



Viewpoints Special Edition

Architecture and Urbanism in the Middle East

The Middle East Institute





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Viewpoints Special Edition

**Architecture and Urbanism
in the Middle East**

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A Special Edition of *Viewpoints*

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Introduction

MEI's special edition of *Viewpoints* on "Architecture and Urbanism in the Middle East" is an opportunity to celebrate the beauty, diversity, and vitality of the built environment of the region. It is also an opportunity to consider the challenges facing architects, designers, and developers in their efforts not only to preserve the rich cultural heritage of Middle Eastern cities but to shape these urban spaces in ways that address the physical and socioeconomic pressures occurring within them.

Indeed, as the contributors to this volume demonstrate, the Middle East's built environment is at an important juncture. There are major choices to be made if the region's urban development is to meet the needs and expectations of its peoples. The 15 essays comprising this volume are snapshots of the built environment arcing from the Maghreb through the Levant to the Gulf.

Taken together, the essays suggest the need for a new paradigm of designing Middle Eastern urban spaces for sustainability — comprehensive in that it encompasses all physical components of human settlements such as buildings, streets, public spaces, and infrastructure; balanced in that it supports physical and economic growth while accommodating the traditional and cultural needs of the local community; responsive in that it protects and enhances the health, safety, and general wellbeing of inhabitants; and innovative in that it incorporates new technologies into designs so as to reduce the stress on the natural environment.

Labyrinth: Moroccan Medinas

Simon O'Meara

By anyone's estimation, the medinas of Morocco are singular. To be sure, there is much that is uncommon about these gated and walled premodern cities that today form just one part of a number of Moroccan municipalities (e.g., Fez, Marrakech, Tetouan, and Tangiers). And there is much that is evocative about the word "medina" itself, conjuring up images, for example, of blind walls, hidden lives, and forbidding, twisting passages. Nevertheless, it is important to understand that these medinas are the fruition of a long experiment in Arab-Muslim urban design that has its roots in the pre-Islamic past and its decline in modernity.¹ In other words, for all their apparent inscrutability and potent connotations of traditional Muslim life, these medinas are neither timeless nor an immutable expression of Arab-Muslim, including Moroccan, civilization.



Figure 1: Fez, Ra's Aluyun neighborhood

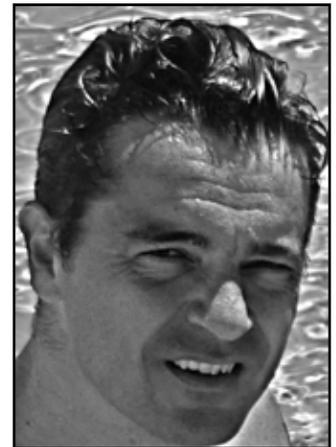
The duration and number of morphologies in this urban experiment is debatable, but not the fact that today's medinas belong to the final stage. For the urban historian André Raymond, this culminating morphology dates to approximately 1500-1800 and is best referred to as "la ville traditionnelle,"

the *traditional city*, as opposed to "la ville classique," the *classical city*, the stage that preceded it.² Following another historian's chronological model, this earlier stage dates to the beginning of the 11th century,³ when it in turn was preceded by another, slightly

1. Key articles in English on this subject include Hugh Kennedy, "From *Polis* to *Madina*: Urban Change in Late Antique and Early Islamic Syria," *Past and Present*, Vol. 106 (1985), pp. 3-27; Jere Bacharach, "Administrative Complexes, Palaces and Citadels: Changes in the Loci of Medieval Muslim Rule," in Irene Bierman *et al.*, eds., *The Ottoman City and its Parts: Urban Structure and Social Order* (Rochelle: Caratzas, 1991), pp. 111-28; Donald Whitcomb, "An Urban Structure for the Early Islamic City: An Archaeological Hypothesis," in Amira K. Bennison and Alison L. Gascoigne, eds., *Cities in the Pre-Modern Islamic World: The Urban Impact of Religion, State and Society* (London: Routledge, 2007), pp. 15-26.

2. André Raymond, *Arab Cities in the Ottoman Period: Cairo, Syria and the Maghreb* (Aldershot: Ashgate, 2002), p. 35.

3. Jean-Claude Garcin, "Le moment islamique (VI^e-XVIII^e siècles)" ["The Islamic Moment (7th-18th Centuries)"], in Claude Nicolet *et al.*, eds., *Mégapoles méditerranéennes: Géographie urbaine rétrospective. Actes du colloque organisé par l'École française de Rome et la Maison méditerranéenne des sciences de l'homme (Rome, 8-11 mai 1996)* [*Mediterranean Megacities: Retrospective Urban Geography. Minutes from the Colloquium Organized by the French School of Rome and the Mediterranean House of the Sciences of Man (Rome, May 8-11, 1996)*](Paris/Rome: Maisonneuve et Larose/École française de Rome, 2000), p. 99.



Simon O'Meara is Assistant Professor of History of Art at the American University of Kuwait. He researches the sociological dimensions of Islamic art and architecture, with a regional focus on North Africa.

different morphology, and so forth.



Figure 2: Fez, Ra's Aluyun neighborhood

Space prevents the enumeration of each stage's defining characteristics (supposing this even could be done fully, given the incomplete evidence for the pre-traditional stages), but with reference to Moroccan history it seems clear that the earliest phase was rudimentary: fortified townships built by the warring Idrisid dynasty (789-949) in their efforts to colonize and Islamicize the western Maghrib.⁴ And although all subsequent stages were complicit to some degree in this hegemonic program, what we find today in a traditional medina such as those in Fez and Marrakech is evidently a far cry from these basic, essentially militarist beginnings — with at least one important exception. At the heart of each stage stood or still stands a Friday mosque (*jami'*), also known as the “cathedral” mosque. In other words, the centripetal organization of the traditional Moroccan medina, whereby both economic activities and domestic residences were, broadly speaking, arranged in ascending order of religious and monetary value respectively, from periphery to center, likely has been followed from the start.⁵ Certainly, with regard to the orthodox doctrines of Islam current at any one period, as one headed inside a medina of whatever stage, so one headed towards a moral center, if not *the* moral (and also economic) center.

This sense of journeying towards something of exalted value allows me to venture the following: It might prove productive for comparative scholarship⁶ to revive informally the notion of the traditional Moroccan medina as a labyrinth (as stated above, we cannot be certain of the earlier stages' streetscapes), provided we do not simultaneously revive the pejorative connotations of disorder, irrationality, and civic incompetence which the notion frequently had in Orientalist literature.⁷ Guillermo del Toro, the director of the 2006 film *Pan's Labyrinth*,

expresses well much of the meaning I intend here by the word: “[A] labyrinth is essentially a place of transit, an ethical, moral transit to one inevitable centre.”⁸ Missing only from this definition is the fact that once at this center, transit com-



Figure 3: Fez, Oued Chorfa neighborhood

4. For a clear exposition of this period in Moroccan history, see Michael Brett, “The Islamisation of Morocco: From the Arabs to the Almoravids,” *Morocco: Journal of the Society for Moroccan Studies*, No. 2 (1992), pp. 60-1.

5. For further discussion of the traditional medina's centripetal structure, what André Raymond calls radio-concentricity, see André Raymond, “Urban Life and Middle Eastern Cities: The Traditional Arab City,” in Youssef M. Choueiri, ed., *A Companion to the History of the Middle East* (Malden: Blackwell Publishing, 2005), pp. 214-17.

6. As outlined, for example, in Lindsay Jones, *The Hermeneutics of Sacred Architecture: Experience, Interpretation, Comparison. Vol. 2: A Morphology of Ritual-Architectural Priorities* (Cambridge: Harvard CSWR, 2000).

7. The notion also holds true for a number of non-Moroccan, traditional medinas. See, for example, Roberto Berardi, “The Spatial Organization of Tunis Medina and other Arab-Muslim Cities in North Africa and the Near East,” in Salma K. Jayyusi et al., eds., *The City in the Islamic World*, 2 vols. (Leiden: Brill, 2008), pp. 1, 282, and 292-3.

8. Cited in Mark Kermode, “Girl Interrupted,” *Sight & Sound* 12 (December 2006), <http://www.bfi.org.uk/sightandsound/feature/49337/>. For a different usage of the term, see the author's *Space and Muslim Urban Life: At the Limits of the Labyrinth*

mences anew: a return exit or a departure for a new center, one immaterial and spiritual, apparent solely from where the traveller now stands. “[T]he labyrinth,” writes the historian of religion Philippe Borgeaud, “is both the path which leads toward a center, toward a new mode of existence, and the enchanted artifice which prevents any exit if one has not taken care to leave path marks ... When he comes to the end of his quest the pilgrim sees the desired center transformed into a confusion which conceals from him the new center toward which he must now direct himself, retracing his steps. The labyrinth always has two centers: where one is and where one desires to be. ... To emerge from the labyrinth is equivalent to entering a new labyrinth. The labyrinth itself is the place of its own passage.”⁹



Figure 4: Fez, Bab Jedid

The architecture of much of the traditional Moroccan medina's streetscape enhances this illusion of perpetual transit. Better illustrated than described, this phenomenon is shown below in photographs of the medinas of Fez and Marrakech. Essentially, the impression is that as you walk through the medina, primarily via the secondary and tertiary routes that weave in and out of the residential quarters, your gaze is drawn ahead to the sky-lit breaks in the walls and ceilings enclosing your passage. But as you reach any one of these openings, its quality as a one-time focal point of your path disappears and another near-distant opening draws your gaze again. As in an ever-receding desert, your arrival seems deferred.

of Fez (London: Routledge, 2007).

9. Philippe Borgeaud, “The Open Entrance to the Closed Palace of the King: The Greek Labyrinth in Context,” *History of Religions*, Vol. 14, No. 1 (1974), p. 23.

Tourism and Preservation in Colonial North Africa

Brian McLaren

The tourist development of North Africa during the period of colonization is one of the most interesting and least examined influences on the architecture and urbanism of the region. Seeking to create a well-organized and efficient tourist system, French and Italian colonial authorities made a considerable investment in the preservation of the Islamic architectural heritage — a building tradition that was the most important attraction for foreign tourists. In visiting the region today, many significant historical sites as well as much of the tourist infrastructure from the colonial period reflects the contemporary European attitudes towards Islamic architecture and urbanism. According to this view, the Islamic heritage of North Africa was seen as inferior to and derivative of Western building traditions.



Brian L. McLaren is an Associate Professor in the Department of Architecture at the University of Washington, where he teaches architectural history, theory, and design.

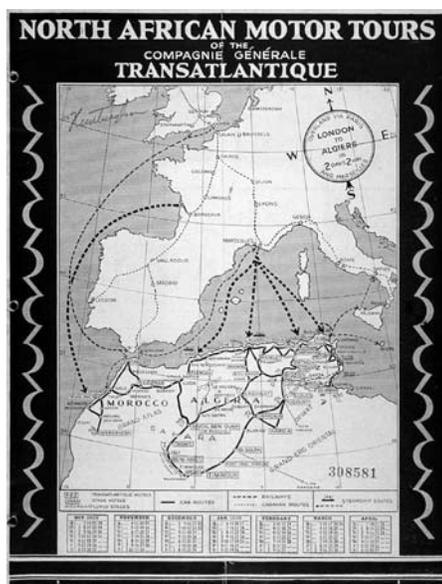


Figure 1: Map of Tourist system in Algeria, Tunisia, and Morocco, from *North African Motor Tours of the Compagnie Générale Transatlantique* (London: Hill, Siffken & Co., 1928).

European colonization was, however, not the first external influence on the architecture and urbanism of North Africa, which had for many centuries been a place of international trade and exchange. Islamic North Africa was under the control of the Ottoman Empire, whose presence in the region dates back to 1519. The nature and extent of foreign intervention changed decisively with the French invasion of Algeria in 1830, which was followed by France's colonization of Tunisia in 1881 and Morocco in 1910. After the Italian invasion of Libya in 1911, the region reached a new phase in which all of its territories were treated as being under European economic organization and political values. In part due to the importance of an

emerging tourist system to the local economies of these colonies, the preservation of local culture began to be an important consideration in the region's architecture and urban planning.

In the French colonies of Algeria, Tunisia, and Morocco, the private steamship company, the *Compagnie Générale Transatlantique* (CGI), created a coordinated network of transportation services as early as 1918. This modern tourist system grew rapidly through the creation of a network of accommodations linked by scheduled bus and

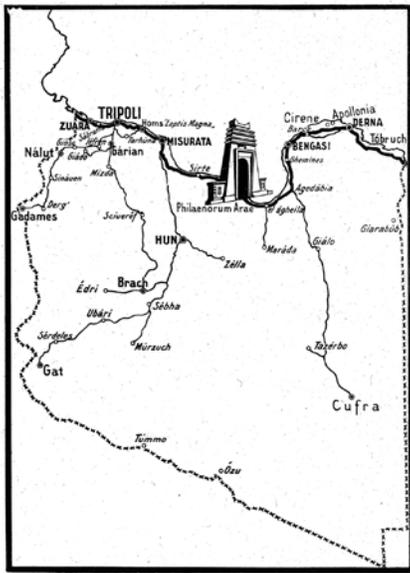


Figure 2: Map of road system in Libya from Tripoli: *Piccola guida pratica e pianta della città* (Tripoli: Unione Coloniale Italiana Pubblicità & Informazioni, 1938).

auto transportation. By 1928 this system included 43 hotels and 19 automobile itineraries that covered some 25,000 kilometers. The result was a continuous network of travel under the direction of the CGI that connected Bordeaux and Marseilles with major centers like Marrakech, Casablanca, Tangier, Algiers, and Tunis, as well as more remote locations like the oases of Timimoun and Ghardaia in the Algerian Sahara. The publicity material that advertised this system speaks of a unique chain of modern hotels that allowed for travel into the interior of Algeria, Tunisia, and Morocco.

A similar though later development took place in the Italian colony of Libya, whose earliest tourist improvements began under the direction of Governor Giuseppe Volpi (1921-25). This progress culminated during the Governorship of Italo Balbo (1934-40) with the foundation of the *Ente turistico ed alberghiero della Libia* (ETAL) in May of 1935. As a state-sponsored corporation, this group provided the services of a travel agency, acted as tour operator, managed a network of hotels, and supervised a group of entertainment facilities that included a theater and casino. By the end of the 1930s, the tourist system of the ETAL was comprised of a network of 18 hotels located throughout Libya, as well as numerous affiliated entertainment and tourist facilities in Tripoli and Benghazi and several travel offices in Italy and Libya. The combination of activities and resources not only allowed the ETAL to provide an inclusive package of services for a tourist audience, but also enabled it to provide a tourist experience that extended the comforts of European travel to the colonial context.

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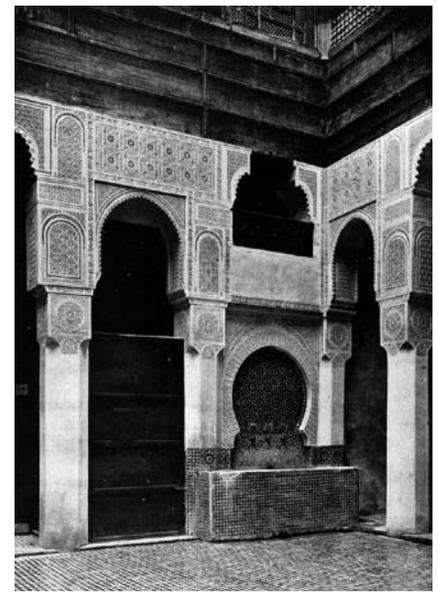


Figure 3. Interior courtyard of Dar Adiyel Palace (17th century), Fez, Morocco. [Dedalo Vol. 9, No. 12 (May 1929), p. 743].



Figure 4: Interior of the Mosque of Ahmad Pasha Qaramanli (1736), Tripoli, Libya. [Dedalo Vol. 7, No. 8 (January 1927), p. 501].

that extended the comforts of European travel to the colonial context.

Despite the importance of tourism in North Africa being connected to an efficient and modern system of travel and accommodation, the tourist experience of the native culture was the prime motivation for travel. It was largely in support of this experience that the colonial authorities in the French and Italian colonies put considerable effort into a systematic study of the local culture. Not only were numerous books published on this material, but additionally many indigenous buildings were preserved. The results of such preservation programs include the Dar Adiyel Palace in Fez, Morocco and the Qaramanli Mosque in Tripoli, Libya — both of which were significant historical buildings that became an important part of the tourist itiner-



Figure 5 View of Hotel de la Mamounia, Marrakech, Morocco (1923, Henri Prost and A. Marchisio). [Henri Descamps, *L'Architecture moderne au Maroc, II – Constructions particulières* (Paris: Librairie de la Construction Moderne, 1931), Plate 15B].

ary. Even though these projects were directed by the most respected scholars in the field, their preservation emphasized the impact of European building sources and craft traditions on the Islamic heritage — an emphasis that was a subtle validation of the French and Italian colonial mission in the region.

What is similarly interesting about the tourist system in North Africa during the colonial period is that its architecture and urbanism quite often followed a preservationist approach in an effort to reference the existing environment and indigenous building traditions. Projects such as the Hotel de la Mamounia in Marrakech, Morocco and the Hotel Ain el-Fras in Ghadames, Libya, exhibit a contemporary architectural language that is deeply indebted to the Islamic heritage. In this

case, however, this approach created a tourist environment that obscured the distinction between the historic architecture and the contemporary colonial presence. The blurring of boundaries between the existing building traditions and the European colonial impact confuses any real sense of the local cultural identity in its own time. In addition, these tourist projects and the related enhancements of the urban and physical landscape gave an ambivalent status to the historic traditions of these newly independent nations during the postcolonial period and continue to shape the tourist understanding of the local culture today. As a result of the French and Italian preservation efforts — which were conducted for the purposes of providing an authentic tourist experience — the Islamic cultural heritage of North Africa continues to be read through the lens of European colonial domination.



Figure 6: Postcard view of courtyard, Hotel Ain el-Fras, Ghadames, Libya (1935, Florestano Di Fausto and Stefano Gatti Casazza). [Author's collection].

Cairo's Plurality of Architectural Trends and the Continuous Search for Identity

Ashraf M. Salama

Egyptian politics, knowledge, and culture are rooted in the modern physical, socio-cultural, and socio-economic realities of Cairo. History — reflecting the intersection of place, society, culture, and technology — adds another dimension to Cairo's architecture and urbanism. As a result, Cairo today is a complex and diverse city of over 18 million inhabitants with a range of well-established traditions and an array of often competing symbols of religious, political, institutional, and economic powers.

The Egyptian economy has unquestionably influenced the process of urbanization in Cairo. The Open Door Policy (1974-1981) placed emphasis on encouraging the private sector, at both regional and international levels, to develop and implement new investment plans. Laws pertaining to taxes and trade were tailored to facilitate foreign investment and international trade. During the 1980s, a period of economic reform, the government's policy was to develop plans geared towards both economic and social development and to encourage international investment in several development realms. The privatization era, which started in 1991, emphasized effective interaction with market dynamics, the aim being to transform government projects into private ventures and to minimize and



Figure 1: The Supreme Court of Egypt, designed by Ahmad Mito. An explicit example of historical revivalism.

limit the role of the public sector and its involvement in strategic projects crucial to the national economy. This trend, which manifested itself in intensive industrial development and a withdrawal of investment from the agricultural sector, has had a marked effect on the urbanization process.

The repercussions of these policy phases on Egyptian urbanism are evident, especially when one looks at private sector investment in mass housing and industrial development around greater Cairo. A redistribution of powers has been conceived in which the government role is supposed to be minimal in the areas of production and development and maximal in environmental protection. The government's role was to provide security, safety, and public services; to direct the activities of the private sector for the benefit and welfare of the general public; and to create employment opportunities. The failure of the government to fulfil this role resulted in a private sector monopoly in the delivery of these services, which became subject to market speculation. The aggressive participation of the private sector in housing and service delivery led to inflation and



Dr. Ashraf M. Salama holds BSc, MSc, and PhD degrees in Architecture. He is Professor of Architecture and currently holds a Reader in Architecture Position at Queens University Belfast, and has held academic positions in Saudi Arabia and Qatar. He was the Director of Consulting at Adams Group Architects in Charlotte, North Carolina (2001-04).

an overheated real estate market. Clearly, the private sector targets strategic locations inside the urban perimeter of Cairo for developing large-scale luxury commercial and office buildings. It also aims at housing projects in the new cities around Cairo, at the affluent population and the upper middle class.

Within the economic context of Cairo, several architectural and design positions have emerged to deal with these issues. However, many of the projects that were created left the city to suffer in ugliness, which left the public starving for visually appealing environments. Although few attempts were made to create built environments that addressed the practical realities of the time, there was a search for a contemporary Cairene identity. A diversity of architectural theories has emerged, resulting in a fertile soil that encourages new attempts at all levels, from the construction of individual houses to large-scale public projects. One such theory is Postmodernism.



Figure 2: Original Weavers Company Headquarters by Farouk Al Gohary. An implicit example of historical revivalism.



Figure 3: Integrated Care Society by Magd Masarra. An example of surface treatment architecture that makes little reference to anything but the creative impulses of the architect.

One major position that exemplifies contemporary Cairene architecture and urbanism is *historical revivalism*. This has materialized with clear references to the mix of Egyptian heritages. While many insisted that simulating history in contemporary buildings would foster a sense of belonging and strong emotional ties between society and the built environment, the license to blindly select, borrow, and copy from the past has become acceptable. There are several examples of historical revivalism using the architectural ideology of a certain period. For example, the Supreme Court of Egypt, designed by Ahmed Mito, employs features of Pharonic architecture but with different proportions. In the Oriental Weavers headquarters, Farouk El Gohary incorporates arches and an inner courtyard and openings covered with stucco screens in an attempt to produce a new image of Cairene architecture. Some other architects have gone to extremes

Postmodernism in Cairo is within the framework of international postmodernism. Yet the local movement has failed to offer an alternative vision. It has not provided a remedy for problems resulting from thoughtless appropriations of Western and modern architectural trends. And it has not gone far enough in acknowledging the needs and aspirations of Cairene society. Postmodernism has not addressed the faults implicit in modernist architectural practices, but rather, has tacitly accepted them. It is merely an adjustment from following the international modernism to following the international postmodernism.



Figure 4: Khan Al Aziza. An example of straight copying from the past.

and allowed themselves essentially to copy and paste from the past. The Khan Al Azizia project features such superficial copying of ancient designs that are completely at odds with both function and context.

Critical Regionalism is another position that attempts to read the history of Cairo and extract its essence while adapting it to suit the spirit of the times. It is a way to show cultural, economic, and political independence. In the Nile Art Gallery, Halim Ibrahim considers pre-modern heritage in a building that serves a modern function. His concern was to connect the current art movement in Egypt with the Islamic and Arabic cultural heritage. The project is a thoughtful effort aimed at the development of a contemporary Cairene cultural identity. Gamal Bakry's work is based on profound interpretations of history and culture. In his design for the commercial and tourist center near the Pyramids, he reflected on the cultural richness of Egypt, with a yellowish facade that references the nearby desert. Hierarchical masses are used to simulate the idea of a pyramid. Openings are designed with motifs that reflect Egyptian culture and a conscious attempt is made to link the building with the pyramid platform, using it as a panoramic view.



Figure 5: Nile Art Gallery. An example of Critical Regionalism — a conscious attempt at reinterpreting the heritage of Cairo.



Figure 6: Commercial and Tourist Centre by Gamal Bakry. An example of Critical Regionalism — a conscious attempt at reinterpreting the heritage of Cairo.

Adaptive reuse, and urban intervention in historic Cairo are relatively new approaches to architectural practice. *Al Azhar Park* illustrates the practice of culturally responsive architecture. It was envisioned by H.H. the Agha Khan in the 1980s as part of a larger program for the development and upgrading of the *Al Darb Al Ahmar* area of Old Cairo. Under the direction and management of the Agha Khan Trust for Culture, Sites International was selected as a local consultancy to develop the final designs of the park together with other consultants. This project is another thoughtful attempt to improve the quality of the built environment and retrieve some of what Cairo has lost over the past 30 years.

Contemporary Cairo is a collection of planning and architectural positions that search for an identity. Few cases correspond to the history and economy of Cairo while many defy Cairene culture. Although there are honest attempts to tame the urban development process, and Egyptian architects manage individual buildings well enough, Cairo's overall built environment is increasingly mismanaged. Nevertheless, there is hope found in a few designs that Cairo can produce a solid architectural trend and planning direction.



Figure 7: A view of Al Azhar Park: An example of culturally and environmentally responsive architecture.

Egypt: Modernity and Identity

Nasser Rabbat

Steeped in history and tradition, but also open and cosmopolitan, modern Cairo developed an expansive yet distinct sense of identity. Starting from the middle of the 19th century, the city went through a series of political, cultural, and economic transmutations that were reflected in its First was the invasion of Napoléon Bonaparte in 1798-1801, which jolted the country to rise from its medieval stupor and face up to this early colonial threat. Second was the reign of Muhammad ‘Ali Pasha (1805-48), who sought to modernize the country in an ultimately unsuccessful effort to catch up with the West. This became sadly clear during the reign of his grandson, Khedive Isma‘il (1863-79), the most ambitious, most “progress”-minded, and most Europeanized member of the dynasty. He visited the Paris Exposition Universelle in 1867 and was fascinated by the bold plan of Baron Haussmann, which transformed the city of Paris. Upon his return, he “Haussmannized” Cairo and drastically altered its size, layout, and future development.

Isma‘il’s economic policies proved disastrous. The British landed in 1882, after he was replaced by his son, Tawfic, in 1879 and subjugated Egypt to colonial rule. They also opened the country to their vast imperial network. Within 20 years, Cairo became a

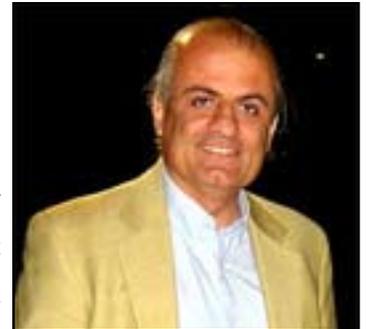


Fig. 1: Mosque of Sultan Hasan

cosmopolitan city tied to the international economic system and teeming with a multitude of migrant adventurers and persecuted minorities that sought her as a new home. This was the peak architectural moment of the city. Scores of buildings were built in hybrid styles that borrowed freely from the varied repertoires of the past and blended them with vari-

ous European styles, especially the Art Nouveau, Art Deco, and Neo-Baroque styles. But the one distinguishing invention of the period, and the one adopted as the semi-official style of the country, was the Neo-Mamluk style.

The most majestic Neo-Mamluk example is the Mosque of al-Rifa‘i (1869-1911), which stands opposite the Mosque of Sultan Hasan (1356-61) as an attempt by the Khedival family to measure up to the Mamluks. (Fig. 1) Other notable examples are the Dar al-Kutub, built in 1904 by the Italian Alfonso Manescalo (Fig. 2), the Awqaf Ministry, built between 1898 and 1929 by Mahmud Fahmi, and the Egyptian Engineers Society



Nasser Rabbat, B. Arch (Damascus), M. Arch (UCLA), PhD (MIT), is the Aga Khan Professor of Islamic Architecture at the Massachusetts Institute of Technology. He is the author of several books, including The Citadel of Cairo: A New Interpretation of Royal Mamluk Architecture (Leiden: E. J. Brill, 1995), Thaqafat al Bina' wa Bina' al-Thaqafa [The Culture of Building and Building Culture] (Beirut: Riad Alrayyes Publisher, 2002).

Headquarters, built in 1930 by Mustafa Fahmi. A counter-style, the Neo-Pharaonic, was limited to mostly Art-Deco commercial buildings, except for the Mausoleum of Sa'd Zaghlul, the leader of the 1919 revolution against the British, which was designed by Mustafa Fahmi in 1928 specifically to express an Egyptian identity that united Muslims and Copts. (Fig. 3)

Another historicist, though less localized, and hence less nationalistic, style, the neo-Islamic, was adopted for many of the commercial buildings in downtown, probably as a means to give the city a special character as a modern metropolis with an "Oriental" genealogy. This is exemplified by many of the oeuvres of the Slovenian architect Antonio Lasciac, such as the Bank Misr building (Fig. 4) and the Assicurazioni Generali Trieste Apartment Building. The style dominates the commercial and civic center of a new suburb, Heliopolis, which was built in the 1910s by the Belgian industrialist Baron Empain as an Oriental garden-city for a new, select, and mostly foreign professional class.



Fig. 2: Dar al-Kutub



Fig. 3: Mausoleum of Sa'd Zaghlul

The Revolution of 1952 that toppled the monarchy gave rise to the more outspoken categories of modernity, nationalism, and socialism as framers of the image and the architecture of the recently independent republic. The new framework engendered some important modernist civic projects ranging from entire new satellite cities, such as Nasr City, planned by Sayyid Kuraim in the 1960s, to government offices, factories, hospitals, schools, and public housing projects. Simultaneously, and somewhat in op-

position to the modernist emphasis, a number of outstanding architects, such as Hassan Fathy and Ramses Wissa Wasef, advanced vernacular architecture as the most authentic representation of the people's architecture of Egypt. Their buildings, such as New Gournia village (1948-1961) by the former and Harraniyya village (Fig. 5) by the latter (1957-74), cast the vernacular through a mixture of objective social and environmental experiments and lyrical interpretations of traditions. Their followers continued to use their formal language but did not develop its socioeconomic content. Instead they brandished it as a kind of indigenous post-modern response to the blandness of modernist architecture and, in some cases, such as the work of Abd al-Wahid al-Wakil in Saudi Arabia, exported it as an expressive regional style.

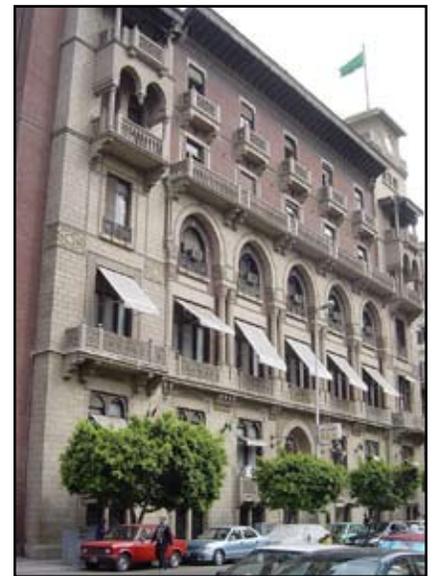


Fig. 4: Bank Misr

The last three decades have witnessed the resurgence of the discourse on Islam as a cultural identity, which translated in architecture into a massive revivalist movement. Sincerely at times, but opportunistically at others, many architects en-



Fig. 5: New Gournia village

gaged in the design of various historicist styles to satisfy the growing demand for a contemporary Islamic architecture. The examples range from romantic *mélanges*, which freely re-interpret historical motifs, to the often arbitrary usage of forms detached from their historical and geographic contexts, to the rational, abstracted, and at times minimalist projects of architects trained in the modern tradition.

However, the most significant and alarming recent development is the city's ruralization, which gives the old metropolis the appearance of a conglomerate of contiguous villages, cut off from civic authorities and

living by their own economic rules and behavioral codes. (Fig. 6) The cosmopolitan quality of the architecture of modern Cairo has been slowly deteriorating under the pressure of a severe population explosion and heavy rural emigration accompanied by a mixture of official neglect and corruption, a greedy and speculative real estate market, and chaotic zoning



Figure 7

and overbuilding practices. (Fig. 7) The other side of the coin is represented by the numerous

“New Cities” growing around Cairo on the edge of the desert and catering to a new class of entrepreneurs and beneficiaries of the unrestrained *laissez faire* policies initiated by the late President Anwar Sadat and continued by President Husni Mubarak. Their architecture displays an eclectic collection of post-modern or revivalist motifs distorted through a Disneyesque vision of contemporary suburban living in the West. (Fig. 8) Thus as the city loses its modern and slowly evolved architectural identity, its new suburbs acquire a consumerist, neo-liberal, and globalized new identity that has no local flavor. (Fig. 9)



Figure 6



Figure 8



Figure 9

Jerusalem Architecture: Old Is Bitter, New Is Ugly

Annabel Jane Wharton

Jerusalem is a “golden bowl filled with scorpions.” Those scorpions are architectural as well as human, modern, and ancient. Such is the fate of a city considered holy by Jews, Christians, and Muslims and possessed episodically by the theocratic states of all three. At the core of Jerusalem is the “Old City,” defined by the imposing 16th century walls built by Sulayman the Magnificent (Fig. 1). From the 1860s, Jerusalem, like many cities in the Middle East as well as in the West, developed suburbs. “East Jerusalem,” with its largely Palestinian population, includes the northeast section of the expanded city as well as the Mount of Olives. It is divided from the Palestinian communities of the West Bank by the Israeli defense barrier and from West Jerusalem, with its largely Jewish population, by the north-south Road 1 (Fig. 2).

OLD ARCHITECTURE

The Old City’s most prominent ancient buildings are burdened by old age and by the various, and always exclusive, religious



Figure 1: General view from the Mount of Olives

claims made upon them. Many sites excite vicious rivalries. Best known of these contested places is al-Haram al-Sharif/the Temple Mount. Herod’s grand successor of Solomon’s Temple was destroyed by the Romans in 70 CE. The great podium on which the Temple stood (the “Wailing Wall” or Kotel is the southern part of this platform’s western retaining wall) was left in ruins by the Romans and the Christians. The sanctity of



Figure 2: View of Route 1 from the south (road as barrier). Route 1 follows the “Seam,” the pre-1967 divide between Jordan and Israel.

the site was put back to work only after the seventh century Islamic conquest of the city with al-Aqsa Mosque and the great Dome of the Rock, which marks the traditional location whence Muhammad made his night journey to heaven (Fig. 3). Now, Jewish and Christian extremists — for very different reasons — seek to clear the site of



Dr. Annabel Jane Wharton is the William B. Hamilton Professor in the Department of Art, Art History, and Visual Studies at Duke University. Her most recent book is Selling Jerusalem: Relics, Replicas, Themeparks (University of Chicago Press, 2006).

its Muslim buildings for the rebuilding of the Temple.



Figure 3: Dome of the Rock

“Zion” (probably the Jebusite term for fortress) or the City of David was the locus of the king’s burial (I Kings 2:10); it is authoritatively located by archaeologists on the southeast hill of Jerusalem. But in late antiquity, the southwest hill of the city was misidentified as “Zion.” On it, in the later fourth century, a large five-aisled, two level basilica, known as the “Mother of All Churches” was constructed. The church was rebuilt in much the same form first by the Crusaders and then, in the 14th century, by the Franciscans. This last, Gothic structure incorporated many of the religious narratives of its predecessor as well as its surviving foundations. It was identified by pilgrims as the site of Jesus’ flagellation, the washing of the Apostles’ feet, the Last Supper, Pentecost (when the Apostles received the Holy Spirit 50 days after Jesus’ resurrection), and the death of Mary. In the 16th century, the Franciscans were expelled from the site after the Jews identified it to the Ottoman rulers as David’s Tomb. At present, the surviving fragment of the great Gothic complex is a

two-storied room, with the Cenacle — the place of the Last Supper — above, and the Tomb of David below (Fig. 5). The former is thoroughly secularized and the latter thoroughly sacralized. Men and women have separate entrances to the



Figure 5: Cenacle and Tomb of David, exterior

Other sites of contention are less familiar. The occasional eruptions of violence between the traditional Christian sects (Greek Orthodox, Coptic, Roman Catholic, Armenian, etc.) in possession of various parts of the Holy Sepulchre are symptomatic of the continued rivalry of their spatial claims (Fig. 4). The hostilities at the Holy Sepulchre always elicited disdainful comments from Protestant Christian travelers, who in the 19th century sought and found their own, alternate tomb of Jesus — Gordon’s Garden Tomb. King David’s Tomb stages another example of spatial jealousy.

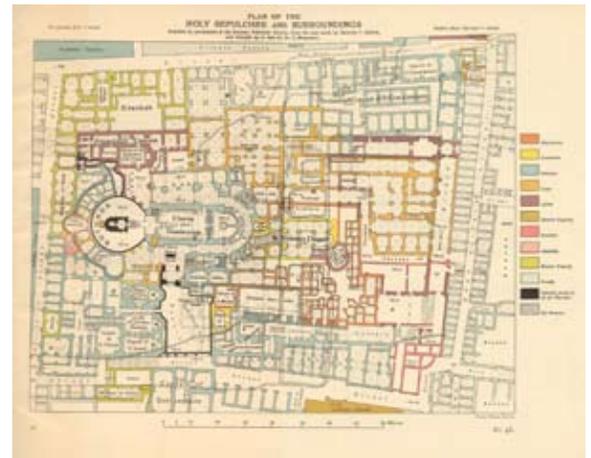


Figure 4: Holy Sepulchre, plan of the church showing its sectarian divisions. From C.R. Ashbee, ed., *Jerusalem, 1920-1922* (1924).

Tomb; men who wish to visit it must wear yarmulkes. The Roman Catholics contest Israeli control of the site, just as they did its Ottoman possession.

NEW ARCHITECTURE

The old buildings of Jerusalem may be violent, but they are solemn and handsome. Their ancient walls and vaults were solidly constructed by local masons from the pink-gold local limestone. The structures were built with traditional methods and in time-tested forms. They age well. Even the buildings of the 19th and early 20th century — like the old Jewish, Muslim, and Protestant neighborhoods founded outside the walls of the Old City, the commercial structures built by the Armenian Patriarchate on Jaffa Road, or the Rock-

efeller Museum designed in the 1930s — acknowledge the local scale and forms even when they introduced modern European styles and technologies. During the British Mandate (1918-1947), regulations imposed green space around the Old City and restricted buildings' height and construction materials. Buildings had to be faced in Jerusalem stone; corrugated iron was banned.



Figure 6: View from Jaffa Gate to the west.

At least one of those regulations is maintained. New buildings are inevitably sheathed in a thin veneer of Jerusalem stone. But most of the old regulations are ignored. Green space is disappearing. The parkland opposite Jaffa Gate has been occupied by grotesque parking decks and architecturally offensive luxury accommodation for the very wealthy (Fig. 6). The condos there are largely abandoned by their rich, non-resident Jewish owners for most of the year, contributing to the death of the economy in the part of the city that should be most vital.

The Jerusalem Hilton (now the Crowne Plaza), which annulled the city code on building height in 1974, initiated the meaningless western skyline of Jerusalem, punctuated ungrammatically by characterless monoliths (See Figs. 1 and 7). Unfortunately, cheaply constructed pomposities, built without reference to the scale of their neighborhood and with no conscience about their affect on distant views of the city, characterize post-1967 building in the city. Who could possibly find a particle of aesthetic pleasure in the twin tour group hotels, the Olive Tree and the Novotel, looming over St. George's Cathedral in East Jerusalem? Indeed, state construction (e.g., the Ministry of Justice), as well as speculative Israeli ventures in East Jerusalem seem intentionally ugly.

Jerusalem has at least one good postmodern building: the Supreme Court, designed by Ram Carmi and Ada Carmi-Melamed, opened in 1992 (Fig. 7). The plan and scale of the building were inspired by the Alhambra and the Rockefeller Museum: at its core is an elegantly proportioned courtyard bisected by a narrow stream running almost its entire length. The structure is less about *gravitas* than about intimacy. It provides the law a deeply human habitat, whether or not it deserves it.

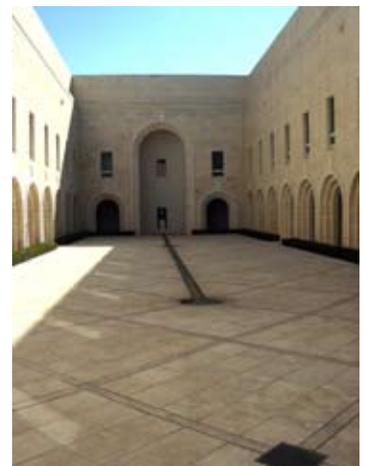


Figure 7: Supreme Court, courtyard.

Jerusalem is a place to feel passionate about architecture — about its beauty, about its aura, and about its abuse. For those who are moved by architecture, Jerusalem offers a remarkable roller-coaster ride.

Global Capital, Urban Regeneration, and Heritage Conservation in the Levant

Rami Daher

“Property” is the new consumer good *par excellence* and “real estate development” is the new religion in the Middle East. Cities across the region are competing for international investment, business, and tourism. Developments in Dubai are setting the precedents and models to follow. This reality stands in stark contrast to the 1960s, when cities like Cairo and Beirut represented cutting-edge urbanism to the rest of the Arab world.

The circulation of global capital (such as surplus oil revenues) in search of high yielding investments, combined with excessive privatization, has transformed urban reality, inflated property values, fuelled speculation, and altered the nature of public life in cities throughout the Arab world. It is estimated that between 2005 and 2020 the Arab Gulf states likely will have invested about \$3 trillion in the Middle East and North Africa.¹ The intense urban restructuring spurred by this investment frenzy poses challenges for heritage conservation and urban regeneration in historic city cores in the region. Among these are a lack of interest, inadequate funding, and inappropriate approaches to urban regeneration due to lack of expertise and the need for more critical and sustainable practices.



Dr. Rami Daher is a practicing architect and the head of his own firm, TÜRATH. He is also an associate professor of Architecture at German Jordanian University in Amman.

PRIME CAPITALS AND NEOLIBERAL URBAN RESTRUCTURING

Several urban mega-projects in Beirut, Amman, and even Damascus have been orchestrated by partnerships between multinational corporations and the state. These partnerships have culminated in the establishment of new regulating bodies — SOLIDERE (Société Libanaise de Développement et de Reconstruction) in Beirut and MAMARED (National Resources Investment and Development Corporation) in Amman).

The Beirut downtown reconstruction project fashioned by SOLIDERE was presented to the public as the main post-war reconstruction effort. Urban critics and academics presented an interesting critique of the project. While affirming its importance as a symbol of Lebanon’s emergence from its 15-year civil war, they still considered the project as simply a real estate development where history and heritage are but themes incorporated through Disneyfied pastiche representations. It is true that the project included the *preservation* of older buildings and urban spaces from the traditional and French Mandate periods, but it is important to mention that the final outcome resulted

1. Yasser Elsheshtawy, “The Great Divide: Struggling and Emerging Cities in the Arab World,” in Yasser Elsheshtawy, ed., *The Evolving Arab City: Tradition, Modernity, and Urban Development* (New York: Routledge, 2008), pp. 1-26.

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in a very exclusive urban setting where the whole notion of urban memory and property ownership was expunged.² This reconstruction is creating a collaged urban morphology that is designed for consumption and linked with entertainment geared for rich Arab Gulf tourists and the local elite.

The SOLIDERE model of urban restructuring was adopted in 'Amman as well. In fact, the two cities share similar global investors. This neo-liberalization of the creation of public space is leading to the dilution of local differences and the circulation of "corporate" urban realities and images. The Abdali Project turns its back on 'Amman's original downtown, which is only about 1.5 kilometers away from the Abdali site, and is expected to lead to urban geographies of inequality and exclusion as well as spatial and social displacement.

'Amman's Abdali is promoted by MAWARED as the "New Downtown for Amman." However, the project will in fact intensify the socioeconomic and spatial polarization not only between East and West 'Amman, but also between this new "elitist urban island" and the rest of the city.³ The Abdali Project has led to the displacement of the nearby existing Abdali transportation terminal, together with its drivers, informal vendors, and occupants, to the outskirts of 'Amman's city center. The project also will present fierce competition to the existing downtown area, which is gradually disintegrating and is already suffering from a lack of economic vitality.

Although Damascus has not yet undertaken a major urban flagship project, several neoliberal real estate developments already have had a considerable effect on the authenticity and sustainability of the city's cultural heritage. Significant transformations include the "development" intended for the historic Hijaz Railroad Station and the newly erected Four Seasons Hotel. Other projects are anticipated along the Barada River.

COSMETIC URBAN REGENERATION IN SECONDARY PROVINCIAL CITIES

Jordan, Lebanon, and other countries in the region have received international funding from the World Bank and other donor agencies to boost their national tourism strategies and development in the form of tourism/urban regeneration in secondary cities and smaller towns. Such international aid has targeted cities such as Tripoli, Tyre, Ba'albeck, Sidon, and Byblos in Lebanon, and Kerak, Salt, Jerash, 'Amman, and Madaba in Jordan.

Comparative research and fieldwork analysis has concluded that the various components and the nature of the end product of such projects are very similar across the two countries. Taking Salt, Jordan as an example, it is obvious that the project mainly concentrated on the physical aspects of urban regeneration (e.g., tourist trails, pedestrianization of public plazas, panoramic lookouts, streetscape, and signage). The intervention in the public urban space centered on stone pavement for plazas, streets, or steps, outdoor furniture, and signage. Essentially, this is a one-time limited inter-

2. Doris Summer, *Neo-Liberalizing the City: Transitional Investment Networks and the Circulation of Urban Images in Beirut and Amman* (Master Thesis in Urban Planning, American University of Beirut, 2005).

3. Rami Daher, "Amman: Disguised Genealogy and Recent Urban Restructuring and Neoliberal Threats," in Elsheshtawy, ed., *The Evolving Arab City: Tradition, Modernity, and Urban Development*, pp. 37-68.

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vention in the form of *architectural cosmetics* affecting the historic urban tissue of the city without a serious attempt to address the establishment of heritage tools, systems, or sustainable institutional practices at the municipal level of these towns that insure the continuity of urban regeneration and community involvement in the long run.⁴

Furthermore, these projects lead to the circulation of different forms of urban and heritage projects and of a prototypical tourist experience within the region. Gradually, not only are local differences between these cities disintegrating, but the urban experience also is being confined to consuming the same manufactured version of heritage and to gazing at the same urban furniture detail, lamp fixture, or floor pattern.

THE CHALLENGE OF CONSERVING THE REGION'S HERITAGE OF MODERNITY

One of the problems facing heritage conservation in the region is the absence of a critical definition of its cultural heritage which would incorporate marginalized realities such as the region's heritage of Modernity. The middle of the 20th century in the region centered on a critical and informed public opinion in different walks of life and actually produced an architecture that was dynamic, *avant-garde*, and progressive. An interesting local version of "Modern" architecture emerged between the 1940s and the 1970s, signifying a society that was open to different positive cultural changes and progressive transformation. Beirut was the heart of the region's Modernity. Whether it was the Hotel St. Georges, the Shams Building, the Pan American Building, or the various cinemas and cafés on Hamra Street, the buildings of that era signified an enlightened architectural practice that is local and global, yet critical and exceptional. Examples from Damascus and Amman included the National Museum in Damascus, several buildings belonging to the University of Damascus, and finally, the Insurance Building, the Intercontinental Hotel, and the Youth Sport City in Amman.

Unfortunately, the region's growing consumer-based and uncritical public lacks a genuine appreciation of its heritage of Modernity due in certain cases to being unconscious of its value and significance, and in other cases, to the dominance of the "dollar" on people's value systems. This is leading to the destruction and disfiguring of the valuable heritage that once represented a true testimonial to the region's temporal depth and critical public sphere.

CONCLUDING THOUGHTS

In the midst of intense neoliberal urban restructuring, there is a need for research that goes beyond the classical analysis of the traditional Arab city, and that focuses instead on current urban transformations, the flow of global capital, and its effect on the realities of cities, urban structures, and polity, the *metropolitization* processes from below addressing issues of historic cities' core conservation and regeneration, sustainable and environmentally conscious urban growth, the migration and circulation of humans and capital, the formation of slums, and the details of social life *vis à vis* lines of inclusion and exclusion.

4. Rami Daher, "Tourism: Heritage and Urban Transformations in Jordan and Lebanon: Emerging Actors and Global-Local Juxtapositions," in Rami Daher, ed., *Tourism in the Middle East: Continuity, Change and Transformation* (England: Channel View Publications, 2007), pp. 263-307.

The Contemporary Built Environment in the Arab Middle East

Mohammad al-Asad

With the advent of the 1990s, a new phase affecting the development of the built environment in the Arab Middle East commenced, when urban — rather than purely architectural — concerns gradually began to attract increasing attention from decision-makers and members of the architectural community, and the emphasis of the 1970s and 1980s on developing architectural vocabularies that express local and historical specificities gave way to a preference for internationally-prevalent models, particularly relating to high-tech and deconstructivist architecture. Since then, two interconnected narratives have defined the evolution of the built environment in the region, with one being prevalent in the area's middle and low-income countries of, and the other in the affluent, oil-rich countries of the Gulf Cooperation Council (GCC).

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An important project signaling the initiation of the first narrative is the redevelopment of the Beirut Central District (CBD), which began as Lebanon emerged from its grueling 15-year civil war (1975-1990). The project illustrated a newly emerging emphasis on urbanism rather than on architecture. In this instance, the Lebanese government granted authority to a public share-holding company to assume ownership of the CBD (by providing shares in the company to preexisting property owners) and to develop it into a multi-use high-end urban district. Although controversial in socioeconomic terms, the project has been carried out according to very high architectural and urban standards and has managed to transform the area into an urban showpiece, not only for Beirut, but also for the region as a whole. Whereas the project included buildings by world-famous architects, its individual works of architecture clearly are subsumed in an overall urban vision that emphasizes pedestrian connectivity, mixed-use districts, continuities in building scale, conservation of an architectural heritage (a good part of which dates back to the 1920s), and a generous provision of public spaces. The Solidere model initiated a new approach that has become popular in the region and that has consisted of reconfiguring complete urban districts through large investment companies working in coordination, and often partnership, with governmental authorities.

While the Beirut CBD project included a conservation component, it remained primarily an urban development project. In contrast, a number of projects in the low and middle-income countries of the region emerged during the 1990s that dealt primarily, if not exclusively, with issues of heritage conservation and addressed the urban scale rather than merely that of individual monuments. Considering the historical wealth of

Dr. Mohammad al-Asad is a Jordanian architect and architectural historian. He is currently the founder and director of the Center for the Study of the Built Environment. Dr. al-Asad earned his bachelor's and master's degrees in architecture from the University of Illinois and his PhD in architectural history from Harvard University.

numerous urban centers in the region, such projects were overdue. Important examples of them have taken place in Sana'a, Aleppo, Cairo, Jerusalem, and Hebron.

Interestingly, even Cairo, which has been suffering from extensive urban stress, particularly since the 1970s, has quietly undergone a gradual, though limited, process of rehabilitation. A subway system was introduced as early as the second half of the 1980s. Unleaded gasoline has replaced the leaded variety, thus helping soften the problems of air pollution. The city's endless decline seems to have been arrested. In fact, minor but clearly evident improvements have taken place regarding issues such as overall cleanliness, the visual pollution caused by commercial signs, and traffic congestion.

Even in middle-income cities such as 'Amman, there has been a new emphasis on projects that address the urban scale. An ambitious master plan has been put in place to control and direct the city's rapid growth and to address the problem of urban sprawl, incorporating principles such as multi-use zoning and increased densification. In addition, a light-rail line has been conceived to connect 'Amman to the nearby industrial city of Zarqa and to eventually serve various parts of 'Amman itself. Similar plans are taking place elsewhere, as in Damascus, where there is talk of developing a new master plan for the city.

Tourism also emerged as a main generator of projects on the urban scale, whether in creating new towns or affected parts of existing ones. Initially, these were carried out mainly in Egypt, primarily in the Sinai Peninsula and along the shores of the Red Sea and the Mediterranean. Others soon followed, as with the Jordanian port of Aqaba along the Red Sea.

Although there has been an increasing emphasis on issues of urbanism in the past 15 years or so, interesting developments related to architecture also have been taking place. A number of unabashedly *avant-garde* architects have emerged in the region, such as the Lebanese Bernard Khoury and the Jordanian Sahel Al Hiyari. These architects, who have assumed a level of international recognition, have no place for historic or regional nostalgia in their work, but emphasize creating novel modernist solutions. Their sources of inspiration interestingly enough are found in local conventional low-tech industrial practices.

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The city of Dubai has come to best exemplify the second narrative. A series of themed districts, each referred to as a "city," have been built there; they include "Media City," "Internet City," "Motor City," "Studio City," and even "Culture City." Each of these high-end developments features a combination of housing units, recreational facilities (e.g., golf courses, hotels, retail and office space), and specialized facilities relating to the theme of the district. Other urban-scale projects include developing the now world-famous massive man-made islands in the shape of palm trees and a map of the earth, all of which have been part of an effort aimed at "branding" Dubai on the global level.

A number of Dubai's dazzling plans were initiated before the spike in oil prices that began around 2003 and took hold

about 2005. Since then, colossal projects inspired by the Dubai model have been conceived throughout the region. Complete new cities are being planned or are already under construction, including the City of Silk in Kuwait, Saadiyat Island in Abu Dhabi, and the King Abdullah Economic City in Saudi Arabia on the coast of the Red Sea. In these projects, the issue of identity, so prominent in the region's first construction boom of the 1970s and 1980s, is all but absent, for they are intended to express a global sense of belonging rather than a specific regional identity.

Economic developments in the countries of the Gulf generally have a strong impact on their less affluent neighbors. As the region is becoming more friendly to foreign investments, and as investors from the region have preferred to keep a larger portion of their investments in the region close to home following the events of September 11, 2001, they are carrying out numerous large-scale projects in neighboring countries, primarily consisting of high-end residential, office, retail, and tourism developments. Considering the significant financial resources being poured into these projects, there is serious concern that they will divert the considerable, and often productive, energies that so far have been placed into initiatives that have included historic conservation and overall urban upgrading into high-end luxury projects, many of which very well may end up as white elephants.

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Over the past decade and a half, there has been a profound change of emphasis from the micro-scale of architecture to the macro urban scale, and from the search for localized architectural identities to an attempt to fit within overall global developments. Another issue that needs to be seriously addressed is that of sustainability in the built environment. This is particularly crucial in the Gulf zone, which is dominated by the automobile, depends on the mechanical air-conditioning of massive interior spaces, and has expansive, lush landscapes irrigated by water primarily obtained through energy-intensive desalinization plants.

If any level of sustainability in the built environment is to be achieved in the Gulf, there will be a need to seriously reconfigure its cities. Amongst other things, planners and policy makers will have to drastically rethink movement in the city to more effectively incorporate public transportation, pedestrianization, and an increased dependence on telecommuting. Dubai, for one seems to have begun to realize this. It is currently developing an extensive light-rail system to help ease its notorious traffic congestion problems. Perhaps this marks the beginning of a broader acknowledgement that the prevalent urban models that have been developed in the cities of the Gulf over the past few decades are not sustainable, and thus constitutes the first step in that part of the world in a long journey towards developing new models for urban living.

Conservatism versus Modernism: Hesitant Urban Identity in Saudi Arabia

Mashary A. Al-Naim

What do people think about their urban identity and what needs do they identify themselves with? What role do traditions play in a society, and why do people create new traditions? Every society has a continuous flow of traditions, changing and taking on different forms, which are essential for societal survival. As Rapoport states, “for any group to survive ... there must be continuity at some level.”¹ Traditions, even changing traditions, offer a certain continuity within a group.



Efforts in Saudi Arabia to maintain a continuity of tradition are strongly linked to the impact of religion within Saudi culture.² These traditions can be linked with what Rapoport calls the “cultural core.” He differentiates the cultural core from “peripheral” values, which are modified according to changes in life circumstances. Unlike these changing

*Dr. Mashary A. Al-Naim,
Associate Professor, King
Faisal University, Vice Rector,
Prince Mohammad Bin Fahd
University*



Figure 1: Al-Khalaf Village — Asir

peripheral values, Rapoport argues that the cultural core continues as a determining factor in the creation of individual identity and as a mechanism by which members of a group communicate their collective identity.³

In this sense, a change in lifestyle may influence and modify the values which help people to cope with a new way of living, but those values which enable people to generate meaning in their built environment will continue in their function. The continuity of identity of any society stems from these core values.

The strength of these core values depends on the degree of resistance shown by any society towards change, and the ability of its members to preserve their cultural core. This is not to say that the existence of these values ensures full continuity of identity, but rather that they play an essential role in fusing a new identity. As Bloom states, in a change of life circumstances, “individuals may make new and appropriate identifica-

1. A. Rapoport, “Culture and Built Form-A Reconsideration”, in D.G. Saile, ed., *Architecture in Cultural Change, Essays in Build Form and Culture Research* (Lawrence, KS: University of Kansas Press, 1986), pp. 157-175.

2. S. Hamdan, *Social Change in the Saudi Family*, Unpublished Ph.D. Thesis, Iowa State University, Ames, Iowa (1990), p. 149.

3. Rapoport, “Culture and Built Form-A Reconsideration”, pp. 157-175.

tions. Individuals may also seek to protect and enhance identification already made.”⁴

Rapoport presents two definitions for the concept of identity. The first stresses the importance of continuity of identity, the “unchanging nature of something under varying aspects or conditions.” The second definition is concerned with the “condition of being one thing and not another.”⁵ The implicit and explicit resistance to introduced objects, images, lifestyles, etc., plays an important role in the continuity of certain meanings over an extended period of time. Habraken’s concept of implicit and explicit constraints as two mechanisms that enable us to evaluate the form assists us here. He argues that during the production of a new form, there is an internal mechanism that forces the form to take certain shapes. These shapes are compatible with peoples’ past experience, belief system, norms, and lifestyles.⁶

The tension between conservatism and modernism in urban Saudi Arabia resulted in a certain social resistance, and it has become necessary to discuss how this social resistance has been translated into forms. This has encouraged many researchers and architects to search for an identity in the contemporary Saudi built environment. The following discussion aims to present a general review of this search over the past two decades, focusing on two main questions. First, has the need for identity in Saudi Arabia resulted in society responding, “Here we are, despite the drastic changes and foreign influences; this is our identity”? Or has this need for identity emerged as a result of a superior Western culture that has directly influenced the social and physical orders in Saudi Arabia? It is important to clarify here that the following discussion is not intended to answer these two questions; rather, it will use them broadly as a context for a discussion of the built environment.

Rapid changes in the 1970s resulted in a sense of “not belonging” in the urban environment in Saudi Arabia, since people suddenly found themselves in a completely different physical environment. Indicating the loss of traditional identity in the Saudi built environment, Ben Saleh⁷ (1980) writes:

Recent buildings have lost their traditional identities and have become hybrids of exotic character in their architectural form, main concepts, arrangement of spaces, organization of elements, and building techniques employed.⁸



Figure 2: Al-Mamalka Tower — Riyadh

4. W. Bloom, *Personal Identity, National Identity and International Relations* (Cambridge, UK: Cambridge University Press, 1990), p. 50.

5. A. Rapoport, “Identity and environment: A cross-cultural perspective,” in J.S. Duncan, ed., *Housing and Identity: Cross-Cultural Perspectives* (London: Croom-Helm, 1981), pp. 6-35.

6. N.J. Habraken, *The Appearance of the Form* (Cambridge, MA: Awater Press, 1985), pp. 63-66.

7. Saudi academic and former Dean of the College of Architecture and Planning at King Saud University.

8. Cited in M. Al-Gabbani, *Community Structure, Residential Satisfaction, and Preferences in a Rapidly Changing Urban Environment: The Case of Riyadh, Saudi Arabia*, Unpublished PhD, Michigan, University of Michigan (1984), p. 275.

Konash⁹ agrees, criticizing Western firms that practiced in Saudi Arabia for their lack of knowledge about the local culture while suggesting more collaboration between Saudi and foreign architects.¹⁰ After studying the impact of Western urban concepts in the contemporary Saudi cities, Al-Hathloul¹¹ suggests that Arab-Islamic traditions which formulate the needs of Saudi families should be respected in any future building regulations.¹² Fadan¹³ goes further, attributing the loss of traditional identity to the social changes in Saudi society, writing that the “attraction[s] to Western life-style have drawn Saudi attention away from developing a clear and concise understanding of the evolution of a traditional living environment.”¹⁴ These studies agree on the negative impact of Western images on Saudi cities.



Figure 3: Ministry of Interior — Riyadh

At the same time, however, people were fascinated by Western images. Boon comments on the strong influence of colonial villas in the Middle East.¹⁵ Al-Gabbani finds that in Riyadh “most of the housing units constructed follow Western models which symbolize prestige and use costly imported materials.”¹⁶ While indicating that modern architecture in Saudi Arabia is seen to be “culturally destructive,” Abu-Ghazzeleh criticizes the desire of Saudi architects to reflect images of economic and technological development through the adoption of “Western design” due to the “disassociation of the privileged business elite from their cultural roots.”¹⁷ These people tried to express themselves in the urban environment through images mainly borrowed from the West. This then encouraged the middle classes to imitate the Western images that were created by the business elite.¹⁸ This is not to say that people did not express their own socio-cultural values in their urban areas, but that people experienced new things for the first time. Personal and social identities were expressed

9. Saudi academic working at King Fahad University for Petroleum and Minerals, Dhahran, Saudi Arabia.
10. F. Konash, *Evaluation of Western Architecture in Saudi Arabia: Guideline and Critique*, Unpublished Master Thesis, Albuquerque, New Mexico, University of New Mexico (1980).

11. Saudi academic, (PhD, MIT, 1980) who worked as Deputy Minister for Urban Planning in the Ministry of Municipal and Rural Affairs, Riyadh.

12. S. Al-Hathloul, *Tradition, Continuity, and Change in the Physical Environment: The Arab-Muslim City*, Unpublished PhD Thesis, MIT, Cambridge (1981). The study introduces for the first time the impact of Western urban concepts on the Saudi-home environment. Also, it suggests that “urban form within the Arab-Muslim city is to be found not within the physical elements themselves but within their system of arrangement (the rules of conduct), then these elements can be adapted or can even change so long as their system of arrangement or their relationships remain constant.” p. 266).

13. Saudi academic (PhD from MIT, 1983), at King Saud University, Riyadh.

14. Y.M. Fadan, *The Development of Contemporary Housing in Saudi Arabia, (1950-1983)*, Unpublished PhD Thesis, MIT, Cambridge (1983), p. 15.

15. J. Boon, “The Modern Saudi Villa: Its Cause and Effect,” *American Journal for Science and Engineering*, Vol. 7, No. 2 (1982), pp. 132-143.

16. M. Al-Gabbani, *Community Structure, Residential Satisfaction, and Preferences in a Rapidly Changing Urban Environment: The Case of Riyadh, Saudi Arabia*, Unpublished PhD Thesis, Michigan, University of Michigan (1984).

17. Jordanian Academic.

18. T. Abu-Ghazzeleh, “Vernacular Architecture Education in the Islamic Society of Saudi Arabia: Towards the Development of an Authentic Contemporary Built Environment,” *Habitat Int.*, Vol. 21, No. 2 (1997), pp. 229-253.

through extensive alterations to those houses later on.



Figure 4: Qasr Tuwaiq — Riyadh

formal and far from local cultural images, such as Greek or Roman classical styles. In the best cases, we can see some buildings imitating traditional forms or borrowing some forms from Arab-Islamic traditions such as Mamluk architecture.²⁰ On the other hand, Mofti,²¹ for example, criticized these new buildings, which derived their physical forms from different resources.

Indeed, most studies of Saudi Arabia's built environment have attributed the lack of identity to borrowed physical elements, and have focused on the impact of borrowed forms on visual identity rather than paying more attention to relationships between people and the surrounding physical objects. One local newspaper editorial cried out: "Issue: our contemporary buildings have no identity."²² The editor warned that "the architectural crisis of our contemporary buildings increases day after day ... a confusion of images is the only description for our contemporary buildings."

Most of the suggestions for maintaining identity center on re-using traditional images. Boon, for example, suggests that in order to have an identity, it is important to revive traditional urban images.²³ Al-Nowaiser²⁴ reaches the same conclusion, indicating that, in order to reflect "a genuine sense of identity," it is necessary to find "valid features of architectural heritage" to incorporate into the contemporary Saudi urban environment.²⁵

In fact the modernization process in Saudi Arabia was primarily political and tried to re-create physical forms rather than generating any real change at the socio-cultural level. Saudi cities changed only their appearance, while the cultural values remained conservative and in line with traditional Saudi society. This obvious contradiction is reflected in the urban form and physical identity, which slowly became very exotic and far-removed from the images and practical

19. M. Al-Angari (the former mayor of Riyadh) mentioned in 1983 that Riyadh had several architectural styles such as European, Islamic, and vernacular. *Assyasa* (Kuwaiti Newspaper), June 2, 1983.

20. F.A. Mofti, "Transformation in the Built Environment in Saudi Arabia", *Urban Futures*, Vol. 2, No. 4 (1989), pp. 17-26.

21. Saudi academic at King Abdulaziz University in Jeddah.

22. *Al-Yaum* (Arabic newspaper), No. 8698, February 4, 1997.

23. Boon, "The Modern Saudi Villa: Its Cause and Effect," p. 142.

24. Saudi academic at King Saud University, Riyadh.

25. M.A. Al-Nowaiser, *The Role of Traditional and Modern Residential Urban Settlements on the Quality of Environmental Experience in Saudi Arabia: Unyzeh and New Alkabra in Alkaseem Region*, Unpublished PhD Thesis, California, University of Southern California (1983), p. 328.

values of ordinary people.



Figure 5: Urban morphology — Riyadh

This led to what can be called a “hesitant urban identity,” exacerbated in part by governmental planning. Since 1968, when Doxiadis started planning Riyadh, the Saudi government initiated more than 100 plans for most of the Saudi city, concentrating on physical planning and paying little attention to socio-cultural factors. The resulting conflict in the urban forms has increased the gap between residents and their urban environment, a phenomenon which has played a major role in the cultural resistance towards built environments in Saudi Arabia.

These recent and continuing shifts of emphasis within the built environment in Saudi Arabia are reactions to this sense of lost identity.²⁶ Borrowing from the past is used as a tool to maintain visual identity in Saudi Arabia. Al-Shuaibi²⁷ states that “designers of various disciplines always borrow from the past, whether ancient or recent.”²⁸ Abu-Gezzeh also encourages those buildings which he calls “hybrid regional architecture.” For him, this type of building “reflects both modern and traditional influences.”²⁹

Critical to urbanization issues such as this in Saudi Arabia is the role of public participation in government planning, which mostly has been minimal thus far. Although Saudi Arabia has started to elect municipal councils, the role of these councils is largely consultative rather than decisive. This may change in the near future due to public pressure, but until this changes, responsibility for the urban form in Saudi Arabia remains in just a few hands.



Figure 6: King Abdulaziz Historical Center. Note a high rise building in the back constructed in the early 1980s.

Whether the Saudi built environment will continue in its conservatism, or open its arms to global trends, the identity of the Saudi urban form has already been crafted. Change will be difficult. Most important is to what extent Saudi society will absorb global trends while maintaining its identity, and the future of the decision making process in urban planning.

26. Early attempts to re-use traditional images in contemporary buildings started in the late 1970’s, especially in governmental buildings. This can be attributed to the worldwide raised consciousness about the local cultures. M. Al-Naim, “Culture, History, and Architecture: Qasr Al-Hokm District in Riyadh,” *Ahlan Washlan* (Saudi Arabian Airline Magazine), Vol. 20, No. 9, (1996), pp.12-17.

27. Saudi architect, widely known and well regarded for interpreting and using traditional forms in the contemporary Saudi urban environment.

28. H. Salam, ed., *Expressions of Islam in Buildings*, Proceedings of International Seminar, Sponsored by the Aga Khan Award for Architecture and the Indonesian Institute of Architects, Jakarta and Yogyakarta, Indonesia (1990), p. 38.

29. See T. Abu-Gezzeh, “Vernacular Architecture Education in the Islamic Society of Saudi Arabia: Towards the Development of an Authentic Contemporary Built Environment.”

Old Heritage, New Heritage: Building in Sana'a, Yemen

Michele Lamprakos

In the 1970s, when UNESCO's interest in Sana'a began, the "old city" — with its remarkable tower houses of stone and brick — *was* the city (Figure 1). Adjacent to it were the walled palace precincts, several low-rise quarters from the Ottoman period (also within walls), and beyond these, farmland. Within a decade, new development had dwarfed the old city, robbing it of the social, economic, and cultural functions that had made it a legendary place. World Heritage designation has, to some extent, created a new role for the old city in the popular imagination. This also has had unintended consequences — such as a new pride in the "Sana'ani style" and its application to new buildings, especially residential architecture.



Figure 1: View of the old city of Sana'a, 1995. (Monica Fritz, courtesy of the Aga Khan Visual Archive, MIT)

Sana'a's transformation into a metropolis and World Heritage city has been rapid. Located in the remote and mountainous north of Yemen, modernization came suddenly. The first wave was political, a Nasserist style-revolution supported by Egypt. The second was social and economic: entrepreneurs and technocrats from the south arrived to invest in expanding

infrastructure and to staff new institutions. Then, in the early 1970s, the oil boom drew millions of Yemeni men to the Gulf. Many worked in the construction sector, and their remittances fueled the largely unplanned expansion of the city. The returning construction workers experimented with the "villa" house types that they had built in the Gulf, incorporating elements of local planning and embellishing facades with local flourishes. Around this time foreigners and some local architects began to argue that the old city of Sana'a must be saved and that it qualified as a World Heritage site.

In the industrialized West and in parts of the Middle East, the idea of conserving "traditional" forms developed gradually, as those societies modernized and building practices died out. In Yemen, by contrast, modernization and conservation have occurred side by side. Traditional practices have not died out — and individuals in their 40s and 50s see the houses they grew up in now exalted as "heritage" (*turath*). Perhaps because of this rapid transition, in Yemen the term *turath* does not necessarily connote the "past."



Michele Lamprakos holds a BA in Near Eastern Studies from Princeton (1983); an M. Arch. from the University of California, Berkeley (1992); and a PhD in Architecture from MIT (History, Theory and Criticism/Aga Khan Program in Islamic Architecture, 2006). She currently works as an architect in Washington, DC with a focus on historic buildings. Her research interests include the link between conservation and sustainability, and the history of building construction.

Residents of Sana'a use the term to describe *new* buildings that incorporate elements of the local style — patterned brick relief, plaster flourishes, and the now mass-produced colored glass windows (*qamariyyas*). Builders and craftsmen, many of whom trained as apprentices under old-style master builders (*ustas*), use the term *turath* in revealing ways. Some distinguish between “old heritage” (*turath qadim*) and “new heritage” (*turath jadid*). “Old heritage” indicates older buildings, which should be conserved according to certain standards. “New heritage” indicates new buildings built for clients in the “Sana’ani style.”



Figure 2: Al-Qasimi House, located on one of the old city’s many urban gardens.

World Heritage listing has renewed the prestige of old-style building, leading some *ustas* to specialize in restoration and additions. But they also build new buildings; their prestige is such that even when architects design the building, clients still defer to the *ustas*, allowing them to make changes as they see fit. These clients want houses in the local style, but more comfortable than the traditional tower house — houses of two or three floors, with a private garden and access to a car.

For international agencies like UNESCO and ICOMOS,¹ the situation in Yemen is both unique and disturbing. They are glad that “traditional” craftsmen survive, and are able to apply their skills in restoration. But they do not want them to alter the old buildings, which are historic artifacts. Nor should these craftsmen confuse the new and the old, which represent two different “historical eras.” As Trevor Marchand has noted, however, the *ustas*’ ability to adapt their art to new conditions and building types is the basis for their expert status and social prestige. Marchand argues forcefully that conservation laws, in effect, kill off traditional trades by arresting their evo-

lution. Why shouldn’t *ustas* be able to continue a tradition? In theory, I agree with Marchand. But in Yemen, the practice of conservation often differs from the idea. And in new building, where the evolution of tradition is unfettered, most agree that the result is unsatisfactory.

In the old city, the tenets of conservation as described in the major international charters — the rigorous preservation of original fabric, the distinction between old and new — are loosely applied, and sometimes ignored altogether. Even when local architects supervise conservation, portions of buildings may be rebuilt and reconfigured, but “disguised” as old-style construction by the *ustas*.

New buildings draw inspiration from traditional architecture; in many ways, this new *turath* is like “revival” styles in other parts of the world. Architects and conservators in Yemen, both local and foreign, see much of this work as evidence that a once brilliant society of builders no longer knows how to build. Change, they say, is happening too quickly — houses built only one generation apart present an unfavorable comparison. The architectural profession, which

1. International Council on Monuments and Sites; UNESCO was ICOMOS’ parent organization. Most of the major international conservation charters were written under the auspices of UNESCO or ICOMOS.

might ease the transition, is very young in Yemen and lacks a culture of internal critique.



Figure 3: A recent addition to a house in the old city, by an *usta* who specializes in *turath*.

The *ustas*, too, recognize the problem: “The experience of 1,500 years — even in the quality of the brick — has been lost,” one *usta* told me. “If there is no shepherd, the goat gets lost. We builders are goats without a shepherd: each works the way he wants.” Another *usta* points out that he does the best he can, given constraints beyond his control. The tower house, which has become an icon of the city, is being transformed dramatically from the inside out. The house type was designed for collective living, with different activities occurring on each floor. It grew vertically over time; the size and rhythm of windows were carefully modulated in a way that reminded one author of Yemeni poetry (Figure 2). Today, the tower house has in many cases become a kind of apartment house, with nuclear units of an extended family living on separate floors. When new floors are added, windows are the same on each floor, since floors no longer vary in use (Figure 3). The regulations of the conservation office, enforced by well meaning but underpaid and often insufficiently trained inspectors, do not help. As in other parts of the world, they focus on conformity to a generalized “style.” This only contributes to the impoverishment of the buildings’ façade.

In the old houses, the proportions of the façade derived from interior requirements, specifically, the height of a person seated on floor cushions. This set the height of the window sill and the ceiling — and thus the placement of decorative brick coursing, which occurs at the floor framing. Now, the *ustas* say, everyone wants furniture, so the window sill and the ceiling must be higher. They also want large windows, which changes the characteristic window shape. Old-style windows are narrow rectangles; atop the rectangles are two short verticals or “necks” on which the arch sits, giving the arch an elongated proportion. If the window is very wide, the arch would run into the floor — so the neck is eliminated. “It looks squat,” says one *usta*, “like a man without a neck.”

Moreover, the constructive system itself has changed. The decorative brickwork characteristic of Sana’ani architecture is related to the load-bearing brick wall. Now, most clients want concrete houses, although the *ustas* try to persuade them that concrete is unsuited to the cool climate. The concrete frame or block wall may be erected by a contractor, and an *usta* called in later to “decorate” it with brickwork. The brickwork thus bears no functional relationship to the underlying structure (Figure 4).



Figure 4: Brick arches and detailing applied as veneer on a concrete block wall.

It seems clear that new *turath* will continue to evolve, but how? In the old city, the

usta's hand is often restricted by conservation guidelines that do little to foster creative solutions. In the new outlying districts there is little planning, no rules to follow, and few worthy precedents. There is one area, however, where we may find the inventive application of traditional techniques to new building types: the old, formerly walled suburbs, especially Bir al-Azab. These low-rise neighborhoods were the proving ground for the current generation of *ustas* and their fathers. Here they built, added to, and embellished houses very different from the tower house, under the critical eye of their elders. "Bir al-Azab is not part of UNESCO's Sana'a, but it's part of the *ustas'* Sana'a," observed a local architect. In contrast to the newer suburbs, context and precedent are important here. As such, these neighborhoods could become a laboratory for new *turath*.

This essay is indebted to conversations with numerous individuals, including Ali Oshaish, Giovanni Boccardi, Yahya al-Dhahbani, Yassin Ghalib, Abdullah al-Hadrami, Nadia al-Kawkabani, Steven Kramer, Ronald Lewcock, Abdelkarim Mohsen, Ali Oshaish, Selma al-Radi, Ahmad al-Rawdhi, Abdullah al-Rawdhi, Saba al-Suleihi, and Francesco Varanda.

Tall Identity...Lost Sustainability

Yasser Mahgoub and Anas Al-Omaim

The phenomenon of building tall and high rise buildings is sweeping all cities in the Middle East. They are all trying to build the “highest,” the “tallest,” and the “biggest” structures — recognized as such throughout the world. Dubai, for example, in addition to its numerous tall buildings along Zayed Road, is about to finish constructing the 800+ meter high Burj Dubai designed by SOM that will become the tallest building in the world when completed. This trend in Dubai initiated a temptation for other Gulf cities, including Kuwait, Saudi Arabia, and Abu Dhabi, to spread vertically as a sign of modernity and power. Kuwait is allowing the constructing of several tall buildings in its down-

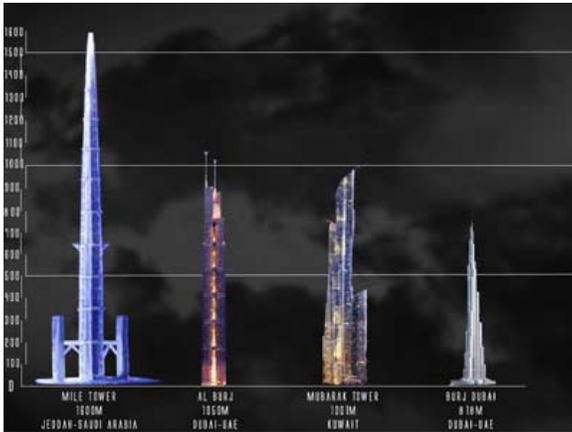


Figure 1: The future tallest towers in Gulf cities.

Tall buildings present a challenge as a new building type that did not exist in traditional architecture of the region. While some attempt to wrap them with elements and features borrowed from traditional buildings, the majority of tall buildings constructed in Middle Eastern cities are comparable to skyscrapers found in other parts of the world utilizing the same materials and construction technologies. After Dubai received world attention due to its massive architecture, some raised the question whether this architecture is “healthy,” that is, whether it is environmentally sustainable. As Al Sal-lal puts it, “The active construction of tall buildings in the UAE, as a result of the rapid growth of economy, goes in a fast pace and has not allowed enough time to study and realize the adverse impacts on the



Figure 2: Kuwait’s urban environment, a mixture of old and new and tall and short buildings.



Yasser Mahgoub is Assistant Professor of Architecture, Department of Architecture, College of Engineering and Petroleum, Kuwait University.



Anas Al-Omaim is an architect and urban designer. He has worked in Kuwait, London, and New York City.

environment.”¹



Figure 3: Examples of tall buildings in Kuwait.

Demands for sustainable architecture started to appear not only to save planet earth from global warming, but also as a trend and a key of publicity towards an intellectual awareness. The government of Dubai realized the negative impact of its rapid urbanization strategies that is promoting mega projects and tall buildings projects. According to Littlefield, “the fact is that the economic development of Dubai could not have been achieved without increasing the size of its carbon footprint, and like the rest of the UAE, Dubai is still essentially a fossil-fuel economy. According to the World Wildlife Fund, Dubai has the second-highest per capita carbon emissions in the world.”²

In January 2008, HH Sheikh Mohammad bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai instructed that all buildings in Dubai to be constructed according to “green building standards,” which has imposed the right kind of pressure on the developers. According to Al-Marashi and Bhinder, “this comes as a major boost to the international climate initiative *and* makes Dubai one of the first in the world, and the only city in the Middle East region, to initiate ‘green building standards.’”³ The UAE now has its own Emirates Green Building Council to frame UAE’s building construction guidelines taking into account the local conditions. Pacific Control Systems LLC has built the UAE’s first Platinum rated “Green Building” with solar air-conditioning and lighting. It is located at the Techno Park in Dubai. The built-up area of the five-storey building spans an area of over 100,000 square feet. It is aesthetically designed to use solar energy for most of its energy consumption requirements.

Kuwait is following the trend in Dubai to apply a sustainability strategy by initiating “green architecture act” and the first

1. Khaled Al-Sallal, “Tower Buildings in Dubai – Are they Sustainable?” Council on Tall Buildings and Urban Habitat (CTBUH) Conference, October 10-13, 2004, Seoul, Korea.

2. David Littlefield, “Gulf States Gear Up to Go Green,” *Building Design*, March 30, 2007, pp. 14-15.

3. H. Al-Marashi and J. Bhinder, “From the Tallest to the Greenest Paradigm Shift in Dubai,” CTBUH 8th World Congress, 2008.

Leadership in Energy and Environmental Design (LEED) certified building in Kuwait will start construction in 2008. As announced in World Architecture News in May 2008, Kuwait Engineering Office was commissioned to design a tower using sustainable design guidelines and tools outlined in the Green Building Rating System. "In addition to creating an iconic 40-storey tower consisting primarily of high end offices and a hotel, KEO was given the task of achieving a LEED® Gold from the US Green Building Council (USGBC). As well as meeting or exceeding a series of green requirements, the tower employs a series of wind turbines and PV panels to provide a renewable source of energy. It is hoped that this initiative starts a new trend towards applying a sustainable strategy by other developers and consultants."⁴

Kuwait started to apply building codes in the form of regulations and rules in 1955, and then in 1975 they released the first booklet that contains all the regulations in a systematic way. After that the municipality started to change the rules from time to time, to follow the politics, economy, and the social changes. Kuwait municipality started to modify the regulation for the first time in 1979 then the second time in 1985. Kuwait has started to construct tall buildings during the 1970s with buildings of a maximum of 12 floors. But with the increase of demand and the increase of security after the war against the regime of Saddam Husayn in Iraq in 2003, many foreign companies were attracted to start businesses in Kuwait. Therefore, building codes were modified to accommodate this need, and taller buildings started to rise.

The growing number of tall buildings under construction in Middle Eastern countries is alarming. Their impact on the human, natural, and built environment is not carefully assessed. The sustainability of tall buildings and mega-projects should be guaranteed in order to avoid creating degraded and congested urban environments. Absence of explicit laws or regulations regarding the implementation of sustainability in Kuwait's building codes limits the application of sustainability strategy to the personal interests of the owner or developer. Also, buildings can never be completely sustainable and green if they were not placed in a green environment.

Kuwait City is not well adapted to certain ecological ideas that cater towards an environmental city; for example, the electrical grid of Kuwait does not allow for the return of electrical surplus generated within the building. In addition, recycling is not recognized in any form in the city, making it harder for individual buildings to apply waste management strategies. Sustainable and green planning is a key factor for promoting sustainable building and achieving a comprehensive sustainable environment. Finally, building codes and regulations in Kuwait should reach out to urban design and urban planning.

There is a need to develop a new rating system of sustainability for the region, either adapted from the original LEED or invented from scratch, to serve Kuwait and the Gulf region. LEED caters to environments other than our local cities; the points LEED considers green might not work as a sustainable factor in the Gulf region. For example, LEED promotes

4. World Architecture News, May 14, 2008, <http://www.worldarchitecturenews.com>.



Figure 4: Sabah Al Ahmad International Financial Center, the first buildings in Kuwait pre-certified for LEED Gold status.

the use of bicycles as an alternative means of transportation, and supports saving spots in the building for bike storage. This does not work in Kuwait or the Gulf region, as the harsh desert climate and planning are not conducive to this form of transportation.

Tall buildings are an unavoidable structural invention invading the Gulf region and Kuwait. Green architecture requires more efforts during the design stage and more initial costs practices. Architects and developers avoid applying these policies in their design in order to reduce the cost and complexity of their projects. The government has a big role to play in promoting sustainability through the media and mass public campaign. Kuwait municipality and professional engineering associations should work to enforce building codes with green laws. Kuwait University, represented by the Department of Architecture and College of Engineering, should create awareness of green architecture not only through the curriculum but also through establishing testing labs that are developed solely for testing new ideas towards green and sustainable architecture in Kuwait.

Doha: Between Making an Instant City and Skirmishing Globalization

Ashraf M. Salama

A tiny peninsula off of the Arabian Peninsula, Qatar has become one of the major global producers and exporters of Liquefied Natural Gas (LNG). The wealth produced by Qatar's oil and gas exports has generated a construction boom in its capital, Doha, and the surrounding area. This resulted in significant growth at all levels, from urban development and infrastructure provision to cultural and educational facilities.



Figure 1: Four Seasons Hotel, an example of Global Architecture.

Historically, Doha was a fishing and pearl diving community. Today, the city is home to more than 90% of the country's nearly one million people, the majority of whom are professionals from other countries. Until the mid-1960s, the majority of the city's buildings were individual traditional houses that represent local responses to the surrounding physical and socio-cultural conditions. During the 1970s, Doha was transformed into a modern city. However, in the 1980s and early 1990s, the development process was slow compared to the prior period due to the overall political atmosphere and the heavy reliance of the country on the resources and economies of neighboring countries.



Dr. Ashraf M. Salama holds BSc, MSc, and PhD degrees in Architecture. He is Professor of Architecture and currently holds a Reader in Architecture Position at Queens University Belfast, and has held academic positions in Saudi Arabia and Qatar. He was the Director of Consulting at Adams Group Architects in Charlotte, North Carolina (2001-04).

The recent rapid development of Doha is associated with a fast track urbanization process, marked by large scale office towers and mixed use developments. In its modernization process and the attempt to follow the city of Dubai as an example of a global urban image, the city has adopted international building standards — state of the art glass towers with few attempts to fuse the modern with the traditional. However, the pace of development puts the city and the country in the category of “Instant Cities.” The government is supporting large-scale infrastructure development and high profile institutional and cultural building projects,



Figure 2: Headquarters of Ministry of Economy and Commerce, an example of Global Architecture.

the majority of which are designed by well known international firms and star architects. Despite the shortcomings inherent in any swift urban development process and the resulting global architecture, innovative approaches to design and the creation of responsive environments are being developed sporadically around the city.



Figure 3: An academic cluster, Qatar University campus.



Figure 4: An attempt at establishing local identity, Qatar University campus.

One of the early attempts to establish a local architectural identity against modernism and post-modernism was the Qatar University campus designed by the Paris-based Egyptian architect, Ahmed El Kafrawi. The campus is located on an elevated site 7 kilometers (km) north of Doha in Al Markhiah District and 2 km from the Gulf shore. The program accommodates main campus buildings such as a central library, an administration building and an information technology centre; five colleges (arts and sciences, education, engineering, business administration, *Shari'a* and Islamic studies); student activities and sport and recreational facilities; an educational technology building; and central services units. Based on an octagonal unit design idea, wind-tower structures are designed to provide cool air and reduce humidity. Towers of light are also introduced and intended to control the harsh sunlight. The abundant use of *mashrabiyyas* (traditional screened windows) and some stained glass also serve to mediate the environment. Open and partially covered courtyards, planted and often with fountains, are plentiful throughout the site. The architect placed strong emphasis on natural ventilation, one of the many ways in which he related to traditional architecture of the region. As specific models he used the few still existing wind-tower houses in Doha and modernized the basic principle.



Figures 3 & 4: Liberal Arts and Sciences Building, Education City, Qatar Foundation

As the discourse continues on the dialectic relationships between tradition and modernity, the contemporary and the historic, and the high-tech and the environmentally friendly, I have selected two important buildings that represent physical and intellectual statements: the Liberal Arts and Science Complex designed by the Japanese architect Arata Isozaki and the Texas A & M University Engineering College designed by the world-renowned Mexican architect Ricardo Legoretta.

The first statement is that of Arata Isozaki, who is well known for his innovative projects over the past 30 years and for his deep interpretation of the contexts in which his designs are developed. He designed the Liberal Arts and Sciences building (LAS), which is a focal point for all students in the Education City. Occupying an area of approximately 22,000 square meters and developed over a period of 21 months, the building was designed to accommodate the Academic Bridge Program (APB), a preparatory program for enhancing the academic background and experience of high school graduates from Qatar and other countries in the Gulf region. The APB addresses the universal problem of students' academic and cultural transition from high school to the university, but has been designed specifically to address the needs of students in the Gulf region. A visually striking and architecturally stunning project, the building is designed around a theme developed from traditional Arabic mosaics that are evocative of the crystalline structure of sand. This design was based on intensive studies to evoke the essential characteristics of the context while introducing new interpretations of geometric patterns derived from widely applied traditional motifs.



Figures 5 & 6: Texas A&M University College of Engineering, Education City, Qatar Foundation

The second statement is by the AIA Gold Medal award-winning Ricardo Legoretta, who in his design of the Engineering College of Texas A & M University continues to root his work in the application of regional Mexican architecture to the wider global context. Typically, his work is recognizable for its bright colors and sustained attempts to amalgamate local traditions and contemporary needs. Legorreta uses elements of Mexican regional architecture in his work, including bright colors, interplays of light and shadow, central patios, courtyards, and porticos, as well as solid volumes. Over a construction period of 19 months and on an area of 53,000 square meters, the College was opened in 2007 with a total capacity of 600 people, including students, faculty members, and teaching staff. The concept is based on introducing two independent but adjoining masses linked by large atria: the Academic Quadrangle and the Research Building. The

Salama...

overall expression of the building demonstrates masterful integration of solid geometry and a skillful use of color and tone values. Accessibility is well articulated where five main entries that lead to the inside of the building are introduced: two pedestrian entries, a car and vehicle entry, a service entry, and finally an entry tower. The lower floor accommodates car parking, locker rooms, and ancillary facilities.

While these two buildings represent conscious endeavors of two prominent architects toward creating responsive educational environments that meet the aspirations of the founders of the Education City and their society, it remains to be seen how the new buildings in the same campus will fit in harmony — visually, spatially, and functionally — with those already discussed and with the overall plan of the Education City. It also remains to be seen how the designs of other international and local architects will contribute to the continuing discourse on global architecture versus the emerging attempts of a culture of resistance.

The Reconstruction of Abu Dhabi's Central Market

Yasser Elsheshtawy

In emerging cities with no substantive urban history such as Abu Dhabi, the capital of the United Arab Emirates, the notion of identity and tradition becomes a tool through which different, and at times conflicting, political agendas are pursued. With respect to the built environment, this politicization of tradition responds to, and is guided by the varying interests of different actors: the “messianic” vision of its rulers (legitimizing power) and the interests of policymakers, planners, and architects (making profit). The reconstruction of the central market project in the city’s downtown area is illustrative of this process. Moving through a series of iterations and cycles in which notions of identity and tradition are used to varying degrees, the project transformed from an informal marketplace in the midst of Abu Dhabi to a globalizing city center representative of a new Middle East.

THE CASE OF THE CENTRAL SOUQ: TRANSFORMING URBAN MEMORY

One of the memorable sights for anyone visiting Abu Dhabi in the 1990s was the central market nestled between high-rise buildings in its central business district. Entering

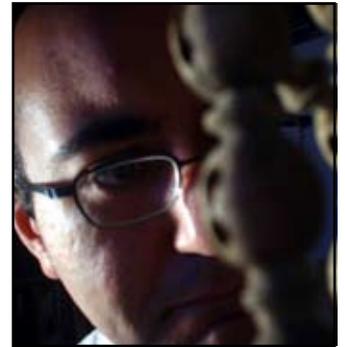


it was like encountering a different world — a *Foucaultian Heterotopia* composed of small, informal shops and low-income migrant workers — a sense of chaos contrasting sharply with the ordered appearance of its immediate context. It projected an air of provinciality and informality (Fig. 1). Ironically, in Abu Dhabi this was the only place that conveyed some sense of history and tradition, even though the market was built in the early 1970s.



Figure 1: Abu Dhabi's original central market

It was part of a general scheme devised by the city’s planner, the Egyptian ‘Abd al-Rahman Makhluḥ, to modernize. That was in 1972. The project remained a major landmark not just for foreign tourists and travel writers¹ but also for residents of Abu Dhabi. Popular



Yasser Elsheshtawy is Associate Professor of Architecture at the United Arab Emirates University. He has published several books on Middle Eastern cities, the latest is “*The Evolving Arab City*,” and he is currently completing a book on Dubai titled *Dubai: An emerging urbanity to be published by Routledge in Spring 2009*.

1. See J. Raban, *Arabia through the Looking Glass* (London: Collins, 1979).

accounts describe it as being as “old as Abu Dhabi, an intrinsic part of the city.”² However, the sense of a curiosity prevailed. This was further amplified by the very fact that such a market, with its chaotic appearance, would not fit with the neat and orderly image that officials wanted to project. Plans for renewal and removal were under consideration for some time, but it wasn’t until 2002 that authorities finally decided to build a new market in “traditional Arab and Islamic design.”³

REBUILDING THE MARKET: THE ORIGINAL VISION

This initial announcement, and subsequently the proposed replacement, did not seek a radical departure from the existing layout. Initially, Abu Dhabi Municipality awarded the project for the new market to the Arab Engineering Bureau (AEB). Architects at the firm were quick to affirm the historical character of the souq. Aside from these historical musings, the project in the initial stages was still viewed in mostly humanistic terms: the small, intimate scale would be retained; it was contrasted with the high-rise towers and so on.

Until the market’s actual demolition in 2005, a series of newspaper articles periodically documented shopkeepers’ and shoppers’ moods, eliciting reactions and more or less playing into a notion of loss: that Abu Dhabi was losing a “historical landmark.” Plans for the project or images, were never made public. Ultimately, the original proposal was scrapped and a competition was held for a larger scheme. The winning design by Jordanian architect Rasim Badran shows a three-story inward oriented structure, in addition to a five-story building. The project displays a cultural sensibility by incorporating elements of what is considered Gulf-Arab architecture.

THE NEW VISION

The project was put on hold, and no significant effort at demolition took place. In 2004, after the death of Shaykh Zayid, President of the UAE and ruler of Abu Dhabi, the capital embarked on a significant construction effort, entering a new phase of urbanization. Among the many development players entering the scene was the government-owned developer al-Dar. They replaced the municipality as the principal developer for the site. Things moved quickly once the replacement was made, resulting in an announcement of the cancellation of the previous scheme, a complete reworking of the design and the issuance of eviction notices for shopkeepers. This process was made more urgent by a fire that partially destroyed the souq. A site visit by the author prior to demolition show the souq still active with significant commercial activities (Figure 2). The area was finally demolished on March 2, 2005.



Figure 2: The central market prior to demolition

2. K. Daniel, “Bazaar Buzz: The old world charm of Hamdan Souk in Abu Dhabi makes shopping a pleasure,” *Gulf News*, June 17, 2002, p. 16.

3. “Designs underway to build new market in Abu Dhabi: Central Souq to be replaced with a new facility in traditional Arab and Islamic design.” *Gulf News*, December 29, 2002, p. 4.

Following the demolition, a new scheme was introduced by the UK's Foster Architects, replacing the Arab architect Rasim Badran. Foster's website includes an interesting description of the project, essentially confirming its historical origin, but then noting that the market will be a "reinterpretation of the traditional market place and a new civic heart for Abu Dhabi." A cluster of towers will create a "striking new urban landmark."⁴

The physical facts illustrate the sheer enormity of the project, standing in stark contrast to the original plan of creating a humane, small-scale environment, which would foster a sense of community and intimacy. This is exemplified by the three massive towers — one as high as 88 stories. The lower podium is clad in a lattice-like screen, meant to evoke some sort of *mashrabiya*. What is in essence a modern, luxurious shopping mall is covered with such a device to address this dubious notion of an Arabian souq. The project is currently under construction and its model displayed in various exhibitions is meant to entice investors (Figure 3).



Figure 3: The new central market in the CITYSCAPE Dubai exhibition



Figure 4: Migrant laborers using the outdoor spaces of the market

While the project may have commercial value, what is of particular significance is the transformation which has occurred, from a small dilapidated row of shops, which nevertheless catered to a very significant part of the population, to an ultra-luxurious shopping mall. What underlies all this, it seems, is a desire to exclude those elements which were in some way "spoiling" the modern metropolitan image that officials are trying to portray. There is simply no room for loitering Pakistani shoppers looking for a cheap bargain, or a gathering of Sri Lankan house maids exchanging news (Figure 4). As such this development by its very nature responds to the neo-liberal capital schemes criticized by David Harvey.⁵ It also is a reflection of world city rhetoric as seen in the writings of Jon Friedman and Saskia Sassen, who have examined the social exclusion and role of migrants in world cities.⁶

4. Foster & Partners. 2007. *Official Office Website*, <http://www.fosterandpartners.com/Projects/1431/Default.aspx>.

5. D. Harvey, *Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development* (London, UK: Verso, 2006).

6. J. Friedman, "The World City hypothesis," *Development and Change*, Vol. 17 (1986), pp. 69-83; S. Sassen, *The Global City* (Princeton: Princeton University Press, 2001); for an alternative reading, see M. Peter-Smith, "Power in Place: Rethorizing the Local and the Llobal," in J. Eade and C. Mele, eds., *Understanding the City: Contemporary and Future Perspectives* (London, UK: Blackwell Publishing and J. Robinson, 2002), pp. 109-130; and "Global and World Cities: A View from Off the Map," *International Journal of Urban and Regional Research*, Vol. 26, No. 3 (2002), pp. 531-54.

CONCLUSION: FORGING A NEW MIDDLE EAST

“A city that had no pity on itself or its citizens: a mound of debris that rose higher every day. People looked around them, *bewildered or gratified*, but with a single wish: to get this all over with” (p. 222).

— Abdulrahman Munif, *The Trench, Cities of Salt* (my emphasis)

One could argue that through these, and other, efforts, a “New Middle East” is being forged in this region. The institutions of global capital — multi-national companies and increasingly museums, in addition to star architects — are being used to transform cities in the Gulf which are offered as a model for the rest of the *dysfunctional* Middle East. This has become part of the official rhetoric adapted by local officials and scholars. ‘Abd al-Khaliq ‘Abdullah, a UAE University professor of political science, talks about “the Dubai moment” and that the significance of cities such as Cairo, Beirut or Baghdad has effectively diminished.⁷ Abu Dhabi is in-



Figure 5: Abu Dhabi’s emerging skyline seen from the Emirates Palace Hotel

creasingly following a similar path. History and tradition are used to create a “myth” of a glorious Islamic past, which is revived at the hand of the city’s rulers. In some instances, when necessary, they are simply ignored. Ultimately, however, the question becomes: Going beyond the glitter of high-tech *Fosterian* towers, what does Abu Dhabi offer to the world? In the end, are these developments geared towards their inhabitants, enhancing their daily lives, or are they, like Munif’s fictional people in the quote above, left as bewildered as everyone else?⁸

7. A. Abdullah, “Dubai: An Arab City’s Journey from Localism to Globalism,” *Al-Mustaqbal Al-Arabi (The Arab Future)*, No. 323 (January 2006), pp. 57-84.

8. For more details on developments taking place in Abu Dhabi see Y. Elsheshtawy, “Cities of Sand and Fog: Abu Dhabi’s Global Ambitions,” in Y. Elsheshtawy, ed., *The Evolving Arab City* (London, UK: Routledge, 2008).

Dubai: Selling a Past to Finance the Future?

Kevin Mitchell

As a result of efforts to ensure a future, Dubai has accelerated the present and fashioned a past that is often reduced to a series of marketable images. Precipitated by a desire to attract foreign direct investment and capture a share of the global and regional tourism markets, the rapid change has had significant effects on the built environment. Since the middle of the 20th century there have been exponential increases in the scale of architectural and urban projects and the speed with which they are designed and constructed. The exaggeration of scale has been accompanied by an emphasis on the iconic to attract media attention and investment; the speed is necessary to ensure confidence, inspire continued investment, and fulfill the promise of profit. While the economic benefits of increasing scale and speed to deliver iconic statements are evident in the case of Dubai, it has led to the commodification of the built environment. Treating buildings and urban spaces as mere commodities may have long-term consequences.



Kevin Mitchell is an Associate Professor in the Department of Architecture of the American University of Sharjah. He is also the Director of Graduate and Undergraduate Programs.



Figure 1
Urbanization has been almost instantaneous in Dubai. As late as the 1960s, some Dubai inhabitants continued to live in small palm-frond shelters (*barasti*) that were used prior to the introduction of more permanent dwellings. Others with greater means lived in “windtower” houses, named for the characteristic wind catchers (*badgir*) that rose above the houses and contributed to cooling by enhancing the effect of breezes. While there is evidence of the use of wind catchers throughout the broader region, Dubai’s windtower houses were modeled on those found in modern-day Iran and in other parts of the Gulf; they represent migration and the transfer of knowledge that resulted from the exchange of goods, ideas, and technology along trade routes. As is common with vernacular buildings, scale was related to available or easily imported materials and technology. In the windtower houses, mangrove poles or timber joists that supported upper floors or roofs restricted the width of rooms to approximately 3–3.5 meters. The size and structural capacity of the material placed limits that, in the hands of capable master builders, became the basis for a restrained elegance and intimate scale that is rare in many contemporary buildings.

For a brief period during the 1970s there were noteworthy buildings by architects aware



Figure 2

from the early 1970s that exhibited sensitivity to issues of scale and context included a series of projects by Jafar Tukan, the Dubai Police Headquarters by Cagdas Associates, and the Dubai International Airport by Page & Broughton.

While it is difficult to trace the beginnings of the emphasis on iconic buildings that relied on reproducing vernacular elements at an exaggerated scale, it seems that the tendency was clearly apparent from the mid-1980s onward. In 1984, John R. Harris & Associates initiated the design of the *Diwan* of His Highness the Ruler of Dubai. Although the *Diwan* complex demonstrates the restraint characteristic of the office's earlier work in Dubai, the reliance on visual references to historical precedents indicated the influence of postmodernist tendencies that were widespread in Europe and the United States in the early 1980s. The windtowers employed as purely visual elements in the *Dwan* foreshadowed the proliferation of non-functional iconic elements across Dubai's skyline in the following decades. However Harris did maintain the concern for sensitivity to climate that was characteristic of his earlier projects such as the Dubai World Trade Center.



Figure 3



Figure 4

The reproduction of vernacular elements soon gave way to increasing scale and treating buildings as iconic statements intended to attract attention through visual expression. Increases in land value provided the incentive to build higher and the importation of new construction materials and technologies made it possible. Buildings, as a result of their visibility on the emerging skyline, became iconic symbols of progress and evidence of prosperity. The free-standing high-rises lining Shaykh Zayid Road represent one of the first manifestations of the competition for attention that has come to characterize much of Dubai's contemporary architecture.

Throughout the 1990s, a number of projects illustrated the emphasis on developing visually arresting forms that could compete for attention on Dubai's skyline and in a global context. The most well-known example is the Burj al-Arab hotel (WS Atkins) which, as a result of its isolation on an island and a de-



Figure 5

scale of projects may actually continue to increase. Occupying the site of what was one of Dubai's more established neighborhoods, Jumeira Gardens will cover an immense area and contain "one of the world's tallest and largest buildings."

An increasing focus on iconic statements to attract the attention of tourists and investors has placed the emphasis on the individual building rather than on the relationship between building and urban context. This has led to fragmentation and a lack of cohesion. Individual buildings are viewed as commodities and their success is determined by the ability to attract investment rather than by contributions to creating a cohesive urban environment.



Figure 6



Figure 7

In the early part of the 20th century, the introduction of the windtower house resulted from the exchange of goods, ideas, and technology. Well-suited to address the climate and context, the house type was flexible enough to be adapted to fit specific needs. Interior spaces were scaled for human habitation and, when grouped, the houses created an urban environment that was also humanely scaled. This part of Dubai's past has been obscured by the emphasis on the windtower as an iconic element.

The quest for large-scale icons has been characterized by impatience. There is little time for design and construction, and this has impacted the quality of the built environment. Recently, more attention has been given to labor-related issues in the construction industry in the Gulf. To date, the focus has been on improving basic conditions, but until those performing the work are viewed as integral rather than dispensable, there is little chance that the quality of buildings will improve. Ultimately addressing the small-scale concerns that have a fundamental effect on the way we inhabit or experience space takes a great deal of time and effort on the part of those designing and constructing buildings. The demand for increased speed and larger scaled projects in Dubai means that there is little investment in design and in those responsible for the actual construction. Buildings may be sufficient for the present, but perhaps not invested with an understanding of the past or with the time and attention necessary to secure the future.

Modernizing and De-Modernizing: Notes on Tehran

Mina Marefat

In 1967, Constantine Doxiadis assumed that global cities would inevitably be alike,¹ while Wolf Schaefer observed more recently, “different processes and dynamics of change... are colliding with local histories worldwide.”²² While cities continuously change, they also retain traces of the past. (Figure 1) The architectural artifacts in Iran’s capital, Tehran, offer clues as to what can happen when historically strong cultural forces, especially religious ones, intersect the flows of capital, goods, information, people, and politics.³³ They offer us snapshots of paradox, contradiction, and hybridization — modernization and de-modernization — which make globalization at best fragmented and fractured.⁴⁴



Figure 1: Tehran, 1978

LATE QAJAR TEHRAN (1848-96)

After Iran’s defeat in several wars and the loss of much of its territory in the early 19th century, Tehran’s architectural façade under Nassereddin Shah (1848-96) displayed a selective approach to ideas and institutions deemed modern. (Figure 2) An old city but a new capital, Tehran expanded dramatically but continued to display the traditional features of an Iranian Islamic city: walls and gates with Islamic symbolism, a fortified citadel, (Figure 3) bazaars, residential quarters, and a major congregational mosque. (Figure 4)



Mina Marefat, PhD, AIA, is an architect, urban designer, and architectural historian in Washington, DC whose Bam Project sponsored by Catholic University and the Library of Congress brought well known professionals together to investigate the potential for innovation in short and long term rebuilding after natural disasters.

The European elements that appeared in late 19th century Tehran were superficial adaptations of Western features confined to the citadel and nearby areas of European presence. (Figure 5) Perhaps symbolic was the city’s first public clock, a potent example of

1. Constantine Doxiadis, “The Coming World City: Ecumenopolis,” in Arnold Toynbee, ed., *Cities of Destiny* (New York, London, Sydney: Thames and Hudson, 1967), pp. 345–346.

2. Wolf Schaefer, “Global Technoscience: The Dark Matter of Social Theory,” paper given at University of Maryland Conference on Globalizations: Cultural, Economic, Democratic, April 11, 2002, p. 1.

3. I add politics to Sassen’s classic descriptions of globalization. Saskia Sassen, *The Global City: New York, London, Tokyo* (Princeton, NJ: Princeton University Press, 2001).

4. For a detailed discussion of globalization as it relates to Tehran see, Mina Marefat, “Fractured Globalization: a Case-Study of Tehran,” published in Elliott Morse, ed., *New Global History and the City* (New Global History Press, 2004). Marefat’s award-winning PhD dissertation at MIT, *Building to Power: Tehran 1921-1941*, included path-breaking original research.

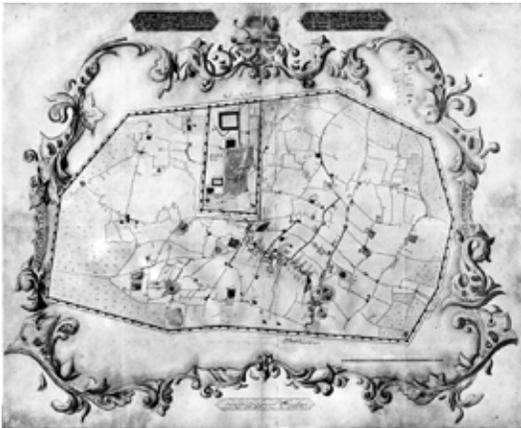


Figure 2: Berezin map of Tehran, 1842

modernity. The clock soon stopped working but the city's temporal life continued moving along to the periodic calls to daily prayer. In fact, the new wall and towers of the late 1860s, reportedly inspired by Vauban's fortification of Paris, were designed to assert Tehran's claim to being the center of a global Shi'ite Caliphate. Even as Qajar shahs and their courts traveled to the West and became increasingly covetous of Western objects, they never politically embraced or promoted ideologies of modernity, much less the secularizing tendencies of globalization. The proliferation of religious buildings was the most salient architectural sign of population growth in Tehran.

REZA SHAH AND MODERNIZATION (1924-41)

Like Ataturk in Turkey, Reza Shah headed a paternalistic state intent on modernization, with or without substantive changes. (Figure 6) His relationship with the West, however, was ambivalent. He welcomed the forces of global development, Western experts, and visitors, but also resented their perceived superiority and aimed to curtail their influence by replacing them with Iranian counterparts.

His program of urban surgery was a conscious process of introducing new institutions and forms: wide paved boulevards with separate pedestrian and vehicular lanes, an orthogonal grid of streets imposed on mazelike neighborhoods, and large public squares at intersections. (Figure 7) He tore down the walls of the citadel, razed most of its buildings, and replaced them with monumental government and bureaucratic edifices. This new architecture underscored a grandiose state ideologically committed to nationalism, secularism, and modernization. [Figure 8]

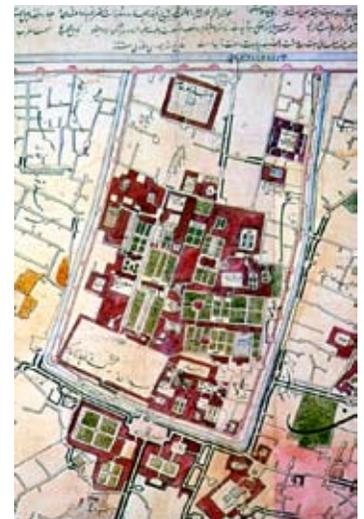


Figure 3: 1858 Kriz Arg (citadel)

At the same time, however, Reza Shah countered modernity with an indigenous past. Throughout Tehran, he replaced 19th century religious symbols with pre-Islamic iconography recalling the ancient Persian Empire. A most telling sign



Figure 4: Royal Mosque (Flandin)

was the new National Bank, a statement of financial independence and a rejection of British domination [Figure 9] directly inspired by Persepolis, the treasury of the ancient Persian Empire. [Figure 10] Even as he employed European architects, the Shah also supported a first generation of Western-educated Iranian architects who put their own unique stamp on public and private buildings. But his effort to turn Western influence to the benefit of a globally significant Iran was not as consequential as he had hoped, insofar as Iran was not yet



Figure 5: Shamsol Emareh

a crucial nexus in the global flows of capital, people, and politics.

MUHAMMAD REZA SHAH AND TEHRAN AS EPICENTER (1941-79)

After the Allies forced his father to abdicate during World War II, Muhammad Reza Shah continued his secular program, fueled by oil revenues. (Figure 11) In a thriving economy, oil and modernism became coterminous as the Shah engaged in an orgy of building designed to make the capital an international epicenter.

Petrodollars in hand, he lured an impressive array of famous Western architects to participate in structural and stylistic experimentation. Entire cities were to be built within and around Tehran. A paradigmatic example was *Shahestan Pahlavi*, a huge administrative township intended to centralize governmental bureaus, following the model of Manhattan under mayor John Lindsey. As they embarked on such grand projects, the imported architects visited and were influenced by magnificent Safavid architectural remains. Many consequently attempted an architectural vocabulary which paid homage to that rich tradition, an effort aided by joint ventures with Iranian architects. Another scheme was *Pardisan*, an ultra-modern island resort designed as a Middle Eastern Las Vegas for Gulf shaykhs. This path-breaking global park was to simulate the five climatic zones of the world and incorporate an animal reserve, museums, a planetarium, cultural centers, and picnic grounds.



Figure 6: Reza Shah, Seuvrugran photo

The new Tehran was in one sense a global place where flows of capital, goods, information, and people converged. Its population had quadrupled by the mid-1970s, reaching 4.5 million. Yet, despite extensive building, the urban infrastructure remained feeble; without a modern sanitary sewage system or adequate public utilities, including public transportation, it was incapable of handling onslaughts of people, commodities, and cars. Further, the city polarized into a northern half populated by the affluent, secularized classes and a generally poorer, less developed southern area. Be-



Figure 7: Maydan Sepah

neath the modern, cosmopolitan veneer of the global city flowed a latent religious current, ill at ease with modernity. As is well known, it was the persistence of certain strains of “local” culture rather than global forces that ended Muhammad Reza Shah’s reign. After almost a half century of ambivalently modernizing and globalizing, Iran established the first modern Islamic state and became, ironically, the global symbol of the rejection of global forces.

TEHRAN AFTER 1979

Turning inward, Tehran and Iran became paradoxically both less and more global after 1979. As the gates to the West closed, pre-Islamic imagery was stripped from public monuments and replaced by the faces and words of Islamic leaders. Hundreds of new mosques sprang up as religious, community, and economic centers. If huge modern edifices, a rational urban grid, and grandiose public squares were the legacies of Reza and Muhammed Reza Shah, (Figure 12) then the gaudy shrine of Imam Khomeini near Tehran's rapidly expanding cemetery must be a signal architectural trace of the first two decades of Islamic rule. Meanwhile, the problem of Tehran's overcrowding was answered by shanty towns and high rises that have created a newly modern silhouette. (Figure 13) Pollution, traffic congestion, shortages of water, and excesses of sewage have continued, as has the binary class geography of the city.



Figure 8: Meydan Mashq Gate



Figure 9: Bank e Melli (National Bank)

Tehran remains a lively and complex reality, full of conflict and vitality beneath a bleak garb. (Figure 14) A century of turmoil and both forced modernization and de-modernization have perhaps enabled a particular dynamic. As reflected in a somewhat phantasmagoric architecture, the defensive and creatively eclectic dualism of Iran's political leaders has led to a habitual split, an experience half "modern" and half "looking backward" — one hand appropriates from around the globe while the other ideologically rejects all of it. The irony, perhaps, is that Tehran, showcasing a new political order, now displays an Islamic face while a vibrant cosmopolitanism thrives in a city full of satellite dishes and internet connections that slake the thirst of many Iranians for global encounters.⁵⁵

encounters.⁵⁵

55. After Israel, Iran is reported to be the most "wired" county in the Middle East. Demographically dominant young people, at least, participate more and more in a world civilization.

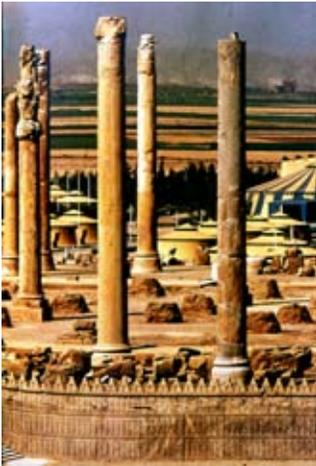


Figure 10: Persepolis columns



Figure 11: Muhammad Reza Shah



Figure 12: Shahyad Monument, renamed Freedom Square



Figure 13: North Tehran, Motahari Square



Figure 14: 21st century Tehran

Bam: Rebuilding a Historic City

Mina Marefat

In an eerie coincidence, the 2004 tsunami in Southeast Asia took place precisely on the first anniversary of the earthquake in Bam, Iran in the early morning hours of December 26. The shocking loss of life in both tragic events reminded us how interconnected our world is. Hurricanes Katrina and Rita in the United States and another devastating earthquake in Pakistan demonstrated again that the world is not prepared when it comes to large-scale disasters, particularly those that take place in culturally rich heritage sites such as Bam.



Figure 1

Bam invites us to consider the many complex architectural issues that need to be addressed in historic areas vulnerable to natural disasters. Situated about 1,000 km south of Tehran, Bam is a large oasis edging a vast desert; a sophisticated underground irrigation canal system of *qanats* provides the water supply. (Figure 1) This old trading center and military post represents an architectural history of more than 2,000 years. The Arg-e-Bam, the citadel and seat of government, built by the Sassanians on a hill 200 meters high, was not only the largest mud brick structure in the world but also a focus of cultural identity for the city and its surrounding area. (Figures 2 and 3) Before the 2003 earthquake, Bam had a recorded population of about 100,000. Eighty-five percent of Bam was destroyed, almost 30,000 people in the area were killed, more than 20,000 injured, and 75,000 people, many from surrounding villages, were rendered homeless. (Figure 4)

Three converging factors resulted in such massive damage and loss of life: previous structurally unsound changes to original walls, especially in the citadel; significant termite damage that reduced wall cohesion; and an extremely high frequency of earthquake vibrations. Reconstructing Bam for a more earthquake resistant future presented many challenges and lessons. (Figure 5)

One of the most crucial concerns was housing, both temporary and permanent, since



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Figure 2



Figure 3

almost 85% of Bam's housing, mostly of adobe construction, was destroyed in the earthquake. Early on, it became clear that people were reluctant to relocate for any length of time to camps with intermediate shelters. (Figure 6) They responded best when temporary tents and intermediate shelters were on or near the sites of their destroyed homes. Prefabricated intermediate dwellings of lightweight, earthquake resistant design, typically consisting of one room of 16-20 square meters, were quickly constructed and required little maintenance. (Figure 7) In some cases, people modified shelters to fit their way of life, improving them to harmonize with typical Bam dwellings

where several families may live under one roof. Other ideas that emerged from considering conditions in post-seismic Bam stressed the importance of developing architectural solutions that take advantage of both rubble and surviving walls to construct intermediate and permanent buildings.

A key fact was that most of the homes destroyed by the earthquake were no more than 30 years old and lacked proper structural bracing, a fact likely due to the desire to reduce building costs. Preserving Bam's housing in the future will require building strategies that are both cost-effective and earthquake-resistant. The experience of addressing Bam's permanent housing reconstruction highlighted a clear need for the future: more sustainable, seismic-resistant, and creative alternatives to the steel-frame and masonry (either solid fired brick or lightweight, hollow air-entrained ceramic block) plans then available.



Figure 4



Figure 5

One flexible approach to reconstruction is the Superadobe system developed by architect Nader Khalili. This earth and fire construction system incorporating Iranian vernacular earth building methods answers both temporary and permanent needs. Barbed wire laid between circular courses of earth-filled sandbags establishes stability as well as quake- and flood-resistance. (Figure 8) The earth itself provides insulation and fire-proofing. The courses are corbelled near the top to form a dome, an aerodynamic design that stands up to high winds. Residents without sophisticated technical training can build Superadobe inexpensively, thus empowering people to create their own homes and community structures. Because the buildings use local resources, they are entirely sustainable and easily become permanent housing. Blending smart technology with tradition, this method of construction relies on timeless forms — arches, domes, and vaults — to create strong, safe, beautiful single and double-curvature shell structures

honoring the ancient mudbrick architecture of the Middle East. (Figure 9) This is also a robust enough approach — technically, structurally, and aesthetically — to answer the immediate needs of communities as devastated as Bam for new



Figure 6

In the longer term, as a microcosm of the Persian built environment — as emphasized by noted architect Keyvan Khosrovani — the ancient city of Bam offers opportunities to generate ideas for sustainable reconstruction, tapping into techniques such as passive cooling, solar and wind energy, day-lighting, green roofs, and reliance on local materials and crafts. Such principles of blending human habitat with natural ecosystems have long been integral to local Persian traditions of building. Locally aware innovations such as Superadobe and Styrofoam panel systems readily revitalize these traditions and reinvigorate development in a manner that preserves cultural identity and pride in community while setting standards for structurally sound building, smart growth, low impact development, eco-urbanism and livable communities that may be relevant to many places in the world.

The second challenge of Bam was its historic value — the need to reinforce an existing cultural asset, the Bam citadel, while taking care to preserve what survived. It is notable that some of the oldest, abandoned or eroded earth structures in the citadel survived the earthquake even as heavily restored and modified ones collapsed. (Figures 10 and 11) Seismic concerns encourage a deep understanding of crucial construction features — base connections, bracing, types of reinforced walls, and methods of strengthening existing construction. One thing learned from the citadel of Bam is that architecture, structure, and material are one. In some cases, as with steel frame buildings destroyed in Bam, it was not the material but the welding — the construction— that failed under seismic impact. In other cases, carelessly adding straw-reinforced stucco or other material to walls undermined the underlying integrity. (Figures 12 and 13)



Figure 7



Figure 8

As Rudolph Langenbach, an expert in seismic vulnerability put it: “a core understanding of building systems” does not take architectural appearance as indicative of stability. Builders and rebuilders cannot assume that one material or another — in this case earth — will behave like similarly sized and shaped structures or laboratory models used for engineering analyses. Fostering sustainable building means combining scientific understanding with knowledge recovered from people who knew how to build earthen struc-

tures in earlier times, who knew why walls looked as they did and had the structural soundness they needed.

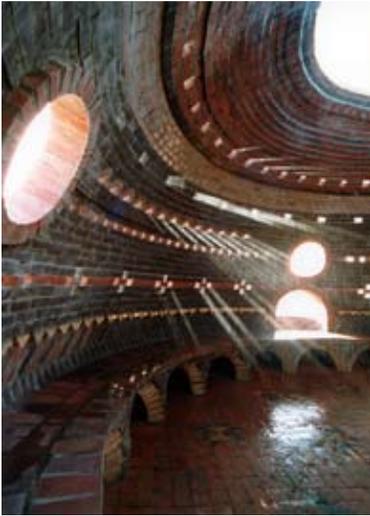


Figure 9

Much of the destruction in Bam can be traced to failures of the construction systems applied to specific structures, rather than failures of the material. The city is a striking reminder that simple, unfired earth is a primary building material for many of the world's people and the medium for many precious cultural artifacts. Earth remains a central building material, to be further explored and developed into innovative, sustainable solutions for rebuilding the residential, cultural, institutional, and commercial landscapes of communities devastated by natural disasters. Likewise, the lessons of Bam point to a need for significant changes in public policy to encourage and implement disaster prevention and recovery plans, as well as creative sustainable building strategies sensitive to geographical, climatic, and cultural conditions.



Figure 10



Figure 11



Figure 12



Figure 13

From the Top Down: Aerial and Satellite Views of the Middle East's Built Environment

Tangier, 2001



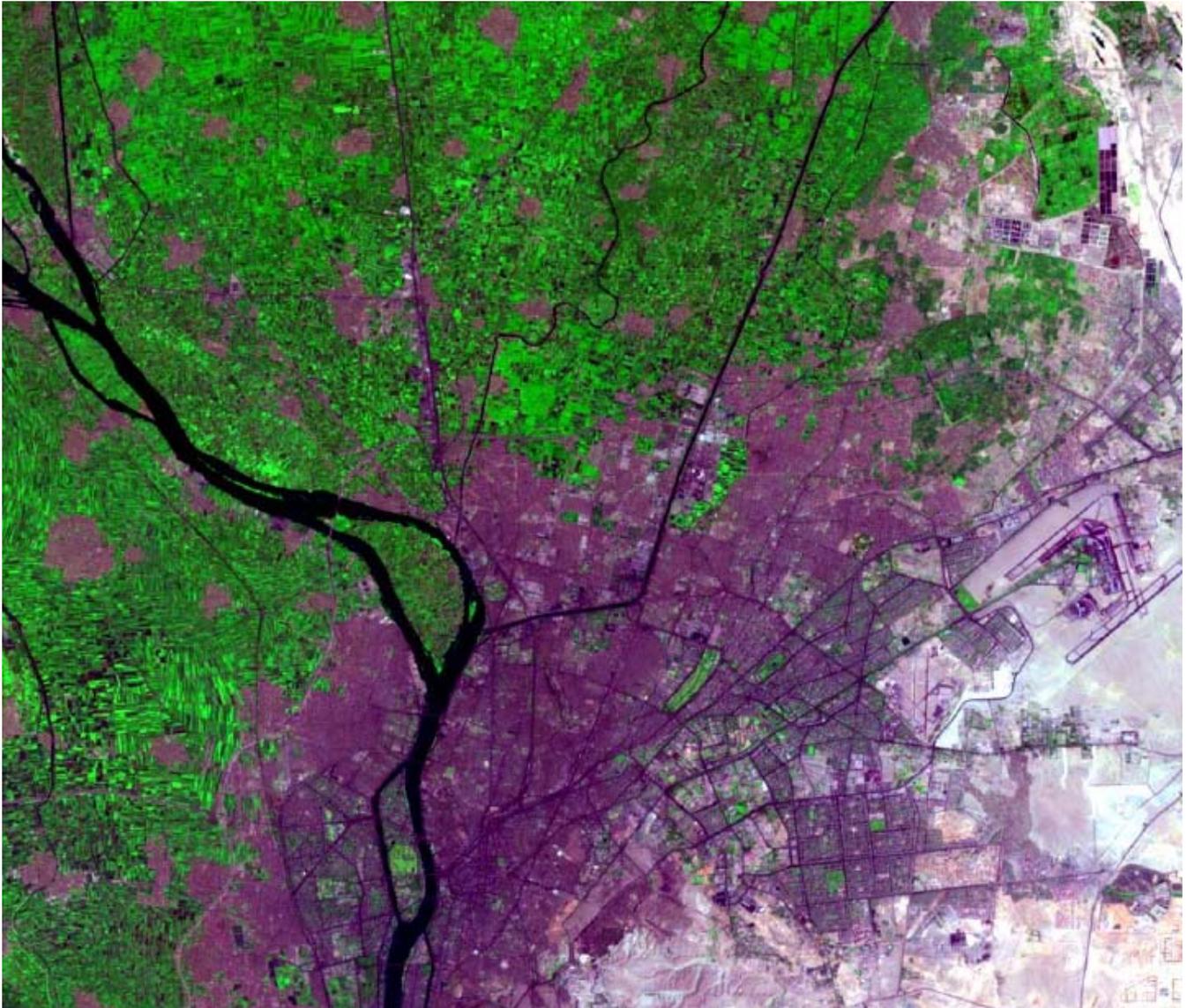
Image Science and Analysis Laboratory, NASA-Johnson Space Center: "The Gateway to Astronaut Photography of Earth."
<<http://eol.jsc.nasa.gov/scripts/sseop/QuickView.pl?directory=ESC&ID=ISS001-E-6683>>

Algiers, 1996



Image Science and Analysis Laboratory, NASA-Johnson Space Center. "The Gateway to Astronaut Photography of Earth."
<<http://eol.jsc.nasa.gov/scripts/sseop/photo.pl?mission=NM21&roll=753&frame=20>>

Cairo, 2000



Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Cairo, Egypt 08-23-2000*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

Jerusalem, 1999



Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Jerusalem, Israel 08-07-1999*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

Beirut, 2000



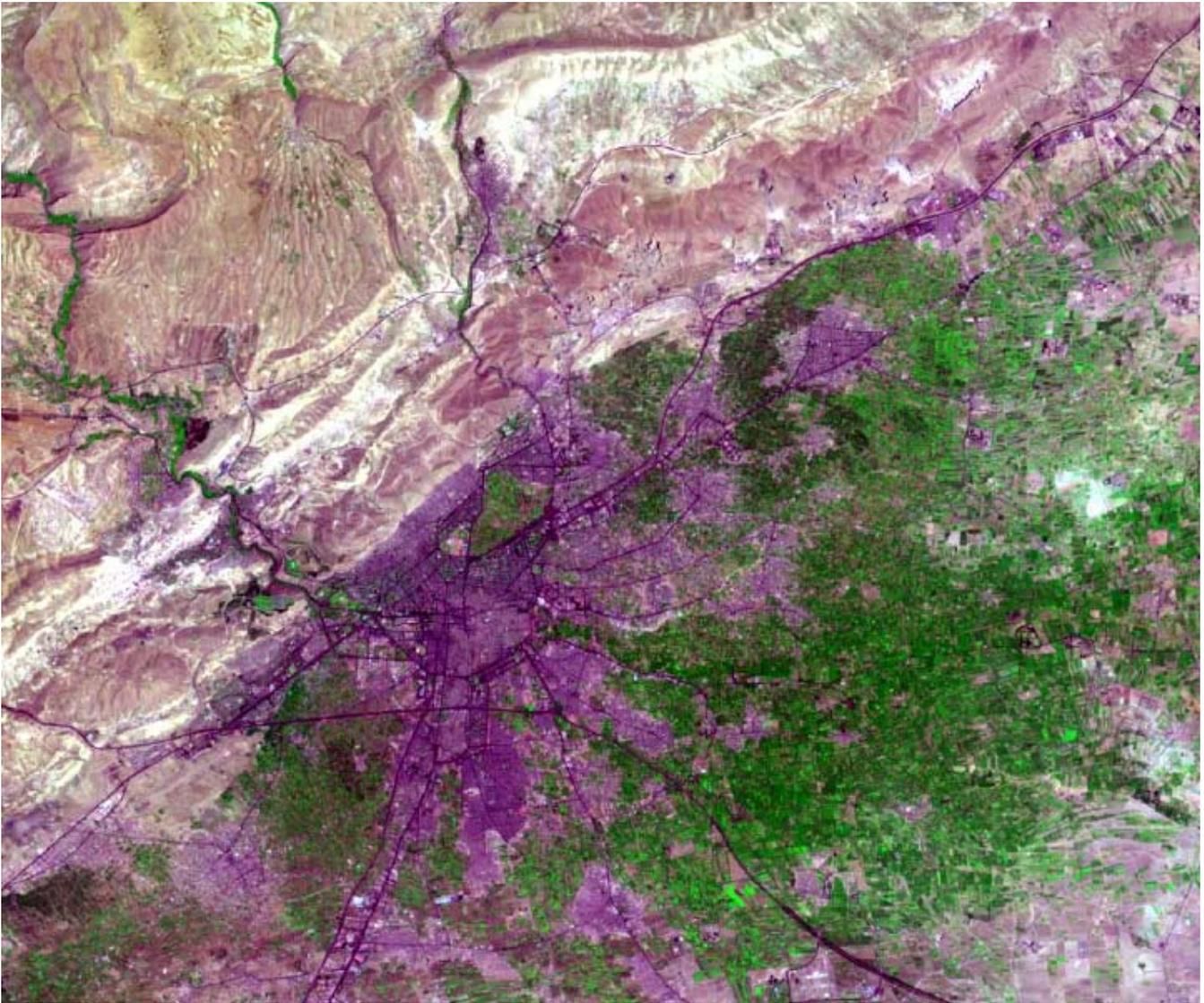
Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Beirut, Lebanon 06-22-2000*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

‘Amman, 1999



Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Amman, Jordan 08-07-1999*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

Damascus, 2000



Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Damascus, Syria 06-22-2000*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

Kuwait City, 2001



Image Science and Analysis Laboratory, NASA-Johnson Space Center: "The Gateway to Astronaut Photography of Earth."
<<http://eol.jsc.nasa.gov/scripts/sseop/photo.pl?mission=ISS001&roll=E&frame=6336>>

Tehran, 1998



Image Science and Analysis Laboratory, NASA-Johnson Space Center. "The Gateway to Astronaut Photography of Earth." <http://eol.jsc.nasa.gov/scripts/sseop/photo.pl?mission=STS091&roll=719&frame=59>

Dubai, 1973

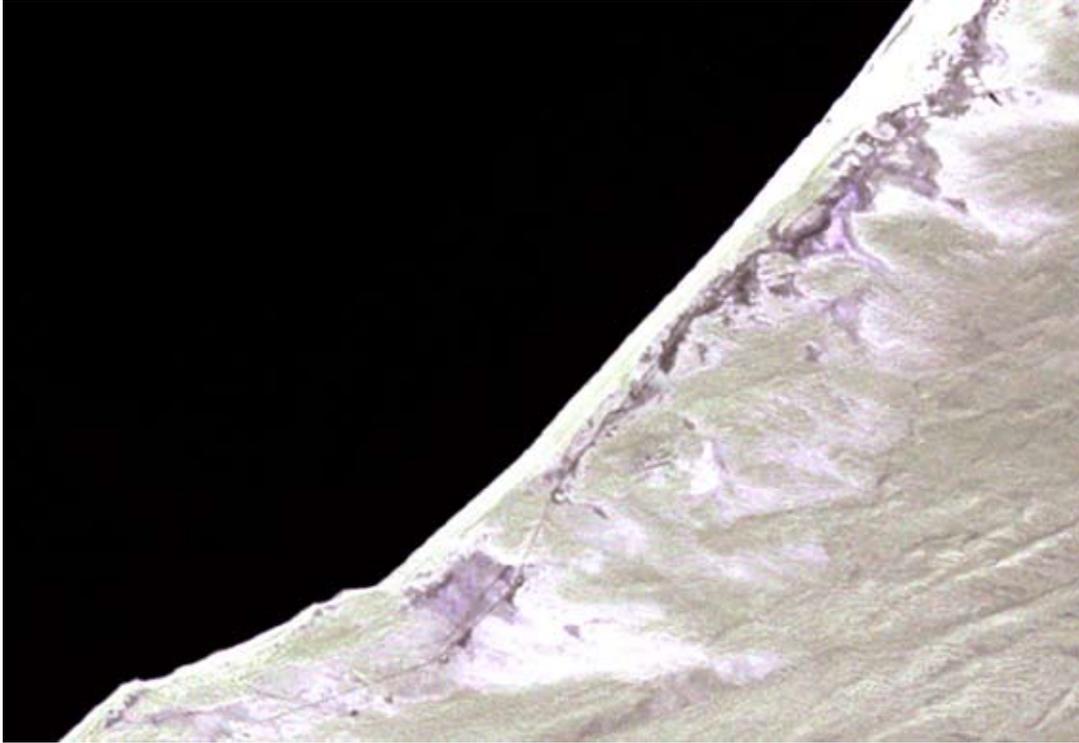


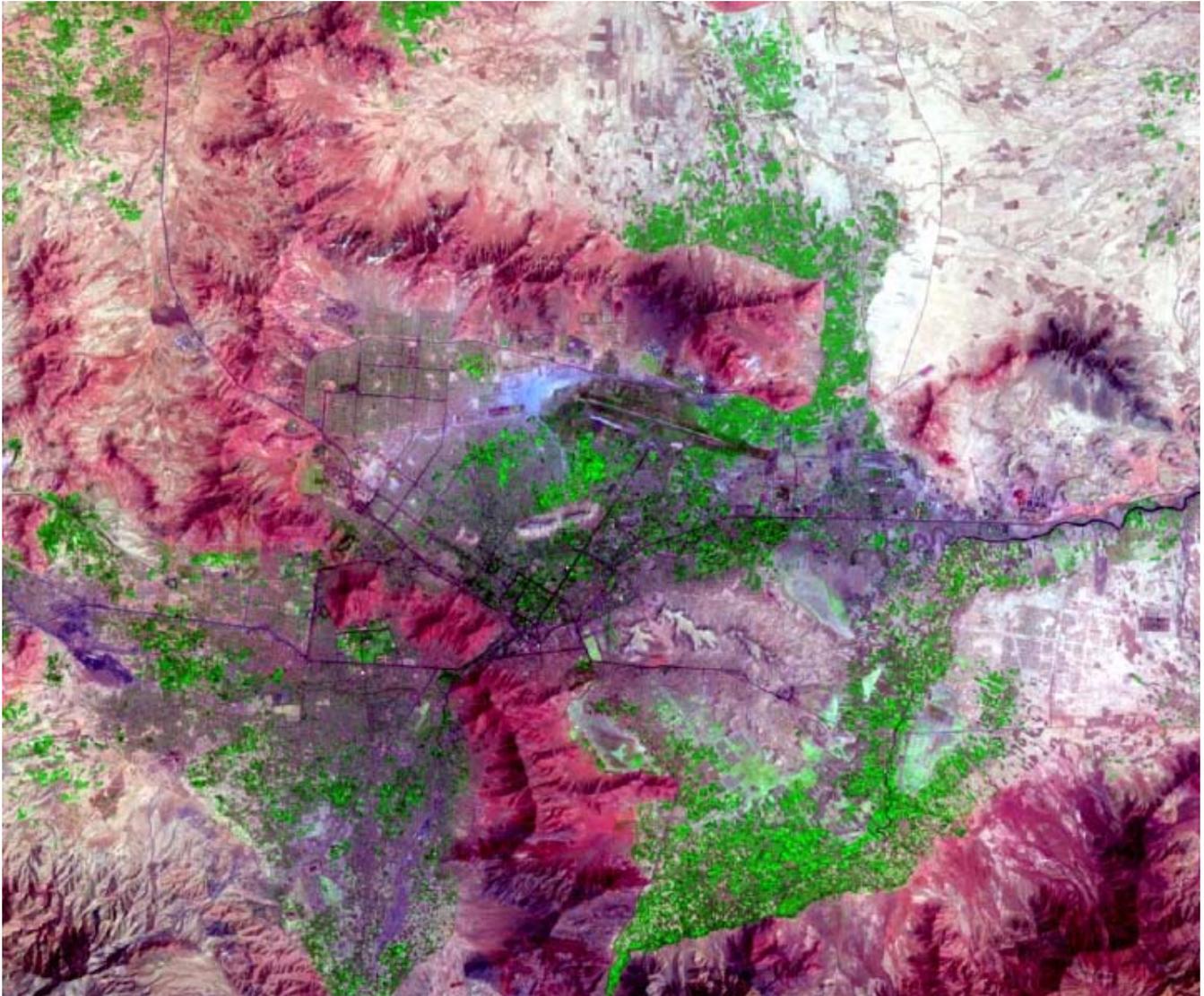
Image Archive, The Landsat Program-National Aeronautics and Space Administration. <http://landsat.gsfc.nasa.gov/images/archive/c0009.html>

Dubai, 2006



Image Archive, The Landsat Program-National Aeronautics and Space Administration. <http://landsat.gsfc.nasa.gov/images/archive/c0009.html>

Kabul, 2001



Different lenses and filters were used in this composite as represented by the different colors present in the image. Each color roughly corresponds to the following: water-black, plant life-green, built structures-purple or grey, and highly reflective surfaces-white. *Kabul, Afghanistan 10-31-2001*. Small, Christopher. 2006. *Urban Landsat: Cities from Space*, Map Collection. Palisades, NY: Socioeconomic Data and Applications Center (SEDAC), Columbia University. Available at: <http://sedac.ciesin.columbia.edu/ulandsat/>

The Gulf at Night, 1992-2003



This image is a composite of night light brightness around the Persian/Arabian Gulf and southeastern Arabian Peninsula from three different dates: Blue=1992, Green=1997, and Red=2003. Each date corresponds to a different color channel, so the composite color shows the relative brightness at each time. Areas equally brightly lit at all three times would appear white. Areas much brighter in any one of the years would appear closer to the color corresponding to that year. Areas brighter at two out of three times would appear as the additive color of those years (e.g. Red+Green=Yellow, so yellow areas were more brightly lit post-1992). Prominent features include Qatar and the United Arab Emirates, the Batina Coast of northeast Oman and a number of oil and gas production facilities in the Gulf and on the edge of the Rub al-Khali in Oman.

Many thanks to Christopher Small of Columbia University's Lamont Doherty Earth Observatory for producing and providing this image as well as the caption explaining it. More detail on night light composite imagery and its analysis can be found in C.D. Elvidge, Francesca Pozzi, and Christopher Small, "Spatial analysis of global urban extent from DMSP-OLS night lights," *Remote Sensing of Environment*, Vol. 96, No. 3-4 (June 2005), pp. 277-291. Acknowledgement also goes to Chris Elvidge of the National Geophysical Data Center and the Defense Meteorological Satellite Program for producing the data which made such images possible. Night light date and other datasets of interest are available to the public at <http://www.ngdc.noaa.gov/dmsp/dmsp.html>.

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