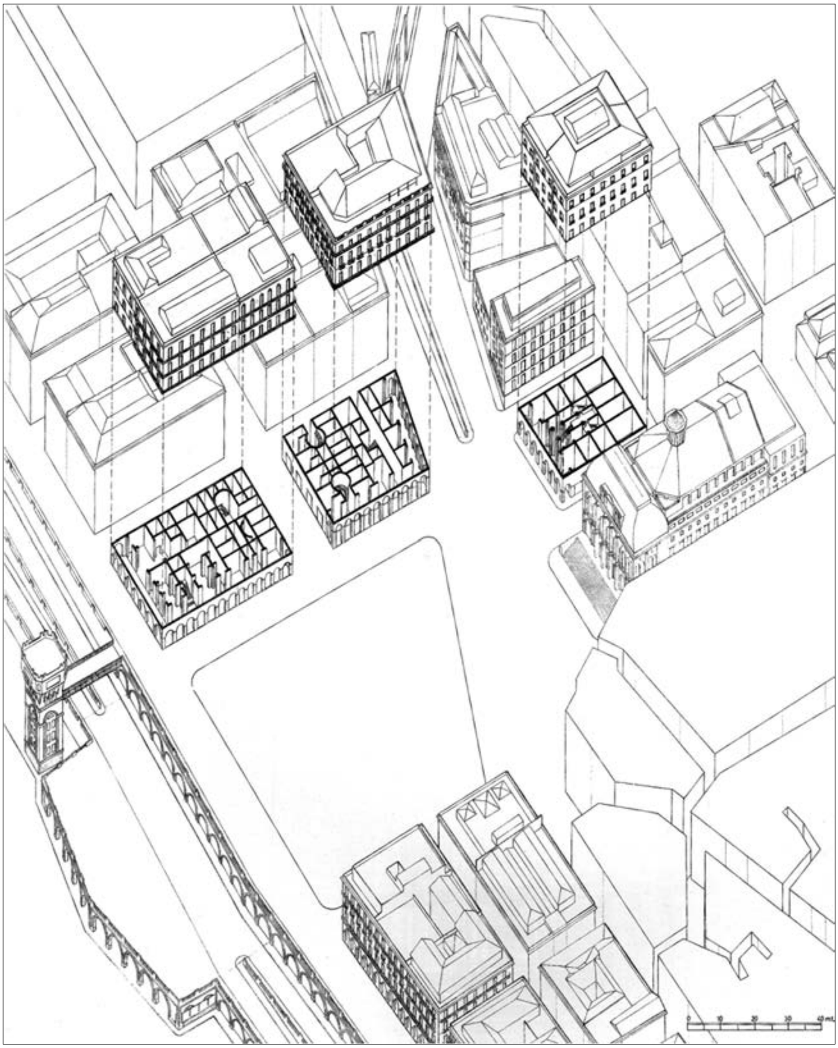

0
10
20
30
40 mt.

Fig. 1. Place de la République. Note to the right the National Theatre designed by F. Chasseriau.

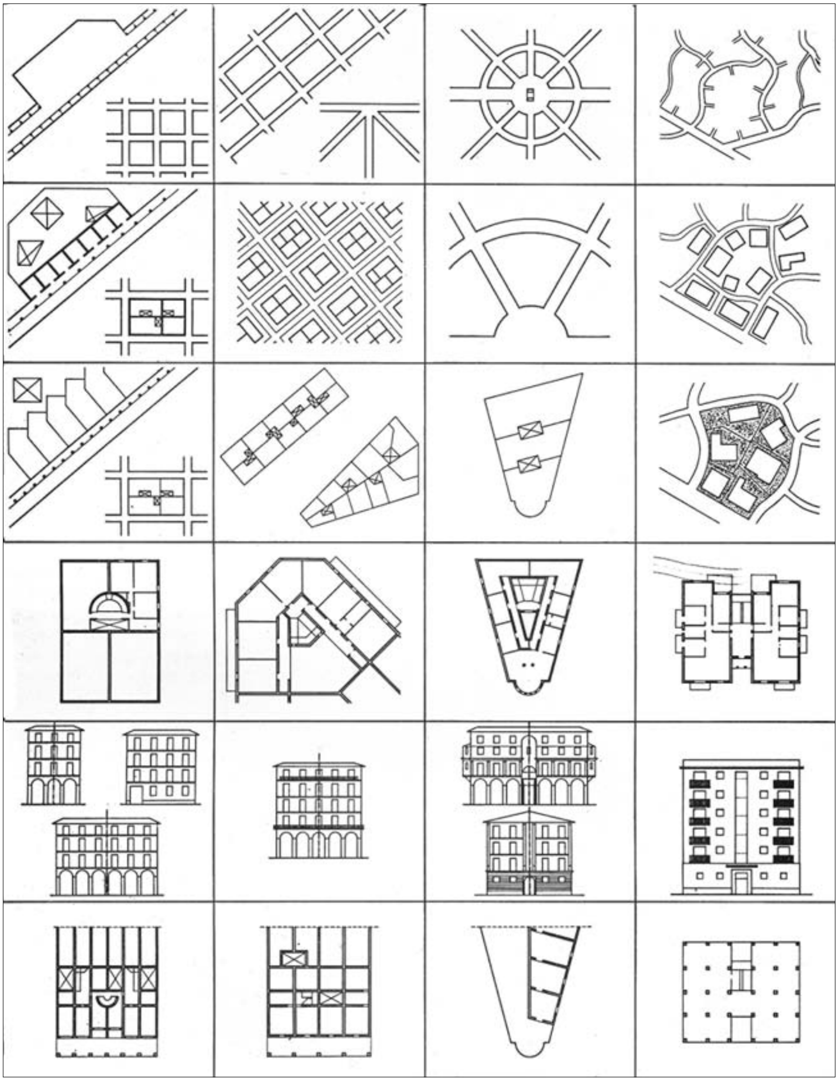


Fig. 2. Abacus of the typological process. From left to right the four periods between 1830 and 1930. From above the urban scale or the plan; the layout of the plot; the urban block; the apartment type and the techniques of construction.

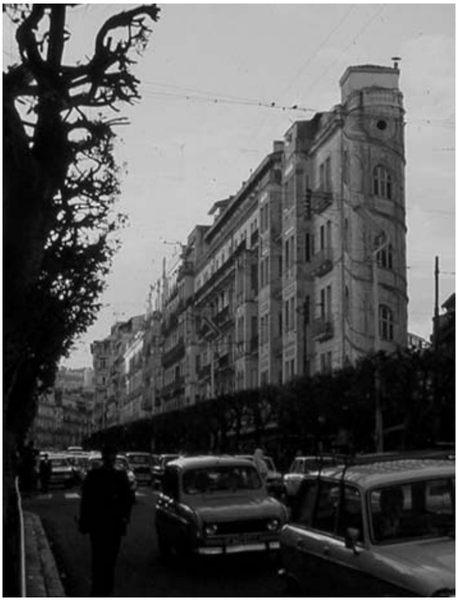


Fig. 3. The stair used as a corner solution in rue Michelet today Didouche Mourad.

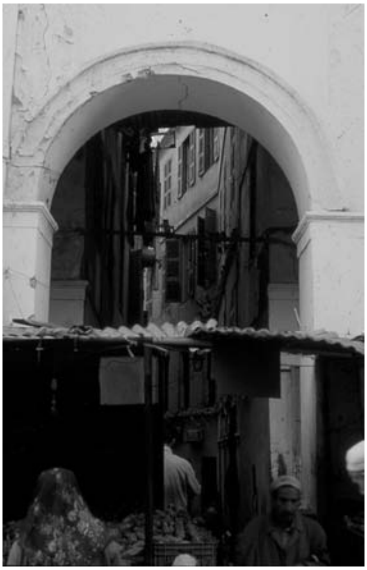


Fig. 4. The traditional Arab fabric covered by a Colonial curtain at place de Chartres.

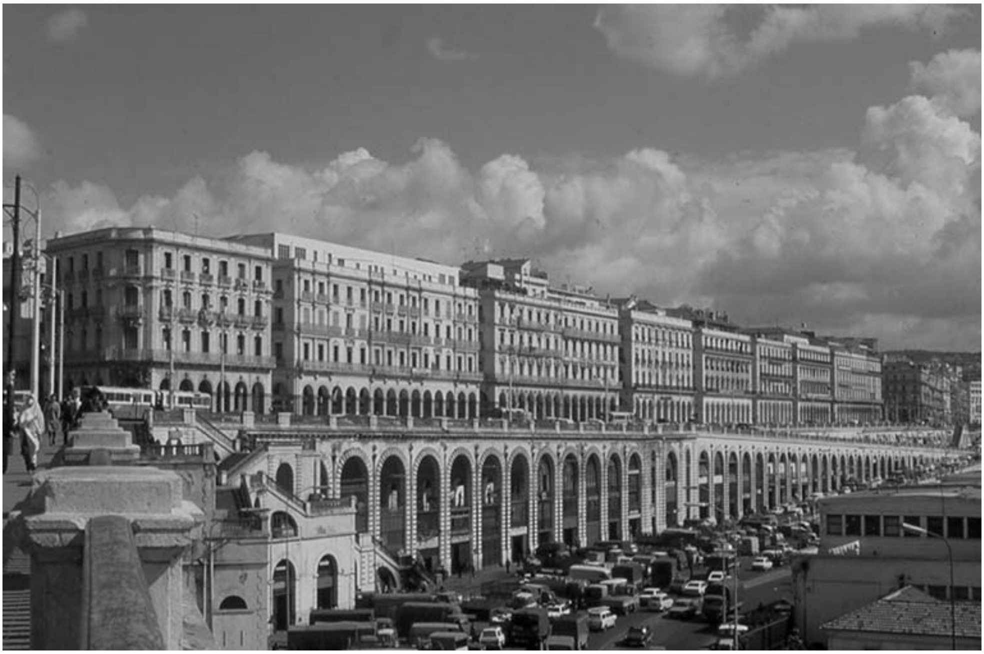


Fig. 5. The gigantic infrastructure of the harbour designed by F. Chasseriau.

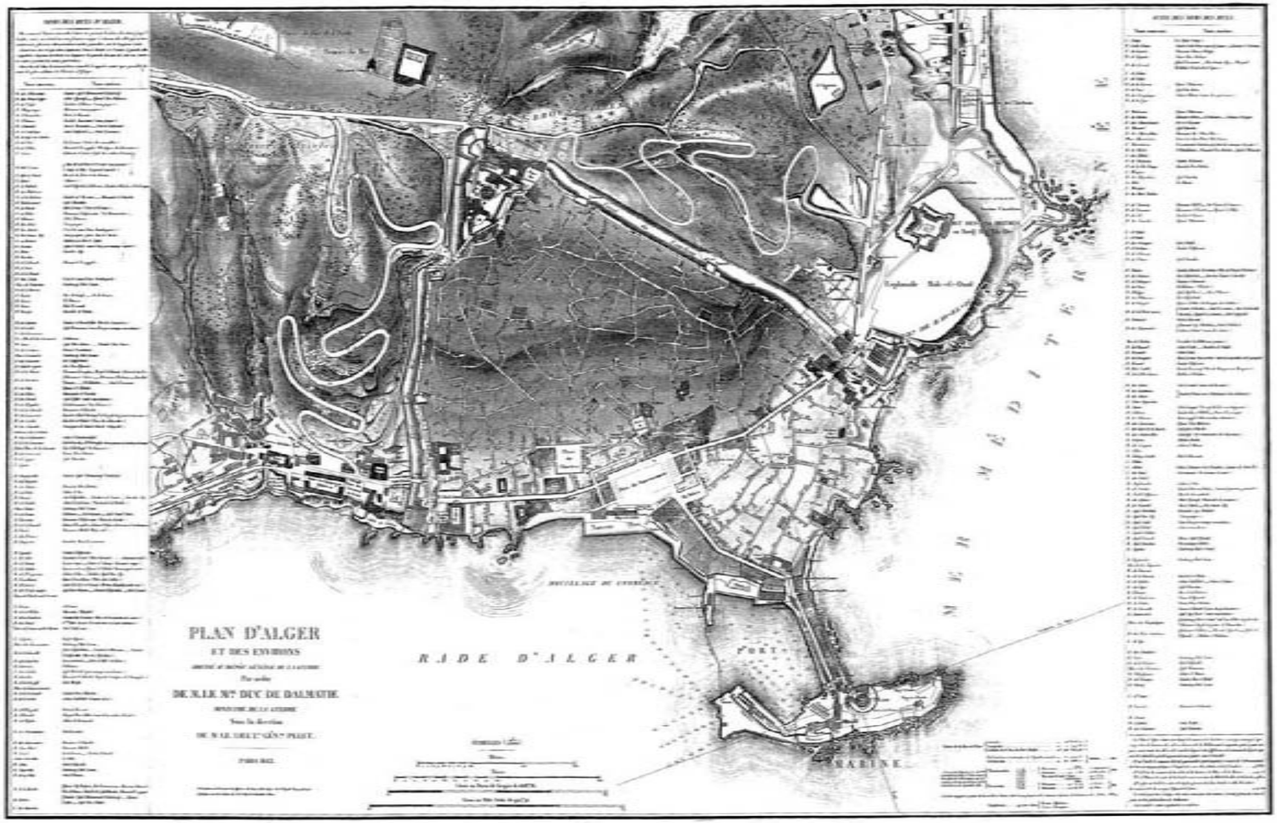

PLAN D'ALGER
ET DES ENVIRONS
Par ordre
DE M. LE Mal DUC DE DALMATIE
Sous la direction
RADE D'ALGER
PORT
MARINE
MER MÉDITERRANÉE

Fig. 6. Plan of Algiers.

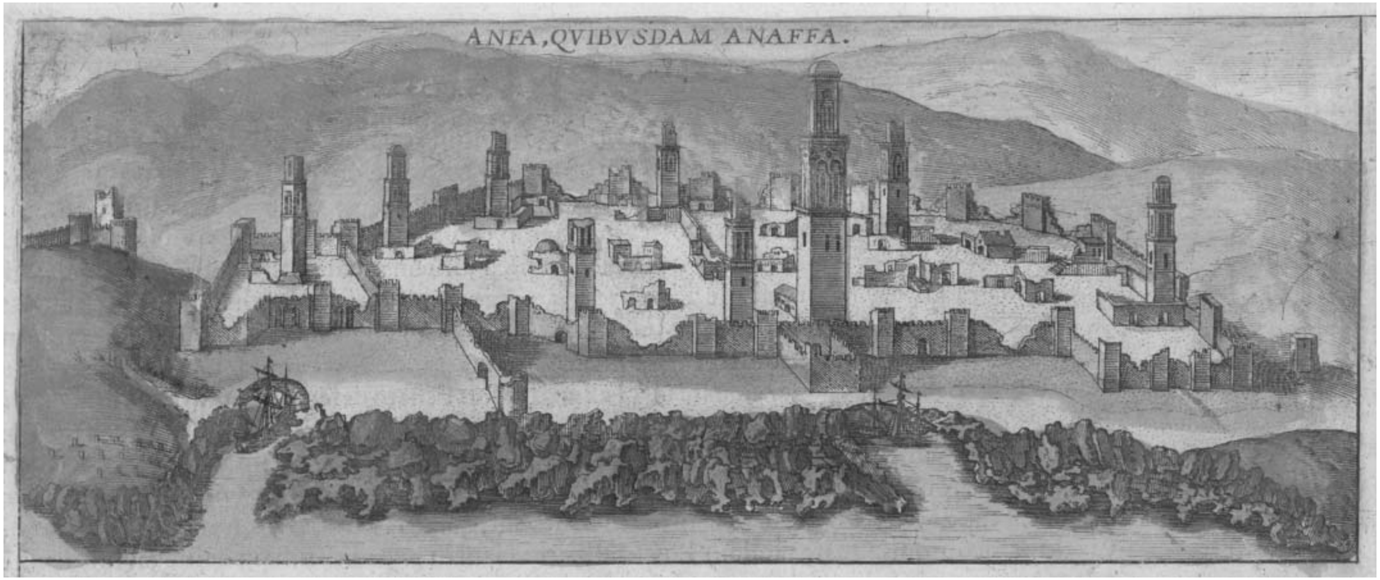

ANFA, QVIBVSDAM ANAFFA.

Fig. 1. The ruins of Anfa, in Georg Braun and Franz Hogenberg, published in Civitates orbis terrarum (Cologne, 1572), Beinecke Library, Yale University.

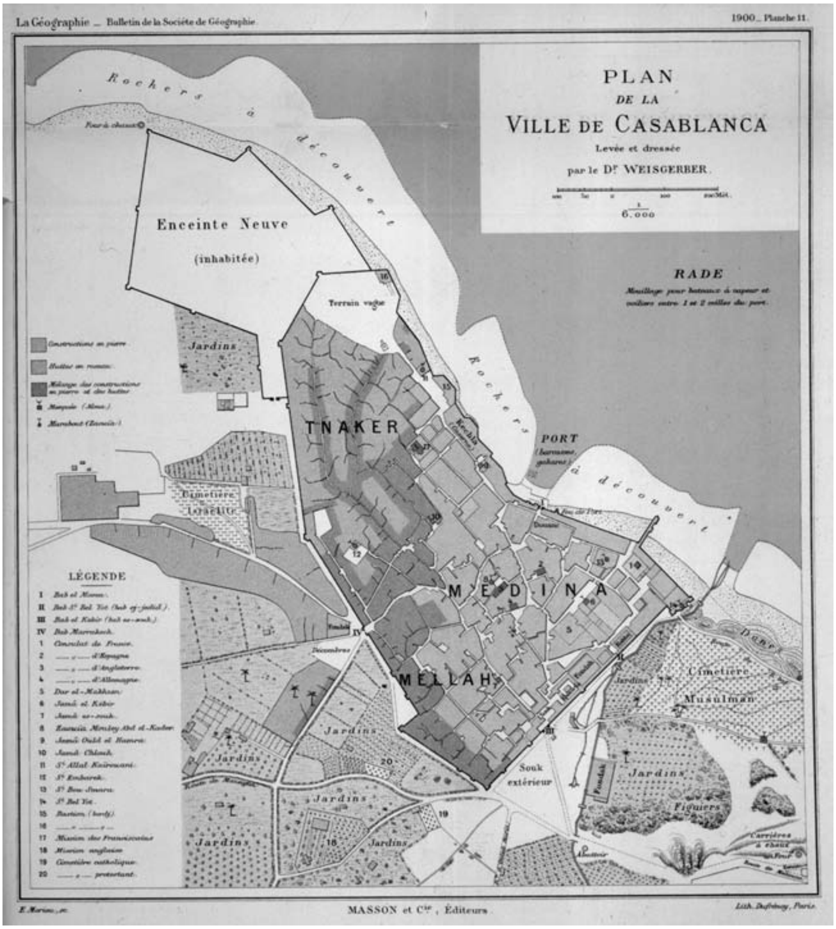

La Géographie — Bulletin de la Société de Géographie
1900 _ Planche 11.
PLAN
DE LA
VILLE DE CASABLANCA
Levée et dressée
par le Dʳ WEISGERBER.
6.000
RADE
Rochers à découvert
Enceinte Neuve
(inhabitée)
Terrain vague
Jardins
TNAKER
PORT
Cimetière Israélite
MEDINA
MELLAH
Douane
Souk extérieur
Cimetière Musulman
Jardins
Figuiers
Abattoir
Carrières à chaux
LÉGENDE
I Bab el Marsa.
II Bab Sᵗ Bel Yot (bab ej-jedid).
III Bab el Kebir (bab es-souk).
IV Bab Marrakech.
1 Consulat de France.
2 d'Espagne.
3 d'Angleterre.
4 d'Allemagne.
5 Dar el-Makhzen.
6 Jamâ el Kebir.
7 Jamâ es-souk.
8 Zaouïa Moulay Abd el-Kader.
9 Jamâ Ould el Hamra.
10 Jamâ Chleuh.
11 Sᵗ Allal Kairouani.
12 Sᵗ Embarek.
13 Sᵗ Bou Smara.
14 Sᵗ Bel Yot.
15 Bastion (bordj).
16
17 Mission des Franciscains.
18 Mission anglaise.
19 Cimetière catholique.
20 protestant.
MASSON et Cⁱᵉ, Éditeurs.
Lith. Dufrénoy, Paris.

Fig. 2. Dr. Félix Weisgerber, plan of Casablanca in 1900, coll. of the author.

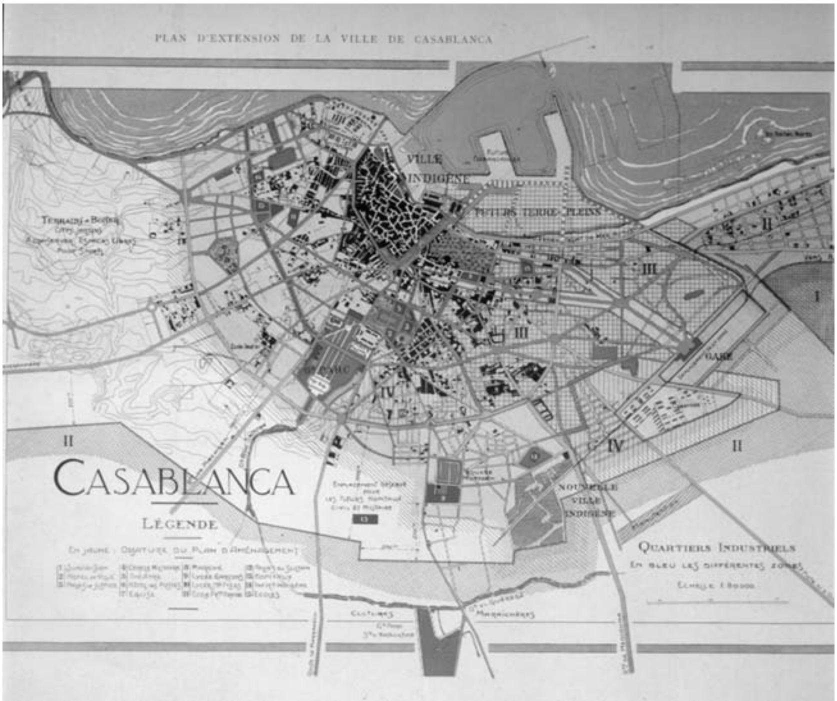

PLAN D'EXTENSION DE LA VILLE DE CASABLANCA
VILLE INDIGÈNE
FUTURS TERRE-PLEINS
I
II
III
IV
GARE
PARC
II
CASABLANCA
LÉGENDE
NOUVELLE VILLE INDIGÈNE
QUARTIERS INDUSTRIELS
EN BLEU LES DIFFÉRENTES ZONES
IV
II

Fig. 3. Henri Prost, Development and extension plan of 1917 for Casablanca, in France-Maroc, 1917, coll. of the author.

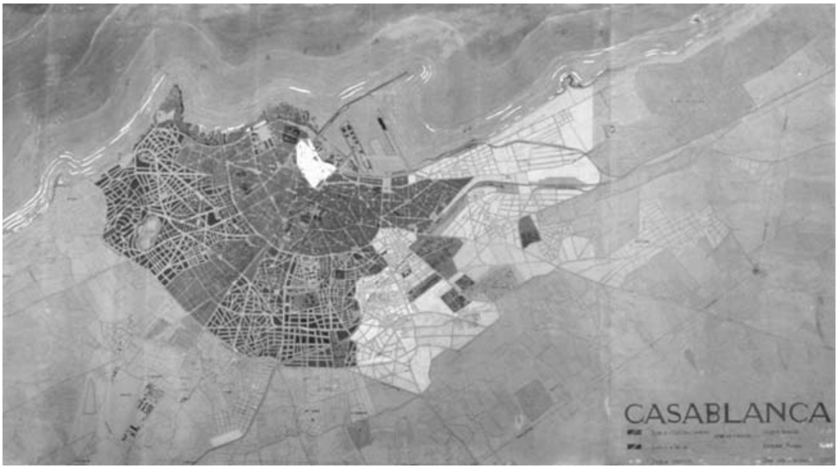

CASABLANCA

Fig. 4. Henri Prost, Zoning plan of Casablanca, 1930 version, Bibliothèque générale et archives, Rabat.

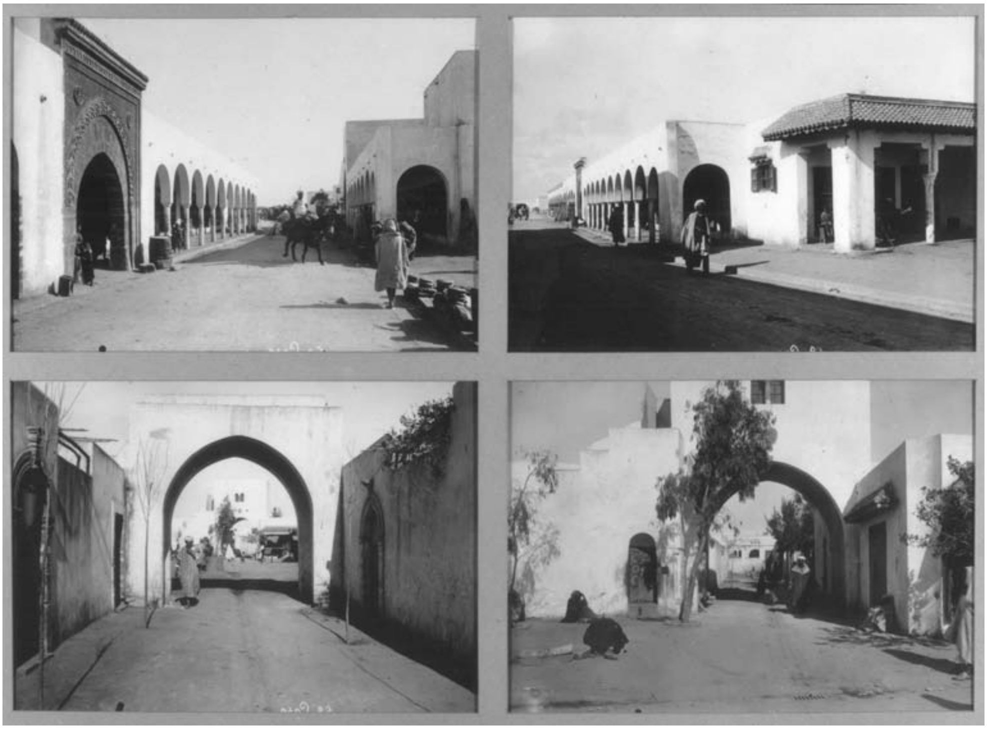


Fig. 5. Albert Laprade (with Auguste Cadet and Edmond Brion), four views of the Habous quarter, Archives nationales, Paris.

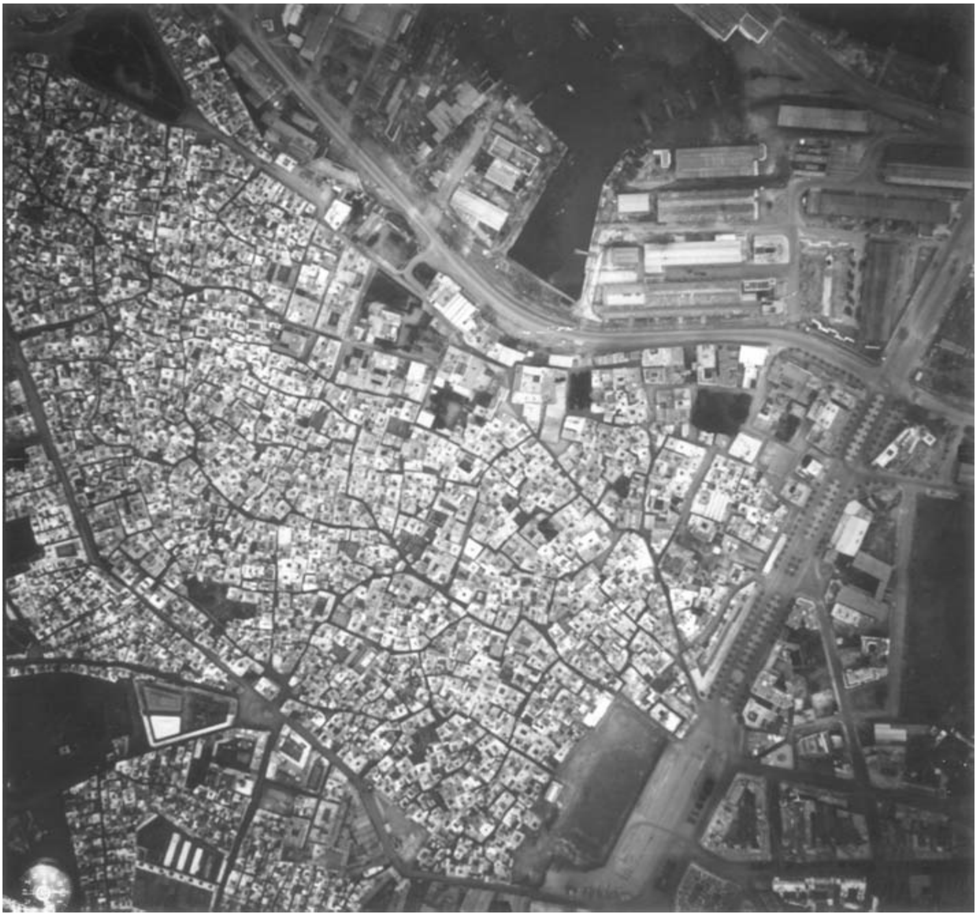


Fig. 6. Aerial view of the medina, 1943, National Archives, Washington, DC.

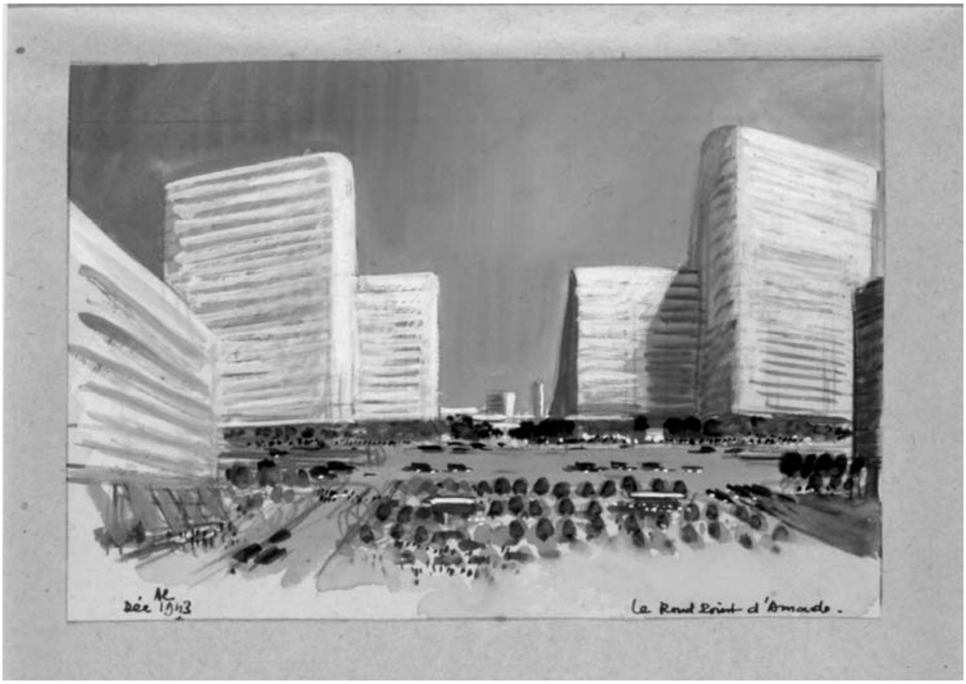

AC
Déc 1943
Le Rond Point d'Amade.

Fig. 7. Alexandre Courtois, Project for the rond-point d'Amade, 1944, coll. Alexandre Courtois Jr., Bayonne.

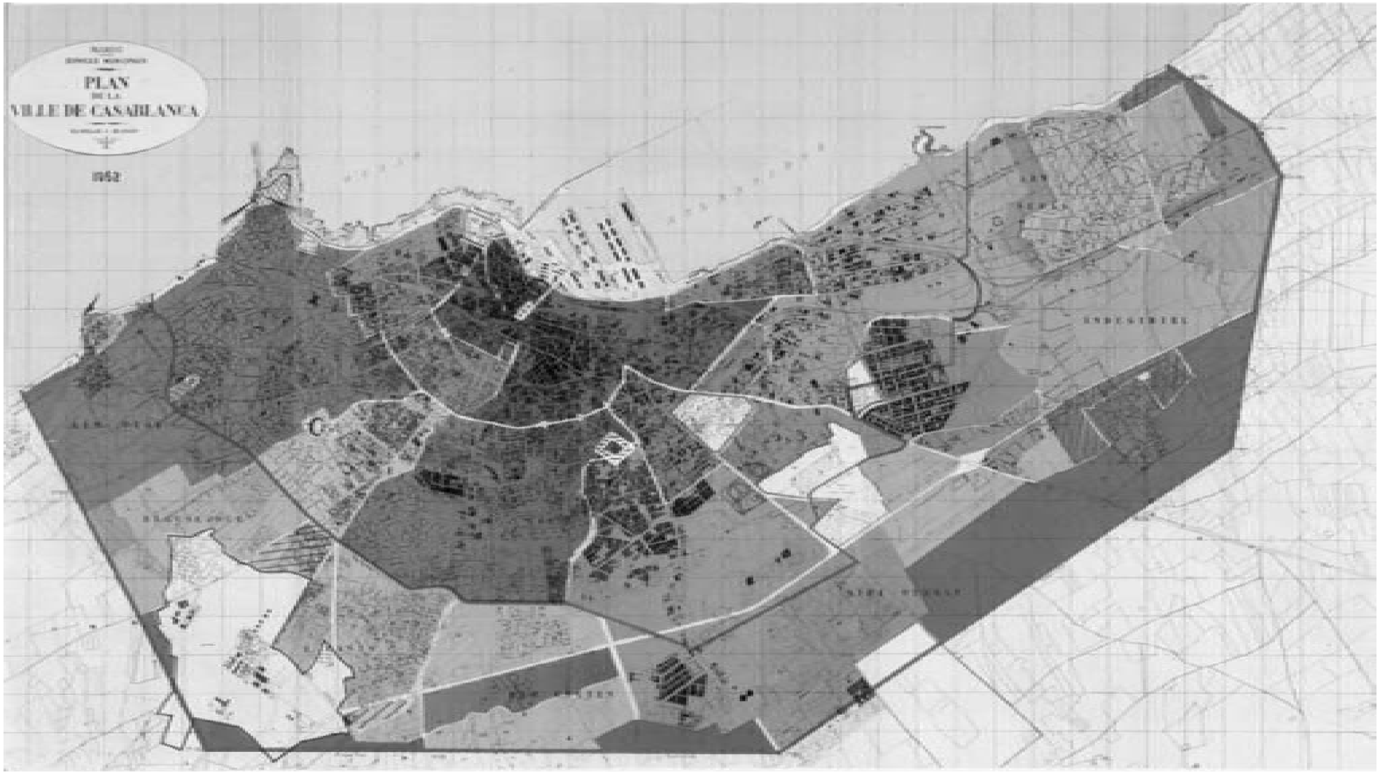

PLAN
DE LA
VILLE DE CASABLANCA
1952
INDUSTRIEL

Fig. 8. Michel Ecochard, Zoning of the Greater Casablanca, 1952, coll. of the author.

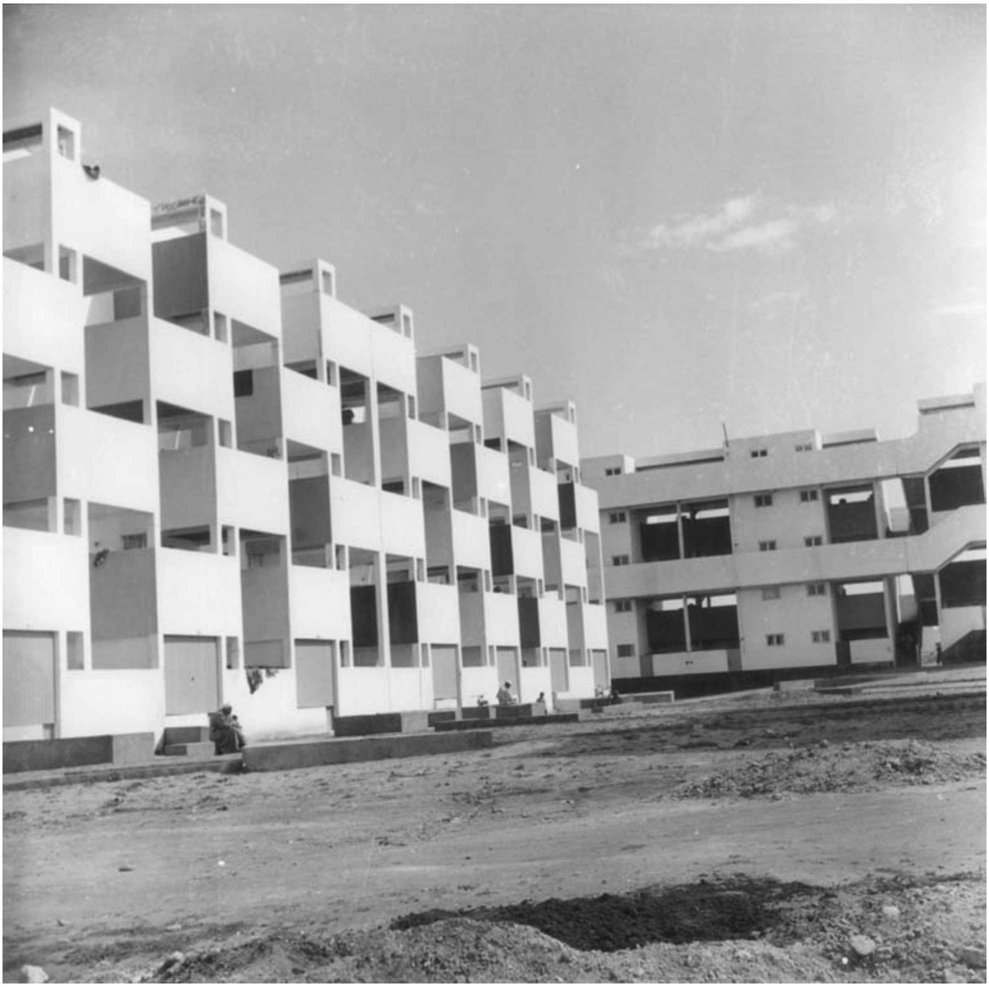


Fig. 9. ATBAT Afrique (Georges Candilis, Shadrach Woods, Vladimir Bodiansky), Housing for muslim workers, Carrières centrales, 1952, Ministry of Housing, Rabat.

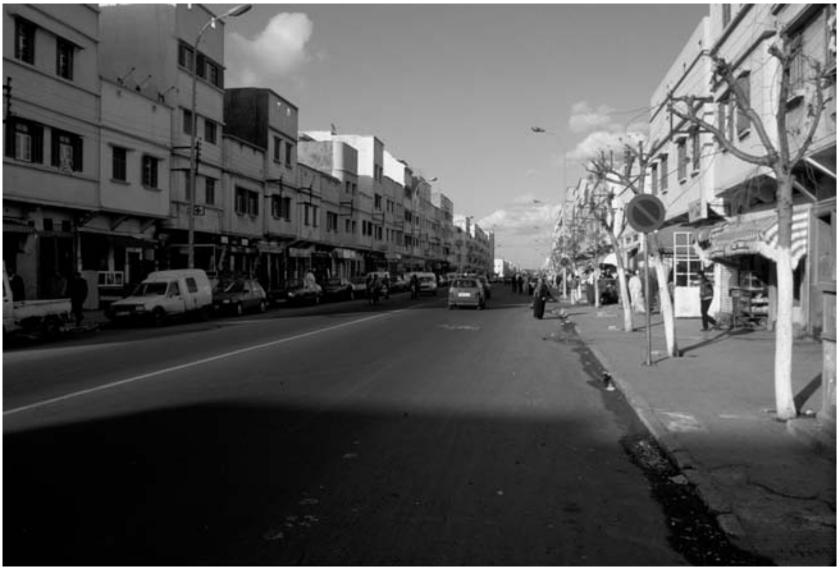


Fig. 10. A street in the neighbourhood of Sidi Othman, 1999,
© Jean-Louis Cohen.

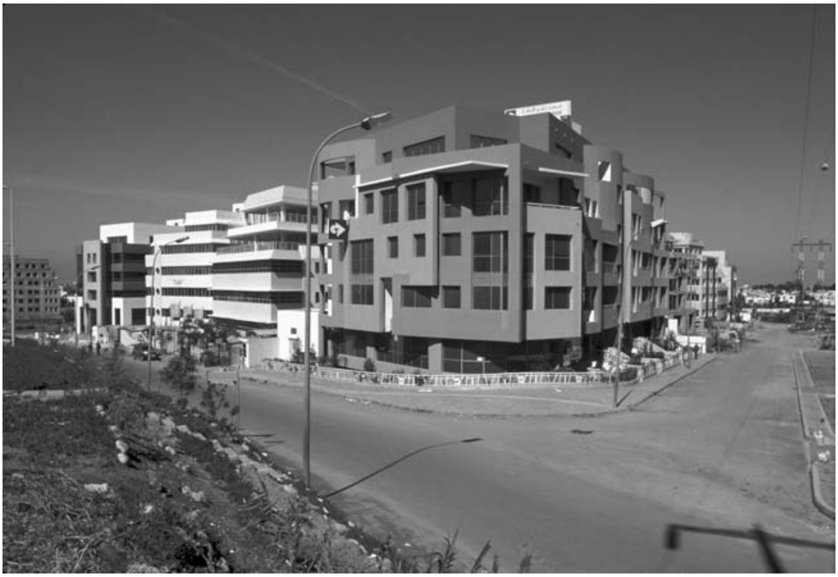


Fig. 11. New business center on the road to the airport, Sidi Maârouf,
2002, © Jean-Louis Cohen.

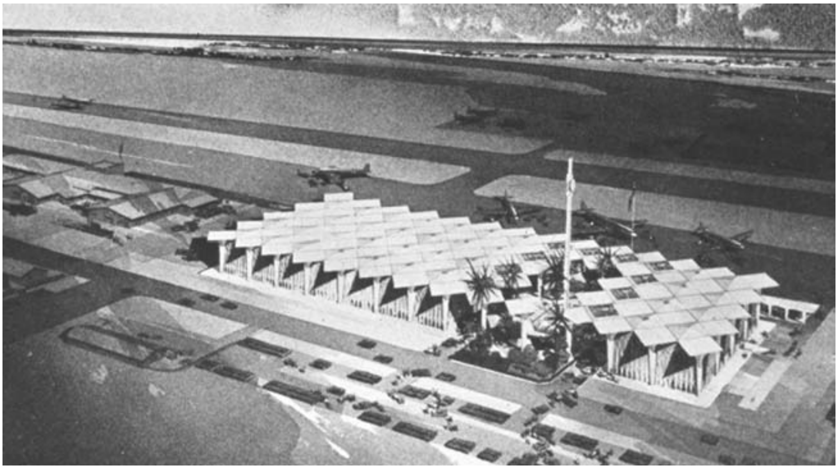


Fig. 1. Dhahran Airport, 1961, Minoru Yamasaki; a modernist interpretation of the nomad tent for a new building type. Courtesy: the Aga Khan Award for Architecture.

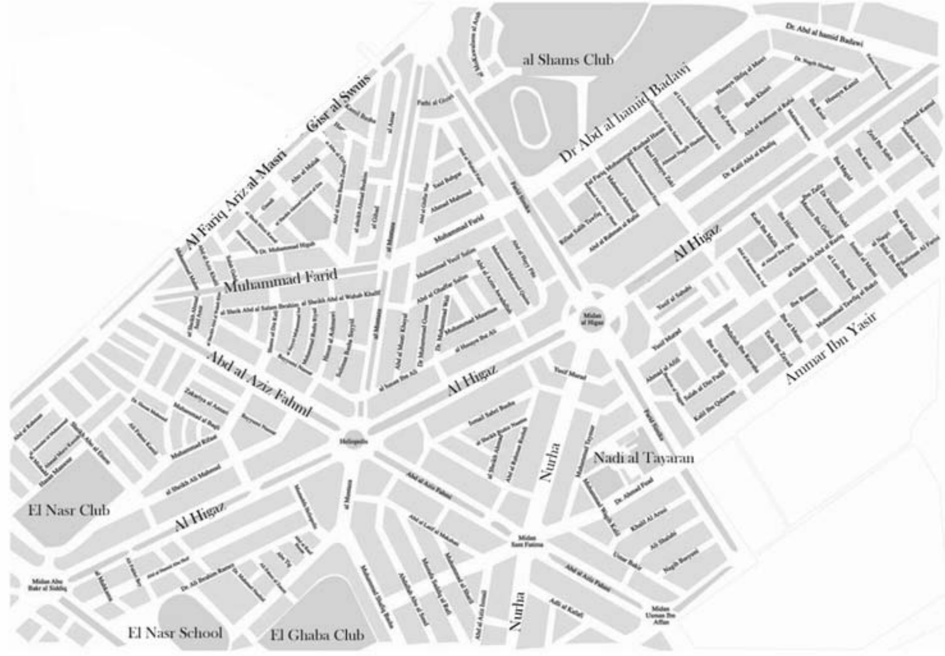

al Shams Club
Dr Abd al hamid Badawi
Gisr al Swiss
Al Fariq Aziz al Masri
Muhammad Farid
Abd al Aziz Fahmi
Al Higaz
Al Higaz
Al Higaz
Ammar Ibn Yasir
Nadi al Tayaran
Nurha
Nurha
Heliopolis
El Nasr Club
El Nasr School
El Ghaba Club

Fig. 2. Heliopolis, Egypt—plan. (Redrawn by N. Simone.)

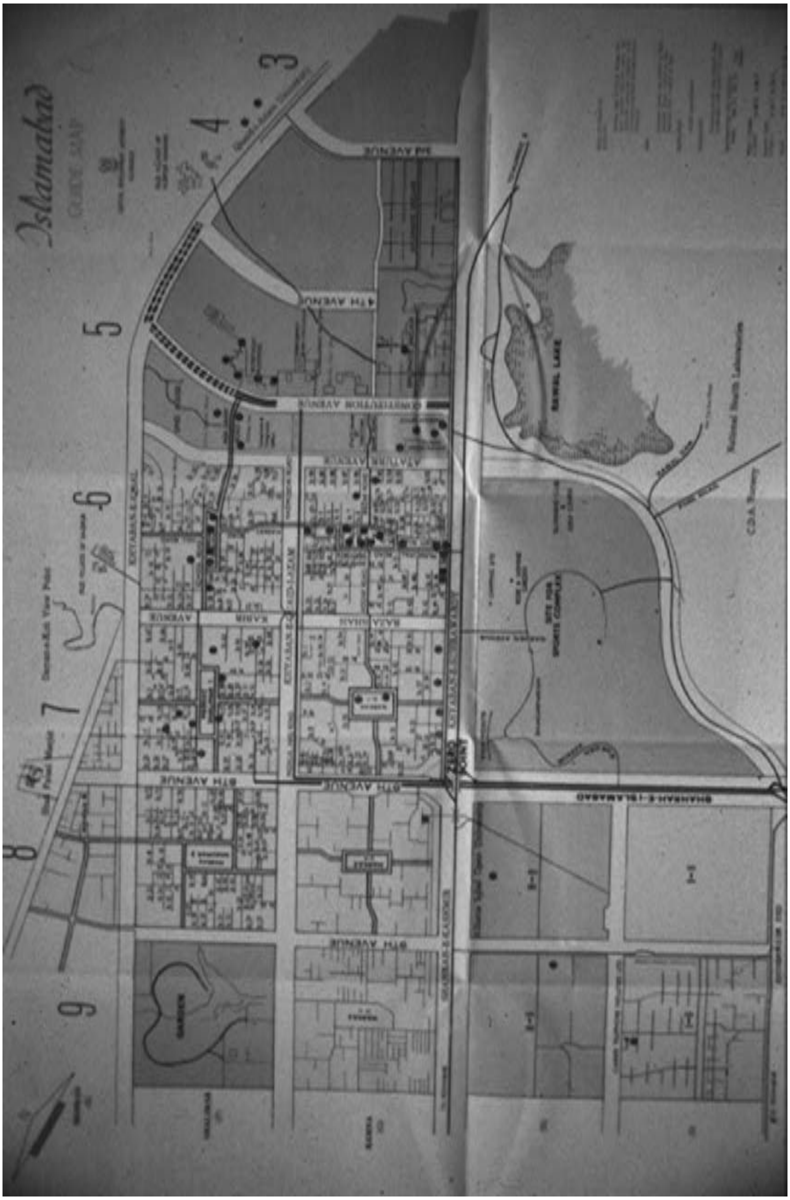

Islamabad
GUIDE MAP
3
4
5
6
7
8
9
CONSTITUTION AVENUE
ATATURK AVENUE
7TH AVENUE
9TH AVENUE
SHAHRAH-E-ISLAMABAD
RAWAL LAKE

Fig. 3. Islamabad Master Plan. (Islamabad Master Planning Department.)

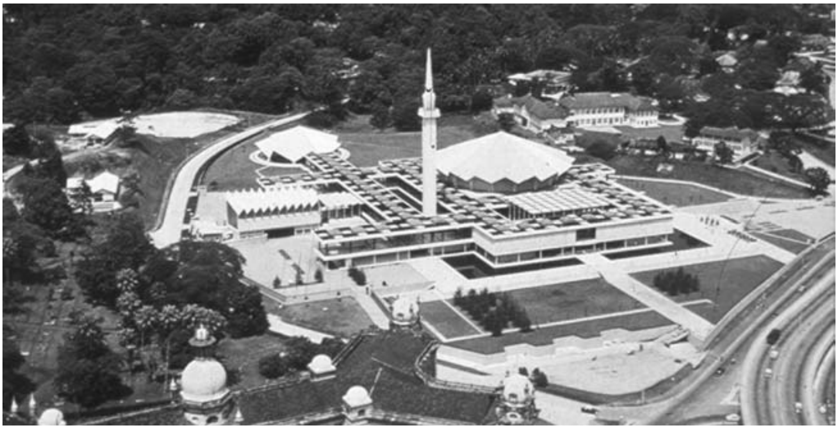


Fig. 4. Kuala Lumpur—National Mosque.

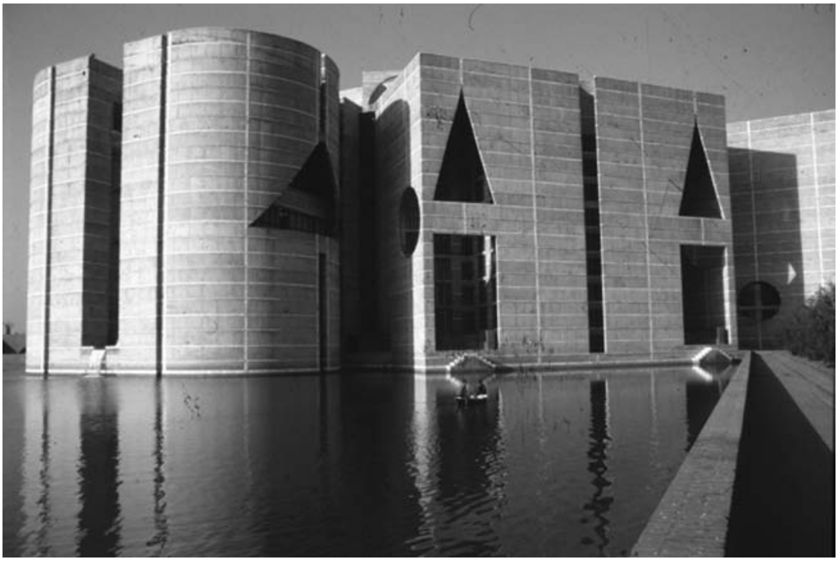


Fig. 5. Dhaka—Capitol. (H.U. Khan.)

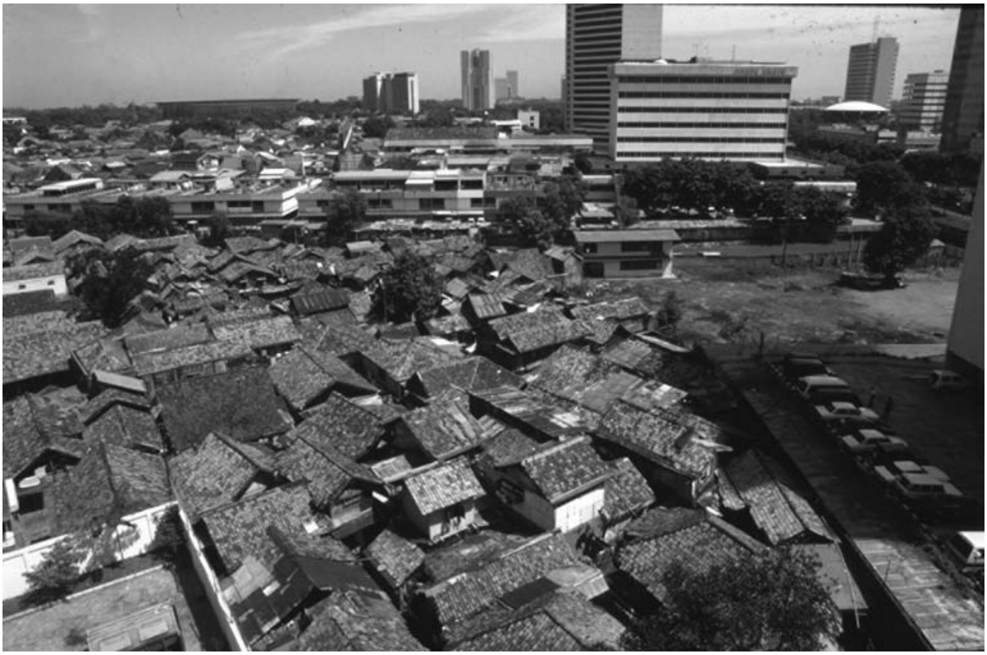


Fig. 6. Jakarta—Kampungs. (H.U. Khan.)

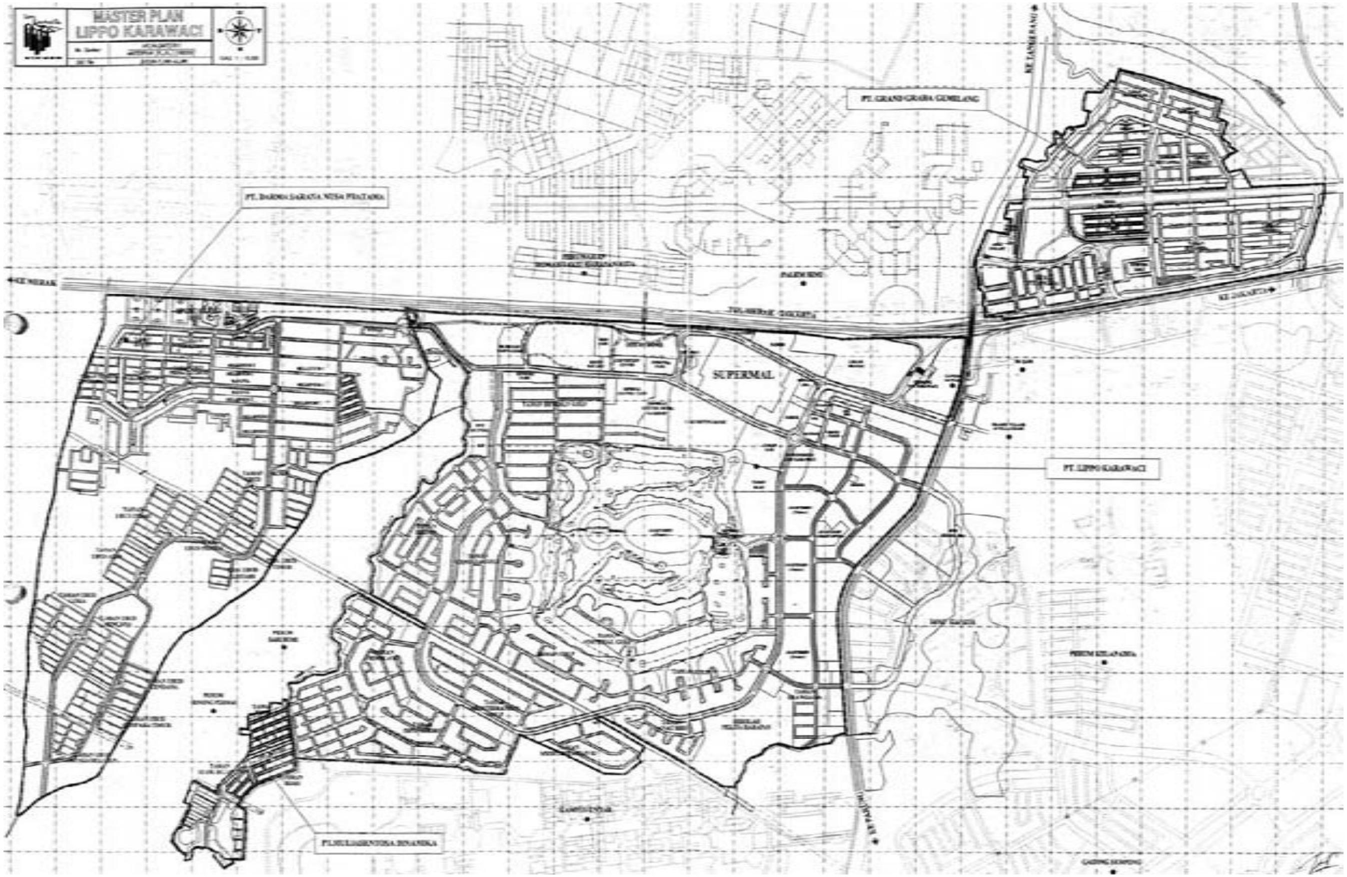

MASTER PLAN
LIPPO KARAWACI
PT. GRAND GRAHA GEMILANG
KE TANGERANG
KE JAKARTA
KE MERAK
SUPERMAL
PT. LIPPO KARAWACI

Fig. 7. Lippo Karawaci Plan.

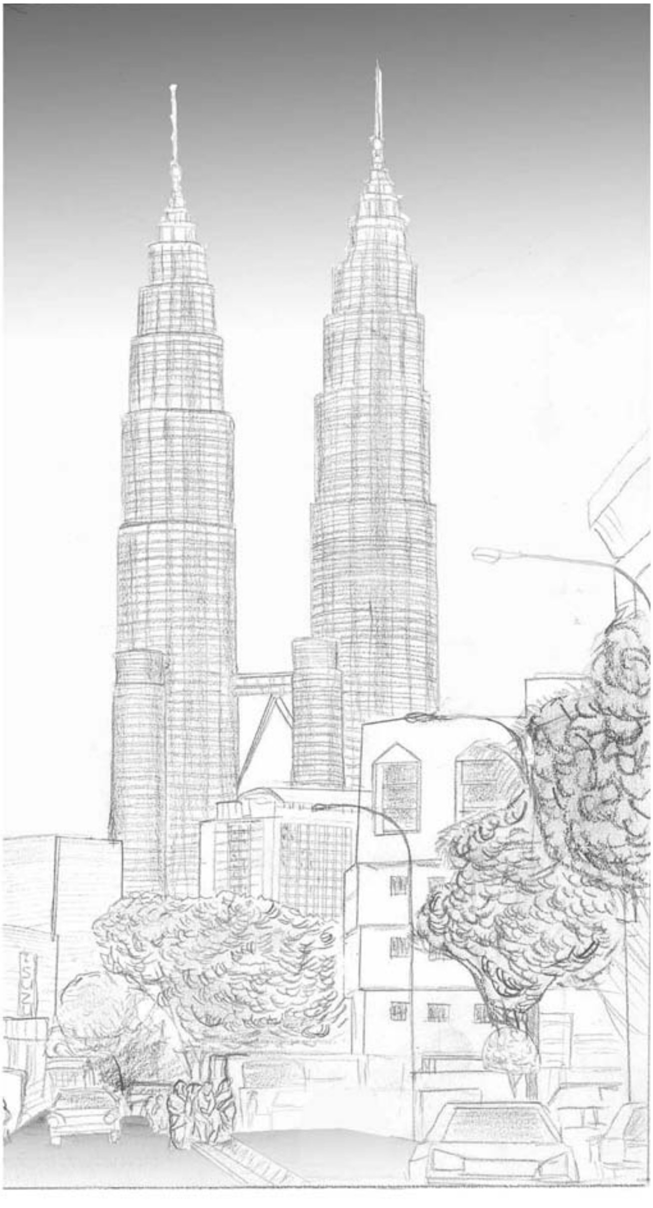


Fig. 8. Petronas Towers. (N. Simone.)

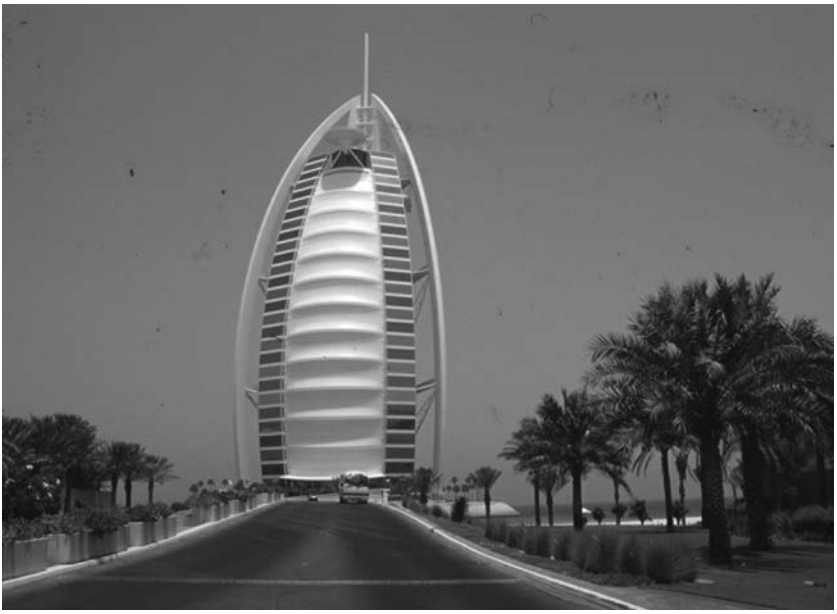


Fig. 9. Burj al Arab Hotel. (H.U. Khan.)

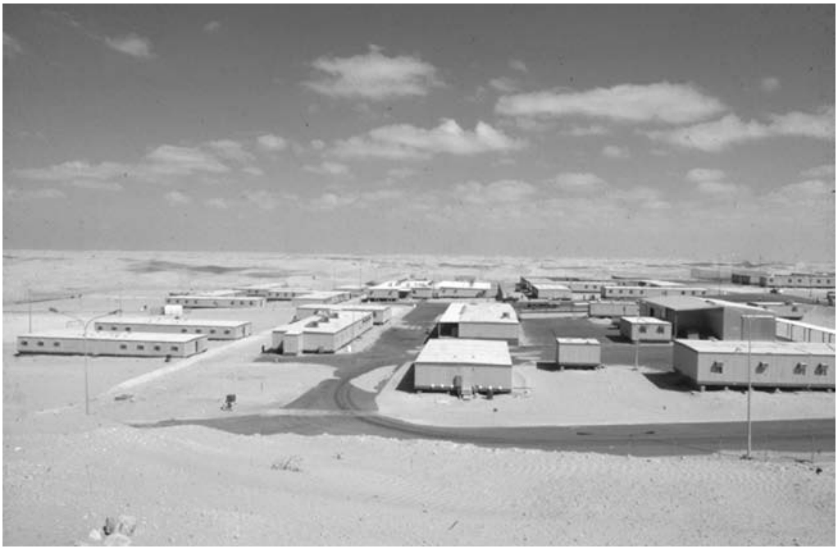


Fig. 10. Saudi Camp Housing. (Gary Otte.)

Fig. 11. Dubai—shopping mall. (H.U. Khan.)

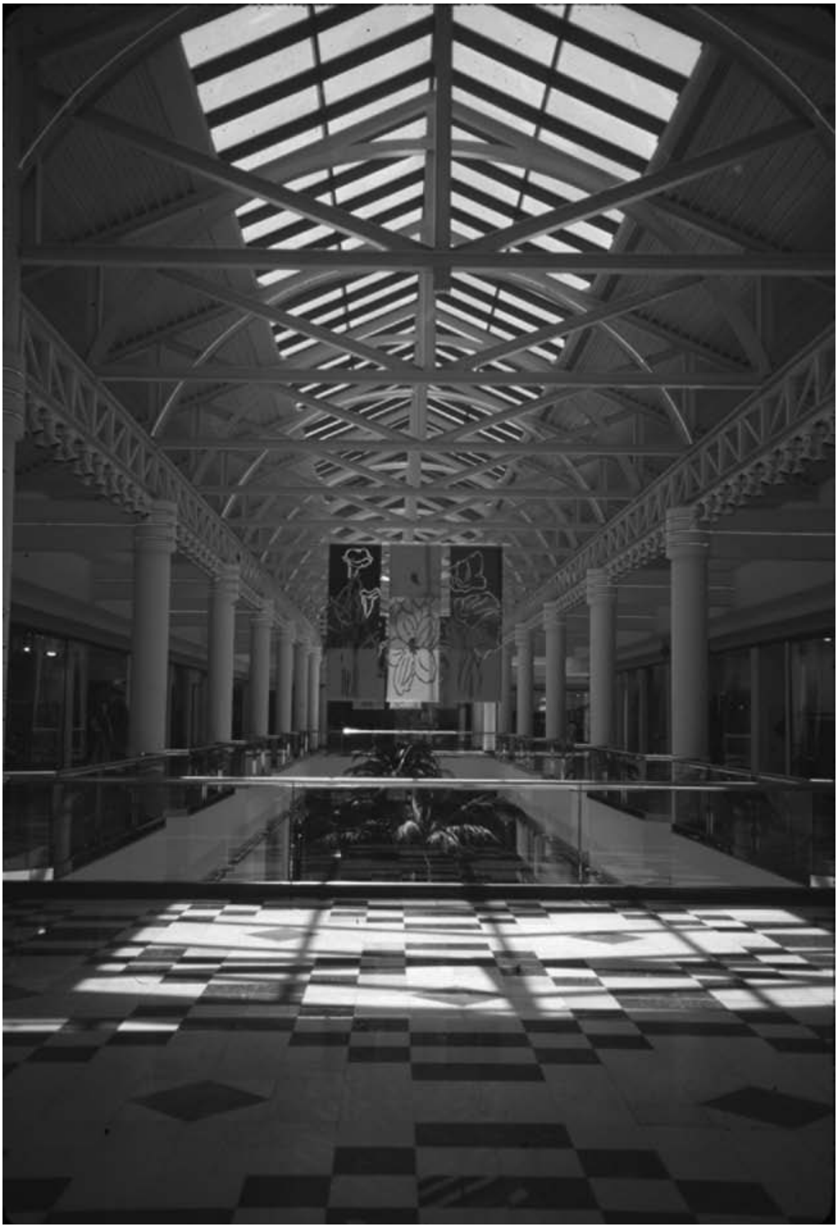


Fig. 11. Dubai—shopping mall. (H.U. Khan.)

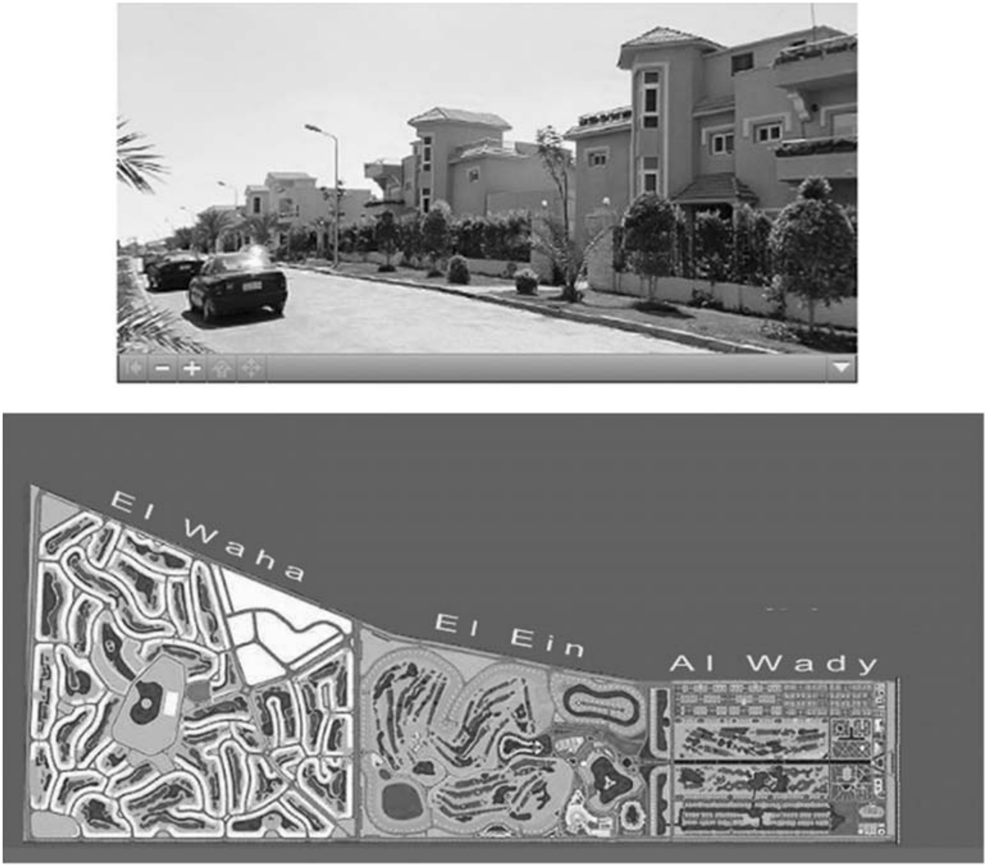

El Waha
El Ein
Al Wady

Fig. 12. Soleimania Golf City.

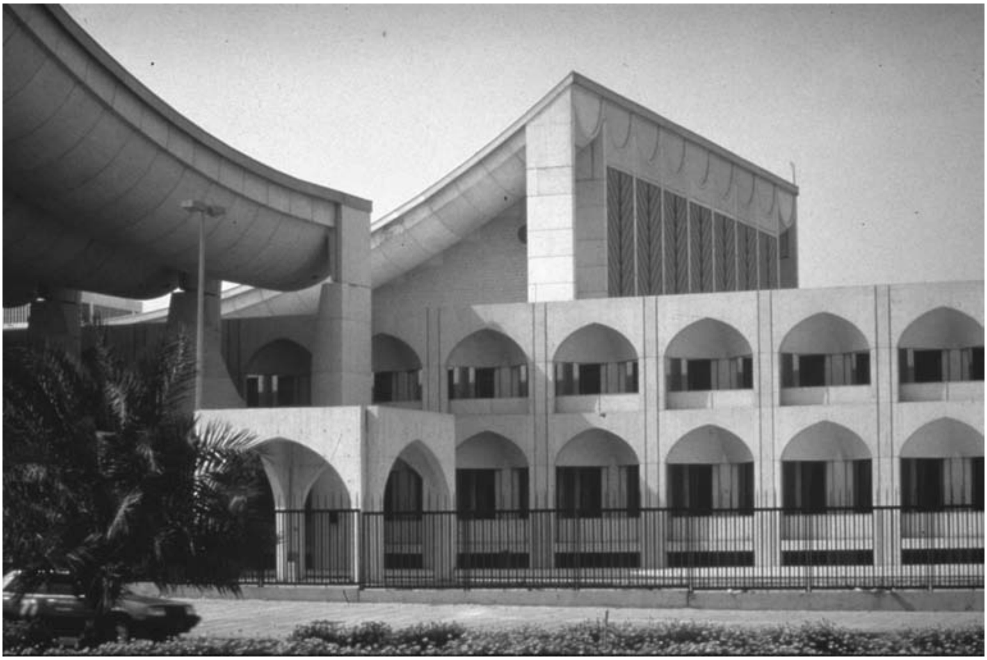


Fig. 13. Kuwait National Assembly Building. (Arch. J. Utzun.)
Courtesy of Aga Khan Award for Arch.

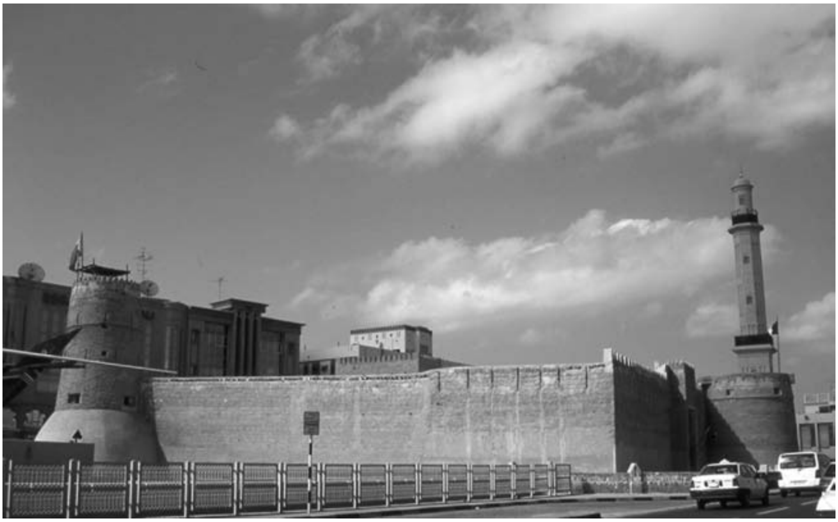


Fig. 1. Al Faheidi Fort.

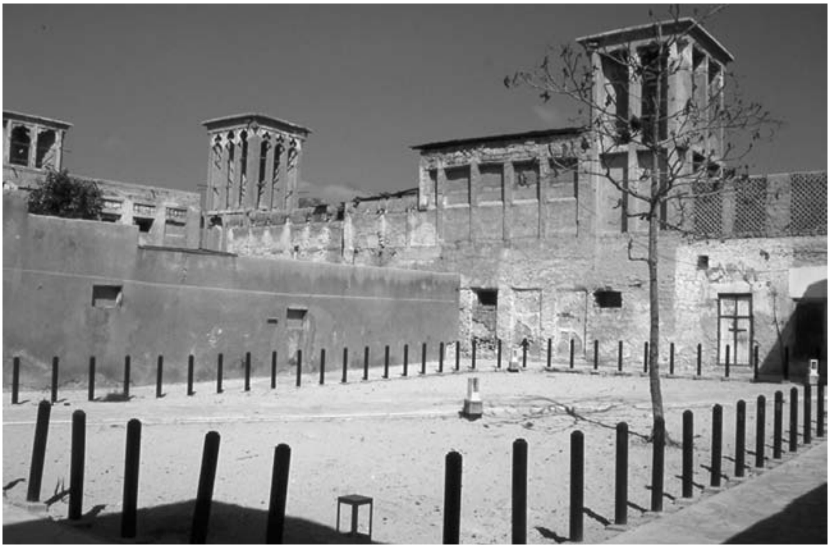


Fig. 2. Bastakiya.

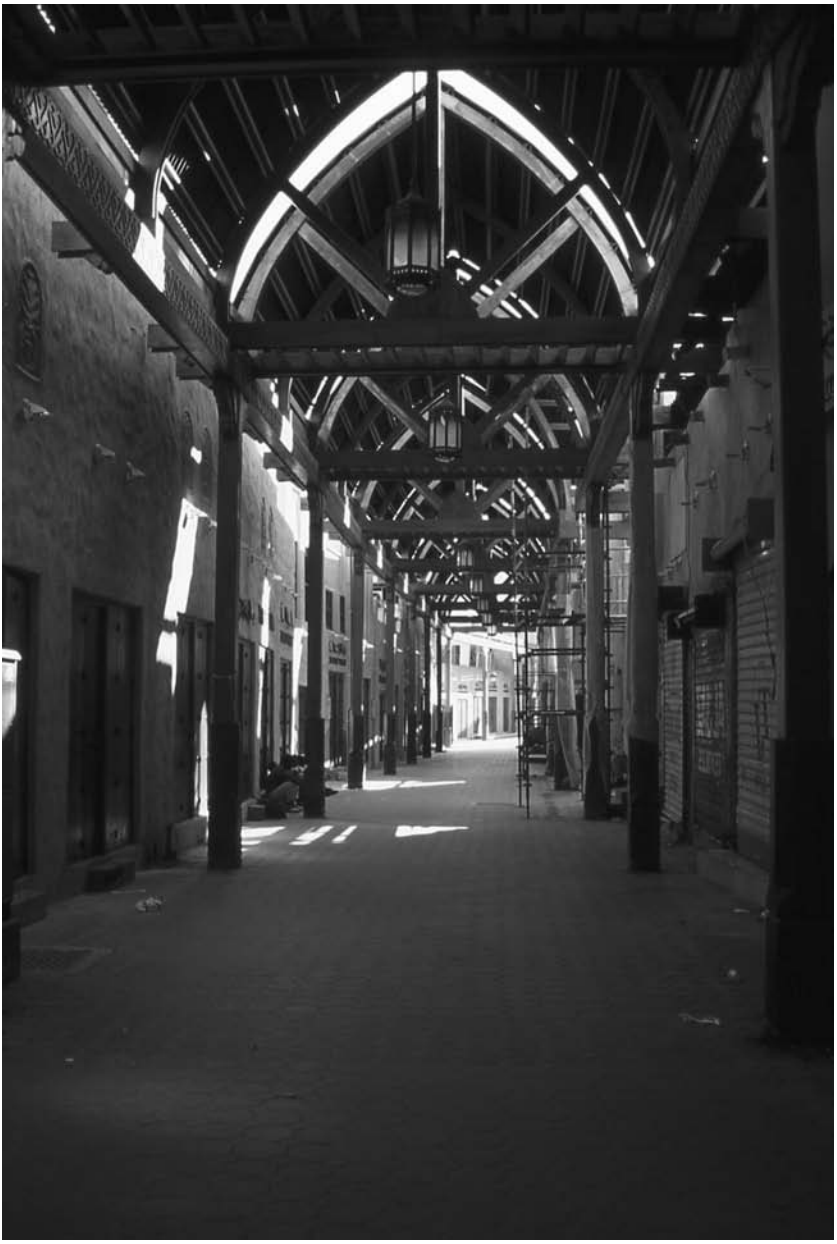


Fig. 3. Grand Souq with wooden roof structure.

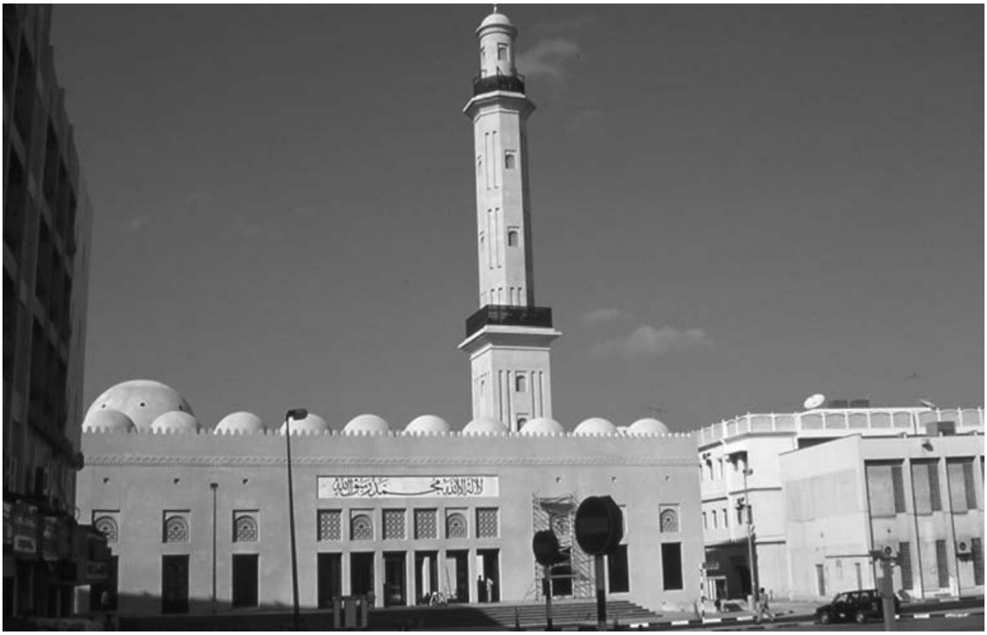


Fig. 4. Grand Mosque.

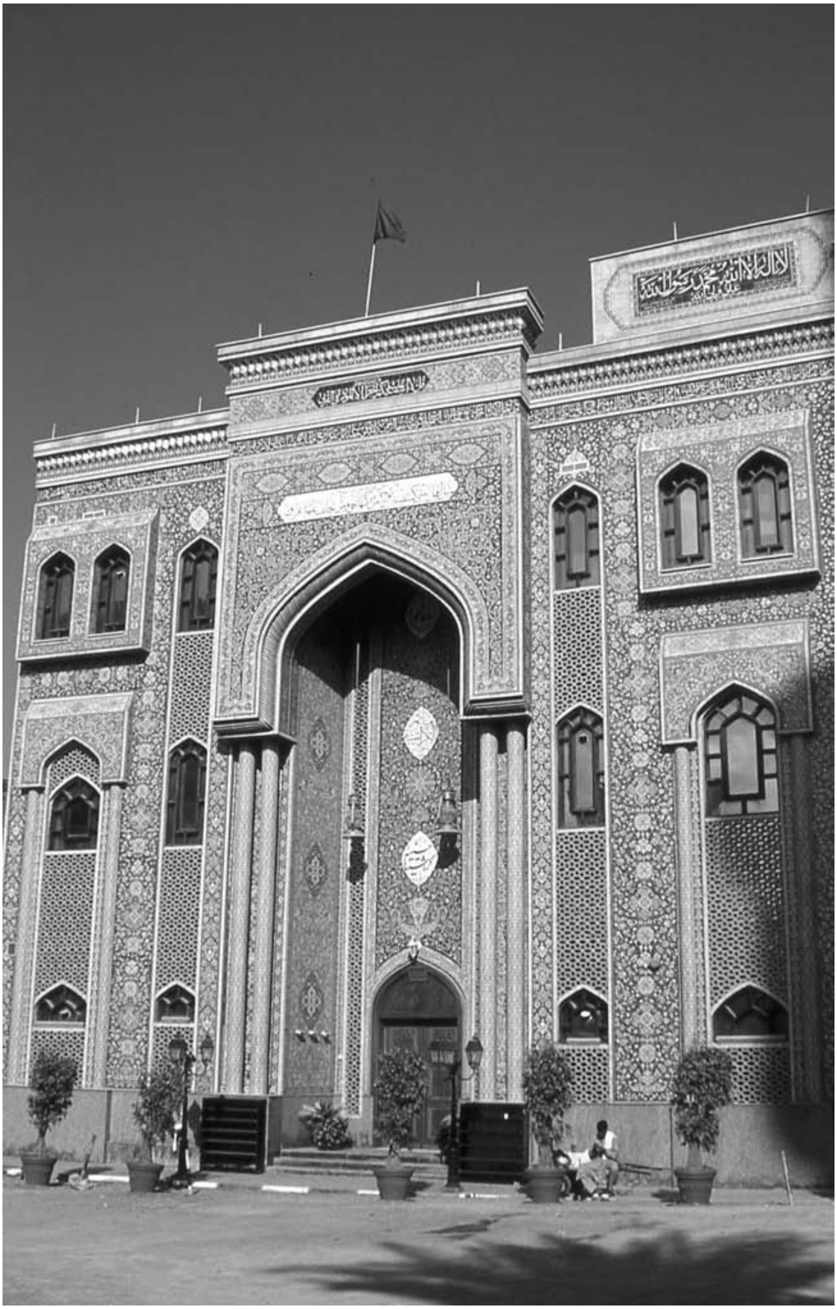


Fig. 5. Ali bin Abitaleb.

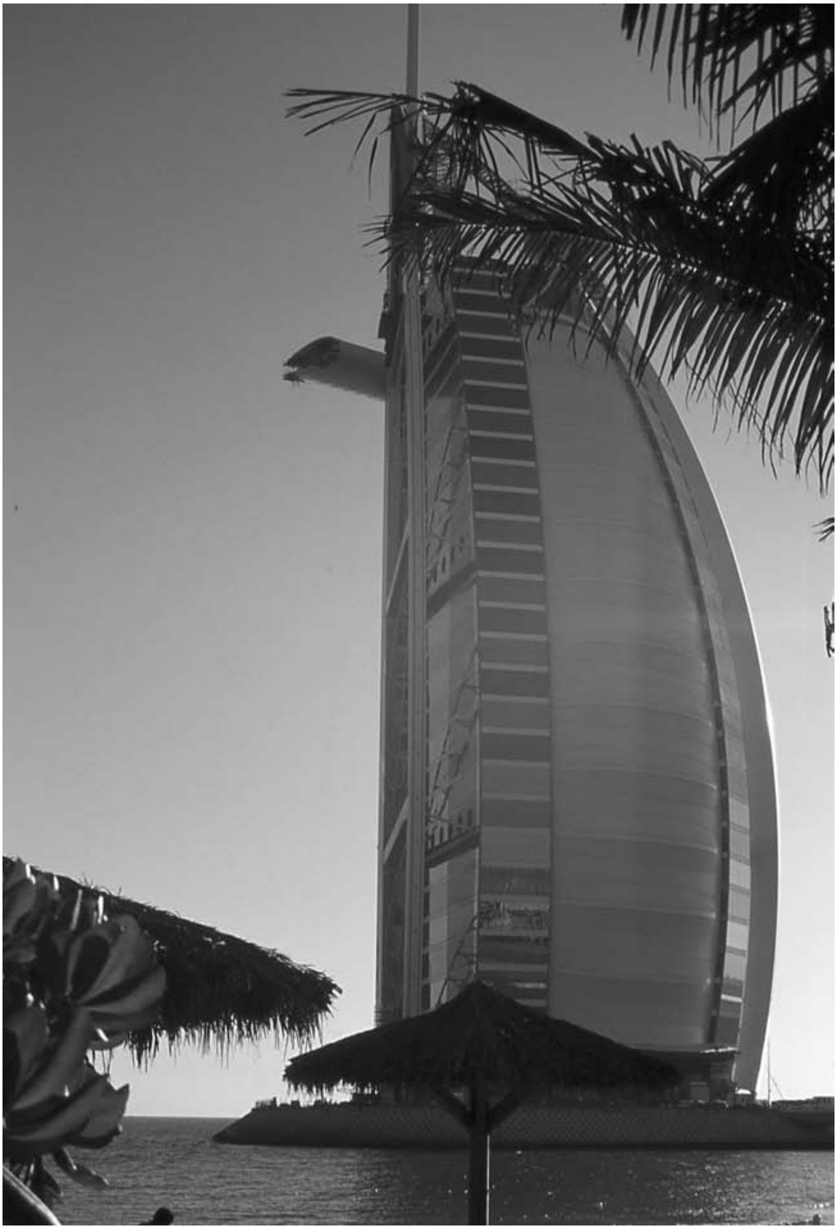


Fig. 6. Burj al Arab.

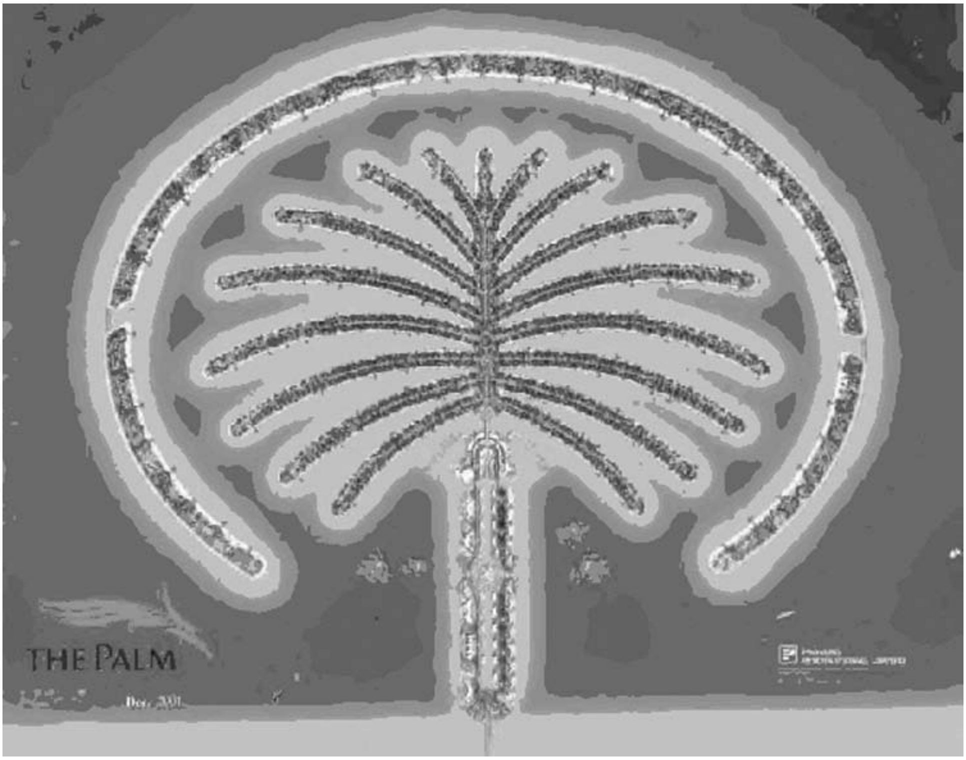
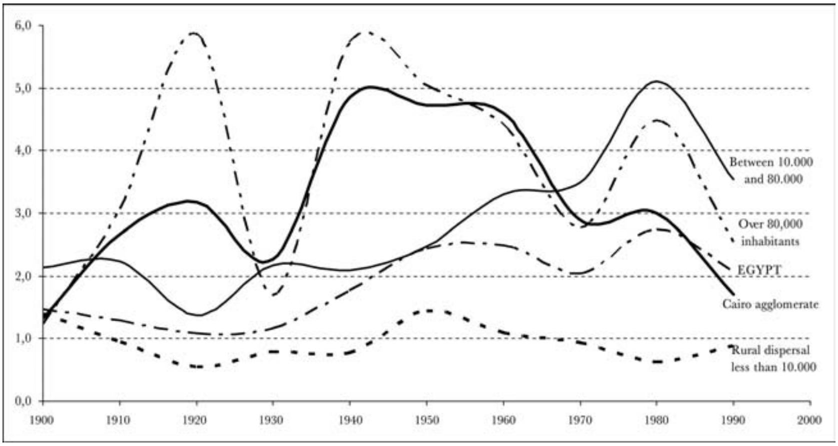
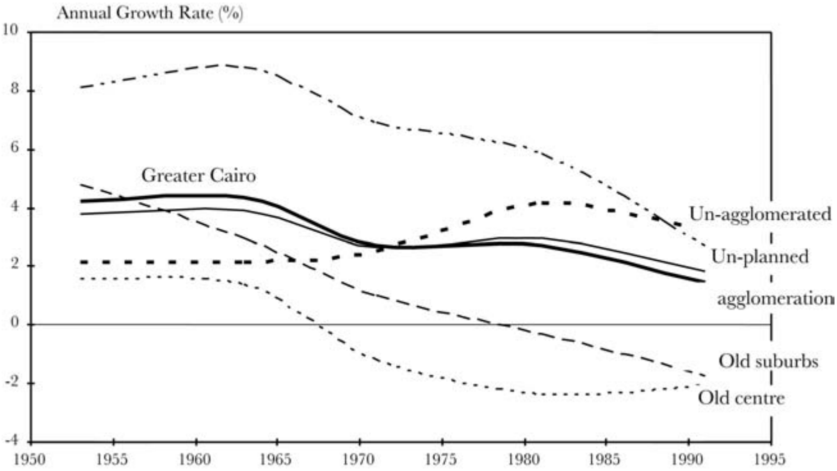

THE PALM
Dec. 2001

Fig. 7. The Palm Islands.



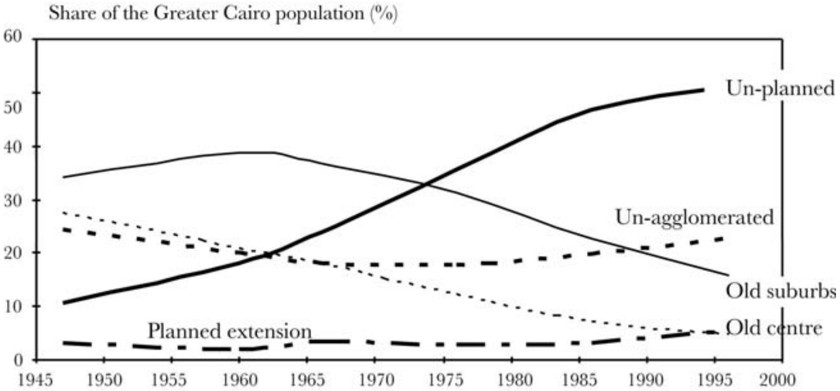
Census data; E. Denis, SEDET, 2004.

Fig. 1. Annual growth rate by agglomeration size, 1900–2000. The distribution used entities at constant limits based on the 1996 urban agglomerate.



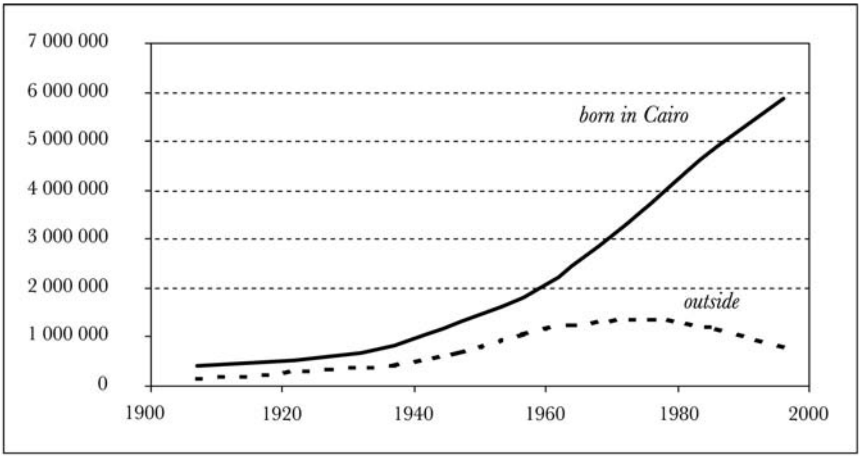
Census data; E. Denis, SEDET, 2004.

Fig. 2. Evolution of annual growth rates by types of quarter.



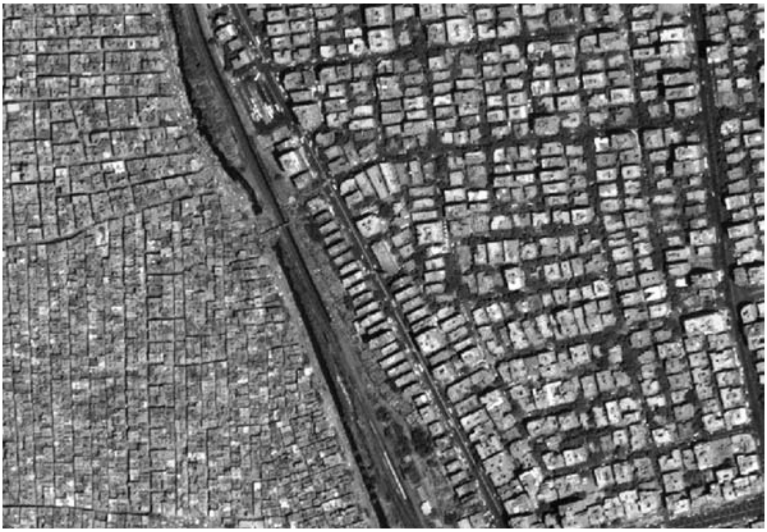
Census data; E. Denis, SEDET, 2004.

Fig. 3. Evolution of Greater Cairo population.



* Cairo Governorate only, not the metropolitan area
Census data; E. Denis, SEDET, 2004.

Fig. 4. Share of inhabitants born outside of Cairo in Cairo population 1907–1996*
Time life migration.



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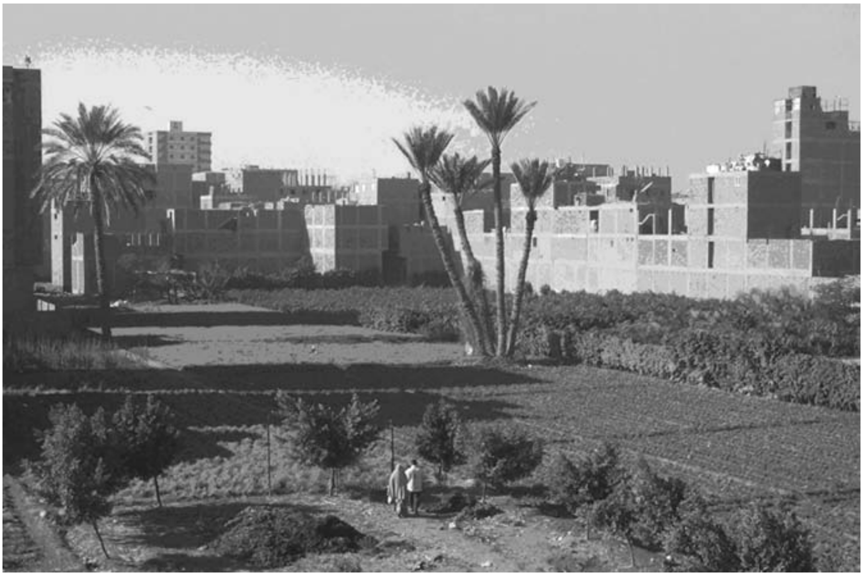


Fig. 6. Popular illegal settlement edge on agricultural private land—Giza, 2003. (D. Sims.)

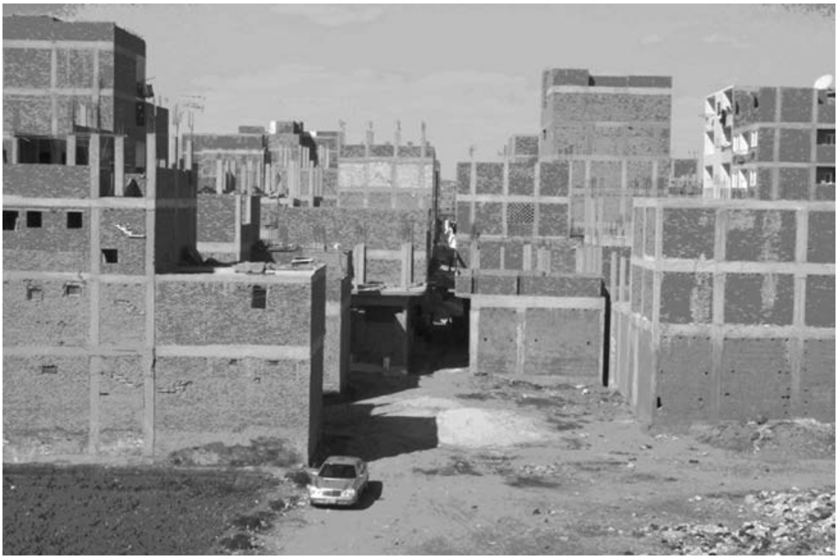
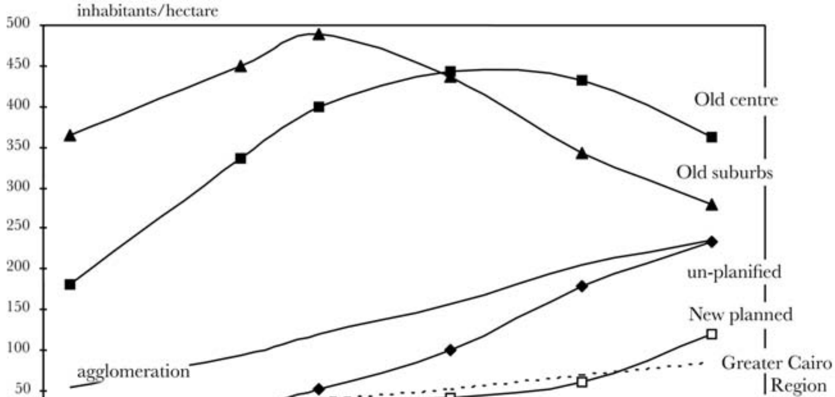


Fig. 7. Popular illegal settlement edge on agricultural private land—Giza, 2003. (D. Sims.)



Census data; E. Denis, SEDET, 2004.

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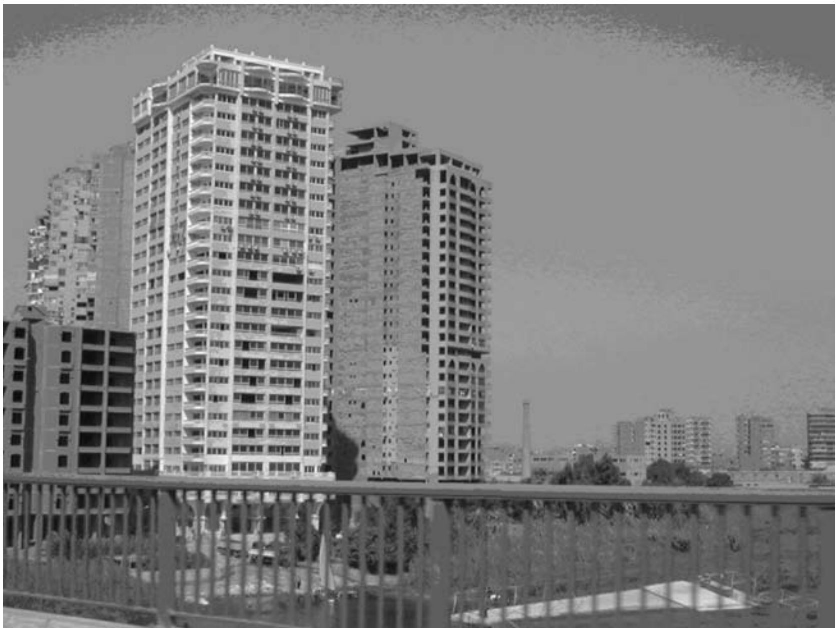

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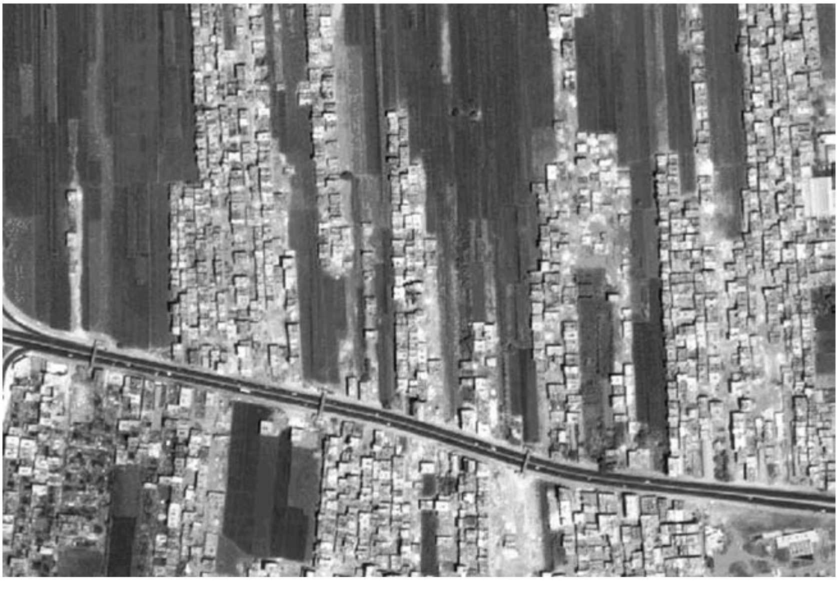

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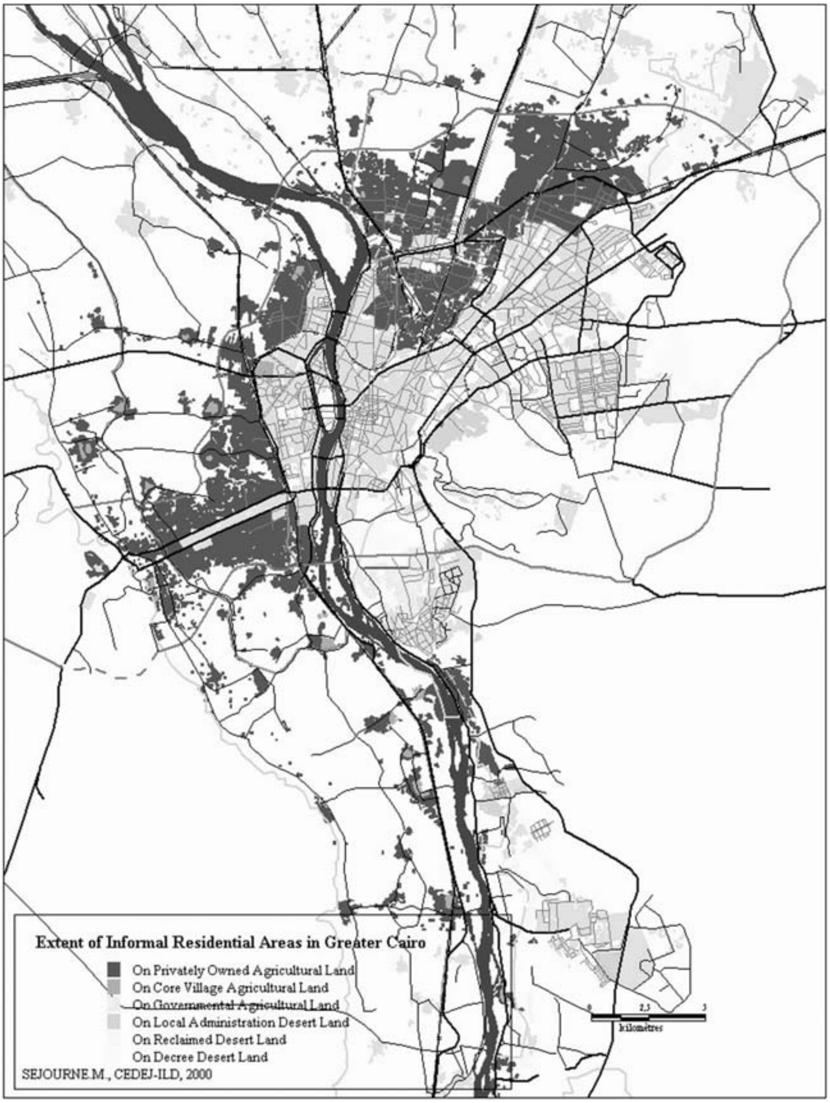
Extent of Informal Residential Areas in Greater Cairo
On Privately Owned Agricultural Land
On Core Village Agricultural Land
~~On Governmental Agricultural Land~~
On Local Administration Desert Land
On Reclaimed Desert Land
On Decree Desert Land
SEJOURNE.M., CEDEJ-ILD, 2000
0
2,5
5
kilometres

Fig. 11. Typology of illegal settlement within Greater Cairo area.

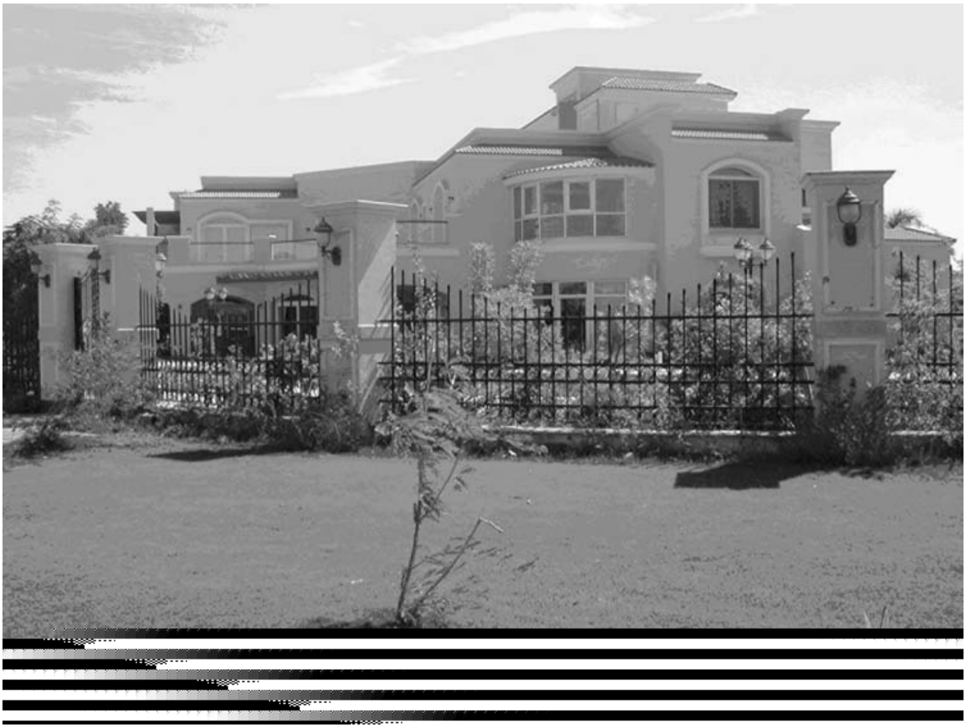

Fig. 12. Villa—Dream Land gated community—Near Six October New City, Giza, 2002. (E. Denis.)

Fig. 1. Plan of the centre of Beirut in 1912. Published in Palestine and Syria . . . Handbook for Travellers by Karl Baedeker, 5th ed. Courtesy of the General Libraries, the University of Texas at Austin. Downloaded at http://www.lib.utexas.edu/maps/lebanon.html.

Fig. 2. Proposal by Ernst Egli for transformations in Beirut and its suburbs, shown as part of an exhibit in 1950. Source: Egli collection, Archives of ETH-Zurich, Hs 785: 142.

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Source: Photo by J. Nasr©.

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Source: Photo by E. Verdeil©.

Fig. 9. Overview of central district, showing the emptied out Martyrs' Square on the right, and part of the ring road around the centre on the left. Photo by E. Verdeil©.

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