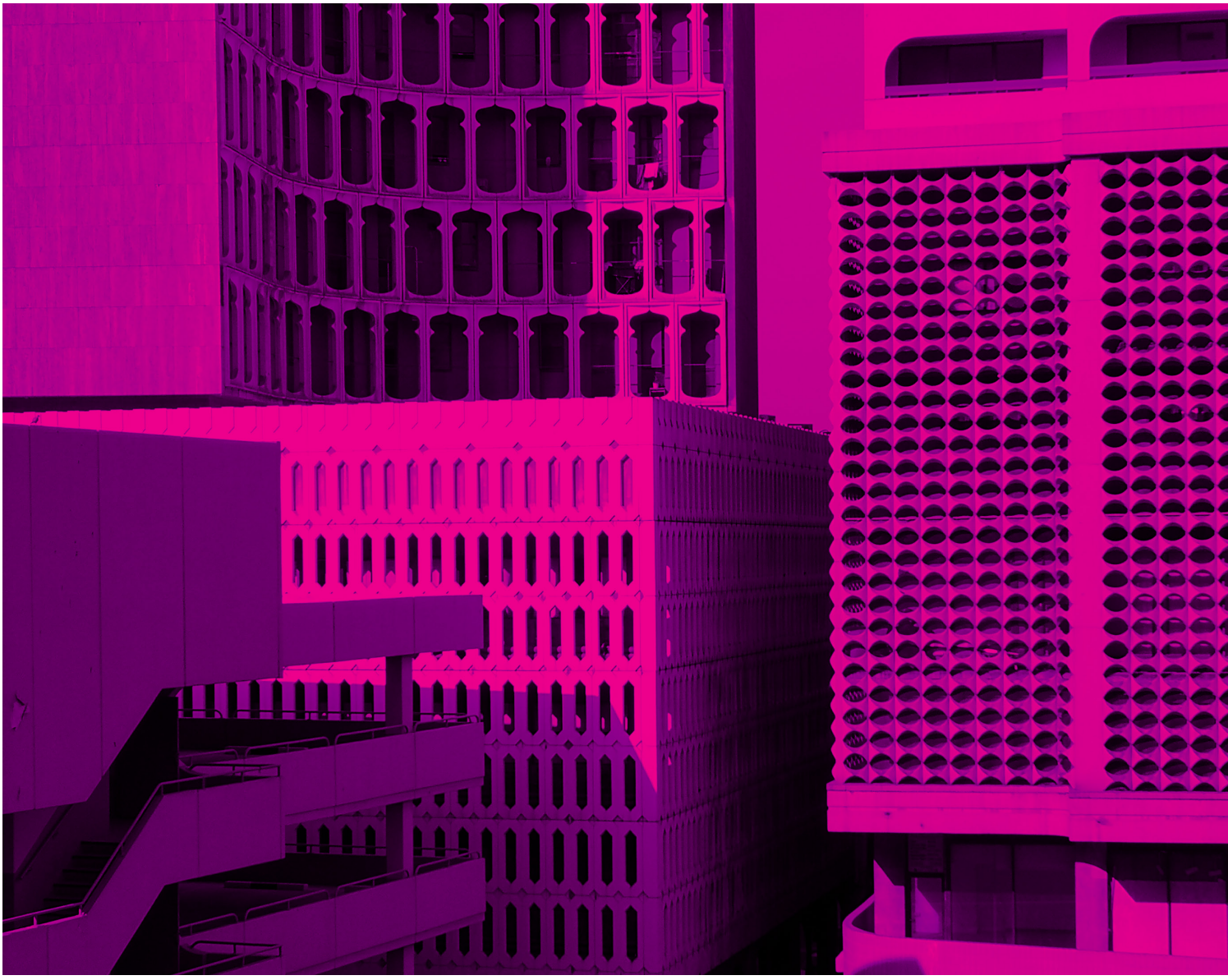

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Impatient Cities of the Gulf: Post-oil Architecture in Flux

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Impatient Cities of the Gulf: Post-oil Architecture in Flux

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/ REVIEW

1

Roberto Fabbri, Iain Jackson

Modernity Reloaded: Architectural Practice and the Gulf Cities

Today's general perception of Gulf cities is based on the assumption of a futuristic vision, a visionary development and a cluster of hi-tech constructions of steel and glass reaching towards the sky.

Since oil was struck, this 'brave new world' has been a testing ground for experimental, risk-imbued architecture and real estate. The sudden affluence and ambition of the rulers to demonstrate progress and social advancement (sometimes expressed through outlandish 'iconic' designs) has certainly fired this drive. The building of cities seemed an appropriate culvert for the vast funds generated, turning what was once barren into a fertile land for real estate, as well as prioritising education, health and basic services such as water and electricity.

Furthermore, there is an ever-present sense of the 'tabula-rasa approach' that forced (or perhaps tempted) architects to pursue different and alternative design processes. Gulf cities seem to encourage the idea, if not always the reality, of being able to 'start again', to be re-made, re-imagined and re-modernised. There is a sense of being in an ever-present 'now', with 'historical' projects stretching back

Fig. 1
New and old constructions in Kuwait City from the Sawaber Housing Complex, by Arthur Ericson Associates, 1977-89, now demolished, Sharq, Kuwait (Photo by Iain Jackson, 2016)

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mere decades. Perhaps this desire to continually reinvent brought about shortcomings in early Modernist paradigms and the rapid rise of new social/cultural/artistic concepts (such as pop art/metabolism/structuralism/post-modernism/idiosyncratic etc.). Modernism as a tectonic and social task could not satisfy the urgency nor pace of change. To paraphrase Berman, Gulf cities did *melt into air*; they could not become solidified nor express a sense of permanence or completion, nor a solution that was satisfactory for more than a fleeting moment[1]. The quest to differentiate within the market seems a primary concern to seduce investors, tenants and customers and establish a brand expressed through form, space, materials and the very latest facilities.

These preliminary reflections offer an image of the Gulf as a fluid domain that challenged designers for several decades in the light of a central question: how do architects, planners and engineers operate in a place with a constantly changing context? How are ideas of history, tradition, memory and heritage constructed and expressed in this vortex of flux? It seems paradoxical to even raise these concerns and presumptuous that these things are even important at all. Yet they would appear to be meaningful because such qualities and values are repeatedly explored and discussed, and continue to be re-made and re-imagined within this elusive search for the ever-new.

In the second half of the 20th century, circumstantial conditions generated a series of experimental, utopian, sometimes unbuildable projects with a high level of idealisation. Some are renowned and garnered much exposure, such as Wright's proposal for Baghdad (discussed in further detail in this volume by Kubo) or Alison and Peter Smithson's Kuwait mat-building attempt that continues to resonate and incite discussion.[2] Many are still to be unearthed as they were shelved and never implemented or abandoned along the way, altered or quickly demolished to make way for something else.

In other cases, the region's specific constraints – such as limited material availability, narrow construction time and challenging climate – led architects, engineers and clients to original ideas, technologies and procurement methods with highly inventive and analytical processes. The concentration and fervour of this activity are surely unprecedented.

The notion of time, which we recalled in this collection's title, is crucial in defining the Gulf's construction paradigm. The need for speed, the urgency to achieve *modernity* in no time has been a common denominator of all the post-oil urban transformations. Newspapers and magazines for the general public always praised – and still praise – this quickness as the result of the natural inclination of the region towards audacity, dynamism and thirst for emerging. On the other hand, technical literature often depicted a less triumphant picture, especially in the early days. For instance, 'The paramount problem has been to

1 Marshall Berman, *All That Is Solid Melts into Air: The Experience of Modernity* (London and New York: Verso, 1982).

2 See Mark Crinson, *Alison and Peter Smithson* (Swindon: Historic England, 2018).

build quickly', reported UNESCO consultant J. B. Barron as early as 1967.[3] Like many other invited consultants that travelled the region during the modernisation era, Barron attributed the poor construction to the rushed development programmes. On some occasions, the incessant pace not only affected the quality of construction but also impinged on the design phase. Architects and planners had to compromise data collection and analysis as these activities do not manifest tangible progress in the initial stages. In this framework, a specific workflow emerged as being more effective in the Gulf: the turnkey project. This formula packages all the construction stages in one contract, including survey, feasibility studies, design at different scales, engineering, services, tendering, construction supervision and testing. In other words, a system that promised – and often delivered – better control over time and costs. It also made clients and investors feel more comfortable dealing with one counterpart.

Consequently, from the mid-1970s onward, this shift engendered a specific type of consultants: large corporate firms such as SOM, Perkins and Wills or HOK, among others, conquered the market and secured most of the major commissions. Similarly, this system promoted collaborations with a series of state-led firms on the opposite side of the political spectrum. Agencies from the Soviet bloc, such as Energoprojekt, Miastoprojekt or Bulgarconsult, could also offer turnkey projects, tight schedules and competitive prices.[4] Smaller European firms, which initially designed tailored buildings for rulers and private investors, lost ground gradually in the big state-led transformation plans. This mechanism not only impacted international consultants but also made the emergence and consolidation of local architectural studios more difficult.

The omnipresent sense of urgency and the chronic scarcity of materials also shaped the territory that sits at the intersection between construction and design: architectural tectonics. During the 1960s and 1970s, due to the rapidly growing population and the vast liquidity generated by oil revenues, the Gulf cities embarked on unprecedented infrastructure plans. Not just housing but also headquarters of ministries, public buildings, power plants, office towers and hotels. For instance, in 1965 Kuwait launched a plan to build 100 school buildings in five years to accommodate a population of students that doubled over the previous decade.[5] Such operations could not be afforded without reconsidering the entire supply chain of building construction. The Gulf has a very limited amount – if any – of usable construction materials. Even desert sand cannot be used in concrete aggregate as it is too fine to generate the necessary chemical linkages. While importing all the necessary means was the norm in previous times, the large transformation programmes of the modernisation era were simply too vast to make shipments economically viable. Time, material

3 J.B. Barron, *Kuwait. The Design of Schools and Related Problems* (Paris: UNESCO Report, 1967), p. 10.

4 See Łukasz Stanek, *Architecture in Global Socialism, Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton, NJ: Princeton University Press, 2020).

5 See Roberto Fabbri, "Prototype Spaces for Education: Pedagogy, school planning, standardisation and prefabrication in Kuwait's drive to modernity" in Camacho R., Saragoça A. and Fabbri R. (eds.), *Essay, Arguments and Interviews on Modern Architecture Kuwait*, (Salenstein, CH: Niggli Verlag, 2017).

constraints and the vast quantities needed established prefabrication as the new common practice. With prefabrication came standardisation. With standardisation came repetitive types reiterated everywhere in the new satellite neighbourhoods and the transformed city centres. The buildings became rigid boxes, aligned next to each other like concrete curtains running alongside the new roads. So cold and hard-edged that they triggered the perception of being alien to the local environment.

To mitigate this impact, architects felt the necessity to introduce decorative patterns into the facades. Prefabricated panels, often detached as a building's second skins, aimed to protect against the harsh weather and offered the opportunity to experiment with shadows, rebalance the relationship between solids and voids, reintroduce three-dimensionality into flat surfaces and allude to traditional architecture.

For this reason, modern architecture in the Gulf seems somehow different for sporting an urge for negotiating the local context. It has a seemingly contrarian approach of 'starting again' whilst also 'flirting' with so-called traditional (and sometimes fabricated, imagined or appropriated) elements of locality, such as geometrical motifs, shapes, textures or colour palette. In part, this is an expression of the Orientalist fantasy of the Middle East, and yet the liberal application of decoration, patterns and applied ornamentation requires careful examination, especially when it is so diligently applied or grafted onto forms and arrangements that are more generally associated with a more austere modernist agenda (see Chomowicz's essay on Doha).

Within the confines of a journal introductory essay, we cannot adequately cover the political, geographical and cultural contexts of this diverse and complex region. With some caution, deliberate provocation and being well-aware of the sensitive terminology, we tentatively called this edition 'Impatient Cities of the Gulf'. We showed no preference for which side of the Gulf the Journal issue might focus on, nor the problems of its toponymy. Recent scholarship (including most of the papers presented here) has tended to focus on the Western bank, or the so-called 'Arab Peninsula', undoubtedly a reflection of the scale of architectural production there, as well as a direct result of the political situation in Iran and the limitations on scholarship.[6] The intention is not to restrict, isolate or remove the intriguing and valid attempts to bridge the Gulf from the discussion. We are eager for more research to address this void and deeply aware of the sensitivities involved. We were somewhat surprised to receive email correspondence questioning our approach:

"Our book importantly included Iran within the discussion of the region, which your journal issue seems to omit entirely with its talk of the 'Arab

6 Although some excellent research is certainly changing this, including Talin Grigor, *Building Iran: Modernism, Architecture, and National Heritage under the Pahlavi Monarchs* (New York: Periscope, 2009).

peninsula'. We wanted to get away from Western-derived cliches which your blurb [sic; *call for papers*] appears intent on returning to"[7].

All credit is due to Fraser and Golzari in their noble and innovative quest, and indeed any divide between both 'sides' is entirely artificial and in part a product of Western political interference. Nonetheless, there *is* a crucial difference, and despite the two shorelines being only 56 km apart at the narrowest point, they are now worlds apart. This is not a Western cliché, it is clearly evident today in the built fabric, economies and political agenda, and this attracted our attention. Historically there may have been greater exchange and intercourse across the Gulf – it may even have been what Fraser and Golzari claim to be a 'singular entity', and this should be investigated – but this certainly is not the case today. Fraser and Golzari also chose to omit Iraq from their important study, whereas we are delighted to include articles that focus on Iraq and its contribution to the broader debate. The planning of Basra, its elegant port buildings, innovative airport and subsequent expansion are a subject worthy of study. It is not the length of the coast that determines significance here, but rather what happens there (as Tosland discusses in the planning of the Ubullah Neighbourhood plan, and also the wider flow of ideas explored by Kubo on The Architects Collaborative in Baghdad and elsewhere as revealed by Alshabib et al.). Exchanges and dialogue that operate transnationally are crucial here. Yet the discrete focus on individual cities denies this opportunity for a broader investigation, although through the work of firms such as The Architects Collaborative we can begin to see networks, school influences and collaborative approaches to projects across the region. Future scholarship must surely begin to investigate these flows and multiagency tactics more carefully, and this will undoubtedly lead to a 'decentring' of the architect in the story of the built environment, with greater emphasis placed on the role of contractors, developers, clients and political agencies. This will not lessen the need for more careful research into 'local' architectural firms (some of whom are beginning to commission publications such as *Pan-Arab Modernism 1968-2018*[8], or are receiving new attention such as DAR here by Alkanderi), but it will require careful questioning of current 'archive' and 'source' material. The archival material available is clearly recording a particular and narrow set of data produced by a distinct, powerful minority. This repository of material, whilst useful and relevant, must be questioned and treated with scepticism.[9] It needs to be supplemented by more data from a much broader set of voices. This will require new repositories to be formed and platforms where discussion can take place, including in journals like this one.

We have made an attempt here to attract new voices, we have given precedent to early career researchers (5 out of 8 papers are from early career researchers), and agreed to include papers that might not be readily sanctioned in the upper

7 Email excerpt from Murray Fraser to Roberto and Iain, 19th August 2020.

8 Ricardo Camacho, Dalal Musaed Alsayer, Sara Saragoça Soares, *Pan-Arab Modernism 1968-2018: The history of architectural practice in the Middle East* (Barcelona: Actar Publishers, 2021).

9 Laura Ann Stoler, *Along the archival grain: epistemic anxieties and colonial common sense* (Princeton, NJ: Princeton University Press, 2009).

echelons of the academic press. That said, we are confident that some significant contributions are being made here, not to mention considerable scope for further studies that investigate the networks, flows and what Avermaete and Nuijsink call 'contact zones'.[10]

The Gulf region is undoubtedly a fascinating place for this concept to be further studied. As Fraser and Golzari rightly note, this does not equate to something as crude as a 'clash of civilisations', but instead a complex place of encounter, exchange, negotiation and dialogue. The common currency is to convert this vast oil-wealth into the problem of city-making, with all of its dilemmas, contradictions and opportunities. Who gets to direct these operations, and with what consequences? Who features in these cities and who remains firmly on the outside, or even hidden within? Who determines what is built, maintained, repaired and demolished? What is the ambition of the client body, and who is to provide the technical expression of this desire? It would be easy to condemn and highlight inequality here (especially in terms of labour, migration and health and safety). However, there must also be recognition of the social infrastructure – the investment into housing, education projects and healthcare provision has been extraordinary and reveals the tussle of power and priorities.

Global Experts Cultivating Local Knowledge

The commissioning of 'global experts' is a familiar and common feature of the Gulf city. from From the moment oil was discovered consultants from outside the region were commissioned to produce schemes ranging from entire cities and vast infrastructure projects down to individual intimate villas (starting with Wilson Mason in Iran, Jane Drew in Kuwait[11] and the Aramco housing that Alshabib discusses here). Others were less known and developed a 'specialisation' in the Gulf city, practising almost exclusively in the region with very little if any recognition elsewhere. They were featured in specialised journals devoted to the region (such as *Middle East Construction*) and cultivated strong collaborative networks within this sphere.

Recently returned graduates, a growing art scene and a broader political desire also cultivated a desire to bring the world's most prominent architects to the region, especially in Iraq.[12] Kubo's article sets out two such cases dating back to 1950s Baghdad, each with an opposing methodological approach. Here we see the vision of the sole genius artist, played by Frank Lloyd Wright, and an alternative collaborative ensemble under the direction of Walter Gropius. Although

10 Tom Avermaete, Cathelijne Nuijsink, "Architectural Contact Zones: Another Way to Write Global Histories of the Post-War Period?", *Architectural Theory Review* (July 2021), DOI: 10.1080/13264826.2021.1939745.

11 See Mark Crinson, *Modern Architecture and the End of Empire* (Aldershot: Ashgate, 2002); Mark Crinson, and Iain Jackson and Jessica Holland, *The Architecture and Influence of E. Maxwell Fry and Jane B. Drew* (Farnham: Ashgate, 2014).

12 See Amin Alsaden, *Conceiving the Global: Crises, Encounters, and Architecture in Baghdad*, 1955-1965. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences, 2018; Caecilia Pieri, *Bagdad. La construction d'une capitale moderne* (1914-1960), (Beirut and Damascus: Presses de l'ifpo, 2015); Mina Marifat, Caecilia Pieri, *Le Corbusier. Gymnasium in Baghdad* (Paris: Editions du Patrimoine, Centre des monuments nationaux, 2014).

tempting to caricature Wright and his sycophantic relationship with the Iraqi monarchy, it was a model that was widely used, with the world's growing list of internationally renowned and famous architects recruited to dramatically shape the region. A variation on this theme was the Gropius approach. Trading on his global fame, collaborations were formed with local architects and designers who would take responsibility for the design execution and brokering more sensitive 'on-the-ground' discussions. Tosland sets out a third, if less popular method of global practice from that period, one of immersion and research. Max Lock's approach of careful observation, documentation, study and learning from the existing context resulted in some fascinating and rather sensitive design solutions for Basra and its environs. Unlike the top-down masterplanning presented by Spencely, Minoprio and MacFarlane at Kuwait and Baghdad, or Raglan Squire at Mosul, Lock's solution could be considered as more sociological and sensitive to the traditional built environment. This approach attempted to integrate and respond to the climatic conditions, construction techniques and planning concerns. James Wilson pursued a similar approach in his archaeological studies in Baghdad, but for Lock it was more a sociological study than one of surveying ancient ruins. Wilson utilised his studies to absorb an architectural language, but for Lock it was more of an anthropological exercise supplemented with a series of detailed drawing studies and documentary work. Lock's work was aligned with the Doxiadis *Ekistics* model and was more interested in designing spaces such as 'gossip' squares and gathering spaces than decorative patterns and 'language'. Lock's desire to be experientially submerged and *part* of the environment gave his designs a more nuanced feel, but it inevitably represented the Middle East as somehow being behind and out of step with the avant-garde. There was a conceptual dilemma of wanting to fit in and contribute to the slow gestation of city-making, whilst at the same time eagerly trying to do what Chakrabarty describes as catching up with the now[13].

Many *local* architects and planners were also acutely aware of the context and historical environment, and following their education in the West began to quickly document and take creative influence from these works. The American University at Beirut was a particularly fertile institution for incubating new talent and collaborative practice, as Alkanderi's account of Dar al-Handasah reveals. Mohamad Makiya's interest in the villages of Iraq followed his overseas studies[14] and is a further example of this reassessment and subsequent documentation of the vernacular that was then re-imagined in new solutions. George Shiber was also important in this regard, and his appreciation of Kuwait's historic core sets out a broad cultural appraisal and recognition of the architectural qualities and values that we would now term heritage.[15] Shiber's caustic response to the

13 Dipesh Chakrabarty, *Provincialising Europe: Postcolonial thought and historical difference* (Princeton, NJ: Princeton University Press, 2000).

14 Karen Dabrowska, *Mohamed Makiya: A Modern Architect Renewing Islamic Tradition* (London: Saqi Books, 2021).

15 Saba George Shiber, *The Kuwait Urbanization. Documentation, Analysis, Critique* (Kuwait: Government Press, 1964).

destruction of Kuwait's old town remains pertinent today, but all too often the response is to make a token gesture towards heritage and design tradition. In the rush to build and rapidly propel change, much has been lost or treated with less reverence than was deserved.

Whilst there has been little restraint in terms of preservation, the developers and governments of the Middle East have invested heavily in architecture and the built environment. In commissioning and procuring these cities, infrastructure and buildings, they have produced a rich collection and unrivalled ensemble. This is often overlooked, and as pioneers and risk-takers there will inevitably be mistakes and ventures that seem misguided (and even negligent) in hindsight. This bravery (or irreverence) has in places also been rewarded, and as this modern architecture reaches a certain maturity, it too has begun to form a rich and enviable contingent.

New Towns and Neighbourhoods

John Harris was being hyperbolic when he suggested that 'There is something ridiculous about a thirty-storey Islamic tower'.[16] The problem facing Harris was how to address ideas of decoration and tradition and how to increase the scale of construction. 'The punch', claimed *Middle East Construction*, 'derives from a careful balance of solid and void, controlled areas of detail and from the celebration of such functional items as access balconies or wind tower ventilators. Nothing that does not have a purpose.'[17] TAC followed similar principles, delivering an architecture that, although somewhat stark and restrained, generated a language that seemed to speak of newness and difference whilst nestling within the landscape. Others pursued solutions with more overt references to the vernacular settlements, such as the new town of Jahra, Kuwait, designed by Michael Lyell Associates in 1979. This project was important because of its attempt to re-make or rethink the vernacular settlement in a similar vein to the Max Lock approach. Whilst on first impressions it could be accused of pastiche mimicry, it sought to create homes that would foster community and belonging. It was a reaction against acontextual form-making. However, it was far from nostalgic or attempting to recreate a bygone time. For example, 'bushwhacked' concrete facades and 'mixed-use' types were adventurous solutions. Hanley's article on other projects in Saudi Arabia reveals a similar approach in low-rise high-density housing with innovative landscaping. These projects were precursors to more recent developments in Msheireb, Qatar, that Chomowicz discusses here.

The Msheireb development is an attempt to create a 'downtown', mixed-use, sustainable city district with low-key architecture and close attention to the streetscape and public spaces. Of course, it has the now ubiquitous museums

16 *Middle East Construction* (December 1984), 33.

17 *Middle East Construction*, 33.

and carefully placed cultural 'anchors', and even its own tram system. Even if it has the hallmarks of simulacrum and feels too pristine, surely it is a more considered response to creating a place to live and work in. The quest for increasingly unusual tower gimmicks, structural contortions or figurative gestures is being called into question here. Msheireb should not be mistaken for preservation or allegiance to retaining a historic core. Rather, it is the replication of a familiar pattern and seems to offer a solution to urban planning and architectural form that responds to both the popular imagination of the Middle East and the desire for the old, densely arranged, serendipitous city.

Of course, this kind of venture will only work if it can be sold. If it lacks the glamour of a tower, it does not lack influential friends. The endorsement of this project is bestowed from the highest level. Royal approval suggests this particular approach is preferred, and in a society with a 'top-down' approach to governance, this provides a clear orientation of what is expected of future projects. It also brings us to the role of the client, promoter, developer and media. These are often hidden or background players in the architectural realm, yet their significance and presence cannot be denied. The notion of the architect as the sole creative agent or the primary author is being firmly challenged, as well as directed. The developer's brief and expectations are explicitly discharged to the architect to deliver. The architect is tasked with creating a suitable vessel that will satisfy these demands as well as giving the project a form and/or facade that can communicate a narrative or sense of meaning. This could be through technological innovation (and architects are becoming more conscious of their ability to contribute in meaningful ways here) but is more likely to be from a reference to precedent, ornament, or, as in this case, a district-wide response. Could Msheireb's commitment to sustainability offer a more appropriate approach to development, as well as being better suited for adaptive reuse and retrofitting?

Housing and Enviro-tech

Hanly's article offers a position that needs further investigation and presents a picture of the Gulf that is rarely discussed and has not featured as prominently as it should. The stories of Jubail and Yanbu are fascinating. Located on each coast, they were built to handle the transportation of oil that flows from the eastern coast in Jubail and ends on the western coast at Yanbu, ready to be shipped elsewhere. TAC, again featured as part of the narrative, alongside civil engineers and petro-chemical industry clients. This approach to a wider historiography of city-making is to be commended, not least because it discusses the collaborative and multi-designer-maker approach required to produce such large and complex *system-object-environments*. The outcome of this project is equally intriguing because the quest was to rebuild this arid, parched environment so that it could be cultivated and become a lush garden of 'desert-resistant' flora and fauna. This was not a simple irrigation installation, but a highly enviro-technical resculpting of the earth's surface on an almost unimaginable scale. This Edenic

'garden city' included carefully choreographed and rather beautiful housing with clean geometric forms suitably arranged to appear informal and accidental, whilst birds and wildlife also took up residence in the ample gardens and landscape. They form part of the Company Town pattern so familiar throughout the Gulf, but appearing very different to the hierarchical solutions of Kuwait Oil Company's Ahmadi, for example. Whilst giving the impression of being 'natural', they completely replace what was an actual wilderness. To maintain this fabricated even-better-than-the-real-thing-nature, the soil samples are monitored, air quality is analysed and botanical specimens are slowly acclimatised to their new homes after being tended to in what looks like a medical-grade facility or laboratory. Meanwhile, the *real* natural resources of the Earth are being piped beneath the city and across the desert to the coast, or refined into petrol and plastics a short but carefully calculated distance away from the city to avoid pollution or accidental contamination. There is something deeply appealing about these projects, because the pursuit of utopia is always attractive and innocent. Part of the attractiveness lies in the extreme but flawed attempt to achieve the goal. Its message is one of hope, betterment and that *everything* will be well. It feels optimistic and hopeful (and for sure, the quality of life appears enviable), yet behind the entire project, including its procurement and execution, is something so fundamentally detrimental to our environment. Whilst the intention to provide a good quality of life was admirable, the result was rather naïve and even manipulative, especially as the next stage in the highly curated process was to develop fertiliser industries to enable the plants to survive and to aid mass food production.

The architecture of the Gulf has always been provocative, and its extreme (i.e. courageous) plans and buildings make it an obvious and somewhat easy target for pithy critique and harsh rebuke. It is a place where innovation, experimentation and a desire to test and play have resulted in some major design provocation and astonishing solutions. The pace of the work and the ability to create entire cities in little more than 50 years is testament to the vision and determination, as well as a commentary on wealth concentration and the ability to recruit a large overseas labour force. The question now is will the funds gathered from oil be sufficient to maintain a progressive state, and will the various attempts at diversification be sufficient? The transport hub and attractive conditions for trade have certainly helped the UAE and Qatar to exercise some dominance here, and with the potential to 'work from anywhere' model being a real possibility for many, perhaps they will attract a workforce drawn to its lifestyle and business potential. Of greater importance is whether alternative energy sources and building technologies can be developed in this innovative incubator-theatre that could provide a 'total architecture' zero-carbon model for our future cities.

Michael Kubo

Genius versus Expertise
Frank Lloyd Wright and The Architects Collaborative at the University of Baghdad

Frank Lloyd Wright, The Architects Collaborative, Walter Gropius, Iraq, Baghdad

/Abstract

The growing involvement of U.S. architects in the post-oil expansion of Gulf cities after World War II corresponded to an expanding terrain of geopolitical and economic exchanges through which these firms competed for commissions. A revealing comparison of these dynamics of professional and cultural exchange can be found in the conjunction of parallel projects by U.S. architects for an Iraqi national university in Baghdad: the *University of Baghdad*, designed by The Architects Collaborative (TAC) and associated in particular with Walter Gropius as the firm's senior partner, and Frank Lloyd Wright's *Plan for Greater Baghdad* (1957), a larger cultural complex for the city, which included a university on the same peninsula where TAC received its commission in the same year. The presence of two university projects on the same site pitted two paradigmatic examples of U.S. postwar practice against each other: the self-styled genius persona of Wright against the collective body represented by TAC. While Wright's scheme offered a personal appeal to the Iraqi monarch, Faisal II, and the mythologization of his rule through a symbolic cultural landscape of historical references, TAC's University project constituted a demonstration of expertise within the developmental framework of foreign technical assistance by U.S. firms. The historiographic emphasis on singular authorship and the interpretation of each project only relative to their respective authors' creative *œuvres* has reinforced the lack of a direct comparison of the two schemes. Understood within a framework of competition between two modes of U.S. architectural practice in Iraq, however, a comparison of TAC and Wright's competing engagements in Baghdad reveals their architects' differing political and social affiliations, as well as their opposing interpretations of Iraq's cultural heritage and postwar modernization, and of the concepts of internationalism, technical assistance, and expert practice in relation to national development.

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The growing involvement of U.S. architects in the post-oil expansion of Gulf cities after World War II corresponded to an expanding terrain of geopolitical and economic exchanges through which these firms competed for commissions. As new territories were implicated as puzzle pieces within the shifting map of U.S. and Soviet influence during the Cold War, the newly post-colonial states of the Arab and Persian Gulf gained importance both as potential allies, buttressed through the developmental framework of foreign technical assistance, and as sources for the increasingly valuable strategic currency of oil. The U.S. sought to embed its influence within national modernization efforts in these states via governmental and financial aid initiatives such as the Point Four program, while pro-U.S. alignments like the Baghdad Pact competed with other transnational formations in the region, particularly the Pan-Arabist movement embodied by the rise of Gamal Abdel Nasser in Egypt. Consortia of U.S. and European oil companies extended their primary interests into the Arab and Persian Gulf states after World War II, exploiting concessions gained by U.S. and British interests in the early twentieth century; at the same time, the newly independent Gulf states contested and renegotiated the terms of these prewar concessions, generating lucrative new revenue streams that could be used to support ambitious national programs of modernization and development.

By the mid-1960s, numerous U.S. architects had gained significant commissions in the Arab and Persian Gulf states. In navigating these emerging territories for architectural work, aspects of the discursive and competitive terrain of practice that had marked prewar competition in the U.S. reasserted themselves as these offices sought to address the cultural, aesthetic, and technical concerns that accompanied these new mechanisms of exchange.

A revealing comparison for these dynamics of professional and cultural competition can be found in the conjunction of two parallel projects by U.S. architects for an Iraqi national university in Baghdad, overlapping in time and location: the *University of Baghdad*, designed by The Architects Collaborative (TAC) and associated in particular with Walter Gropius as the firm's senior partner, and Frank Lloyd Wright's *Plan for Greater Baghdad* (1957), a larger cultural complex for the city which included a university on the same peninsula in the Karada neighbourhood where TAC received its commission in the same year.[1] The project to design a university campus formed part of an extensive modernization program under the Iraq Development Board, created in 1950 to expend seventy percent of the country's expanding oil revenue on national development, first through infrastructural projects and, after 1956, through iconic cultural projects by prominent foreign architects including Gropius, Wright, Le Corbusier, Alvar Aalto, and Gio Ponti. The majority of these projects (including Wright's) ended by 1958,

1 In the comparison that follows, I rely on Neil Levine's comprehensive history of Wright's *Plan for Greater Baghdad*, and the context of the Minoprio & Spencely and Macfarlane master plan for Baghdad, within which the other Development Board projects were conceived: see Neil Levine, *The Urbanism of Frank Lloyd Wright* (Princeton, NJ: Princeton University Press, 2015), 334–384. I am grateful to Levine for his comments on an early presentation on the University of Baghdad in his seminar on Baghdad at Harvard University in 2013, as well as in subsequent discussions, and particularly for his generosity in making available archival materials from his research on Wright and the Development Board projects to his seminar students.

when public hostility to foreign influences culminated in the *coup d'état* of 14 July, in which the U.S.- and British-affiliated Hashemite monarchy of King Faisal II was overthrown and the military general Abd al-Karim Qasim came to power. Yet TAC's commission for the University continued, proceeding in fits and starts through numerous political and economic realignments into the country's second building boom under Saddam Hussein in the late 1970s and early 1980s.

The presence of two projects for a university on the same site in Baghdad circa 1957 pitted two paradigmatic examples of U.S. postwar practice against each other: the self-styled genius persona represented by Wright against the collective body represented by TAC.[2] These two projects made vastly differing claims for agency within the Iraqi context. While Wright's scheme offered a personal appeal to the Iraqi monarch, Faisal II, and to the mythologization of his rule through a symbolic cultural landscape of historical references, TAC's University project constituted a demonstration of expertise within the developmental framework of foreign technical assistance by U.S. firms. The consequences of these differing political and cultural stakes became evident following the overthrow of the Hashemite monarchy, an event that instigated a decade of subsequent regime changes that would culminate in the Ba'th Party's rise to power after 1968. The political flexibility of TAC's work allowed the firm to continue designing the University project throughout these numerous political changes, constructing the campus into the second Iraqi building boom between 1979 to 1983, by which time TAC's work had expanded to include large-scale urban planning and architectural commissions in Baghdad, Mosul, and Basra. In contrast, the prospects for Wright's grand urban scheme had likely faded even prior to the 1958 *coup d'état*, and this disfavor may have provided the immediate impetus for the Development Board's commissioning of TAC to design a university on the Karada site.

The differences in authorship between Wright's and TAC's schemes for Baghdad have also reinforced differences in the terms on which these projects have been understood. Beyond the evident aspects of Orientalism that attach in different forms to both projects, Wright's *Plan for Greater Baghdad* has typically been placed in relation to his work through the lens of creative signature. Informed by a personal catalog of literary and cultural references, Wright drew his design from multiple periods across the pre-Islamic and Islamic history of Iraq, seeking to make these allusions legible both symbolically and spatially in the final design. By contrast, parallel attempts to interpret TAC's university as the singular work of Walter Gropius, rather than of a collaborative firm, have often led to judgments of its design as banal or derivative in creative terms, technocratic in conception and unconvincing in execution. The historiographic emphasis on singular authorship has thus precluded a discussion of these

2 The Architects Collaborative (TAC) was established in 1945 as an experiment in team-based design by seven recent graduates of Harvard, Yale, and the Cambridge School of Architecture and Landscape Architecture—Jean Bodman Fletcher, Norman C. Fletcher, Sarah Pillsbury Harkness, John C. Harkness, Robert S. McMillan, Louis A. McMillen, and Benjamin C. Thompson—together with Gropius, then chairman at Harvard after his emigration from Germany via England in 1937.

architects' opposing approaches to the changing Iraqi political context in seeking commissions, or of their fundamentally different conceptions of a new national university for the expanding capital of Baghdad. The tendency of historians to interpret each project only relative to their respective authors' creative *œuvres* has reinforced the lack of a direct comparison of the two schemes, despite their evident relationships.

Understood within a framework of competition between two modes of transnational architectural practice in Iraq, however, Wright's *Plan* and TAC's *University* immediately bear comparison as projects to develop the same basic educational program (though conceived very differently) for the same location, designed within a year of each other by the only two U.S. firms invited to participate in the Development Board program in Baghdad in these years. Furthermore, the two commissions may have been regarded as competitive by the Development Board more directly than previous accounts have suggested. Indeed, there is evidence of a significant temporal relationship between these two projects, and it is possible that the demise of one was linked to the commissioning of the other.[3]

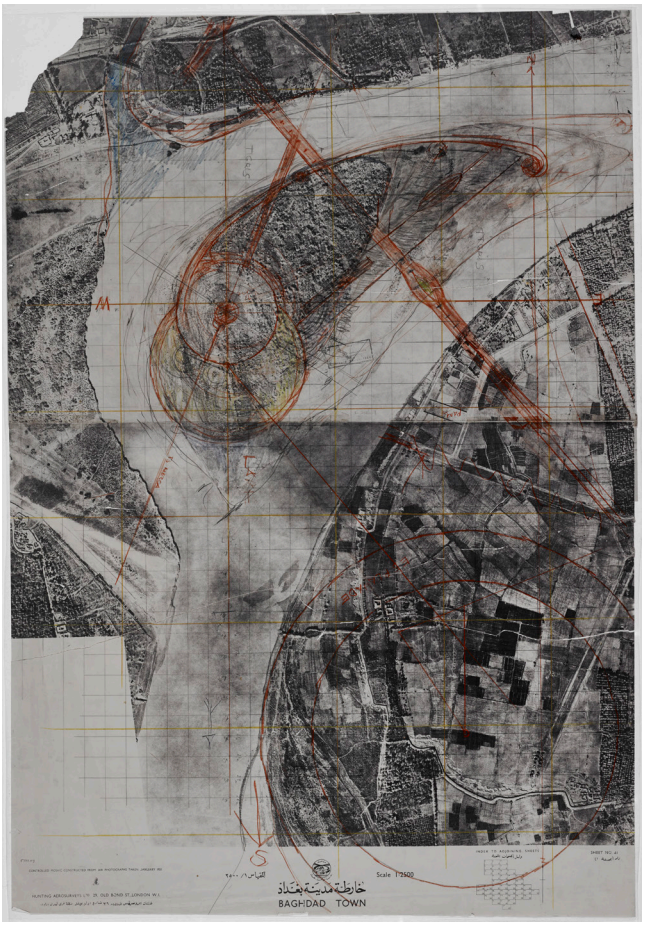
In adopting differing modes of address to the Hashemite monarchy and the bureaucratic apparatus of the Development Board, respectively, Wright's *Plan* and TAC's *University* reflected the implicit competition between projects that catered, in one case, to the monarch's desire for legitimization or to the Development Board's search for foreign expertise, on the other. In this sense, a comparison of TAC and Wright's competing engagements in Baghdad reveals their architects' differing political and social affiliations, as well as their opposing interpretations of Iraq's cultural heritage and postwar modernization, and of the concepts of internationalism, technical assistance, and expert practice in relation to national development.

The Genius University

Wright's *Plan for Greater Baghdad* was developed as a personal appeal to Faisal II, the nominal Hashemite ruler of Iraq prior to 1958 in conjunction with 'Abd al-Ilah, the crown prince and former regent before Faisal came of age in 1953, and Nuri al-Said, the powerful statesman who served multiple terms as Prime Minister in the decades prior to the 14 July *coup d'état*. In choosing the site for the project he was offered in early 1957, to design a cultural center including an opera and civic auditorium, Wright made much of the fact that he was granted two meetings with Faisal II on his first trip to Baghdad in May 1957 — the only one of the international architects invited to Baghdad to be awarded

3 The origins and timeline of the *University of Baghdad* commission have not previously been sufficiently well established to explore the question of whether these two practices were evaluated by the Development Board in direct comparison for the university site at any point. This has been due, in part, to the unavailability of the documentary material discussed later in this chapter, particularly the correspondence from Walter and Ise Gropius to Ellen and Nizar Ali Jawdat, through which a far more precise chronology of the initial development of the TAC commission can be determined.

this privilege. Furthermore, Wright's staff claimed that he was granted an aerial tour of the city in Faisal's private plane in order to select possible sites for his commission, and that the island he chose for the cultural center, then owned by the royal family, was given to him personally by the monarch. It was on this tour, Wright later recounted to the fellows at Taliesin, that he identified the island on the Tigris adjacent to the Karada peninsula, provisionally marked for a university by the Development Board, as his preferred site for a cultural center over the location he had originally been given, situated on the site of the British Trade Fair in Karkh, immediately south of the British Embassy.[4] **[Fig. 1]**



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It was rhetorically meaningful for Wright to stress that the transactions of site and program had been from one genius to another, granted to him through the hand of Faisal II as a patron. After having been notified that the unoccupied island site he had coveted from the air was owned by the royal family, Wright reported that he appealed directly to the monarch, after which "he [Faisal] put his hand on this island place on the map and looked at me with an ingratiating smile and he said, 'Mr. Wright, it is yours.'"[5] Wright reiterated the potential of "this little island the king put his hand on and gave to me specifically," then called *Pig Island*, but promptly reconceived in Wright's imaginative map as the *Isle of Edena*.[6] This contact with the ruler clearly impressed Wright—in his words: "Now that converted me to monarchy right then."[7] He subsequently dedicated his project to the king and the crown prince, declaring that "in IRAQ, monarchy has proved worthy."[8]

4 It remains unclear whether Wright actually toured the city in Faisal's private plane or if this was an artistic reimagining of his more prosaic arrival in Baghdad via commercial airline. In his talk at Taliesin upon his return, Wright did not clarify the nature of his aerial tour: "Flying over [Baghdad] I saw an island, unoccupied, practically in the heart of the city.... when I came down and looked at the map there was that island with nothing on it whatever.... So I went after that island. And they said, 'Oh no, Mr Wright, we cannot, we assure you, do anything with the island. The island belongs to the imperial household.'" As reported in Bruce Brook Pfeiffer, ed., *Frank Lloyd Wright: His Living Voice* (Fresno: The Press at California State University, 1987), 51. A contemporary article in Time implied that this aerial viewing of the site took place upon Wright's arrival: "Circling in over Baghdad by airplane, he spotted a long narrow island in the middle of the Tigris. He discovered that it was royal property, went straight to King Feisal II. Recounts Wright: 'The young king took me by the arm, smiled and said, "It is yours."'. As reported in "New Lights for Aladdin," Time Magazine, Vol. 71, No. 20 (May 19, 1958): 82. Levine cites interviews with Nezam Amery and William Wesley Peters, both of whom were with Wright in Baghdad on his May 1957 trip, as claiming that Faisal "lent him his plan so that he could see the land" (Amery) and that the site was chosen only after Wright had arrived in Baghdad, not on the flight there (Peters). See Levine, *The Urbanism of Frank Lloyd Wright*, 426, note 112.

5 "A Journey to Baghdad," transcript of Wright talk at Taliesin Fellowship, June 16, 1957, in Pfeiffer, *Frank Lloyd Wright: His Living Voice*, 51.

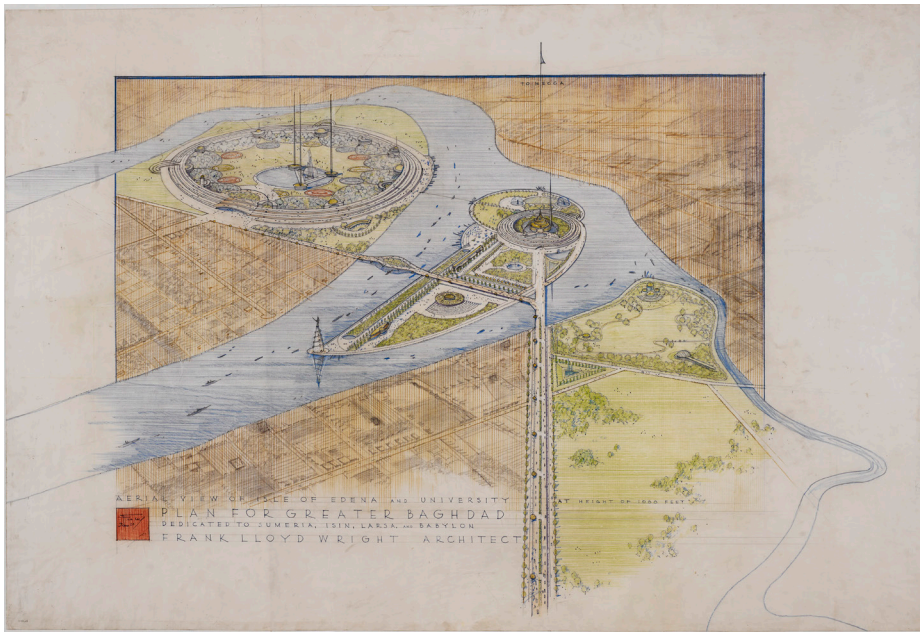
6 "A Journey to Baghdad," 50.

7 "A Journey to Baghdad," 52.

8 Frank Lloyd Wright, "Proposed—This Nine-Year Plan for the Cultural Center of Greater Baghdad," June-July 1957, MS 2401.379 M, and "Transcript of Tape Recording of Mr. Wright's Speech," typescript of the talk given to Iraqi Society of Engineers, May 1957, MS 2401.377–78 C, Frank Lloyd Wright Foundation Archive; cited in Levine, *The Urbanism of Frank Lloyd Wright*, 426, note 160.

Fig. 1

Frank Lloyd Wright, *Plan for Greater Baghdad*, 1957. Preliminary sketch plan of university and cultural center over collaged 1951 Hunting Aerosurveys aerial photographs. Courtesy of The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural & Fine Arts Library, Columbia University, New York).



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Wright's claim that he had been awarded the island by the king himself—a site he soon surmounted to absorb the university planned for the Karada peninsula—legitimized the authority behind his expanding ambitions in much the same way that his design, in turn, offered a legitimization of Faisal II's rule. The *Plan for Greater Baghdad* mythologized the monarchical state by incorporating a catalog of historical references drawn from Sumerian, Babylonian, and Abbasid periods in the region's history, implicitly positioning the Hashemite monarchy as the inheritors of this fictionalized Islamic and pre-Islamic past.[9] A central symbolic element in this nexus of references was the *Round City*, built under the Caliph al-Mansur (714–755 AD), which Wright misattributed to Harun al-Rashid (763 or 766–809 AD), the fifth Abbasid Caliph, thus conflating the mythological foundation of the city of Baghdad with its flowering under the Caliphate, a period recorded in the *Thousand and One Nights*, beloved by Wright as a child.[10] The *Round City* provided the organizing pattern for the university within Wright's plan, which grafted the symbolism of the first planned architecture for the city of Baghdad onto the design of an educational complex that would implicitly usher in a new golden age of development under the Hashemite monarchy. This constructed lineage thus positioned Faisal II as the contemporary genius of Iraqi modernization, an al-Mansur (or, in Wright's imaginary, a Harun al-Rashid) for his time. [Fig. 2]

9 The Hashemite monarchy indeed claimed lineal descent from Fatima, daughter of the Prophet Muhammad. Levine cites a contemporary guide, *An Introduction to the Past and Present of the Kingdom of Iraq*, which stressed this legitimization in terms similar to Wright's: "With the establishment of the Kingdom of Iraq under King Faisal I in 1921, not only did Iraq gain her political entity… but by choosing a Hashemite as head of the State she also restored to the throne the very family from which the Abbasid Caliphs themselves had sprung." See *An Introduction to the Past and Present of the Kingdom of Iraq* (Baltimore, MD: Lord of Baltimore Press, 1946), 3.

10 Wright openly acknowledged both his personal, mythological interpretation of Baghdad's history and his projection of this literary imaginary onto the contemporary reality of the city. As he told the Taliesin fellows, "I've been very sentimental about this journey because when I was a chap, oh long before I was your age, I was enamored of Hashid [sic], Aladdin and the wonderful lamp, Sinbad the Sailor, and scores of those tales of the Arabian Nights. Of course, that was Baghdad to me. And Baghdad of course is there now, but not the Baghdad I dreamed of then." As quoted in Pfeiffer, *Frank Lloyd Wright: His Living Voice*, 50.

Fig. 2

Frank Lloyd Wright, *Plan for Greater Baghdad*, 1957. Aerial perspective of university and cultur-al center from north, showing monument to Harun al-Rashid at northeast tip of Isle of Edena. Courtesy of The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural & Fine Arts Library, Columbia University, New York).

In seeking to glorify the monarchy for which the *Plan for Greater Baghdad* was produced, the stakes of Wright's project thus seemingly reinforced the political aims that underlay the Development Board's decision to invite foreign architects to design cultural buildings as public signs of national progress. This shift in priorities, inaugurated by the Development Board's second six-year plan (1955–60), reflected the government's growing need to produce visible symbols of modernization in order to pacify an increasingly unsettled urban population: the cultural superstructure to be built atop an infrastructural base of irrigation, flood control, and water storage that had been the focus of the first six-year plan (1951–56). Lord Salter, a British advisor to the Development Board, warned in 1955 that "popular resentment, caused or aggravated by the failure to devote a substantial part of the public revenues from oil to work giving widespread and visible benefits quickly, may increase political instability."[11] At the same time, however, a major cause of these public grievances was the perceived dependence of the monarchy on British, and increasingly U.S., influence, a situation that dated from the installation of the Hashemite family by the British upon Iraq's official independence from the Mandate in 1932. As reaction against foreign interference grew in the 1950s, a design like Wright's thus posed a particular problem of signification, as a project by a U.S. architect designed explicitly to legitimize the historical narrative upon which Hashemite rule was based.

For his part, Wright inveighed against the commercialism of the West and warned against its encroachment in Iraq as part of the country's development. "If we are able to understand and interpret our ancestors," Wright argued, Baghdad need not "adopt the materialistic structures called 'modern' now barging in from the West upon the East."[12] In arguing against the other foreign offices that had been given commissions by the Development Board, Wright attacked what he regarded as both the materialism of Western culture and the professionalization of its architects, an assessment for which a firm like TAC, his eventual competitor for the University, would have provided a ready example. In *Genius and the Mobocracy* (1949), Wright warned against the false community of collective architectural practice in the U.S., claiming that "professionalism is parasitic—a body of men unable to do more than band together to protect themselves."[13] Indeed, in a letter to the prime minister and the Development Board, Wright lamented that he had already "come too late to save [the country]… from the invasions of the Proffesional [sic] Architecture of the West."[14] Instead, in a talk given to the Iraqi Society of Engineers during his May trip, he appealed for Iraqis to look "deep… [into] your [own] inheritance," interpreting this heritage as encompassing both the pre-Islamic and the Islamic history of the region.[15] He

11 Lord [Arthur] Salter, *The Development of Iraq: A Plan of Action* (Baghdad: Iraq Development Board, 1955), 118.

12 "New Lights for Aladdin," *Time Magazine*, 19 May 1958, 82.

13 Frank Lloyd Wright, *Genius and the Mobocracy* (New York: Duell, Sloan and Pearce, 1949), 4.

14 Wright, "To the Minister and His Development Board, City of Baghdad, Iraq" (draft), n.d. (1957), MS 2401.379 BB, Frank Lloyd Wright Foundation Archive; cited in Levine, *The Urbanism of Frank Lloyd Wright*, 426, note 118.

15 "Transcript of Tape Recording of Mr. Wright's Speech," typescript of the talk given to Iraqi Society of Engineers, May 1957, MS 2401.377–78 C, Frank Lloyd Wright Foundation Archive; cited in Levine, 426, note 114.

argued that these references offered an intrinsic connection to the *genius loci* of the place—in his words, "a genius of itself"—and demanded that "an architect should not come in and put a *cliché* to work."[16] In this formulation, the *genius loci* of the site (its spirit, life force) was bound to the genius of the architect as its interpreter (creator, generator), and to the genius of the monarch as the architect's patron (father, progenitor).[17]

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Though an educational program was never officially included by the Development Board as part of his commission, Wright's imaginative conception of a university mirrored the *ethos* of creative genius that he sought to express in the more monumental forms of the opera and cultural center on his Isle of Edena. Lacking a brief, and determined to avoid the emphasis on professionalization that typified contemporary universities in the U.S., Wright's scheme instead articulated an organic educational model that stood apart from the Development Board's narrower interest in training a class of specialists to participate in the country's modernization. Wright had outlined this holistic conception of pedagogy in the decade prior to his arrival in Baghdad, arguing in *Genius and the Mobocracy* that "until architecture, philosophy, and religion become one as they are in organic architecture," Wright claimed that "we are not going to be able to make such fruits of science as we already know in abundance, really constructive."[18] Further, he asked: "What hope have we for indigenous culture when even our 'universities' are not founded upon study of the principles and aesthetics of innate—organic—structure."[19] In Baghdad, Wright saw this "indigenous culture" as comprising a dense overlay of literary and archaeological references—a palimpsest to which the formal elements of his university and cultural center, he might well have imagined, could provide the key for the educated Iraqi citizen of the future.

The form of the university that appeared within the *Plan for Greater Baghdad* mapped this organic conception literally into a circle of faculties attached to

16 "Transcript of Tape Recording of Mr. Wright's Speech," typescript of the talk given to Iraqi Society of Engineers, May 1957, MS 2401.377–78 C, Frank Lloyd Wright Foundation Archive; cited in Levine, 426, note 114.

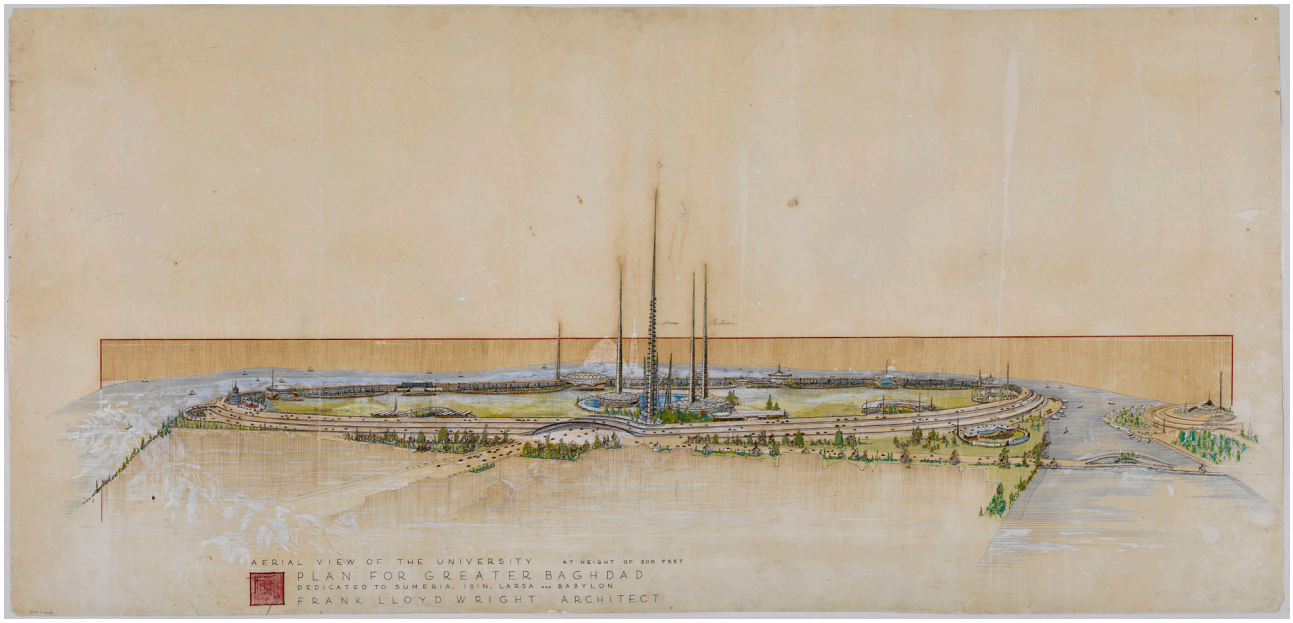
17 On the origins of the term *genius* from the Latin *gigno, gignere* (to generate, father, beget), see Darrin M. McMahon, *Divine Fury: A History of Genius* (New York: Basic Books, 2013). McMahon traces *genius loci* to the original sense of the energy, life force, divine power, or sacred presence of a place (and often connected to the idea of a presiding spirit, embodied by the sixth century BCE in the figure of the snake as a sacred creature or totem of *genius*, and later in the sense of a personal spirit, individual protector, or genie). Ibid., 21-22.

18 Frank Lloyd Wright, *Genius and the Mobocracy*, 11.

19 Wright, *Genius and the Mobocracy*, 11.

Fig. 3

Frank Lloyd Wright, *Plan for Greater Baghdad*, 1957. Site plan of university and cultural center. Courtesy of The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural & Fine Arts Library, Columbia University, New York)



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a ring road, a "Ziggerat [sic] of Parking" that demarcated the boundary of the campus at the same time that it conflated a Sumerian prototype with the plan of the *Abbasid Round City of Baghdad.* Within this circular enclosure—the "curriculum," in Wrightian double entendre—the university departments were laid out in counter-clockwise fashion, proceeding (in sequence from the entrance arch at the street that connected the campus to the opera house and cultural center) from fine arts to architecture, sociology, government, law, engineering, religion, athletics, gymnasium, sciences, and agriculture. **[Fig. 3]** Unlike TAC's later proposal for the *University*, the allocation of these departments and their adjacencies was metaphorical rather than based on identifiable needs, organizing the faculties in a conceptual sequence starting from the arts, to proceed to secular and spiritual governance, and to the human, physical, and natural sciences. Given both his preference for genius and his opposition to technocratic conceptions of education, Wright may have imagined this cyclical progression from culture to nature as a diagram for the cultivation of a genius appropriate to modern Iraq, parallel to the flowering of the arts his opera and cultural center would inaugurate. A triangle of broadcasting studios for radio and television at the center of the campus suggested the dissemination of these fruits of genius to the nation, with towering profiles that celebrated the creation of the region's first Arab-controlled television network in Iraq the year prior to Wright's plan.[20] **[Fig. 4]**

Given the ineluctable association of the *Plan for Greater Baghdad* with Faisal II, it is little wonder that the project failed to win the approval of the Development Board, particularly given the rising public dissatisfaction with British and U.S. influence on the monarchy. The authorial relationship of genius architect to genius ruler that Wright proposed was politically contingent on the survival of the Hashemite monarchy, as well as on the continued lack of resistance to the

Fig. 4

Frank Lloyd Wright, *Plan for Greater Baghdad*, 1957. Perspective of university. Courtesy of The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural & Fine Arts Library, Columbia University, New York)

20 See William A. Rugh, *Arab Mass Media: Newspapers, Radio, and Television in Arab Politics* (Westport, CT: Praeger Publishers, 2004), 186.

foreign interests that lay behind it. Furthermore, Wright's arrogation of both the Karada site and the university program beyond the scope of his original commission made him the only one of the foreign architects invited to Baghdad to wilfully disregard the confines of the master plan for Baghdad, produced in 1956 by the British firm of Minoprio, Spencely, and Macfarlane, that governed the sites offered by the Development Board.[21] Both the university and the cultural center in Wright's scheme thus relied, each in their own way, on political and spatial conditions that failed to obtain even prior to the demise of Faisal's rule. The inability to reconcile the *Plan for Greater Baghdad* within the framework of the other Development Board projects is suggested by the Board's invitation of Hugh Spencely, a co-author of the master plan for Baghdad, to review Wright's proposed choice of both the Island and Karada sites in late September 1957, a month after Wright submitted his project. By September 7, the Development Board had apparently already decided to offer TAC the university on the Karada site, and the firm received news of the commission at nearly the same moment that Wright's plans were being reviewed.

Ambassadors Abroad

In contrast with Wright's personal appeal to Faisal II, TAC's commission for the *University of Baghdad* was gained through contacts formed in the interstices between U.S. professional training, the bureaucratic channels of the Development Board, and the emerging terrain for modernist architectural practices in Iraq in the 1950s. The key interlocutors in this transnational exchange were Ellen and Nizar Ali Jawdat, architects who had studied under Gropius at the Harvard Graduate School of Design from 1942 to 1947—a period when women and foreign students made up a significant portion of the student body during wartime—before returning to practice in Baghdad, where they became advocates of Gropius and TAC for the Development Board commissions taking shape in the 1950s.

The Jawdats epitomized the elite class of foreign-educated professionals, increasingly trained in the U.S., that comprised the generation of young Iraqi architects who began their practices after World War II. Ellen Jawdat (née Ellen Stone Coan) was born in Srinagar, India in 1921 to Janet Tyron Stone and Frank Speer Coan, then a YMCA secretary in Lahore and Hyderabad, and later the general secretary of the English-Speaking Union of the United States (1935–42) and a Near and Middle East Expert for the U.S. Office of War Information after

21 Wright may not have believed that his efforts would lead to a commission for the university on the Karada peninsula, or that his prospects for the cultural center for which he had originally been commissioned would not be adversely affected by this gambit. At the time Wright was working on the cultural center and the university, he claimed: "I do not know that there is very much hope for the Baghdad projects. This is really my proposition to them.... I sort of came in on the tail end of things [sic], so what impression I can make now, I do not know—but I am going to try." See Frank Lloyd Wright, "YOUTH OF AMERICA: THE POETIC PRINCIPLE" (Monona Terrace, State of Wisconsin, Baghdad, "Talks to Taliesin Fellowship," 23 June 1957), reel 189, 1, 7, MS 1502.258, Frank Lloyd Wright Foundation Archive; cited in Levine, *The Urbanism of Frank Lloyd Wright*, 426, note 119.

1942.[22] After receiving a degree in art history from Vassar in 1942, Ellen enrolled at the Harvard Graduate School of Design under Gropius, where she graduated in 1947. Nizar Ali Jawdat, born in Damascus, Syria in 1921, was the son of 'Ali Jawdat al-Ayyubi, then the governor of Aleppo and later Prime Minister of Iraq through rotating terms in 1934–35, 1949–50, and June to December 1957—the period in which TAC was officially commissioned to design the University.[23] During Jawdat al-Ayyubi's appointment as the first Iraqi ambassador to the U.S. from 1942 to 1947, his son Nizar Ali enrolled at the Harvard Graduate School of Design, where he and Ellen met and were married. After returning to Baghdad, Ellen began her practice as an architect—the first woman to do so in Iraq—while Nizar Ali worked as an architect for the Iraqi Railways office in fulfilment of his five years of public service, required in exchange for the government's sponsorship of his studies at Harvard. The couple practiced together intermittently on projects in Baghdad, including the *Women's Headquarters of the Red Crescent* (1948–50) and the Jawdats' own house, originally built as student housing in 1948 and modified by the couple for their private use after 1955. Ellen continued to practice architecture independently while Nizar Ali established a company as a supplier and contractor for the building industry, including the first provision of air conditioning technology in Iraq.[24] As part of her advocacy for expanded opportunities for modernist architects in Baghdad in these years, in 1954–55 Ellen organized an invited international competition for the *National Bank of Iraq*, won by William Dunkel and completed in 1956, as the first competition in the country to feature a developed brief and anonymous submissions.[25]

The correspondence between Walter and Ise Gropius and the Jawdats from 1948 to 1969 sheds considerable light on both the origins of the *University of*

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22 Ruth Coan Fulton, ed., *Coan Genealogy 1697–1982* (Portsmouth, NH: Peter E. Randall, Publisher, 1983), 346–347.

23 These terms as Prime Minister were often rotated with other political officials representing other social, ethnic, and religious constituencies within the Iraqi elite, including frequent terms by Nuri al-Said, with whom Jawdat al-Ayyubi had studied in the Ottoman military college in Istanbul prior to Iraqi independence. See Hanna Batatu, "Prime Ministers Under the Monarchy (23 August 1921 to 14 July 1958)," in *The Old Social Classes and the Revolutionary Movements of Iraq: A Study of Iraq's Old Landed and Commercial Classes and of its Communists, Ba'thists, and Free Officers* (Princeton, NJ: Princeton University Press, 1978), 182–184 ff. Batatu identifies al-Ayyubi's class origin as "official lower-middle-class, son of a chief sergeant in the gendarmerie" (Batatu, 1978, 180-181). A Time article from 1957 described Jawdat al-Ayyubi's term in that year as a function of "the custom of summer replacements" for Nuri al-Said, his "longtime comrade in arms." See: "Out of the Heat," *Time Magazine*, Vol. 70, No. 1 (1 July 1957): 26.

24 "Out of the Heat," *Time Magazine,* Vol. 70, No. 1 (1 July 1957): 26; "Nizar Ali Jawdat," obituary, *The Washington Post*, 29 January 2017, accessed June 11, 2017, http://www.legacy.com/obituaries/washingtonpost/obituary.aspx?pid=183773232. The Jawdats' built projects together appear in Raglan Squire, "Architecture in the Middle East," *Architectural Design*, (March 1957): 96 ff., along with Ellen Jawdat's *American School for Girls* in Baghdad (1956).

25 Ellen Jawdat in an interview with the author (2013), and also Nizar Ali Jawdat and Ellen Jawdat, *Curriculum vitae*, after 1986, from the personal papers of Ellen Jawdat, Washington, D.C. Though it was not sponsored by the Development Board, Neil Levine describes the National Bank of Iraq competition as "a trial run for the Development Board's program" after 1955. See Levine, *The Urbanism of Frank Lloyd Wright*, 424, note 62. The competition was preceded by the Rafidain Bank, on Shorja [Bank] Street adjacent to the future site of the National Bank, designed by Philip Hirst and completed by 1956.

Baghdad commission and its subsequent history.[26] Following the Jawdats' return to Baghdad in 1947, the couple remained cordial with their former professor at Harvard, as evidenced by Gropius's reply in December 1948 to a letter from Nizar in that year, thanking him for sending news from Baghdad. "I am very glad indeed to hear from you," Gropius wrote, wishing the couple the "hope that you both are happy and can do some constructive work for your country."[27] The correspondence continued informally for six years until the Jawdats wrote to the Gropiuses around February of 1954, serendipitously just two months before the latter's Rockefeller Foundation-sponsored trip to Australia, the Philippines, and Japan in April of that year. In reply, Ise ventured the possibility of adding Baghdad to the list of cities to be visited on their return from Japan in August and September (the final arrangements also included Hong Kong, Bangkok, Calcutta, Karachi, Athens, Rome, and Paris).[28] The Gropiuses traveled to Baghdad from August 19th to 24th 1954, between Karachi and Athens, staying at the Tigris Hotel on the recommendation of the Jawdats.[29] Burdened by the heavy professional demands of their two months in Japan where, Ise lamented, "we can hardly manage to see the place for the hundreds of people who want to talk to [Walter]," the couple expressed the desire only to see Baghdad as tourists—as Ise wrote to Nizar, "We hope, therefore, that no news of modern architecture and W. Gropius has come to Iraq yet."[30]

Events, however, conspired to prevent the Gropiuses from the prospect of an anonymous visit and, eventually, to draw them into discussions of the projects then being planned by the Iraq Development Board. David D. Newsom, then Public Affairs Officer for the U.S. Embassy and director of the United States Information Service (USIS) in Baghdad as well as a friend of the Jawdats, was informed by Ellen of the impending visit by the Gropiuses, and wrote formally to Walter in June 1954 to suggest holding a photographic exhibition of examples of modern American architecture to coincide with his visit, suggesting he might attend the opening in lieu of a more formal lecture.[31] Newsom noted the presence

26 This correspondence first came to light during an interview with Ellen Jawdat at her home on June 24, 2013, when she provided me with a folder of letters from the Gropiuses to her and Nizar stored among her personal files. These letters corresponded closely to the extant letters sent by the Jawdats to Walter and Ise, which are preserved at Harvard University among the Walter Gropius papers, 1925-1969 [MS Ger 208, Houghton Library]. Following the interview, I worked with Ellen Jawdat and Leslie Morris of the Houghton Library to arrange for these letters to be absorbed into the Harvard collections in 2013, thus reuniting both sides of the correspondence for the first time. I am exceedingly grateful to Ellen Jawdat for providing access to these letters and for her assistance in interpreting them, as well as for her generosity in giving them as a gift to Harvard University.

27 Letter from Walter Gropius to Nizar A. Jawdat, 1 December 1948, Harvard University, Houghton f 2013M-29. In the letter, Gropius also responds to an apparent request from Nizar to join CIAM, suggesting that he writes, with Gropius as a reference, to Sigfried Giedion, then General Secretary for the group, to propose establishing a CIAM working group in Iraq.

28 Letter from Ise Gropius to Nizar and Ellen Jawdat, 2 February 1954, Harvard University, Houghton f 2013M-29. The letter alludes to a description by the Jawdats of having divided their practice in Iraq into an architectural design office (presumably run by Ellen) and a contracting office (presumably run by Nizar), which Ise likened favorably to Walter's fight against AIA rules in the U.S. preventing architects from engaging in contracting work. See Walter Gropius, "Gropius Appraises Today's Architect," *Architectural Forum*, (May 1952): 111-112, 166, 170, 174, 178, 182.

29 Letter from Walter Gropius to Ellen and Nizar Ali Jawdat, 13 April 1954; Letter from Ise Gropius to Nizar Ali Jawdat, 26 May 1954; Letter from Ise Gropius to Ellen Jawdat, 29 July 1954, Harvard University, Houghton f 2013M-29.

30 Letter from Ise Gropius to Nizar Ali Jawdat, 26 May 1954, Harvard University, Houghton f 2013M-29.

31 David D. Newsom, letter to Walter Gropius, 18 June 1954, Bauhaus Archiv, GN Kiste Nr. 3, Mappe 123.

of "an active group of young architects in Iraq who would consider it a distinct honor to have the privilege of meeting you while you are here," and hoped that Gropius's presence there "would give… the opportunity to meet some of those in the architectural and engineering world on an informal basis."[32] Photographs of the event, held on August 22nd or 23rd, show Gropius indeed giving a lecture to an assembled group of guests on the lawn of the U.S. Embassy with Ellen and Nizar in attendance, flanked by presentation boards with mounted photographs of contemporary U.S. architecture.

In arranging the exhibition and lecture, Newsom presumably hoped to appeal to the same elite, educated class of U.S.-affiliated professionals of which Nizar and Ellen were already a part.[33] The guest list named a number of young, Western-trained architects including Qahtan Awni (trained at the University of California Berkeley), Jaafar Allawi (trained at the University of Liverpool), and Rifat Chadirji (trained at the Hammersmith School of Arts and Crafts in London), described as "son of head [sic] of Socialists."[34] English and U.S. policy tracts later cited by TAC as guides to the region, like William Polk's *What the Arabs Think* (1952), similarly pointed to the importance of these "Western-educated men and women of the younger generation who are the doctors, lawyers, professors, engineers and white-collar workers of the Arab world," and, in particular, to the feeling among U.S. professionals that "they are the most vocal section of the population and to a large extent are bound to be the key to the Arab world's immediate future."[35]

By the time the Gropiuses returned to the U.S. in September 1954, their attitude had evidently shifted to a more explicit interest in participating in the building program taking shape in Baghdad. Replying for the first time on TAC letterhead rather than on personal stationery, Walter wrote to the Jawdats immediately upon their arrival home in Cambridge:

> I have been so happy in Baghdad that I would greatly enjoy, if an opportunity should arise, doing architectural work for your country. I have pondered whether it was not wrong not to have thrown overboard my itinerary and to try to go and see your King, but you can't imagine what an upheaval changes in our itinerary would have caused, particularly regarding plane reservations.[36]

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32 Newsom, letter to Walter Gropius, Mappe 123.

33 See Bauhaus Archiv, Werkverzeichnis 151, Baghdad University. That these photographs are from the August 1954 trip is confirmed by a letter from Newsom to Walter Gropius on 15 September 1954, enclosing the photographs and thanking Gropius for his "kindness in attending and speaking to the architects at our center last month." See Bauhaus Archiv, GN Kiste Nr. 1, Mappe 4.

34 Ibid. Kamil al-Chadirji was the leader of the National Democratic Party, prominent among the socialist parties that gained power under Qasim after the 14 July *coup d'état*. In a letter to the Gropiuses from Rome on October 4, 1958, following the *coup d'état*, Nizar Ali Jawdat wrote that Rifat Chadirji had replaced Mahmoud Hasan, previously Director of the Second Technical Section of the Development Board, and that "his father heads one of the major parties which are in power now," noting, "you have met him in my house." See Harvard University, Houghton Library, MS Ger 208, folder 956.

35 William R. Polk, *What the Arabs Think* (New York: Foreign Policy Association, 1952), 18. This pamphlet was cited in the bibliography of the TAC *Report on the University of Baghdad* of 1959, in which Polk, then a professor at the Center for Middle Eastern Studies at Harvard, is also cited as a consultant expert on "General Arab Conditions and the Educational Approach."

36 Letter from Walter Gropius to Nizar and Ellen Jawdat, 9 September 1954, Harvard University, Houghton f 2013M-29.

Gropius also followed up on a discussion that apparently took place in Baghdad to send promotional materials on TAC's work for the Jawdats to circulate in Iraq, offering "to send you the promised material as propaganda weapons in favor of modern architecture to be used for your King, or whoever may be interested."[37] Gropius cited the firm's proposal with I.M. Pei for *Hua Tung Christian University* in particular, as "good evidence for our capability to adapt to the conditions of foreign countries," and this project would later be invoked as a comparative precedent for the *University of Baghdad* campus plan.[38] In response, Ellen Jawdat expressed her intent to promote Gropius for a role within the architectural development taking place in Iraq:

> I can't tell you what a boost to our spirits your few days with us were. Not only we, but everybody who met you reacted in the same way—we felt as though a large window had been opened…. for all of us, your visit brought such a wealth of new ideas, wise advice and, most of all, a kind of calm optimism, that we must find some way of reviving the experience… So it was indeed refreshing to watch your instinctive understanding of the situation, in no way minimizing the problems, yet not being overwhelmed by them. We are more than ever convinced that we must find some way for you to make your contribution to this country, for, in addition to the architectural contribution, that is that immeasurable added dividend.[39]

Ellen further suggested an appeal to Faisal II directly as the means to push for Gropius's involvement in Iraq, noting that "Nizar visited him in the north a few weeks after you left, and he expressed the keenest interest."[40] This discussion would have taken place just prior to the commissioning of Minoprio & Spencely and P. W. Macfarlane by the municipality of Baghdad to develop a master plan for the city in late December, at the beginning of the development process that would proceed in earnest with the official launch of the Development Board's program of cultural buildings two years later, in December 1956.

The advocacy for Gropius's involvement in planning and architectural work in Baghdad seems to have operated not through a direct appeal to Faisal II, however, but rather via the more informal bureaucratic channels of influence that circulated around the Development Board. Possibly as early as 1952, the Jawdats prepared a short essay along with an accompanying information sheet on Walter Gropius, apparently to be circulated by Ahmed Jabbar Chelebi, a friend and the director of the Development Board, arguing for the appointment of a coordinating regional planner of international stature to oversee the Board's

37 Letter from Walter Gropius to Nizar and Ellen Jawdat, 9 September 1954, Harvard University, Houghton f 2013M-29.

38 Letter from Walter Gropius to Nizar and Ellen Jawdat, 9 September 1954, Harvard University, Houghton f 2013M-29. Hua Tung appears among the comparative plans in The Architects Collaborative, *Report on the University of Baghdad Designed by The Architects Collaborative, Cambridge, Massachusetts*, U.S.A., c. January 1959, along with Harvard, MIT, Oxford, and the University of Mexico.

39 Letter from Ellen Jawdat to Walter Gropius, 3 October 1954, Harvard University, Houghton Library, MS Ger 208, folder 956.

40 Letter from Ellen Jawdat to Walter Gropius, 3 October 1954, Harvard University, Houghton Library, MS Ger 208, folder 956.

expansive efforts.[41] "It has been suggested," the Jawdats wrote, "that with the vast amount of architectural work being undertaken by the Development Board throughout Iraq, it is essential that there be one supervisory office to co-ordinate these individual projects, and to schedule their design and construction as parts of a coherent long-range scheme for the filling of the country's architectural needs."[42] The Jawdats articulated the need for a scope of ambition that would exceed the master plans that were soon produced for individual cities in Iraq (including plans by Minorio, Spencely, and Macfarlane for Baghdad, Mack Lock and Partners for Basra, and Raglan Squire and Partners for Mosul), arguing instead for coordinated planning at a territorial scale:

> Based on reports and the advice of economists, irrigation experts, specialists in population studies, health and education authorities, etc., Iraq's building schemes should be studies with a view charting a master plan which takes into account the relation of cities to towns, towns to villages; the expansion or change of such units as they are affected by industrial or agricultural progress; the logical settlement of tribes in new villages, and the provision of adequate housing, education, medical, sanitary, and community facilities; the relation of Iraq's vast irrigation schemes to the growth of agricultural populations; and transportation links (air, rail, road, and waterways) between the various communities in the country.[43]

In proposing that these expanded planning efforts take place via the creation of "one central architectural office in the Development Board, producing work of a single high standard," the Jawdats named two international figures as the only ones capable of overseeing such a comprehensive task: Le Corbusier—whom they implied was already occupied with his work in Chandigarh, India "to fill a similar need in that country"—and Gropius, whom the Jawdats proposed as

41 Typescript of essay and information sheet written by Ellen Jawdat, n.d., personal papers of Ellen Jawdat, Washington, D.C. Ellen Jawdat later confirmed in emails to the author (2013 and 2017) that these documents were written for Chelebi, who intended to promote Gropius for the *University* project, following a visit by Nizar to his office at the Development Board "to urge him to consider what a perfect choice Gropius would be to design the University complex." Chelebi, she suggested, must have asked Nizar to prepare a written memorandum, which Ellen then wrote. It is unclear whether or how these documents were subsequently circulated; Ellen recalls that Chelebi intended to hand these in person to "a close friend," rather than to submit them more formally to the Development Board. Photocopies of this essay and the accompanying information sheet were included in Ellen Jawdat's personal file of letters from the Gropiuses prior to the absorption of this correspondence into the Harvard collections. However, the Harvard collections do not currently include these two documents.

42 Typescript of essay and information sheet written by Ellen Jawdat, n.d., personal papers of Ellen Jawdat, Washington, D.C.

43 Typescript of essay and information sheet written by Ellen Jawdat, n.d., personal papers of Ellen Jawdat, Washington, D.C. It can be argued that this expanded regional scope was taken up by the Development Board in part through the commissioning of Constantinos Doxiadis in October 1955, on the recommendation of the International Bank for Reconstruction and Development, to provide "a large-scale housing and community development program not just for Baghdad but for several cities throughout Iraq." See Levine, *The Urbanism of Frank Lloyd Wright*, 351. This was in contrast to the more limited scope of the master plan for the city of Baghdad by Minoprio & Spencely and P. W. Macfarlane, who was commissioned in late 1954 by the lord mayor of the municipality of Baghdad, Fakhruddin al-Fakhri, not by the Development Board. See Levine, 340.

either director of or consultant for such a coordinating office.[44]

It is unclear when discussions of Gropius's involvement first came to center on the university commission in the years between 1952 and 1957.[45] While their personal correspondence continued regularly through October of 1955, it was not until September 1957 that Walter Gropius received a letter from the Jawdats relaying that an offer of the commission to design the *University of Baghdad* campus was due to come from the Development Board. Gropius replied enthusiastically on TAC letterhead on September 20th, in a manner that suggested the news was unexpected:

> What a surprise to receive your letter! This project would indeed have the greatest interest for all of us in TAC, and I shall be glad to come over as soon as we have received the official invitation from your Development Board… The task to design a new University will be most thrilling to us and closest to my own design ambitions, particularly as it will be dedicated to education which is, in my opinion, the backbone of culture in any country.
>
> Today I write only to thank you for your decisive help, which I take from you as a most precious present.[46]

Walter Gropius and Robert S. McMillan traveled to Baghdad from November 2nd to 10th, 1957 to discuss the commission. Gropius wrote again to Ellen and Nizar upon his return to the U.S., reiterating "my most emphatic thanks for everything you have done for us in Baghdad."[47] The trip, he wrote, "could not have been more satisfactory, for we have covered a lot of ground collecting facts and data

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44 Typescript of essay and information sheet written by Ellen Jawdat, n.d., personal papers of Ellen Jawdat, Washington, D.C. The accompanying *Curriculum vitae* included in "Data Concerning Dr. Walter Gropius" listed his planning and architectural work from the founding of the Bauhaus to his "Practice in partnership with Architects Collaborative (group of six [sic] young architects under 35 yrs.)," though incorrectly giving 1948 as the date for the establishment of TAC. It also listed the following as "Personal qualifications" for Gropius:
"Adaptability: Has worked under many different conditions, and in many countries, and is primarily interested in finding building methods and styles suitable to special conditions [of] the society, climate, etc. in question.
Administrative Ability: ability to delegate authority
Extreme Modesty
Possesses great imagination, vision, and enthusiasm
Personal interest in Arab Countries and in the ways they are utilizing and developing their resources."
The personal nature of the appeal and the various errors in data both lend weight to the suggestion that the Jawdats prepared this document, rather than Gropius or TAC.

45 In an interview with the author (2017), Ellen Jawdat claimed that Gropius was discussed from the beginning only in relation to the university commission, though this recollection is at odds with the essay quoted above. An undated letter prior to 1957 from Ellen to the Gropiuses [Harvard University, MS Ger 208, folder 956] describes plans for a university scheme in Baghdad in a manner indicating that this was already known to Gropius, though noting that the project had been delayed: "The university scheme is temporarily halted until the English firm of Minoprio-Spenceley have made their recommendations for the Baghdad City plan & have settled on the site for the university center. So it sits… & we keep talking." It is unclear, however, whether this was meant to refer to Gropius's possible involvement. Neil Levine suggests that the letter dates to "prob. mid-1955" [Levine, *The Urbanism of Frank Lloyd Wright*, 424, note 71]. The letter describes two events which correlate to a letter by Ise Gropius of October 3, 1955, seemingly confirming them as having taken place before that date: a delivery of goat-hair rugs to Cambridge to explore selling such Iraqi rugs through Design Research, discussions of which had been ongoing since the Gropiuses' arrival in Athens in late August 1954 following their Baghdad trip, and the impending arrival of the Jawdats' fourth child in October (Hammad Jawdat, born November 1, 1955). See Harvard University, Houghton f 2013M-29.

46 Letter from Walter Gropius to Nizar and Ellen Jawdat, 20 September 1957, Harvard University, Houghton f 2013M-29. This was only the second letter to the Jawdats written on TAC letterhead, following the letter of September 9, 1954, in which Gropius first openly suggested his interest in architectural work in Iraq. Gropius's letter also mentions "an announcement of the Board's decision in The Iraq Times of September ninth." The article mentioned is "Board Decisions," *Iraq Times*, September 9, 1957, cited by Levine as stating September 7 as the date of the Development Board's decision to commission TAC. Levine, *The Urbanism of Frank Lloyd Wright*, 424, note 72. The letter from the Jawdats with news of the University commission appears not to have survived.

47 Letter from Walter Gropius to Nizar and Ellen Jawdat, 21 November 1957, Harvard University, Houghton f 2013M-29.

which will enable us to go ahead immediately with the design as soon as we get the green light from the Development Board."[48] Discussions of the contract and payments continued between Gropius, McMillan, and the Development Board through December, and by April 1958 Gropius reported to the Jawdats that "we are amidst the work on the University, particularly on the educational approach to the whole problem… This is a most formidable but highly interesting task."[49]

Around the time of Gropius and McMillan's departure for Baghdad in late October, Ise Gropius wondered in a letter to the Jawdats whether Frank Lloyd Wright or his staff remained convinced, as of that fall, that the university commission was still theirs.[50] In fact, the timing of the Jawdats' letter of September 20 informing Gropius of the impending Development Board commission strongly suggests a direct relationship between the official demise of Wright's *Plan for Greater Baghdad* and the decision to offer TAC the University on the Karada site. Wright submitted his completed scheme in August, and Minoprio and Spencely were asked to review the drawings in late September, just after the official decision to commission TAC was apparently made and just before, or coincident, with the Jawdats' message to Gropius. In light of this timing—and the fact that Wright's was the only one of the internationally commissioned projects for which Minoprio and Spencely were asked for comments—it is tempting to speculate either that the Wright scheme had fallen into disfavor by this time, leading to the Development Board to contact Gropius soon thereafter, or, conversely, that an impending decision to offer the University to Gropius created a conflict with Wright's attempt to absorb both the site and the program of the University into his own plans, thus necessitating Minoprio and Spencely's review as authors of the master plan that governed the distribution of these competing projects. Such a request suggests the possibility that Spencely's description of Wright's drawings as "fantastic" in his review of the project was meant, perhaps, to imply that the project was *fantastical:* that is, unable to be realized within the confines of the master plan for Baghdad or the government's developmental ambitions for the country.

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48 Ibid. In a letter from Kahtan Hassan Fahmi Al-Madfai to Ellen Jawdat on 29 September 1957, Al-Madfai confirms news of Gropius's selection for the University and offers himself if Gropius and TAC will require the services of Iraqi architects: "I heard that there is a possibility that Dr. Gropius may visit Baghdad and take over the project of the University, for which I thanked all the Oriental and the Occidental Gods." Private collection of Ellen Jawdat.

49 Letter from Walter Gropius to Nizar and Ellen Jawdat, 3 April 1958. The contract is discussed in Gropius's letter of November 21, 1957, and in a subsequent letter from Robert S. McMillan to Nizar Ali Jawdat on 12 December 1957. See: Harvard University, Houghton f 2013M-29.

50 In a letter from Ise Gropius to Ellen Jawdat on 27 October 1957, prior to Walter and McMillan's trip to Baghdad, she described unexpected visits by students to their house in Lincoln that fall including "an American student from Taliesin." Ise wrote, "I asked them how Mr. Wright had enjoyed his trip to Baghdad. I also asked what building Aalto had been asked to do ('Time' had mentioned that Aalto, Corbu & Wright were busy in Baghdad) and mentioned that Walter was just leaving to look into the planning for the Arab university. The young men looked surprised and said that Mr. Wright had already designed that as well as the building Aalto was supposed to do and we looked sort of sheepishly at each other and then laughed it off. Wonder what situation Walter will actually find when he gets there." See Harvard University, Houghton f 2013M-29.

The Expert University

In approaching the creation of the first consolidated university in Baghdad, TAC was officially responsible for planning the administrative and departmental structure of the university, in addition to the complete design of the campus and its facilities.[51] Unlike European and U.S. universities that had developed piecemeal over time (the January 1959 report gave Harvard, MIT, Oxford, and the University of Mexico as comparative examples for the Baghdad plan, along with TAC's unbuilt proposal for *Hua Tung University* in Shanghai), the commission for the *University of Baghdad* offered an "opportunity which has been given to no other similar institution" in either East or West. "For the first time," the text of the TAC report suggested, "it might be possible to plan a total university—both the physical plan and the philosophy of education—to make use of and profit from the experience of major Western universities and, at the same time, to cater to the particular needs and desires of the people of Iraq.[52] While the concept of a "total" institution here referred to the chance to unite the spatial and pedagogical structures of the *University* in TAC's design, the twin ideals of unifying the academic disciplines and synthesizing local and foreign educational models resonated with Gropius's pedagogical ideal of creative unity as the first director of the Bauhaus, as well as with his conception of "total architecture," conceived as the result of democratic collaboration by "a closely cooperating team together with the engineer, the scientist and the builder." [53]

The central question in conceptualizing this "total university" was its expected role in the country's ongoing modernization efforts, particularly through the expansion of an elite, educated class of graduates that could serve in the future tasks of national development. While its participation in the university as a technically sophisticated office of coordinating experts directly reinforced these aims, TAC cautioned in its initial report against a conception of the future university as dedicated solely to the production of technicians. The firm argued that it was crucial for the government to avoid an exclusive focus on the immediate provision of expertise, in favor of a more flexible, integrated educational program encompassing a humanistic curriculum beyond the narrow scope of professional training:

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51 The project was developed in two phases before and after the *coup d'état* of 14 July 1958, though both were officially presented to the Iraqi government only after the military general 'Abd al-Karim Qasim came into power. In this essay, I discuss the first scheme only, which was reported to be ready by late September 1958 and was submitted by TAC in its *Report on the University of Baghdad of January* 1959, in comparison to Wright's university proposal developed in a similar context prior to 1958. For a detailed discussion of the second scheme after 1959, which included significant changes to the size and organization of the university program and the architectural expression of its major buildings, see Michael Kubo, "'Companies of Scholars': The Architects Collaborative, Walter Gropius, and the Politics of Expertise at the University of Baghdad," in *Dust & Data: Traces of the Bauhaus Across 100 Years 1919-2019*, ed. Ines Weizman (Leipzig: Spector Books, 2019), 496–515.

52 The Architects Collaborative, *Report on the University of Baghdad Designed by The Architects Collaborative, Cambridge, Massachusetts*, U.S.A., c. January 1959, 1. This report listed a "group of special experts" consulted by TAC on "general Arab conditions" and regional culture, educational approach, technical issues, and Islamic art and architecture, bolstering the firm's claims of providing expertise. Special advisors listed for "educational approach" were Prof. Cyril G. Sargent and Donald P. Mitchell of the Harvard Graduate School of Education and Prof. Keyes D. Metcalf, Librarian of Harvard College, Emeritus. Ibid., 5.

53 Walter Gropius, "The Architect Within Our Industrial Society," in *Scope of Total Architecture* (New York: Harper & Brothers, 1955), 80.

> It is possible that in Iraq today, there are many who think in terms of immediate needs.… Forty years ago, when America was undergoing a rapid industrial expansion and we felt strongly the need for new roads, railroads, dams, and our cities were growing higher and broader, there were many who demanded that our universities produce engineers. Today, we are still aware of our imperative need for scientists and doctors. Yet, gradually, we have come to realize that we will produce better engineers, scientists, and doctors if we give them broad education than if we simply train them in their specialties. With this in mind, it is well to emphasize that a university, above all human endowments, is a gift of the present to the future.[54]

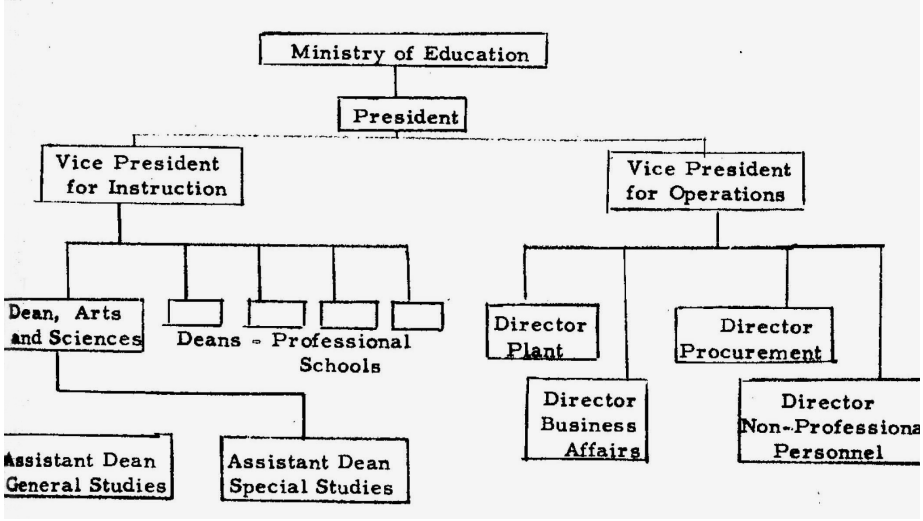
This holistic emphasis echoed Gropius's earlier Bauhaus conception of unity across creative disciplines, as reflected in Gropius's declaration upon the school's founding in 1919 that "art is not a 'profession'."[55] Instead of the tendency toward professionalization, TAC proposed a pedagogical structure that would oppose the technocratic emphasis on specialization that, in its view, increasingly plagued the culture of education in the U.S. as well. "As specialization of knowledge has increased and professional schools within a university have multiplied," the firm wrote in its 1959 *Report on the University of Baghdad*, "the concept of a unity of knowledge or of a synthesis of the great variety of specializations has been almost overwhelmed by the 'success' of specialization and analytical methods…. We would suggest, therefore, as a root concept, the balance of unity and diversity, of synthesis and analysis, of integration and differentiation."[56] Furthermore, the rapid expansion of the University's program in relation to national development and the disaggregated character of its existing facilities and departments left TAC wary of projecting the future structure of departments or facilities as a mere extrapolation of current needs for specific fields of knowledge. "In considering the problem of designing facilities for 5,000, 8,000, or 12,000 students," TAC wrote,

> we are first led to ask—In what schools or for what professional degrees? In an area that is absorbing technological facilities as rapidly as the countries in the Middle East, there may be expected to be rather rapid shifts in the number and nature of professional people needed in the various stages of development. Nor can all of these be predicted accurately at the present time…. Should engineers be given a priority over agriculturalists even though the country's future appears to indicate a continued reliance on agriculture? Might not engineers be even more important than doctors and public health officials even in the area of the control of communicable diseases? And how fast are elementary and secondary schools to be made available? The approach to a plan for a University in

54 Gropius, "The Architect Within Our Industrial Society," 3-4.

55 Walter Gropius, "Program of the Staatliches Bauhaus in Weimar" [1919], trans. in Ulrich Conrads, *Programs and Manifestoes on 20th-Century Architecture* (Cambridge, MA: MIT Press, 1964), 49–53.

56 Gropius, "Program of the Staatliches Bauhaus in Weimar", 7-8.



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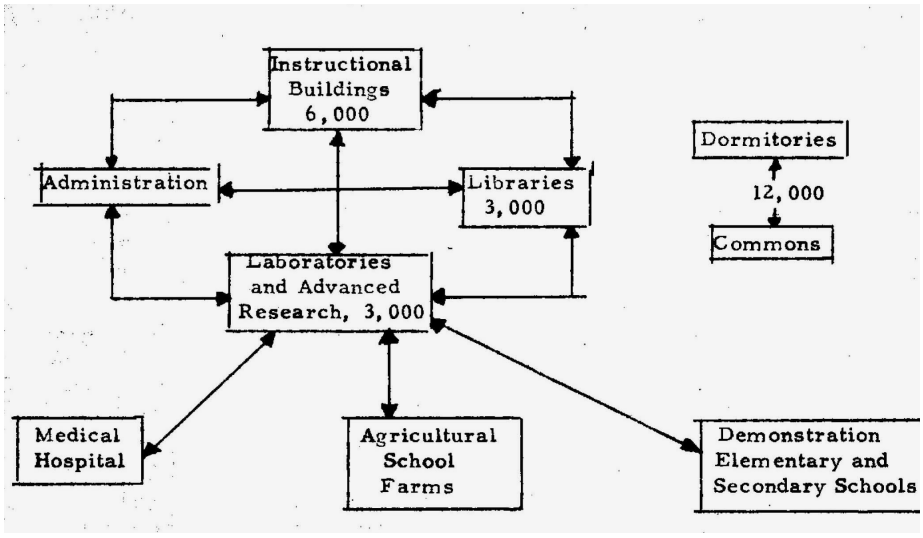

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terms of enrolments of individual colleges appears tenuous, especially as the relationship among the units of the university might well shift over a period of time.[57]

These problems of projection thus returned TAC to the question of whether to plan the university's administrative and physical structure according to departments with separate facilities, or with a more integrated structure that would allow for flexibility and change over time. Conceptually, the report asked, "Are [universities] agglomerations of college buildings per se or are they companies of scholars devoted to common professional pursuits?"[58] Partner Robert S. McMillan echoed this terminology in describing the firm's approach to the *University of Baghdad*, likening the problem to that of designing "a 'single industry town'—the industry being education."[59] In organizing the Baghdad campus around shared facilities rather than separate departments, these "companies of scholars" would become the organizing principle for the University as a whole.

57 Gropius, "Program of the Staatliches Bauhaus in Weimar", 12-14. Both the difficulties of projection and the desire for an expanded humanities curriculum beyond professional specializations were supported by a comparative table of enrollments in institutions of higher learning in Iraq in 1954 and 1957, in which the largest increase was in the College of Arts and Sciences (a nearly three-fold increase from 295 to 802 students), with more modest increases in most other departments. The only departments with decreases in enrollment were the College of Commerce and Economics (1164 to 493 students), the Law School (1000 to 562 students), and the College of Religious Jurisprudence (101 to zero students).

58 Gropius, "Program of the Staatliches Bauhaus in Weimar", 14.

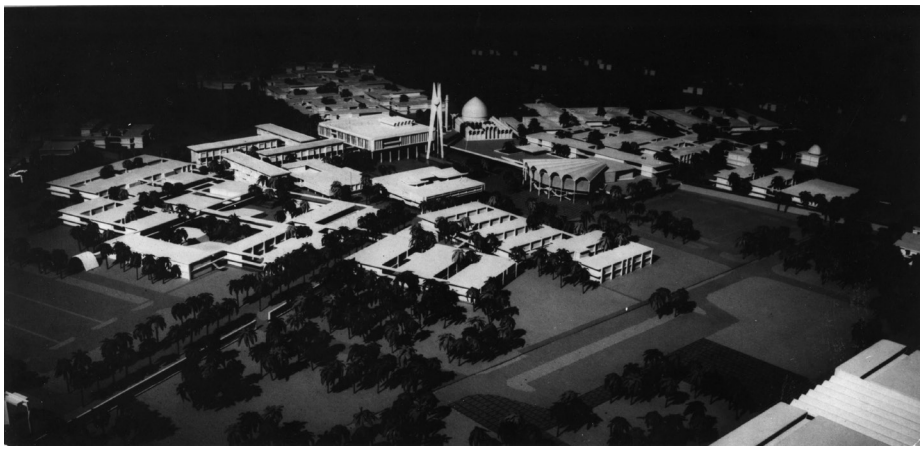
59 Robert S. McMillan, "Visual Problems in Town Planning: The 'University Town' at Baghdad," transcript of paper delivered at "The New Metropolis in the Arab World," an international seminar sponsored by the Congress for Cultural Freedom and the Egyptian Society of Engineers, Cairo, 17-22 December 1960: CAI/15, 3.

Fig. 5

The Architects Collaborative (TAC), *University of Baghdad*. Organization diagram of proposed university administration. From TAC, *Report on the University of Baghdad*, c. January 1959.

Fig. 6

The Architects Collaborative (TAC), *University of Baghdad*. Schematic concept for organization of university buildings. From TAC, *Report on the University of Baghdad*, c. January 1959.



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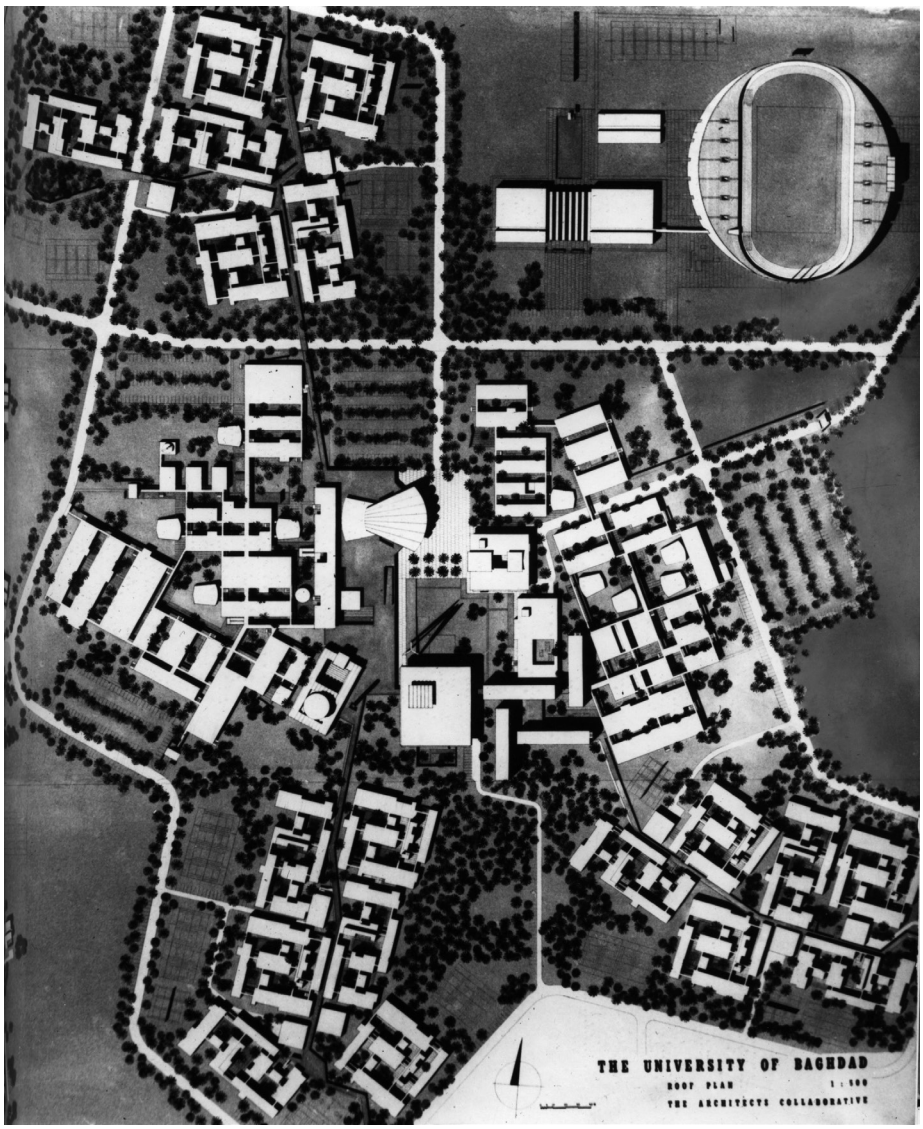


Fig. 7

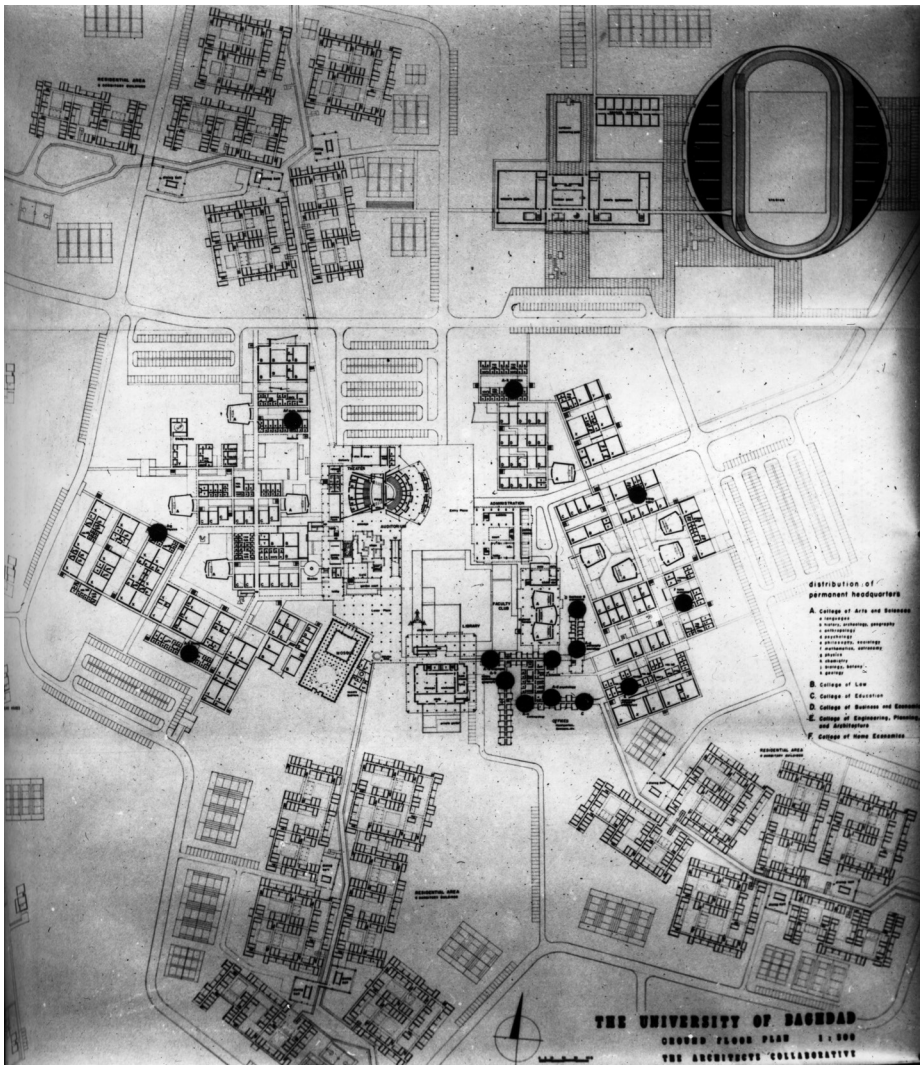
The Architects Collaborative (TAC), *University of Baghdad*. First scheme, model of campus center. From TAC, *Report on the University of Baghdad*, c. January 1959.

Fig. 8

The Architects Collaborative (TAC), *University of Baghdad*. First scheme, roof plan. From TAC, *Report on the University of Baghdad*, c. January 1959.

The terms of this conception of the university thus bore a specific parallel to the holistic creative model on which TAC itself had been established, as a collaboration among generalists rather than an organization of discrete specializations.

Diagrams of the administrative and physical organization of the university in the 1959 *Report* made clear how TAC sought to relate its pedagogical ideals to the spatial structure of its campus on the Karada site. Dividing the university



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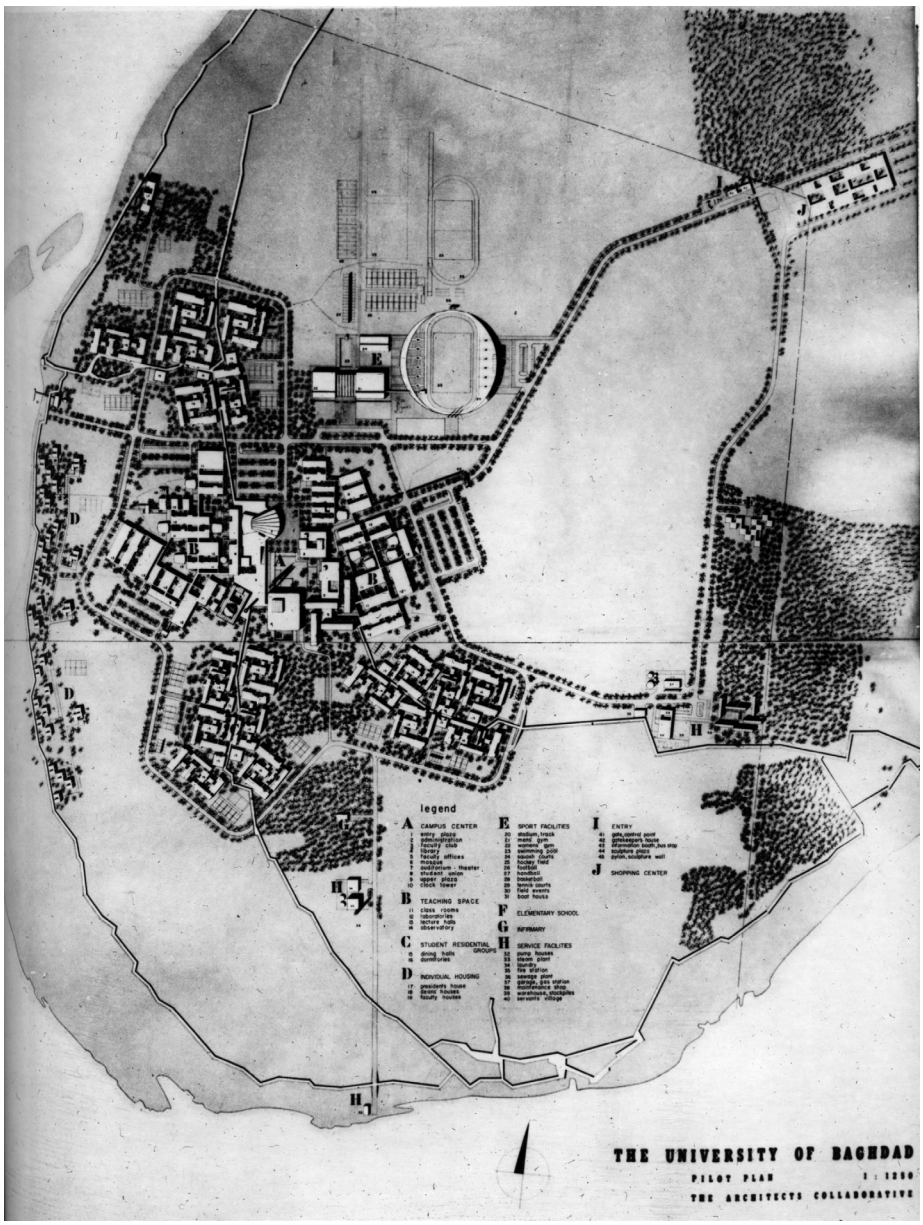
administration into two major functions, instruction and operations, the report proposed that most university instruction be placed under the aegis of a single Dean of Arts and Sciences, rather than splitting these two domains into separate deanships on the model of the typical U.S. university. The Dean would be further responsible for coordinating both general and discipline-specific studies, each supported by an assistant dean, thus avoiding the need to appoint a separate Dean of General Studies without authority over departmental faculty. [Fig. 5]

This administrative pattern corresponded to a physical structure of shared teaching facilities across departments, rather than a campus based on separate faculties in which each would have discipline-specific classrooms, libraries, and offices. [Fig. 6] Instead, the report proposed that buildings be grouped together essentially by type, in rings extending outward from a campus center toward the river on three sides. The campus center would contain the university library, theater and auditorium, central administration building, faculty club, and mosque, joined by covered passages around an open plaza. This central precinct would be surrounded by a mat of connected blocks of classrooms and laboratory spaces, respectively. [Fig. 7, 8, 9] While each school would have a permanent headquarters within this matrix—for

Fig. 9

The Architects Collaborative (TAC), *University of Baghdad*. First scheme, ground floor plan. From TAC, *Report on the University of Baghdad*, c. January 1959.



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example allowing physics, chemistry, and astronomy offices to be located closer to the laboratory areas, while the humanities and social sciences were grouped into a single office block along with education, engineering and architecture, law, business, and economics—TAC argued that this structure of shared facilities would better accommodate future changes in departmental sizes and space needs, as well as preventing the effective segregation of different schools into permanent, discrete sections of the campus over time. Teaching spaces would be surrounded in turn by three clusters of student residences served by a ring road, with individual faculty and administrative housing located along the river at the western edge of the campus. The radial pattern of housing clusters connected back to the campus center via paths based on an existing network of 10-foot high dykes that remained on the site following its reclamation, a feature that was rendered into the pilot plan as a means of providing level changes within the campus. This pattern of "spoke lines" thus provided a legible symbol of the flood control efforts that had

Fig. 10
The Architects Collaborative (TAC), *University of Baghdad*. First scheme, pilot plan. From TAC, *Report on the University of Baghdad*, c. January 1959.

marked the first phase of the Development Board's work, now incorporated as both a rhetorical device and a primary structuring element within the university plan.[60] [Fig. 10]

In contrast to such appeals to the broader humanistic character of a new university for the nation, both the Development Board and the U.S. interests that operated in Iraq prior to 1958 were aligned in the expectation that the University of Baghdad would produce an educated class of experts, in much the same terms of "immediate need" that its architects had warned against. The guests Gropius had met on his 1954 trip to Baghdad included Henry Wiens, responsible for the *Point Four program* as Director of the United States Operations Mission (USOM) to Iraq from 1954 to 1956. In a defense of the Point Four program published in the aftermath of the 14 July *coup d'état,* Wiens confirmed that, among U.S. aims "in education, emphasis was placed on technical training."[61] These efforts included the provision of advisors for a series of special technical schools established prior to 1958, as well as for governmental efforts to emphasize agricultural and technical work in the city's public schools, and the sending of Iraqi officials, technicians, and students to the U.S. for university observation and training programs. Such educational efforts were seen to be of paramount importance for economic and developmental efforts in Iraq, a country in which only twenty-three percent of the school-age population was enrolled in educational institutions and some ninety percent of the population remained illiterate as of 1950.[62]

Not least among the forms of technical expertise that would be enabled by the new university program was the first dedicated school of architecture in Iraq, established in 1959 as a separate faculty within the department of engineering, coincident with the planning and design of the consolidated University of Baghdad campus.[63] Unsurprisingly, given his pedagogical commitments from the Bauhaus to the Harvard Graduate School of Design, Gropius took a particular interest in the role of the first architectural curriculum in Iraq in addressing a national context in which "most new buildings continued to be poor imitations of modern western buildings," as "the age-old building traditions of the Middle East… [were] rapidly being replaced by new materials and construction methods which neither builders nor designers had mastered adequately."[64] According to Fuad Uthman, a member of the faculty of architecture from 1961 to 1969, Gropius expressed his thoughts on the potential creation of a faculty of

60 The Architects Collaborative, *Report on the University of Baghdad Designed by The Architects Collaborative, Cambridge, Massachusetts*, U.S.A., 32.

61 Henry Wiens, "The United States Operations Mission in Iraq," *Annals of the American Academy of Political and Social Science*, Vol. 323 (May 1959): 142-3.

62 Phebe Marr, *The Modern History of Iraq*, 3rd ed. (Boulder, CO: Westview Press, 2012), 70.

63 A broader comparison of the architectural curriculum at the University of Baghdad with other forms of architectural education and training within the knowledge economy of foreign-aided national universities is beyond the scope of this paper. On universities and the "technical assistance machinery" of international urban planning after World War II, see Burak Erdim, *Landed Internationals: Planning Cultures, the Academy, and the Making of the Modern Middle East* (Austin: University of Texas Press, 2020).

64 Fuad A. Uthman, "Exporting Architectural Education to the Arab World," *Journal of Architectural Education*, Vol. 31, No. 3 (February 1978): 27.

architecture in Baghdad in 1958. "Concerned about the shoddy quality of most buildings in the country," Uthman recalled, Gropius recommended that the new school would instead "deal with the development and improvement of local construction techniques," suggesting "that the country needed a school of building construction more than one of architecture."[65] This distinction echoed the Bauhaus emphasis on building (*bau*) as the highest unity of the arts, a synthesis its third director, Ludwig Mies van der Rohe, affiliated with the German sense of *baukunst* (building-art) rather than *architektur* (architecture) as a tectonic rather than aesthetic pursuit.[66]

Such ambitions to foment a national building tradition that would be simultaneously indigenous and modern, however, continued to rely on models of imported expertise. Robert Mather, a professor of architecture at the University of Texas who came to the University of Baghdad in 1963 as a visiting professor, described the school's initial faculty of architecture as composed equally of U.S. and British-trained Iraqi architects.[67] Classes were conducted in English, in some cases necessitating "the development of an Arabic architectural vocabulary where none had previously existed"—a translation problem paralleled by the need to establish a positive term for the figure of the architect, or architectural engineer (*muhandis mimari*), in a context in which the engineer (*muhandis*) had traditionally represented the dominant form of building practice.[68] By 1978, of the 200 architects practicing in Iraq, some 180 had been trained at the University of Baghdad, with the remainder having studied in the U.S., the U.S.S.R., and European schools on both sides of the Cold War divide.[69] As the first faculty of architecture in the Arab and Persian Gulf states, graduates of the University of Baghdad also proceeded to populate subsequently created departments of engineering and architecture throughout the region, including the college of engineering at Kuwait University, established in 1966.

The specific U.S. model for the University's pedagogy after 1963, including the faculty of architecture, was provided by an affiliation with the University of Texas at Austin. Even prior to this official relationship, the foundational architectural

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65 Uthman, "Exporting Architectural Education to the Arab World," 27.

66 See Fritz Neumeyer, *The Artless Word: Mies van der Rohe on the Building Art*, trans. Mark Jarzombek (Cambridge, MA: MIT Press, 1991).

67 Robert Mather, "A New Program at Baghdad," *AIA Journal*, (December 1965): 57–60. According to Uthman, in his role at the University of Baghdad, Mather "addressed himself largely to the issues Gropius had raised when he was in the country." Uthman, "Exporting Architectural Education to the Arab World": 28.

68 Uthman, "Exporting Architectural Education to the Arab World": 29. Uthman describes the two primary Arabic expressions for the architect at the time the faculty of architecture was established: *muhandis mimari* (translated in English as 'architectural engineer') or *mimar* (translated as 'builder or contractor', and seen as "down the social ladder" from the engineer, or *muhandis*). He suggests that *muhandis mimari* constituted an acceptable compromise between *muhandis* and *mimar*, leveraging the association with engineering to increase the prestige of the architectural field, and that, by the time of the article in 1978, the term had "become accepted not only in Iraq but [in] most of the Arab world as the professional term for architect." See Uthman: 27. Ellen Jawdat wrote in 1957 of a growing "public appreciation of the special role of architect: a realization that his [sic] training equips him to do more than embellish the bare structure provided by a contractor and that his services include an attempt to solve the demands of climate, social function, aesthetic preferences and budget of the client." In contrast to Uthman's terminology, however, Jawdat claimed that "this model of the architect, clearly patterned on U.S. professional models, was distinct from the traditional primacy in the Arab world of the master builder [*mimar*], the synthetic figure that "serves all the categories of builder, mason, engineer and architect." Ellen Jawdat, "The New Architecture in Iraq," *Architectural Design*, (March 1957): 79.

69 Uthman, "Exporting Architectural Education to the Arab World", 30.

curriculum had been modeled on the five-year sequence of typical U.S. undergraduate architecture programs, and was drafted in 1959–60 by Hisham Munir, who had received his B.Arch. from the University of Texas in 1953, prior to attending the University of Southern California.[70] Kenton W. Keith, a USIS officer in Baghdad in the mid-1960s, later described the broader alliance between the University and its Texas counterpart in these years as "a kind of twinning relationship" that involved exchanges of both students and professors, one deep enough that "it had a life of its own and it was operating outside the context of our official relationship."[71] He noted that this exchange was encouraged on both sides as "a relationship that was of benefit to the Iraqis and of benefit to the long-range interests of the U.S." Keith further suggested a desire to continue this connection even after the Arab-Israeli war of 1967 that made any public affiliation with the U.S. government impossible in Iraq, claiming that "the Iraqis actually signaled that they would like to keep that relationship going even as they were breaking diplomatic relations."[72] Such exchanges testified to the degree to which TAC's ambitions for the educational and physical structure of the campus had succeeded in creating an expert university for the training of experts, including forms of professional training fashioned after the same U.S. models of architectural practice that were embodied in TAC's own presence in Iraq.

The desire to train technicians for national development was key among the factors that enabled TAC to continue work on the university project following the *coup d'état* that brought Qasim to power, an event that signaled the official demise of the majority of cultural projects sponsored by the Development Board during the monarchy. Among the commissions that had begun under Faisal II, only those explicitly associated with concrete governmental and social needs under Qasim were chosen to continue, while others, such as Aalto's museum and Wright's opera house and cultural center, were abandoned. The new regime proceeded with Gio Ponti's headquarters for the Development Board itself, now purged of its U.S. and British advisors and reorganized as the Ministry of Planning. So too, Le Corbusier's project for a national stadium and sports complex initially continued until the architect's death in 1965, before its eventual revival and the construction of the gymnasium portion of this complex between 1974 and 1980 by one of Le Corbusier's former associates, Georges-Marc Présenté.[73] Yet, unlike cultural programs seen to be of dubious value for post-revolutionary Iraq, like opera or art, the national tasks assigned to the university were not only continued, but significantly increased under Qasim's

70 Uthman, "Exporting Architectural Education to the Arab World", 29.

71 Kenton W. Keith, USIS Rotation Officer, Baghdad (1966-1967), interviewed by Charles Stuart Kennedy, 1998. The Association for Diplomatic Studies and Training Foreign Affairs Oral History Project, Iraq Country Reader, 164, accessed January 26, 2013, https://adst.org/wp-content/uploads/2012/09/Iraq.pdf.

72 Kenton W. Keith, USIS Rotation Officer, Baghdad (1966-1967), interviewed by Charles Stuart Kennedy, 1998.

73 On the history of Le Corbusier's Olympic complex after 1958, see Mina Marefat, Caecilia Pieri and Gilles Ragot, *Le Gymnase de Le Corbusier à Bagdad* (Paris: Editions du Patrimoine, 2014); Mina Marefat, "*Mise au Point* for Le Corbusier's Baghdad Stadium," *Docomomo*, No. 41 (September 2009): 30–40 and "Le Corbusier in Baghdad," *Brownbook*, No. 55 (January-February 2016), accessed April 17, 2016, http://brownbook.me/le-corbusier-in-baghdad/, and Caecilia Pieri, "The Le Corbusier Gymnasium in Baghdad: discovery of construction archives (1974 -1980)", *Les Carnets de l'Ifpo. La recherche en train de se faire à l'Institut français du Proche-Orient* (Hypotheses.org), (May 31, 2012), accessed June 27, 2021, http://ifpo.hypotheses.org/3560.

government.[74] The TAC university proposal was the only other of the Development Board projects to continue after 1958, and the only project by a U.S. firm, a particularly difficult proposition in the pro-Soviet context of the post-revolutionary Iraqi republic.

74 Already regarded by some within the monarchy as potential sources of both leftist dissent and nationalist sentiment opposed to foreign influence, educational institutions took on expanded importance within governmental plans after 1958, modeled in part on a Soviet-style planned economy as a spur to national economic development. In December 1959, just prior to TAC's submission of its revised second scheme for the University on January 20, 1960, Qasim announced a "provisional revolutionary plan" that included significantly increased investments in education along with housing and healthcare, as forms of social welfare that were seen to be crucial to national development, in contrast to the emphasis on irrigation and agriculture that had marked the Development Board initiatives prior to 1958. These changes included nearly doubling the national budget devoted to education from almost ID 13 million ($36 million) in 1958 to ID 24 million ($67 million) in 1960. See Marr, *The Modern History of Iraq*,100. On nationalist ideology and the tradition of leftist dissent in education in Iraq prior to 1958, see Reeva S. Simon, *Iraq Between the Two World Wars: The Creation and Implementation of a Nationalist Ideology* (New York: Columbia University Press, 1986).

Archival Sources

Letter from Walter Gropius to Nizar A. Jawdat, 1 December 1948. Harvard University, Houghton f 2013M-29.

Letter from Walter Gropius to Ellen and Nizar Ali Jawdat, 13 April 1954. Harvard University, Houghton f 2013M-29.

Letter from Ise Gropius to Nizar Ali Jawdat, 26 May 1954. Harvard University, Houghton f 2013M-29.

Letter from David D. Newsom to Walter Gropius, 18 June 1954. Bauhaus Archiv, GN Kiste Nr. 3, Mappe 123.

Letter from Ise Gropius to Ellen Jawdat, 29 July 1954. Harvard University, Houghton f 2013M-29.

Guest list for lunch at U.S. Embassy, Baghdad, n.d. [c. August 1954] Harvard University, Houghton Library, MS Ger 208, folder 956.

Letter from Walter Gropius to Nizar and Ellen Jawdat, 9 September 1954. Harvard University, Houghton f 2013M-29.

Letter from Ellen Jawdat to Walter Gropius, 3 October 1954. Harvard University, Houghton Library, MS Ger 208, folder 956.

Letter from Ellen Jawdat to Walter and Ise Gropius, n.d. [c. 1955]. Harvard University, Houghton Library, MS Ger 208, folder 956.

Letter from Walter Gropius to Nizar and Ellen Jawdat, 20 September 1957. Harvard University, Houghton f 2013M-29.

Letter from Kahtan Hassan Fahmi Al-Madfai to Ellen Jawdat, 29 September, 1957. Private collection of Ellen Jawdat, Washington, D.C.

Letter from Ise Gropius to Ellen Jawdat, 27 October 1957. Harvard University, Houghton f 2013M-29.

Letter from Walter Gropius to Nizar and Ellen Jawdat. 21 November 1957. Harvard University, Houghton f 2013M-29.

Letter from Robert S. McMillan to Nizar Ali Jawdat, 12 December 1957. Harvard University, Houghton f 2013M-29.

Letter from Walter Gropius to Nizar and Ellen Jawdat, 3 April 1958. Harvard University, Houghton f 2013M-29.

Letter from Nizar Ali Jawdat to Walter and Ise Gropius, 4 October 1958. Harvard University, Houghton Library, MS Ger 208, folder 956.

Nizar Ali Jawdat and Ellen Jawdat, Curriculum vitae, after 1986. Private collection of Ellen Jawdat, Washington, D.C.

Typescript of essay and information sheet written by Ellen Jawdat, n.d. Private collection of Ellen Jawdat, Washington, D.C.

Bibliography

An Introduction to the Past and Present of the Kingdom of Iraq. Baltimore, MD: Lord of Baltimore Press, 1946.

Batatu, Hanna. *The Old Social Classes and the Revolutionary Movements of Iraq: A Study of Iraq's Old Landed and Commercial Classes and of its Communists, Ba'thists, and Free Officers*. Princeton, NJ: Princeton University Press, 1978.

Erdim, Burak. *Landed Internationals: Planning Cultures, the Academy, and the Making of the Modern Middle East*. Austin: University of Texas Press, 2020.

Fulton, Ruth Coan, ed. *Coan Genealogy 1697–1982*. Portsmouth, NH: Peter E. Randall, Publisher, 1983.

Gropius, Walter. "Gropius Appraises Today's Architect." *Architectural Forum* (May 1952): 111–182.

Gropius, Walter. "Program of the Staatliches Bauhaus in Weimar" [1919]. Translated in Ulrich Conrads, *Programs and Manifestoes on 20th-Century Architecture*. Cambridge - MA: MIT Press, 1964: 49–53.

Jawdat, Ellen. "The New Architecture in Iraq." *Architectural Design* (March 1957): 79–80.

Kubo, Michael. "'Companies of Scholars': The Architects Collaborative, Walter Gropius, and the Politics of Expertise at the University of Baghdad," in Ines Weizman (ed.), *Dust & Data: Traces of the Bauhaus Across 100 Years 1919-2019.* Leipzig: Spector Books, 2019: 496–515.

Levine, Neil. *The Urbanism of Frank Lloyd Wright*. Princeton, NJ: Princeton University Press, 2015.

Marefat, Mina. "Le Corbusier in Baghdad." *Brownbook,* No. 55 (January-February 2016). Accessed April 17, 2016. http://brownbook.me/le-corbusier-in-baghdad/.

Marefat, Mina. "Mise au Point for Le Corbusier's Baghdad Stadium." *Docomomo*, No. 41 (September 2009): 30–40.

Marefat, Mina, Caecilia Pieri and Gilles Ragot. *Le Gymnase de Le Corbusier à Bagdad*. Paris: Editions du Patrimoine, 2014.

Marr, Phebe. *The Modern History of Iraq*. 3rd ed. Boulder, CO: Westview Press, 2012.

Mather, Robert. "A New Program at Baghdad." *AIA Journal* (December 1965): 57–60.

McMahon, Darrin. *Divine Fury: A History of Genius*. New York: Basic Books, 2013.

McMillan, Robert S. "Visual Problems in Town Planning: The 'University Town' at Baghdad." *The New Metropolis in the Arab World*. Cairo: Congress for Cultural Freedom and the Egyptian Society of Engineers (December 17-22, 1960): CAI/15, 3.

Neumeyer, Fritz. *The Artless Word: Mies van der Rohe on the Building Art*. Translated by Mark Jarzombek. Cambridge, MA: MIT Press, 1991.

"New Lights for Aladdin." *Time Magazine*, Vol. 71, No. 20 (19 May 1958): 82.

"Nizar Ali Jawdat." Obituary. *The Washington Post*, 29 January 2017. Accessed June 11, 2017. http://www.legacy.com/obituaries/washingtonpost/obituary.aspx?pid=183773232.

"Out of the Heat." *Time Magazine*, Vol. 70, No. 1 (1 July 1957): 26.

Pfeiffer, Brooks, ed. *Frank Lloyd Wright: His Living Voice*. Fresno: The Press at California State University, 1987.

Pieri, Caecilia. "The Le Corbusier Gymnasium in Baghdad: discovery of construction archives. 1974–1980." *Les Carnets de l'Ifpo. La recherche en train de se faire à l'Institut français du Proche-Orient* (Hypotheses.org), (May 31, 2012). Accessed January 26, 2013.

http://ifpo.hypotheses.org/3560.

Polk, William R. *What the Arabs Think*. New York: Foreign Policy Association, 1952.

Rugh, William A. *Arab Mass Media: Newspapers, Radio, and Television in Arab Politics*. Westport, CT: Praeger Publishers, 2004.

Salter, Lord [Arthur]. *The Development of Iraq: A Plan of Action*. Baghdad: Iraq Development Board, 1955.

Simon, Reeva S. *Iraq Between the Two World Wars: The Creation and Implementation of a Nationalist Ideology*. New York: Columbia University Press, 1986.

Squire, Raglan. "Architecture in the Middle East." *Architectural Design* (March 1957): 72–108.

The Architects Collaborative. *Report on the University of Baghdad Designed by The Architects Collaborative, Cambridge, Massachusetts*, U.S.A, c. January 1959.

The Association for Diplomatic Studies and Training Foreign Affairs Oral History Project, *Iraq Country Reader*, 2011. https://adst.org/wp-content/uploads/2012/09/Iraq.pdf.Accessed June 30, 2013.

Uthman, Fuad A. "Exporting Architectural Education to the Arab World." *Journal of Architectural Education*, Vol. 31, No. 3 (February 1978): 26–30.

Wiens, Henry. "The United States Operations Mission in Iraq." *Annals of the American Academy of Political and Social Science*, Vol. 323 (May 1959): 140–149.

Wright, Frank Lloyd. *Genius and the Mobocracy*. New York: Duell, Sloan and Pearce, 1949.

Aminah H. Alkanderi

The Emergence of the Arab Engineer: Saba George Shiber, Arab Consulting Engineers (ACE) and *Dar al-Handasah*

Arab engineers, oil boom, planning-architecture, architecture-engineering, Shiber

/Abstract

The relationship between architects and consumers in the Gulf cities is a commercial and temporal bond rather than a cultural, dynamic, and interactive one. The dearth of historical and premodern architectural monuments and structures in the Arabian desert combined with the rapid oil construction boom of the second half of the 20th century only further challenged the evolution of the socio-cultural association with architecture. With every new ruler, top planning and architecture firms from around the world are commissioned to speculate on the question of the cultural identity of the Arab-Islamic nation and create its image anew through urban renewal and redevelopment schemes. While in constant pursuit of the national image of a modern Arab nation, Gulf cites are invested in master plans, lucrative structures, and monumental buildings that homogenize as abstracted jungles of concrete and glass. The sociocultural structure of Arab Gulf states has indeed fostered rapid urbanization and hindered the evolution of an Arab discourse on architecture. The lack of professional autonomy for architecture as a practice and a discourse promoted a unique interdisciplinary approach to the building industry combining the fields of design, planning, and construction or what I call planning-engineering. Such a design approach blurs the line between the fields of architecture, city planning and engineering into one expert al-Muhandis, a term inclusive of all scientific and technical fields related to the built environment. In this paper, I trace the emergence of Arab engineering consultancies that shaped the urban scene of Gulf cities even today.

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Aminah Hamed Alkanderi, a fresh PhD. graduate in History and Theory of Architecture from the University of Pennsylvania (Dec 2020). Her dissertation "Saba George Shiber's Kuwaitopolis and the Emergence of the Arab Urban-Architect" traces the contested disciplines of design as practiced in the Arab region through the lens of the Palestinian-born American architect Saba George Shiber. Aminah specializes in contemporary theories of architecture and urbanism in the Arab region with a particular focus on the oil construction booms in the Arabian Peninsula. Her research unfolds the socio-cultural and geo-political exchange between the Levant and the Arabian Peninsula and traces the direct impact of the urbanization of Gulf cities on the evolution of the modern discourse on post World War II architecture. Her work seeks to question modes of translation, mobility, and urbanism in the Global South through the practice of Arab intellectuals, practitioners, and professionals. Aminah is an Assistant Professor of Architecture at Kuwait University.

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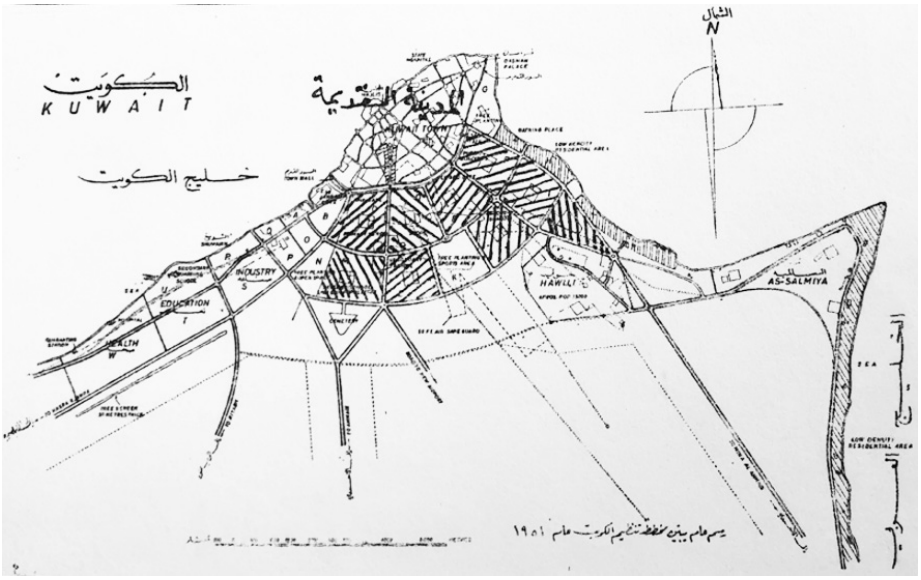

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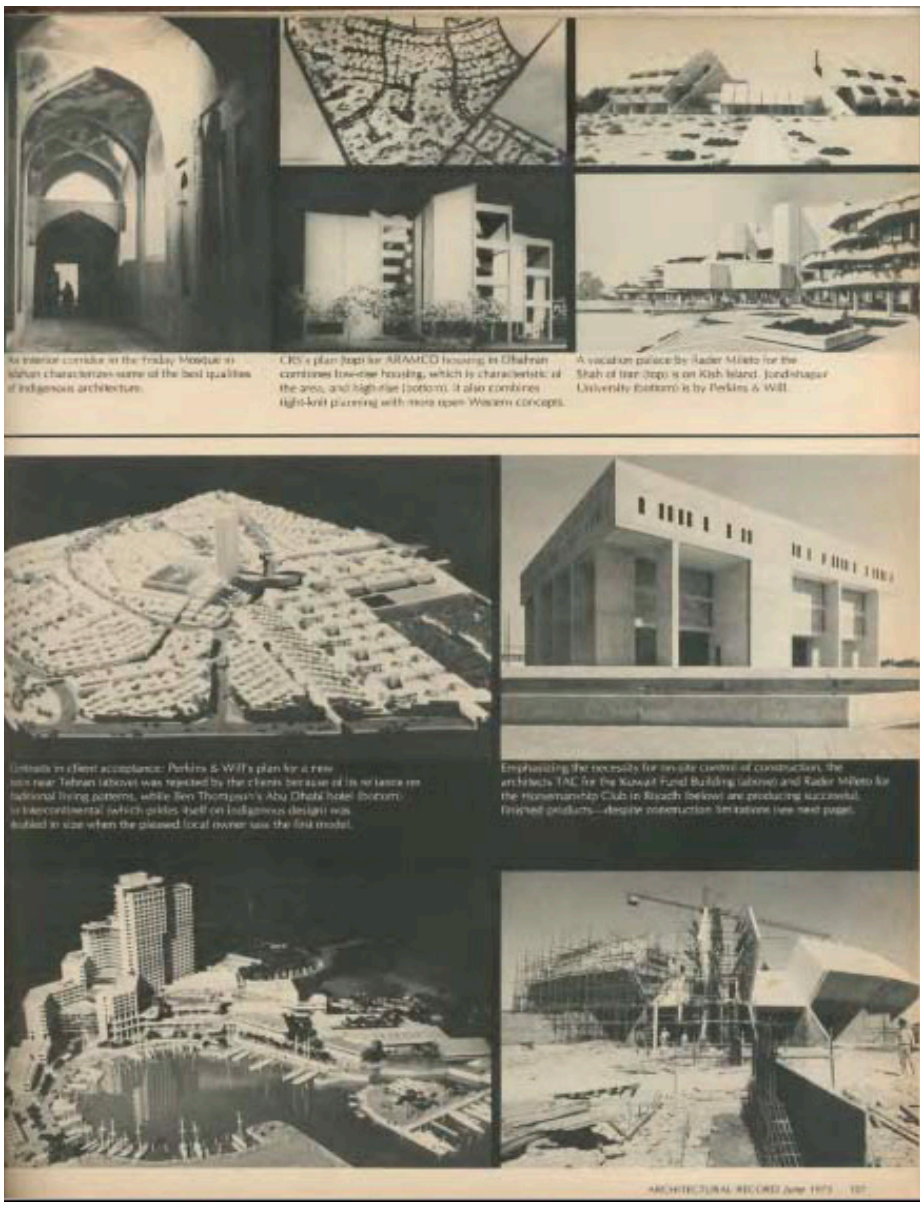
Ever since the discovery of oil in 1937, on the eve of the Second World War, Gulf cities, also known as the Arabian Peninsula, have been in a constant state of change and development in pursuit of modernity and national identity. While rapid urbanism and the making of new cities are the hallmark of oil rich Arab Gulf States even today, urbanism was first perceived as a means to distribute oil wealth through social welfare programs, including housing, free health care, and education services. The first oil boom took place in Kuwait, the Hashemite Kingdom of Iraq, and the Kingdom of Saudi Arabia (KSA), and the three states implemented their first master plans in the 1950s **[Fig. 1]**. The second oil boom of the 1970s promoted an additional layer of urbanism on a grander scale that included the recently independent states in the Arabian Peninsula, including Qatar and the United Arab Emirates (UAE). The question of temporality is prominent in the evolution of Gulf oil cities, whether in Dubai, Riyadh, Kuwait City, or Doha. Arab Gulf states continue to rebuild and remake their cities in order to refurbish, renew, and restate their national identities.[1] Such a tradition was inaugurated by Kuwait's master plan in 1952 and magnified by the Arab oil embargo of 1973, which dramatically raised the price of oil and increased the revenue earned by the young Gulf states, particularly Qatar and the UAE.[2] The massive oil income prompted another wave of radical redefinition from town planning to nation building on both the individual state level and the Gulf region at large. While Kuwait entered its second construction boom and its second city–state master plan delivered by Colin Buchanan (1972), Dubai and Qatar embarked on their first attempt at realizing master plans of their own. The trajectory of Doha and Dubai followed the general course of modernization in the region charted by

1 Future development of Old Kuwait City (1968): New Kuwait 2035; Doha 2022; KSA (2030); See also "Proposals for Restructuring Kuwait," *The Architectural Review Archive (1896-2005)* (Sep 1, 1974): 178-90.: Adam Himes, "Competing Visions for a Modern Emirate: The Government Centre of the State of Qatar," *International Journal of Islamic Architecture* 7, no.1 (2018): 143-69.

2 While oil excavation began in the Arabian Desert before World War II, its discovery varied in disparate states. Oil was first discovered in Kuwait and KSA in 1938, Qatar in 1940, and the UAE, almost twenty years later in 1958. Both UAE and Qatar gained their independence in 1971, while KSA was established in 1932. Oman received its independence in 1951 and Kuwait received its independence in 1961.

Fig. 1

Minoprio, Spencely, and Macfarlane (MSM) Master Plan for Kuwait City (1952).
Source: Shiber Archive, Washington, DC. © 2018.



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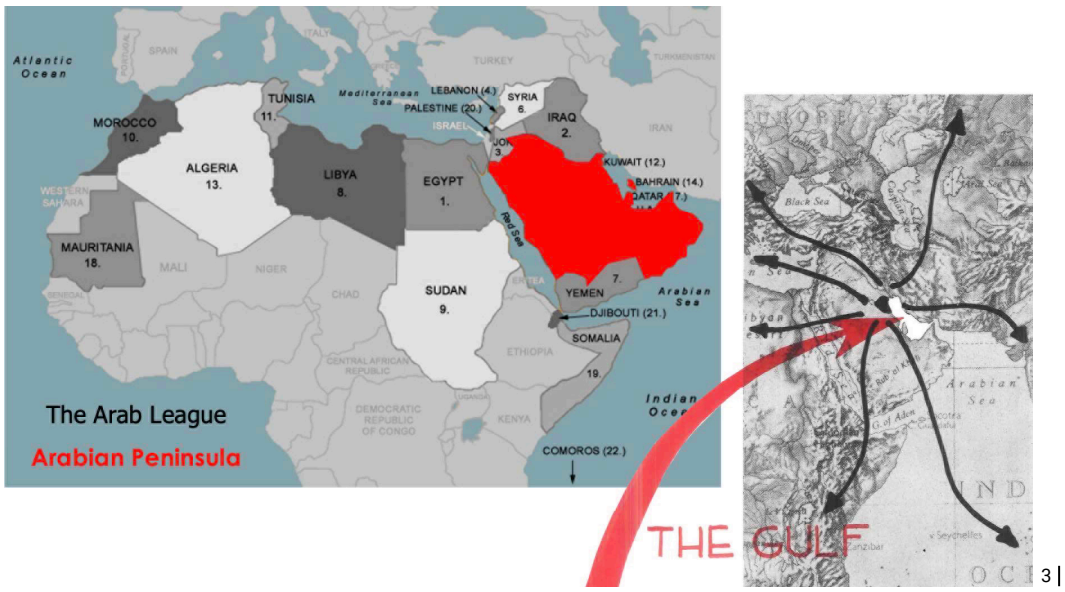
KSA and Kuwait.[3] Expert Arab and Western consultants, such as Saba George Shiber; *Dar al-Handasah*; Constantinos Doxiadis; The Architects Collaboratives (TAC); Skidmore, Owings & Merrill (SOM); and others, were heavily involved and often commissioned simultaneously by multiple Gulf governments **[Fig. 2]**.[4] This is not to say that these experiences were identical, but rather that a general urban trend remained identifiable; thus, understanding the structure, organization, and nature of Gulf cities today is linked to the lessons learned from the urbanization of Kuwait and KSA. Describing the current construction boom in the Gulf, Rem Koolhaas, whose firm OMA operates intensively in the Gulf (and particularly in Dubai), wrote in *al-Manakh Cont'd* (2010):

3 Himes, "Competing Visions for a Modern Emirate": 143-69.

4 See Michael Kubo, "Speculations: US. Architects and Modernization in Kuwait," in *Essays, Arguments and Interviews: Modern Architecture Kuwait*, ed. Ricardo Camacho, Sara Saragoça and Roberto Fabbri (Salenstein, Switzerland: Niggli, 2018), 184-96; Mohammad al-Asad, *Contemporary Architecture and Urbanism in the Middle East* (Gainesville: University Press of Florida, 2012).: Charles Hoyt, "Oil Rich Middle East: the New Frontier for Professional Services?", *Architectural Record* (June 1975): 101-108.
Himes, "Competing Visions for a Modern Emirate: 143-69.

Fig. 2

Urban development projects in Kuwait and Saudi Arabia in the early 1970 published in 1975 under the title: "Oil Rich Middle East: the New Frontier for Professional Services?" Source: Architecture Record (June 1975).



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> "The Gulf is the current frontline of rampant modernization . . . if you want to be apocalyptic, you could construct Dubai as evidence of the end-of-architecture-and-the-city-as-we-know-them; more optimistically you could detect in the emerging substance of The Gulf—constructed and proposed—the beginning of a new architecture and a new city…"[5]

The practice of planning-architecture in Gulf cities today is directly linked to the sociocultural, technical, and environmental contexts that gave rise to the Arab region post WWII that led to the emergence of the Arab expert, *al-Muhandis*. The term "Arab region" references those states in the Arabian Peninsula, as well as some in the Levant, whose urbanization was a direct result of oil production and revenue, including present-day Kuwait, KSA, Bahrain, Oman, Qatar, UAE, Lebanon, Iraq, and Jordan **[Fig. 3]**. Some of these states, mainly those in the Gulf states, are the largest exporters of oil in the world. The others, grouped in the Levant area, benefited from the financial programs funded by oil income, such as the Kuwait Fund for Arab Economic Development, and the business and professional opportunities associated with the rapid urban, social and cultural development process.[6] These two groups share a common spoken language (Arabic) and popular religious belief (Islam) along with diverse ethnic and ideological minorities, which facilitated their exchange of expertise.

For this study, I contextualize the socioeconomic exchange between the Gulf and Levant, which was manifested in the idea of an Arab renaissance city during the first oil construction boom, between the 1950s and 1970s.[7] The goal is

5 Rem Koolhaas, Reinier de Graaf and Iyad Alsaka, *Al Manakh: Gulf Cont'd* (Amsterdam: Archis, 2010), 198.

6 Saba Shiber, *The Kuwait Urbanization* (Kuwait: Government Printing Press, 1964), LXIII.: Al-Hamad, "Some Aspects of the oil controversy: An Arab Interpretation", in *Essays*, eds. Camacho, Saragoca, and Fabbri, , 190.

7 al-Asad, *Contemporary Architecture and Urbanism in the Middle East*. See also The World Bank Report 1963. The Arab oil boycott in 1973 was followed by a massive increase in the income of several nations, which not only benefited the oil-rich Gulf states but also assisted neighboring countries, such as Lebanon, Jordan, and many African states. According to a World Bank report, Kuwait was the fifth largest exporter of oil in the world at the time. The state invested one-sixth of its oil income in other Arab countries' development through the financial programs of the Kuwait Fund for Arab Economic Development. Another model of modernization was explored in the following decades, resulting in the strong presence and influence of American architectural practices in the region (predominantly by TAC., SOM, and HOK).

Fig. 3

Plan of the Arab league states highlighting in red the Gulf states by the author and the Gulf Map by Shiber. Source: Saba Shiber, The Kuwait Urbanization, (Kuwait: Kuwait Government Press, 1964).

to highlight the unpopular narrative on postwar urbanism in the global south, particularly the role *of al-Muhandis al-'Araby* (the Arab Engineer) whose theories, plans, and articulation of the urban built environment shaped the practice of architecture-engineering in the Gulf region today. The lack of significant urban and architectural heritage in the Arabian Peninsula, Arab engineers adapted the abstract form of the land ordinance grid based on the principles of rectilinear boxes and structural frames of commercial buildings in the industrial American cities. Gulf cities emerged as free-standing objects surrounded by vacant spaces and street parking rather than pedestrian plazas surrounded by buildings [Fig. 4].[8] Such a city prototype dominated the practice of urban-architecture for the entire 20th century. It was not until the recent financial and oil crisis in the 2009 that Gulf cities begun to reclaim its right to public urban spaces and pedestrian spaces in the city core at least.[9] Through the reconstruction of the contemporary urban history of cities in the Gulf, one would identify the unique system of urban production and practice of planning architecture that had emerged from the domination of *al-Muhandis's* rational in the Arab region in general and the Gulf in particular. Despite the existing historical narratives surrounding the discourse of postwar urbanism that demonstrate the influence of geopolitics, nationalism, technology, and the energy market in the Global South, the Gulf architecture is generally perceived as a Western creation; in fact, prewar Congrès Internationaux d'Architecture Moderne's (CIAM) concepts and principles of universal urbanism were challenged by the new geopolitical context of the desert cities in the Gulf. In this paper, I demonstrate the modified urban and architectural design principles instigated through the urbanization of Kuwait City in association with the pan-Arabism spirit of 1958.

4

The unique socioeconomic capacity of Kuwait and the climax of Arab nationalism allowed for the evolution of a multifaceted modernization process driven by the United Nations (UN) and Levantine Arab experts from Palestine, Lebanon, and Egypt. Following the Suez War of 1956 to regain Western (French and British) control and overthrow the Egyptian leader Gamal Abdel Nasser, who had nationalized the Suez Canal, pan-Arabism gained increasing popularity. The establishment of the United Arab Republic two years later, and the short-unification of the two states, Syria and Egypt, which lasted until 1961, revived the pan-Arab

Fig. 4

Commercial buildings along Mubarak al-Kabeer street in Kuwait City and the Textile market on the right bordering a street level parking in the 1960s. Similar conditions still exist in different parts of Kuwait City today. Courtesy to Deema Al-Ghunaim, "Trading from Route to Floor: Mubarak Alkabeer Street.", Madeena Pamphlet, (2019)

8 Al-Nakib, Farah. "Cities and belonging in the Gulf Arab States", Panel, The Arab Gulf States Institute in Washington, Washington, DC, July 24, 2019. Stephen Gardiner, and Ian Cook, *Kuwait, The Making of a City* (Harlow, Essex: Longman, 1983), 14-21.

9 Farah al-Nakib, "Cities and belonging.": Alexandra Peca Amaral Gomes, Asseel Al-Ragam, and Sharifa AlShalfan, *Reclaiming public space in Kuwait's residential neighbourhoods: an applied policy-oriented approach*. Kuwait Programme paper series (8). (LSE Middle East Centre, London, UK. 2021).: Masdar City (2006), Msheireb Downtown Doha (2010): City Walk, Dubai (2016), and King Salman Park, Riyadh (2030).

sentiment across the entire region.[10] The state of Kuwait under the leadership of Sheikh Abdullah III al-Salem al-Sabah was in fact strongly affiliated with the idea of pan-Arabism and nationalism, which was in turn reinforced by anti-Western sentiments **[Fig. 5]**.[11] Abdullah III was not necessarily in total alignment with Nasser, but he supported nationalizing Arab resources.[12] On the eve of its independence from the English protection treaty in 1961, the majority of development projects and plans administered by international architects and contractors in Kuwait were suspended;[13] instead, Arab practitioners, intellectuals, and architects were hired from neighboring countries to convey the modern face of Kuwait through a reformation of the fields of education, health, and other social services. Arab contractors, architects, engineers, and planners from Palestine, Egypt, Lebanon, and Iraq were contracted by the recently established Public Works Department (PWD) at *al-Baladiya* (the Municipality) to supervise the modernization of Kuwait **[Fig. 6]**.

5

During the first two decades of its independence, the city-state of Kuwait achieved groundbreaking transformations on social and physical levels. In addition to International experts, Kuwaitis relied on the expertise of Levantine Arabs for school curricula, government, medicine and more that embodied modern values, a value system with which Kuwaitis themselves were not versed. Young Arab engineers, architects, and planners were entrusted with the task of building

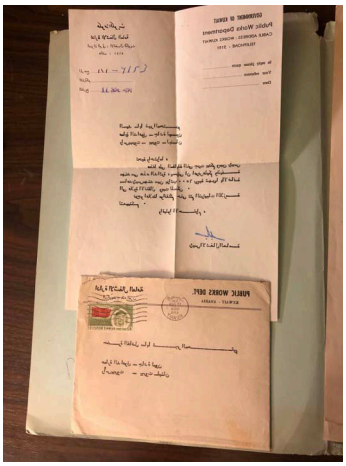

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Fig. 5

Sheikh Abdullah III al-Salem al-Sabah (Emir of Kuwait 1950-65) in Cairo meeting with other Arab leaders including Nasser at the background. Source: Life International (Oct. 4th, 1965) courtesy to Shiber Archive, Washington, DC. © 2018.

Fig. 6

Letter from the public Works Department at the Kuwait Municipality to Saba Shiber about his new post (dated 06/11/1960). Source: Shiber Archive, Washington, DC. © 2018.

10 T. R. L. "The Meaning of the United Arab Republic." *The World Today 14*, no. 3 (1958): 93-101. Accessed December 29, 2020. http://www.jstor.org/stable/40393828.

11 See Sheikh Abdullah al-Salim al-Sabah biography at: https://biography.yourdictionary.com/shaykh-abdullah-al-salim-al-sabah (accessed 09/24/2020). Sheikh Abdullah al-Salim al-Sabah (1895–1965) was the eleventh ruler of Kuwait, the first Emir of the State of Kuwait, and Commander-in-chief of Kuwait Military Forces from 1950 until his death. He supported political reform before the interwar period. Prior to the advent of the oil boom, he challenged the autocratic rule of the Sabah family and demanded the establishment of a consultative council (al-Majlis al-Istishari) to distribute state authority evenly between the ruler and the merchants. Unlike his predecessors, Abdullah al-Salem was more pro-Arab than pro-British, and thus terminated the British "protectorate" status of Kuwait in June 1961. He was regarded as the founder of modern Kuwait through the development of programs in the fields of education, health, and other social services. The Kuwaiti government during his time replaced British commissioners, experts, and consultants with Arab intellects from Palestine and Egypt. He promulgated the constitution of Kuwait in 1961 and established the first elected Arab Parliament, shortly thereafter - in 1963. Abdulla al-Salim initiated tremendous social and political changes that transformed Kuwait from a benevolent, autocratic government to a representative one. Kuwait had therefore become a model for other Gulf States yet to embark on modernization.

12 See Farah al-Nakib, Kuwait Transformed, *A History of Oil and Urban Life* (California, USA: Stanford University Press, 2016), 10-11. The government's ambitious desire to remake the whole city all at once and immediately at the first decade of oil created an influx of skilled and unskilled workers initially from Arab countries and then increasingly from south and Southeast Asia. This problem was evident from the country's first census in 1957, which revealed that the number of foreign-born residents was rapidly growing, almost outnumbering the indigenous population. In 1959, a new nationality law was put in place to control the future population of the country but also monitors the influence of Arab nationalist movement, which threatened the existence of Arab monarchies.

13 Roberto Fabbri, Sara Saragoça and Ricardo Camacho, *Modern Architecture Kuwait: 1949-1989* (Zurich: Niggli, 2016), 168.

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the new Arab city [Fig. 7].[14] Prior to its independence and amid the rise of pan-Arabism, Kuwait did not yet have a class of architects and engineers who could negotiate the terms of construction with foreign consultants appointed by Britain and the UN to supervise the development programs. Such a gap was filled with Levantine Arabs who were trained under the colonial programs in the *École des Beaux-Arts* in Cairo, and Alexandria, or the American University of Beirut (AUB), or else those who attended schools in France, England, Switzerland, and the United States prior to WWII.[15] Only two universities in Egypt offered bachelor's degrees in architecture, Fuad I and Farouk I in Cairo and Alexandria respectively. As with AUB, these universities taught programs in civil engineering and other professions, such as electrical, mechanical, chemical, aeronautical, marine, and petroleum engineering.[16] However, "none of the universities mentioned above offers a complete course in either city planning or landscape architecture except as auxiliaries or requisites to the architecture course."[17] Arab students studying in nearby Arab universities who were interested in architecture or branches of engineering automatically ended up studying civil engineering, because it was the closest offering to those interests that was available.[18] This shortcoming contributed to the idea of the Arab engineer as the master of the built environment: the lack of diversity among engineering and architecture programs in the region accurately reflected the local market's needs, which were the result of the construction boom in the Arab world, but it did not accurately reflect the interest in architecture among students. As a result, the Levantine architects, mainly

14 See Camacho, Saragoca and Fabbri, *Essays, Arguments &*, 93-96. In 1957, an internship program was established at the Public Works Department (PWD, now Ministry of Public Works) under the guidance of Ken Weidner, Dean of AUB's School of Engineering. AUB graduates were offered higher salaries upon graduation, and professors like Assem Salam and Raymond Ghosn worked on numerous influential buildings in Kuwait from 1957 onwards. Among the Arab names and practices who were actively involved in the construction boom in Kuwait are Saba Shiber, Sayd Karim, Dar al-Handasah, and many others.

15 See Saba Shiber, "A School of Design and Engineering for the Proposed 'Jerusalem University'" (Master's thesis, Massachusetts Institute of Technology, 1947). By 1948, only two universities in Egypt offered bachelor's degrees in architecture, Fuad I and Farouk I in Cairo and Alexandria respectively. As with AUB, these universities taught programs in civil engineering and other professions, such as electrical, mechanical, chemical, aeronautical, marine, and petroleum engineering. In 1959, the school of Architecture was established at Baghdad University.

16 Shiber, "A School of Design", 17-18.

17 Shiber, "A School of Design", 17.

18 Shiber, "A School of Design", 6-17.

Fig. 7

Picture from the Kuwait Engineering Society in the 1960s where young Kuwaiti engineers are attending a discussion session organized by Levantine Arab Engineers. Source: Shiber Archive, Washington, DC. © 2018.

from Palestine, Iraq, and Lebanon, who were the translators and mediators of the modern discourse on architecture and urbanism, mastered the language, culture, religion, and politics of Kuwait and other Gulf states and promoted the concept of engineering-architecture, a by-product of the establishment of *al-Muhandis al-'Araby*.

Saba George Shiber, the New Man on the Horizon

In May 1960, like other Arab talents, Saba George Shiber received an invitation to participate in the construction boom in Kuwait given his expertise in the fields of architecture and city and regional planning **[Fig. 8]**.[19] The Palestinian-born American Planner-Architect accepted the job offer for an Assistant Chief Engineer at the Public Work Department (June 1960), and he was animated by the unique opportunity that would allow for building an entire city in Kuwait.[20] Shiber noted that Kuwait was "unlike most other old Arab cities, such as Cairo, Damascus, Baghdad, Jerusalem, Tunis and others in the sense that the old city contained few large religious, historic, or architectural structures to act as starting points or *foci* to planning."[21] The urban fabric of the old seaport town was still preserved and fortified by a mud wall with five gates controlling accessibility to the city; on the other side of the wall, superhighways, modern residential suburbia with concrete villas had just been completed.[22] Oil wealth had brought to Kuwaitis a new era with a new city and urban life that was fabricated from scratch on the empty desert land.[23] In his book, *The Kuwait Urbanization* (1964), Shiber declared:

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> The hardest thing, I have found out, is to plan a city from scratch. It is popularly believed that, when a city is planned from scratch —meaning that there are no difficulties such as an existing urban matrix, complicated mosaics of property ownerships and so on —the planning is easy.[24]

Relying on his credentials, professional connections, and heritage, Shiber was confident that he could seize the moment to build an Arab Renaissance City. His use of the term "renaissance" to describe a modern Arab city in the making compels modern architects and planners to locate the new beginning for oil Gulf cities. In addition to "rebirth", "renaissance" for Shiber also referred to an exchange and interaction between different cultures and contexts—the Arabic

19 Saba George Shiber (1923-68) was the son of George Saba Shiber the head of the Arab Engineers in Jerusalem and the founder of Jerusalem University Association 1946. Shiber Jr. obtained a bachelor in Civil Engineering from AUB in 1944, and Bachelor in Architecture from Cairo University (then called Fuad I University) in 1946. He obtained two masters degrees from MIT, the first in Architecture and the second in City Planning where he worked closely with Dean Fredrick Adams who shaped his planning methodology. After eight years of work experience in the USA as an instructor of architecture, a planner, and architects in several American universities, design firms, and municipal councils, Shiber Jr. obtained a PhD in City and Regional Planning with minor in Business Administration from Cornell University in 1956.

20 Correspondent letters at Shiber Archive in Washington, DC.

21 Saba Shiber, *The Kuwait Urbanization* (Kuwait: Government Printing Press, 1964), 5.

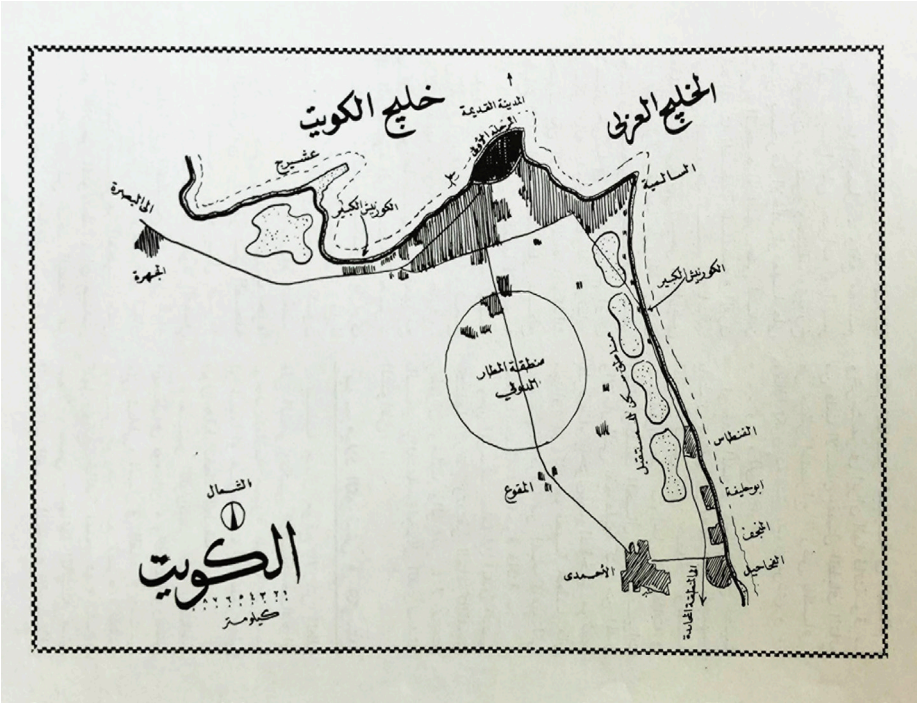
22 Shiber, *The Kuwait Urbanization*, 2.

23 Stephen Gardiner and Ian Cook, *Kuwait, The Making of a City* (Harlow, Essex: Longman, 1983), 14-21.

24 Gardiner and Cook, *Kuwait, The Making of a City*, 5.

Fig. 8

photo for Saba George Shiber in his office at the Public Work Department at the Kuwait Municipality in the 1960s. Courtesy to Ramesy Shiber (Shiber's youngest son), New York City. © 2018.



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and the American, the local and the international, the traditional and the modern [Fig. 9]. The scale and speed of urbanization given rise by the new oil wealth created an opportunity for an Arab renaissance city through the innovations that this metropolis was bringing to the fields of arts, science, planning architecture, and city planning in the Arab world and the Gulf in particular.[25]

Planning-Architecture in the United States

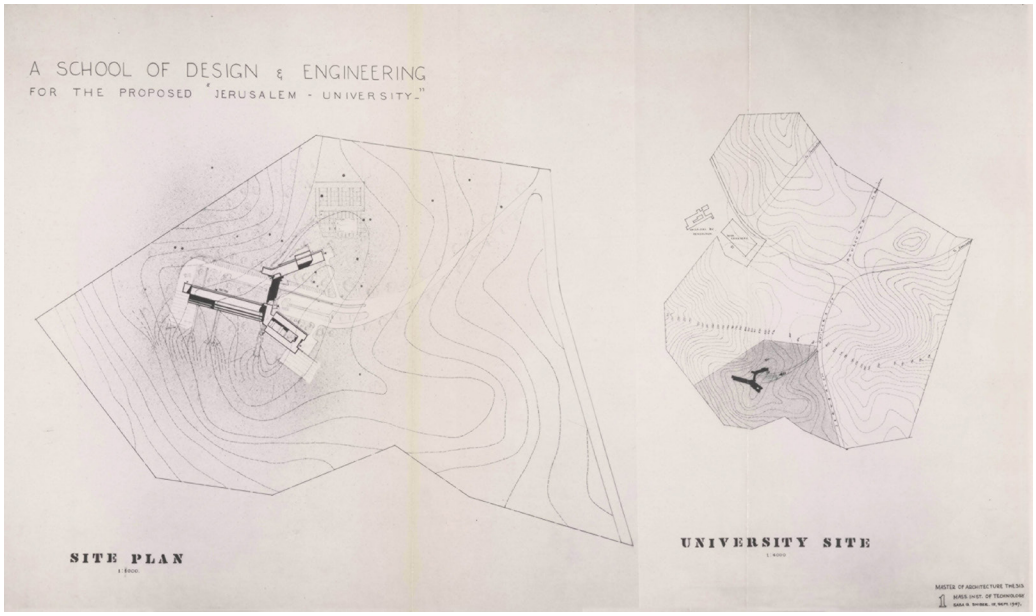
Shiber's journey to the USA (1946-56), was meant to be brief: his father, the director of the Association of Arab Engineers and founder of the Jerusalem University Association who had purchased and set aside land in Jerusalem on which to build the first Arabic School of Architecture, sent his son to MIT to network and to learn from the masters in the fields of architecture and city planning.[26] Post-World War I, Cambridge, New York, and Chicago were urban and architectural labs where American and European immigrants were experimenting with new design paradigms, combining the Bauhaus and *Beaux-Arts*

25 Gardiner and Cook, *Kuwait, The Making of a City*, 5-11.

26 See Saba Shiber, "A School of Design and Engineering for the Proposed 'Jerusalem University'" (Master Thesis, Massachusetts Institute of Technology, 1947), 9-10, 23-4. for details about the founding and objectives of Jerusalem University Association, and the selected site and the purchased land in the southern suburb if Jerusalem located on the biblical Mount of Olives. See Saba Shiber, "A University City for the Proposed Jerusalem University", (Master Thesis, Massachusetts Institute of Technology, 1948) for details about the attempts of Shiber's father to materialize his son plan for the school of Design and Engineering on the site partially purchased by the JUA. There are correspondent letters between Shiber father the founder of the JUA, and British mandate documenting the political struggle with the British mandate to get more details information and maps for the site of the university city. See also an interview with Charles Haddad, a Palestinian architect who graduated from AUB in 1956 published in Camacho, Saragoça, and Fabbri. *Essays, Arguments &*, 106-115. Haddad who was Victor's classmate at AUB (Shiber's younger brother), confirmed seeing maps of Shiber's plan for the architecture school at the proposed Jerusalem University on the land purchased by the father on Mount Olives in 1955. Haddad also noted that the Shiber's family were proud of Saba's venture in the United States, they spoke highly of Saba's achievements, work, and participations; they even published about them.

Fig. 9

Shiber Plan for Kuwaitapolis explaining the concept of fortification as an urban landscaping of the new residential suburbia along the coastline south. Source: Saba Shiber, The Kuwait Urbanization (Kuwait: Kuwait Government Printing Press, 1964)



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methods.[27] Those experiments resulted in new design pedagogy that promoted the concept of "planning architecture" among a range of important schools, including the new Graduate School of Design at Harvard, City and Regional Planning at MIT, the short-lived New Bauhaus in Chicago (which later became known as the Institute of Design), and Cornell University, which was among the first to offer a Ph.D. program in City and Regional Planning. Shiber participated in this venture at MIT and Cornell as a representative of the Arab region and mapped out and designed the first Arabic School of Architecture at the proposed Jerusalem University.

At MIT, under the supervision of Deans William Wurster and Fredrick Adams, Shiber delivered a proposal for a School of Design and Engineering (1947-8) at which the four fields of architecture, planning, landscape architecture, and civil engineering would share the same classes in the first year **[Fig. 10]**. This special curriculum aimed to balance the art and science of planning by focusing on the humanities and philosophy courses that were minimized in the traditional school of architecture in the region.[28] His proposed curriculum was in fact based on a combination of MIT, Rhode Island School of Design (RISD), and GSD-Harvard with some modification in the subjects dealing with materials, horticulture, and social sciences in order to address the specific context and culture of Palestine and the Arab region.[29]

It is interesting that Shiber selected both Lowthorpe School of Landscape Architecture at RISD and the Landscape Architecture program at GSD-Harvard as a model for his proposed Landscape Architecture program. While he did not

Fig. 10

Shiber's design drawings including micro site plan of the architecture building and macro plan of the university site for the School of Design and Engineering for a proposed "Jerusalem University". Source: Saba Shiber "A School of Design and Engineering for the Proposed 'Jerusalem University'." Master's thesis, MIT, (1947).

27 See Lewis Mumford, *The Culture of Cities* (New York: Harcout, Brace & World Inc., 1938); Siegfried Giedion, *Space Time, and Architecture* (Cambridge Mass: Harvard University Press, 1954). The massive immigration of European intellects fleeing fanciest regime including the former Bauhaus masters such as Walter Gropius, Mies van der Rohe, Ludwig Hilberseimer, and Laśezló Moholy-Nagy had contributed to the evolution of new methods of construction and process of design that integrates the different fields of design including architecture, landscape architecture, and Panning.

28 Giedion, *Space Time, and Architecture*, 30.

29 Giedion, *Space Time, and Architecture*, 30

make direct references to Walter Gropius in his thesis project, the proposed curriculum for the school of design and engineering had some resemblance with the collaborative design studios promoted by Joseph Hudnut and Gropius at GSD-Harvard. In addition to appointing Gropius, Hudnut, the first dean of GSD (1936-1945), influenced the school's fundamental transformation from the Beaux-Arts School to what could be identified as the New Bauhaus design pedagogy through the merger of the three formerly separate schools of architecture, landscape architecture, and planning.[30] The new system of education modified American architectural practice based on "development of process of thought and vision."[31] According to the American historian Eric Mumford, Hudnut began teaching the history of what is called "civic design," which highlighted the value of traditional urban streets.[32] Hudnut's attention to pedestrian scale matched well with Gropius' attentiveness to urbanism and the design of new, mixed-income, decentralized settlements situated in greenery. Another fundamental contribution of the GSD was the placement of landscape architecture on an equivalent collaborative footing with architecture and planning.[33] In fact, the students who arrived in the mid-1930s were much more absorbed in Gropius' ideas. This, in turn, influenced an entire generation of architects and educators, such as Ian McHarg (Scottish landscape architect regional planner), I. M. Pei (Chinese-American architect), the partners of Gropius' firm The Architects' Collaborative (TAC., 1945–95),[34] and many others.[35] It was around the same time that Shiber came to study at MIT and became fascinated with the concept of collaborative design and the integrated discipline of design combining architecture, landscape architecture, planning, and city planning. With the intention of capturing the radical design pedagogy he was representing, Shiber seemed to be entertained by the concepts of civic design promoted by integrated design curricula and later developed by Gropius' practice TAC. Such an association would manifest itself in Shiber's work in the Arab region, when he co-founded the Associated Consulting Engineers (ACE) in Beirut and throughout his later career in Kuwait as Chief Engineer. He declared:

30 Eric Mumford, *Defining Urban Design: CIAM Architects and the Formation of a Discipline, 1937-69* (New Haven: Yale University Press, 2009), 28-9.

31 Mumford, *Defining Urban Design*, 30.

32 Mumford, *Defining Urban Design*, 30-31.

33 Mumford, *Defining Urban Design*, 32; Saba Shiber, "Urban Formation and Reformation: A Descriptive and Critical Analysis" (Ph.D. Diss., Cornell University, 1956), 3. Shiber declared "although trans-urban land is not directly involved in this study, its condition, especially in proximity to urban areas, cannot be ignored. Not only is it often a prelude to the visual conditions within the city, but forming the approaches or gateways to the city, it must be considered an integral part of the form of the city. Many elements responsible for "unifying the landscape" wherein the city is set, are to be found in the land embraced by the urban zone of influence." He had referenced Eliel Saarinen, *The City, Its Growth, Its Decay, Its Future* (Cambridge: MIT Press, 1943). Among the projects presented in the form of freehand sketches are those of Eero Saarinen, Louis Kahn, Walter Gropius including some of their winning design studios at GSD-Harvard. The three architects were active members of the American Society of Planner Architects (ASPA) and they were invested in the urban built environment and landscape architecture. A Sketch of the winning team for the St. Louis Jefferson National Expansion Memorial Competition by Saarinen's students (1943) is included (Saarinen was a professor for landscape architecture at GSD). In addition to the Saarinen's MIT Chapel, Shiber included a sketch of Kahn's proposal for Penn Center transportation building. Another project was redevelopment project for the Central South Side, Chicago, a problem thesis at Harvard University under the supervision of Gropius.)

34 The Architects Collaborative (TAC) was formed by eight architects; it operated between 1945-1995 in Cambridge, Massachusetts. The founding members were Norman C. Fletcher (1917–2007), Jean B. Fletcher (1915–1965), John C. Harkness (1916–2016), Sarah P. Harkness (1914–2013), Robert S. McMillan (1916–2001), Louis A. McMillen (1916–1998), Benjamin C. Thompson (1918-2002), and Walter Gropius (1883-1969).

35 Mumford, *Defining Urban Design*, 48.

> "A city must be made up of spaces delicately graduated in accordance with the various requirements of society. If buildings and building-groupments are too far apart, the elements of civic design deriving from scale, spatial relationship and townscape are lost and no worthy sculpturesque urban features ensue. This is, perhaps, from a civic designer's viewpoint, one of the unfortunate results in the over-distension of Kuwait, especially when it started, ab initio, from practically nothing to take pride in a fantastic plant of buildings."[36]

During the time, when Shiber was in the US, he became part of the genesis of the new field of study called "planning-architecture"—a contemporary discourse on city planning combining the art and science of architecture. Similar to discourse on architecture, planning-architecture reviewed the city in its complete sense, as defined by Lewis Mumford: "the city in its complete sense… is a geographic plexus, an economic organization, an institutional process, a theatre of social action, and an aesthetic symbol of collective unity."[37] The arrival of the former Bauhaus masters *en masse* guided the ethos of American architectural practices after the closure of the Bauhaus by the Nazi government in 1933. Since university posts in the US guaranteed permanent residence, German immigrants shared their artistic, scientific, and technological skills with American institutions and in so doing revolutionized their urban design pedagogy. Among those architects were László Moholy-Nagy (1937), Walter Gropius (1937), Marcel Breuer (1937), Josef Luís Sert (1939), and Ludwig Mies van der Rohe (1940). Architecture schools, therefore, exhibited a great curiosity for taking the field of city planning as a three-dimensional design process that combined art and science. While MIT was also invested in the interdisciplinary and collaborative design methods under the guidance of Wurster, the then recently established Department of City and Regional Planning had an additional political design agenda. Under the leadership of Adams (1947-57),[38] the planning program focused on preparing a global professional body of "planner-architects" to assume leadership roles in the development and urbanization of their own countries [Fig. 11].[39]

Interestingly, the concepts of planning-architecture were also promoted by a group of pioneering modernist architects, planners, artists, and historians mainly from MIT, Harvard, and Yale who were recognized by the American Society of Planner-Architects (ASPA 1942-8).[40] The group was founded in New York in December 1943 by Breuer, Serge Chermayeff, Vernon DeMars, and others in

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36 Shiber, *The Kuwait Urbanization*, 120.

37 Mumford, *The Culture of Cities*, 480. Cited in Shiber, "Urban Formation and," 1.

38 A brief history of the Urban Planning Department at MIT is displayed on their website, https://dusp.mit.edu/department/about (accessed Dec. 16th, 2019).

39 Frederick J. Adams, *Urban Planning Education in the United States* (Cincinnati, Ohio: the Alfred Bettman Foundation, 1954), 8.

40 See Mumford, *Defining Urban Design*, 54. They were initially identified as ASAP (American Society for Architect Planners), but it was decided in 1944 to reverse the words "architects" and "planners" in the name so that the initial would be ASPA instead of ASAP.

order to link politics and modern architecture in the US.[41] The members of the group included Gropius, Wurster, Adams, Wallace Harrison, George Howe, Richard Neutra, Erich Mendelsohn, Louis Kahn, Eero Saarinen, Hudnut, Henry-Russel Hitchcock, Siegfried Giedion, Robert Woods Kennedy, Joseph Sert, Oscar Stonorov, and Lawrence Perkin, among others. Despite the lack of research into the exact role of the ASPA, Mumford claims that the group forged a shared commitment to CIAM-based urbanism amid the changing conditions of wartime America. Given the increasing importance of education in urbanism, a new kind of professional arose during WWII in the U.S.–the "planner-architect in the urban biological sense," remarked Chermayeff.[42]

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While Shiber was not a member of ASPA, his mentors were. After 1945, MIT recognized the interdisciplinary curriculum of planning-architecture along the modernist lines, which replaced the closed *Beaux-Arts* jury system. Dean Wurster favored open discussion about the design with the students and ASPA members, including DeMars, Hitchcock, and Kennedy, joined the students-faculty conversations.[43] Both models of the planning-architecture and the open jury system at MIT emphasized the notion of collaborative design in order to organize the physical environment as a whole. These notions, I argue, were fundamental to Shiber's theory and practice of planning-architecture, which aimed to counterbalance mechanized society and to emphasize human associations with the built environment. He was without a doubt aware of ASPA's design agenda, methods, and activities; in fact, Shiber's published work, plans, and architecture projects reciprocate the values of Gropius, Mumford, Kahn, and Giedion, among others who founded the group [Fig. 12].

Planning-Engineering in Lebanon

The combination between the two notions of collaborative design and the national technocrat produced the concept of the "planner-architect", which largely shaped Shiber's career both in the US and the Arab region. His larger vision for the Arab region, reflected in his plan of *Kuwaitopolis*, intertwined the two

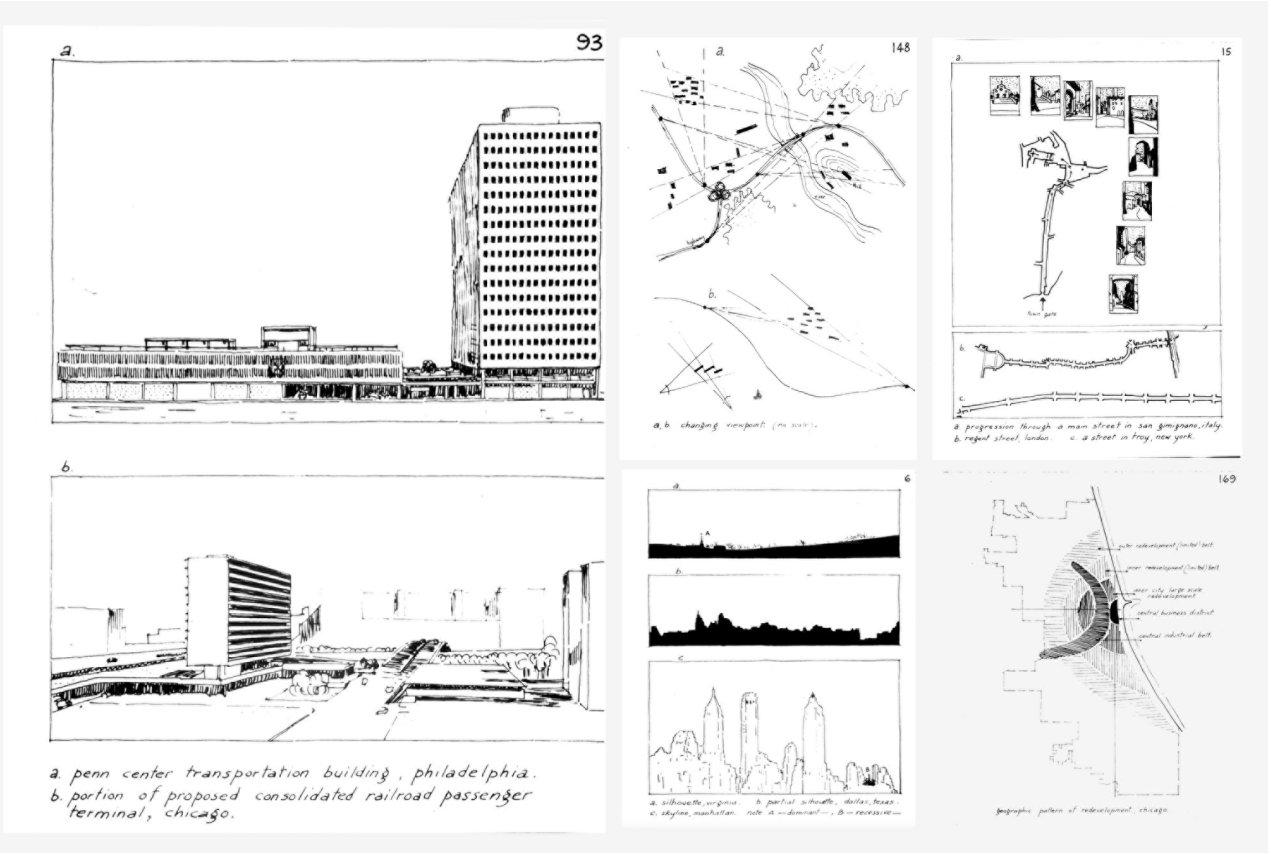
Fig. 11

Physical model of the proposed site for "Jerusalem University" indicating all programs on campus programs and spaces in connection to the urban fabric of the city. Source: Saba Shiber, "A University City for the Proposed Jerusalem University," Master's thesis, MIT, (1948).

41 Mumford, *Defining Urban Design*, 65.

42 Serge Chermayeff, "Urs or Urbanism," *New Pencil Points 24* (February 1943): 72-6. Cited in Mumford, *Defining Urban Design*, 56.

43 See Endnote number 174 in Mumford, *Defining Urban Design*, 225; See also the acknowledgement in Shiber, "A School of Design," and "A University City." Dean William Wurster and Professor Robert Kennedy in addition to Frederik Adams were among the teachers whom Shiber thanked for their influence on his work.



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concepts of planner-architect on the nationalist technocratic level and the collaborative designer on the microcosmic scale in the practice of planning-architecture **[Fig. 13]**. Through promoting the combined field of Design and Engineering, Shiber recognized the "Arab urban architectural-engineering body politic"[44] that is still shaping the urban built environment in the Arab world today.[45] These combined fields are often abstracted through the use of the Arabic term *al-Muhandis*, which can be loosely translated to the English term "engineer", which falls short of the Arabic term's inclusivity regarding all scientific and technical fields


PLANIFICATION

Sept. 15, 1962

Scale In City Planning: Important Considerations for Arab Planners

By Saba George Shiber, Ph.D., A.I.P.

Kinetic-kinesthetic influences enter the process of urban formation as design determinants; the hierarchies of urban scale enter the process of design as regulators of the spatial-visual relationships governing areal location and the dispositional emplacement of emergents thereon. Since location and disposition are governed by multifarious determinants, the mutual interdependence of the forces and factors which enter the process of urban formation result in a cycle, the precision of whose configuration rests on the involvements of relationships, namely, on scale hierarchy.

Since urban formation is a de facto consequence of settlement and since, moreover, a de facto format of this settlement is governed by physical and socio-functional determinants, therefore spatial-visual results can be realized, variously, by the degree of spatial conceptualization entering the process of formation positively. Furthermore, spatial conceptualization, deriving from the creative activity of the mind, finds tangible expression in form, which is visually judged by the sense of proportion, indicating that the integration of finished urban form must derive from the simultaneous action of spatial conceptualization and the visual ability to precise the controlled urban emergents into proportional forms and organizations of forms. This ability must rest in the esthetic-perceptual sense by which beauty or ugliness, in all states of existence, are judged. The precise validity of scale judgment is, then, contingent on subjective esthetic evaluation, and discussion about urban scale as an abstract instrument or determinant in urban formation is subject to a discussion of scale in art and, perhaps, even in engineering, since the concept of scale, namely to judge proportionately, is universal. Even in engineering-derived architecture, de facto scale relationships transpire, notwithstanding the possible absence of a conscious striving for them.

Urban Determinants

As a measure of ratios and proportions, scale is well-known in architecture. Applied to the city, its instrumentality as a measurer of gradation and contrast is more complex and far vaster in scope. Because of its inherent compositional elements, the city offers many quantitative and qualitative differentials which, compared, might be graduated along tangible-intangible continuums and measured by scale. Each continuum is a hierarchy the parts of which (or values) contrasted to each other or to the whole, are a scale hierarchy. Scale may, thus, refer to urban social relationships,

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Fig. 12

Shiber's visual studies based on continuing the work of Hilberseimer, Gropius, and Moholy-Nagy on urbanism and the evolution of the built environment. Source: Saba Shiber, "Urban Formation and Reformation," Ph.D. dissertation, Cornell University (1956).

Fig. 13

Shiber's article, "Scale in City Planning: Important Considerations for Arab Planner" published in Mid-East Commerce (1962). The article was part of a series articles in the 1960s under the title Planifications where he discussed theories, methods, and examples of modern city planning. Source: Mid-East Commerce (09/15, 1962), courtesy to Shiber Archive, Washington, DC. © 2018.

44 Shiber, "Special Report from Cairo," 17.

45 In the Arab region, architecture schools taught under the umbrella of the Collage of Engineering, and the majority of design and construction firms are run by engineers with a small architecture department with the exception of Cairo University which an independent collage of Architecture. It was not until 2010 that the School of Architecture at Kuwait University gained its independence from the Collage of Engineering and it became the Collage of Architecture. Today, in Saudi Arabia there are a number of collages that offers Bachelor degrees in architecture including but only Dar al-Hekma University has an autonomous school of architecture.

related to the built environment, including civil, structural, chemical, agricultural, architectural, and even city engineering. In order to promote the concept of the "architect-planner in the urban biological sense"[46], as promoted by ASPA, Shiber had first to appeal to the composite Arab body politic dominated by engineers and advocate for a new shared language of communication for all practitioners—architects, engineers and planners. His collaborative approach therefore differed from the ones promoted by Harvard and MIT in that civil engineers, architects, landscape architects, and city planners work in close proximity.

Unable to separate design from engineering but also realizing that engineers dominated the field, Shiber consciously unified the fields of design alongside civil engineering in hopes of establishing common ground and developing these new processes into a three-dimensional planning supported by *al-Muhandis's* rationale. In doing so, he hoped to eventually reclaim the role of the planner-architect as the head of the team of experts on both academic and professional levels. In addition to the fundamental impact of the AUB and Baghdad University in promoting *al-Muhandis's* rationale and the emergence of the discipline of "engineering-architecture", I focus on Shiber's attempts to reclaim the role of the planner-architect through his practice of the Associated Consulting Engineers (ACE) **[Fig. 14]**.

Arab Engineering Education

The Daily News, March 9, 1964.

BY SABA G. SHIBER

Engineering education in the Arab World today, be it the product of native or foreign universities or institutes, is devoid of the elements of depth, versatility and humanism. The engineer produced is a sort of human automaton, a man better prepared for contracting, trading, agent-acting, and profit than for design, creativity and research and, except for rare cases, he is singularly ungrounded in the humanities: history, art, culture, philosophy and so on. He is a mere product — if not a by-product — of a routine system calculated to product — if not a by-product — of a routine system calculated to produce — when it does — specialists in an era when the Arab World is direly in need, as well, of "generalists" who can think, create, design, reform and produce works of significance and originality.

In the U.S.A., the U.K., the U.S.S.R., one has observed how, during the past decade or so, top educators have become very conscious of the "intellectual" void in the products called engineers. As a result, many mature institutes of engineering have instituted compulsory courses in the humanities, knitting them closely into the fabric of engineering doctrine and indoctrination.

It is relatively easy to produce engineers or, for that matter, doctors, dentists, lawyers etc... One has even seen hopelessly retarted students graduate in nearly all the professions. But, it is one thing to teach a man, however long that may take, to design a sewage system, operate on a cow or fill a cavity, and quite a totally different thing to produce that same man infused with a sensitive mind, a broad outlook, a critical sense and that ingredient in true and vigorous education, of whatever type, called inquisitiveness, as well as with the capacity to analyse and synthesise. In addition, the products of Arab universities come out, today, devoid of the spirit of civic participation and responsibility, thereby seeing the urban chaos all around and the engineering non-professionality and hardly paying any attention.

One's observations derived from daily contact with Arab engineers produced locally is that, while some may be quite proficient in their narrow fields of specialty, they are quite narrow, or restricted, in the spans of knowledge and learning so essential, thees days, to the making of a rounded man. Around a century-and-a-half ago, Isaac Watts made the following interesting observation:

"There are many who read with constancy and diligence, and yet make no advances in true knowledge".

One seems to get the impression that the young crop of Arab engineers being produced today try to study with "constancy and diligence" about indeterminate structures, prestressed concrete and thermodynamics without, however, being inspired or encouraged to make "advances in true knowledge". You talk about aesthetics, for example, with an architecture graduate from any university in the Arab World, and the chances are quite high that he has never heard of the term, to say nothing about penetrating into, and comprehending, at least some aspects of the portentious universe of aesthetics. You talk about civic design with "engineers' engaged in Arab planning, and they think this is some specialized aspect in structural design. You bring in astronomic phenomena such as parallax — which our Arab forebears excelled in understanding — into a casual discussion about kinetic design in city planning, and your colleagues, especially the most active and prosperous ones, think it is a new dance that has just superseded jazz, swing or twist. You mention Operations Research and even engineering professors give you a queer look, so you quickly change the subject to hung roofs and, to your surprise, you get a queerer look. So you give up, slightly embarrassed, wondering why, to [illegible] engineering education in the Arab World is, by and large, still so elemental, conventional, rigid and lacking depth and breadth, thereby forcing the inquisitive Arab to search for better training abroad. You talk about engineering economics and, even though the economists do not know what it is all about, it is no justification that an engineer should be equally ignorant of the subject.

You ask a junior engineer to develop a sketch you have made. He takes it to a draftsman, pretending it is below his dignity to do that but

(Continued On P. 7)

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Fig. 14

One of many newspaper articles Shiber wrote in local and regional newspaper about the training of Arab engineers. Source The Daily News, March 9th, 1964, courtesy to Shiber Archive, Washington, DC. © 2018.

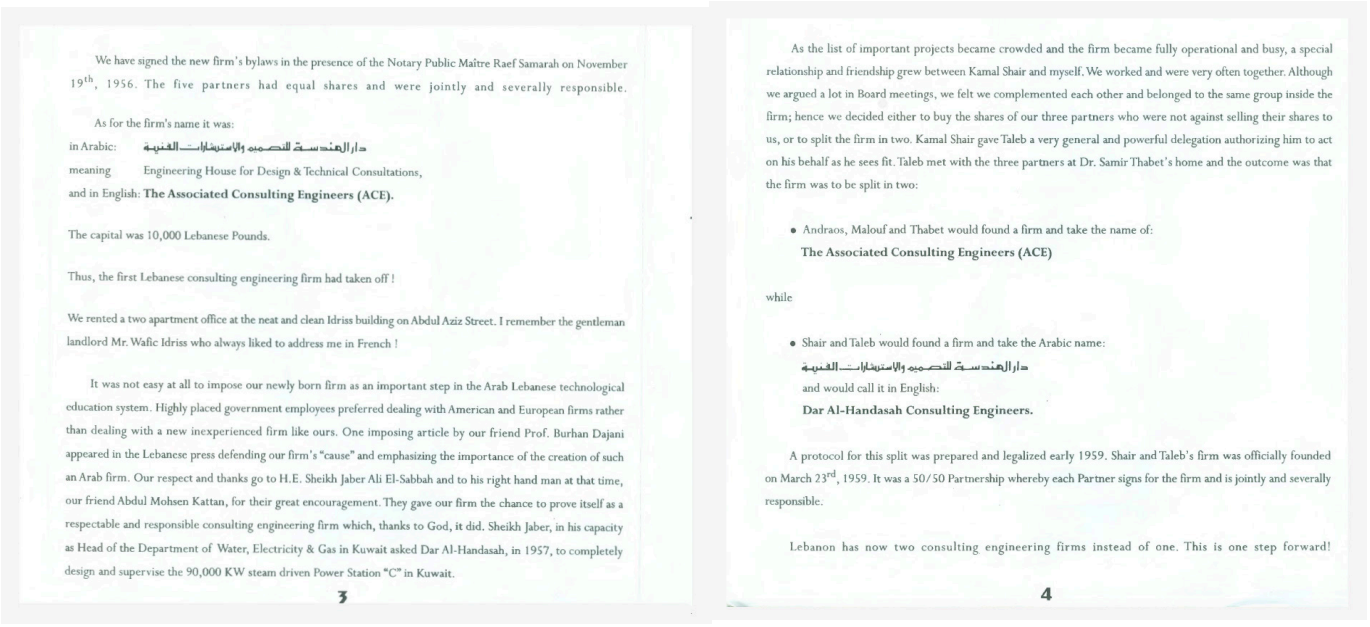
Dar al-Handasah

Within six months from his return from the US as a planning consultant, Shiber joined the first ever Arab interdisciplinary design and engineering firm *Dar al-Handasah li-l Tasmïm wa-l Istesharat al-Handasiyah* , popularly known as *Dar al-Handasah*.[47] Driven by a strong ambition to venture into the internationally competitive market of design, construction, and contracting in the oil rich Arab states of the Gulf, five AUB engineering professors founded *Dar al-Handasah* on November 19th, 1956. The founding team of engineers included Khalil Malouf (Ph.D., Hydraulic Engineering, Imperial College in London), Victor Andraos (Dip. d'Ing., Chemical Engineer, Director of the Institute of Industrial research in Lebanon), Samir Thabit (Ph.D., Chemical Engineering, the Imperial college, London), Nazih Taleb (Ph.D., Structural Engineer, Princeton University), and Kamal Shair (Chemical Engineer, Yale University).[48] The company was registered by two different names, one in Arabic and one in English. In Arabic, its name was *Dar*

46 Serge Chermayeff, New Pencil Points (1943) cited in Mumford, *Defining Urban Design*, 56.

47 Shiber Resume, dated June 1961 at Shiber Archive, Washington, DC.

48 Kamal Shair and Peter Bartram, *Out of the Middle East: The Emergence of an Arab Global Business* (London: I.B. Tauris, 2014); See also Nazeh Taleb, Remembers, a pamphlet distributed among the five cofounders in the occasion of the 40th anniversary of Dar al-Handasah (Nov 19th, 1959) at Shiber Archive, Washington, DC. Five pages brochure produced in 1996 and sent to Dr. Kamal Shair, Mrs. Victor Andraos, Dr. Khalil Malouf, and Dr. Samir Thabet.



We have signed the new firm's bylaws in the presence of the Notary Public Maître Raef Samarah on November 19th, 1956. The five partners had equal shares and were jointly and severally responsible.

As for the firm's name it was:

in Arabic: دار الهندسة للتصميم والاستشارات الفنية

meaning Engineering House for Design & Technical Consultations,

and in English: **The Associated Consulting Engineers (ACE).**

The capital was 10,000 Lebanese Pounds.

Thus, the first Lebanese consulting engineering firm had taken off !

We rented a two apartment office at the neat and clean Idriss building on Abdul Aziz Street. I remember the gentleman landlord Mr. Wafic Idriss who always liked to address me in French !

It was not easy at all to impose our newly born firm as an important step in the Arab Lebanese technological education system. Highly placed government employees preferred dealing with American and European firms rather than dealing with a new inexperienced firm like ours. One imposing article by our friend Prof. Burhan Dajani appeared in the Lebanese press defending our firm's "cause" and emphasizing the importance of the creation of such an Arab firm. Our respect and thanks go to H.E. Sheikh Jaber Ali El-Sabbah and to his right hand man at that time, our friend Abdul Mohsen Kattan, for their great encouragement. They gave our firm the chance to prove itself as a respectable and responsible consulting engineering firm which, thanks to God, it did. Sheikh Jaber, in his capacity as Head of the Department of Water, Electricity & Gas in Kuwait asked Dar Al-Handasah, in 1957, to completely design and supervise the 90,000 KW steam driven Power Station "C" in Kuwait.

3

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As the list of important projects became crowded and the firm became fully operational and busy, a special relationship and friendship grew between Kamal Shair and myself. We worked and were very often together. Although we argued a lot in Board meetings, we felt we complemented each other and belonged to the same group inside the firm; hence we decided either to buy the shares of our three partners who were not against selling their shares to us, or to split the firm in two. Kamal Shair gave Taleb a very general and powerful delegation authorizing him to act on his behalf as he sees fit. Taleb met with the three partners at Dr. Samir Thabet's home and the outcome was that the firm was to be split in two:

- Andraos, Malouf and Thabet would found a firm and take the name of:
  The Associated Consulting Engineers (ACE)

while

- Shair and Taleb would found a firm and take the Arabic name:
  دار الهندسة للتصميم والاستشارات الفنية
  and would call it in English:
  Dar Al-Handasah Consulting Engineers.

A protocol for this split was prepared and legalized early 1959. Shair and Taleb's firm was officially founded on March 23rd, 1959. It was a 50/50 Partnership whereby each Partner signs for the firm and is jointly and severally responsible.

Lebanon has now two consulting engineering firms instead of one. This is one step forward!

4

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al-Handasah li-l Tasmeem w-al Istesharat al-Handasiyah, meaning the Engineering House for Design & Technical Consultations. The English name was Associated Consulting Engineers, translating to *al-Maktab al-Handasi al-Esteshary* in Arabic [Fig. 15].[49] The separate and perhaps ambiguous branding reflects the bifurcation of the Arabian modernity project that blends elements of the universal and cosmopolitan culture of mass production with Arab nationalism. Shair justified the double branding by citing its appeal to a broader clientele: the Arabic *Dar al-Handasah* would attract Arab clients and governments as an extension of the social services and development projects provided by AUB;[50] the English title, they thought, would reflect the cosmopolitan nature of the firm, thus the name Associated Consulting Engineers.[51] In his documentation of the development and evolution of *Dar al-Handasah Out of the Middle East: The Emergence of an Arab Global Business* (2014), Shair stated:

> "We called ourselves *Dar Al-Handasah* in Arabic, Associated Consulting Engineers in English. As *Dar al-Handasah* was written in Arabic script, there was little chance of the non-Arabic reader realizing that the two names were not the same. Those who did realize, we figured, would probably admire our innovative spirit. And that proved the case."[52]

As soon as the company was officially registered, it gained academic, professional, and economic support from other AUB alumni, sister companies such

Fig. 15

Nazih Tableb document about the founding of Dar al-Handasah (1956), and the three titles for the same firm. Source: Nazih Jamil Taleb, "Nazih Table Remembers", Pamphlet (1996) courtesy to Shiber Archive, Washington, DC. © 2018.

Fig. 16

The business split into two firms Dar al-Handasah and The Associated Consultant Engineers. Source: Nazih Jamil Taleb, "Nazih Table Remembers", Pamphlet (1996) courtesy to Shiber Archive,

49 Taleb, Remembers, 2-4.

50 See Ricardo Camacho, "The Making of an Arab Architect", in Fabbri, Saragoça and Camacho, *Modern Architecture Kuwait*, 84-105. For more on the role of AUB in promoting social solidarity through urban development projects in the College of Engineering.

51 Shair and Bartram, *Out of the Middle East*, 87-88.

52 Shair and Bartram, *Out of the Middle East*, 89.

as Bustani's Contracting and Trading company (CAT),[53] and Arab governments. The Beirut office for Aramco Oil Company hired *Dar al-Handasah* a year after its founding in 1957 to carry out four feasibility studies at their oil fields in Dhahran in the Eastern Province of KSA.[54] Shortly thereafter, Sheikh Jaber Ali Al-Sabah, the head of the Department of Water, Electricity, and Gas in Kuwait, commissioned *Dar* to design and supervise the 90-megawatt steam-driven power station "C", the biggest of its kind in the region. He preferred young Arab talent to British experts for this grand project in order to emphasize the state's support for Arab nationalism and its pursuit of independence.[55] While the British company Ewbank (which later became part of the Ewbank Preece Consulting Group) was the lead consultant on the 20-megawatt and 40-megawatt projects known as power station A and B, the Kuwaiti government supported the young Arab consultancy by granting them the lead role in the design and supervision of the new station. It was the largest, at 90 megawatts, and consisted of three 30-megawatt units.[56]

From that point on, the young engineering firm was commissioned by Arab governments, transforming the small Arab consultancy into an internationally recognized competitor in the fields of design, city planning, and engineering. It might have been "a little too soon,"[57] as indicated by Shair, but the team of Lebanese practitioners was ready to venture into the oil construction boom and compete with international experts. The status and scale of the project required advanced technological skills, full dedication, and excellent networks to compete with the work of an expert company with a long track record such as Ewbank. The young Arab company sought assistance from Europe and elsewhere in the Middle East, and they were fortunate enough to receive technical and professional support from an English contractor named GEC and a Danish electrical engineering firm named Knud Hanson. The final crew for the Kuwaiti power station comprised 40 members.[58] Nazih Taleb, another co-founder of *Dar al-Handasah*, states in his memoir (1996) that launching the consultancy in 1956 was very challenging because of the intense competition from Anglo-Americans in the Arab region.[59] Despite the instrumental role of Kuwait and KSA governments in supporting the young Arab consultancy, he expressed a lack of confidence in the young Arab expertise:

> "It was not easy at all to impose our newly born firm as an important

53 See Fabbri, Saragoça, and Camacho, Modern Architecture Kuwait, 385; Emile Bustani was as elected a Member of Parliament in Lebanon in 1951, an office he held until his death in 1963. Bustani had obtained two BS in Engineering from AUB in 1929 and another one from M.I.T in 1933. After his short commission for the Iraq Petroleum Company, he founded his own Contracting and Trading Company, CAT. One of the largest contracting companies in the Middle East involved in laying and constructing oil pipelines building roads, and constructing cities.

54 Shair and Bartram, *Out of the Middle East*, 91. Aramco, who was pumping crude oil through the 1060-mile Trans-Arabia Pipeline––the tapeline––that terminated in Lebanon, had an office in Beirut.

55 Shair and Bartram, *Out of the Middle East*, 92. In 1957, the Dar was introduced to Sheikh Jaber Al-Ali through another AUB alumni, Abdul Muhsin al-Qattan, Palestinian architect who was working in Kuwait at the time.

56 Shair and Bartram, *Out of the Middle East*, 92-94.

57 Shair and Bartram, *Out of the Middle East*, 93.

58 Shair and Bartram, *Out of the Middle East*, 96-99.

59 Taleb, Remembers, 1-4.

step in the Arab Lebanese technological education system. Highly placed government employees preferred dealing with American and European firms rather than dealing with a new inexperienced firm like ours."[60]

Believing in the role of young professionals, particularly Arab engineers, in leading the development of the urban scene in recently independent states, Dean Weidner promoted Dr. Shair to associate professor and offered to hold the position open for three years. Shair, however, politely declined, electing instead to leave academia and fully pursue the work of *Dar al-Handasah*, which was by then facing its own unique challenges with the onset of war on July 15th, 1958.[61] Al-Ali offered to relocate the design staff assigned to the Kuwaiti power plant from Lebanon to a safe and stable environment to guarantee the completion of the project without political and technical difficulties. *Dar al-Handasah*'s employees and their families were provided housing accommodations and compensation for their travel and living expenses in Kuwait. The project progressed smoothly from that point on and was completed on time in early 1960. With the delivery of the project, Kuwait City was finally ready to be redeveloped as a commercial center and contemporary capital city, even air-conditioning its new concrete constructions, commercial towers, retail stores, and government buildings.[62]

Within a year, the company was working on six national projects across the Arab region. Their progress was, however, interrupted by the sectarian revolts in Lebanon and Iraq, as well as by revolts spawning from the pan-Arab spirit led by Nasser. The Gulf States, particularly Kuwait and KSA, provided financial and professional support that reinforced the scientific and technical roots of Arab nationalism.[63] So stated Sahir:

> "As engineers, we were all in the business of development, and in the decades ahead it was to be major advances in the areas of transportation, irrigation power supply, health and education that were to transform the lives of millions living in the Middle East more fundamentally than the speeches of any politicians. We were to participate in many of these exciting developments."[64]

Shair and his partners continued assembling their team of architects, engineers, contractors, and other technical experts based on the projects assigned. They attracted young talent from Lebanon, Egypt, Britain, and Denmark, and

60 Taleb, Remembers, 3.

61 See Shair and Bartram, Out of the Middle East, 92-99; For more details on the influence of the political riots in the Arab region under the leadership if Nasser in relation to the development of Dar al-Handasah and other regional consultancies. The political problems began in Lebanon within the first decade of its independence in 1947. The insurgent Arab nationalism led by Colonel Nasser in Egypt had a significant impact. Chamoun, the president, demonstrated his intention to extend his presidency for another cycle, which was against the Lebanese constitution. Inspired by the concept of the pan-Arab state initiated by the United Arab Republic unifying Syria and Egypt, political revolts in Iraq overturning the monarchy led to the overthrow of Chamoun. The United States sent armed forces to control what was classified as 'international communism' in July 1958.

62 Shair and Bartram, *Out of the Middle East*, 102-03.

63 Shair and Bartram, *Out of the Middle East*, 103-4.

64 Shair and Bartram, *Out of the Middle East*, 119.

demonstrated their quality by delivering complete projects on time.[65] Despite their passion and steadfast dedication to their work at *Dar al-Hadasah*, the rapid growth of the company's activities across the Arab region caused conflicting visions among the five partners, confirmed Shair. Besides the Kuwaiti power and desalination plant, the firm was also supervising a pumping and pipeline system to bring potable water from underground springs near Riyadh, and the construction of a road connecting Jeddah (a city on the Red Sea) and the Taif airport in *Hawiyah*.[66] Projects of such scales in various destinations required a full-time commitment often requiring the three partners to suspend their academic obligations.[67] Three of the founding partners including Andraos, Malouf, and Thabit, were uncertain in their decision to leave academia for business and full-time corporate consultancies. They envisioned the consultancy as an extension of their teaching positions, combining design and research.[68]

Three years after its establishment, the young Arab consultancy *Dar al-Handasah* split into two firms, each with its own vision and mission. One of the offshoots was established by Shair and Taleb who carried on with the original vision of *Dar al-Handasah* as an international multidisciplinary consultancy detached from AUB but highly invested in Arab talent, thus maintaining the same Arabic name *Dar al-Handasah* **[Fig. 16]**.[69] Represented jointly by both partners, the new *Dar al-Handasah* was registered on March 23rd, 1959. Operating outside Lebanon and Kuwait, they billed as experts in infrastructural projects, including power plants, feasibility studies, superhighways, and electrical and water facilities.[70] With the launching of the larger construction boom in 1970, Shair and Taleb split, each partner founding a new firm registered in his individual name: *Dar al-Handasah* (Shair & Partners) and *Dar al-Handasah* (Nazih Taleb & Partners), each of which expanded its activities in the UAE, Qatar, KSA, and North Africa.[71] In 1986, *Dar al-Handasah* (Shair and Partners) purchased Perkins and Will, a global design firm founded in Chicago, USA, in 1935 by Lawrence Perkins and Philip Will.[72] Today *Dar al-Handasah* is an international consortium of professional service firms.[73]

65 Shair and Bartram, *Out of the Middle East*, 91-3.

66 Long road with challenging mountain terrains, about 40 kilometers upward the top of at-Taif mountains. Bin Laden Construction was the construction company carrying out the work under the supervisor of Dar al-Handasah.

67 Shair and Bartram, *Out of the Middle East*, 102-3.

68 Given that they were the only group who combined between academia and practice and that they were joined by Saba G. Shiber who collaborated with them since the beginning as a consultant.

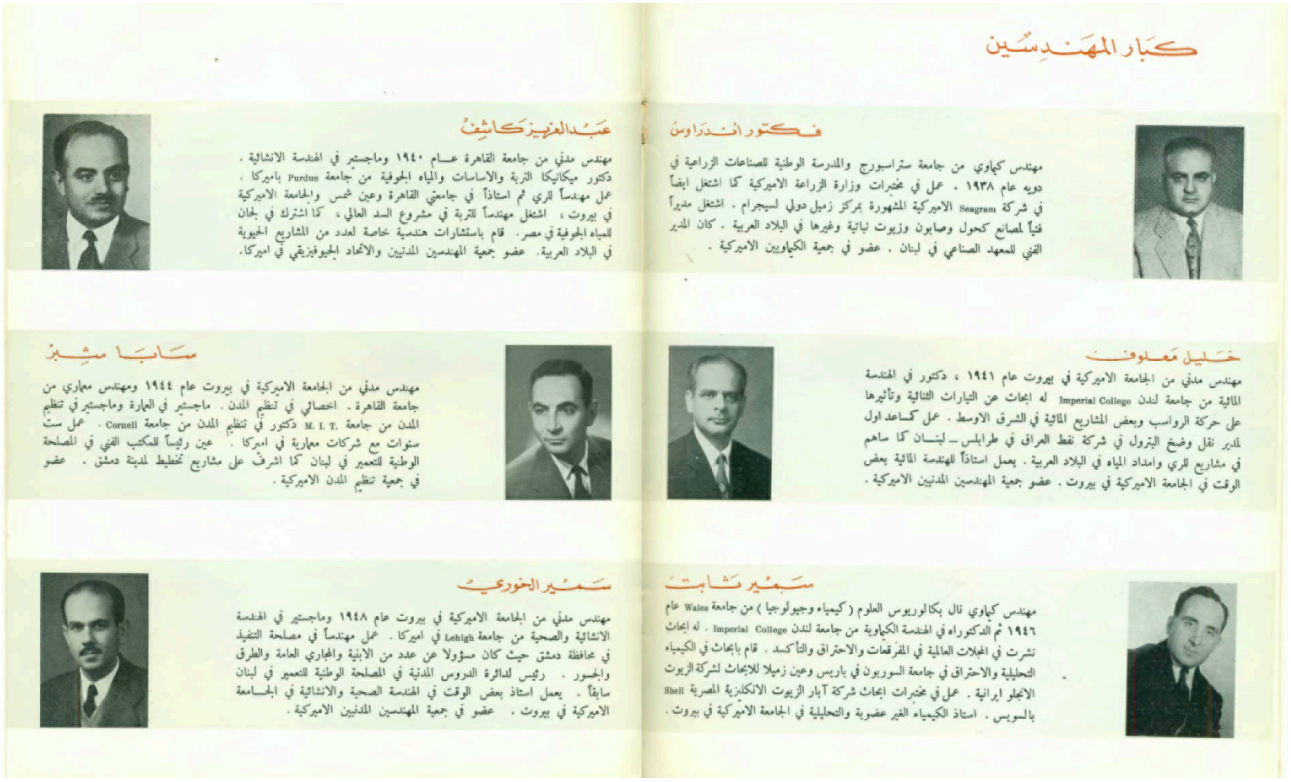
69 See Taleb, Remembers, 1-5.: Shair and Bartram, *Out of the Middle East*, 115-21. With the expansion of the construction boom in the Arabian Desert, the two partners of Dar al-Handasah, Taleb and Shair, looked into further subdivisions of the company to facilitate development of projects abroad. They arrived at an agreement by which they would create another two separate sub-entities: Dar al-Handasah (Shair & Partners), and Dar al-Handasah (Taleb & partners) in January 1970. They would, however, both be represented equally by "the mother firm–The Dar" in their operations in KSA. This agreement ended with the beginning of the biggest construction boom in the Arabian Desert in 1973.

70 Fabbri, Saragoça and Camacho, *Modern Architecture Kuwait*, 386.

71 Taleb, Remembers, 5.

72 See Mumford, *Defining Urban Design*, 46-79. Perkin and Will were former ASPA members who met while studying at Cornell University in the 1930s.

73 About Dar al-Handasah in the Dar Website https://www.dar.com/about/overview, accessed 12/28/2020.



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Associated Consulting Engineers (ACE)

The other offshoot was an independent firm that took the English name Associated Consulting Engineers (ACE) (known as *al-Maktab al-Handdasi al-Istishari* in Arabic) in 1959.[74] It included Andraos, Malouf, Thabit, and three additional partners, one of whom was Shiber, who rose to the occasion from his previous role as a *Dar al-Handasah* consultant, and the other two of whom were Dr. Khoury, Shiber's colleague at the National Reconstruction Authority in Lebanon who also taught construction and sanitation engineering at Cairo University and Ain Shams, and Dr. Abdulaziz Kashif from AUB **[Fig. 17]**. The six partners who shared a common passion for combining their academic work with technical participation in the oil construction boom through consultation projects. ACE became therefore, a bridge linking the theoretical work of academia with the technical expertise of on-site practitioners.[75] The partners aspired to merge their professional experience and participation in the making of the Arab urban scene by training young professionals at AUB and other universities while still remaining actively involved in reviewing, revising, and supervising infrastructural and services projects across the region. ACE had, therefore, embarked on a collaborative design model based on the combination of teaching architecture, construction, structural, and civil engineering, among other services such as land valuation, agriculture, infrastructure, roads, and highways, or what could be identified as planning-engineering **[Fig. 18]**.

Fig. 17

The six founding partners of the Associated Consulting Engineers ACE as an independent firm and their short biographies. Source: Arabic print of ACE's pamphlet, (1959) courtesy to Shiber Archive, Washington, DC. © 2018.

74 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), Beirut (1959). at Shiber Archive, Washington, DC., 2-4.

75 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), Beirut (1959). at Shiber Archive, Washington, DC., 2-4, see services offered by the office.

Shiber, who had already served as a consultant for *Dar al-Handasah* (1956-9), preferred ACE maybe because of its resemblance to TAC's collaborative design methods.[76] The similarity between the two design agencies ACE and TAC highlights the sociocultural, technical, and regional agenda of both Gropius and Shiber. The word "collaborative" in TAC's title references the structure of the firm, based on weekly meetings where all partners critiqued each other's projects, Gropius among them. However, the expansion of the design activities, including community design and large-scale regional planning, required new means of collaboration. In order to merge the fields of architecture, planning, landscape architecture, and engineering into a new whole, a new mode of collaborative design was pursued—"total architecture." In his book *The Scope of Total Architecture* (1955), Gropius reiterated the urgent need for "a closely cooperating team together with the engineer, the scientist, and the builder," in which "design, construction, and economy may again become an entity—a fusion of art, science, and business."[77] Teaming with engineers, planners, landscape architects, and scientists, the team could then generate comprehensive solutions concerned with the whole physical environment and construction industry. At ACE, the phrase "Associated Consulting" implied the type of collaboration that was part of TAC's name. "Associated Consulting" highlighted the continuous process of critique, evaluation, and recommendations for a holistic design proposal while excluding the building process from the contract. The team of six architecture-engineers worked closely with investors and contractors, providing creative design solutions at the scale of both the city and the individual building.[78] The collaborative design process included at least three parties: the client, the consultant, and the contracting firm. "Associated" conceptualized the design process as a learning process between designers, engineers, and management, where each contributed to one or two stages of the project; in other words, ACE was the orchestrator of the design process, leading the team toward a comprehensive result, also known as total design. Shiber referenced Gropius, who observed "the term 'design' broadly embraces the whole orbit of man-made, visible surroundings, from every-day goods to the complex patterns of a whole town."[79] ACE assembled a team of qualified engineers, architects, and city and regional planners to overcome the lack of aesthetic training in design.[80]

18

Fig. 18

Sample of the first consultancy projects in Lebanon. Source: Arabic print of ACE's pamphlet, (1959) courtesy to Shiber Archive, Washington, DC. © 2018.

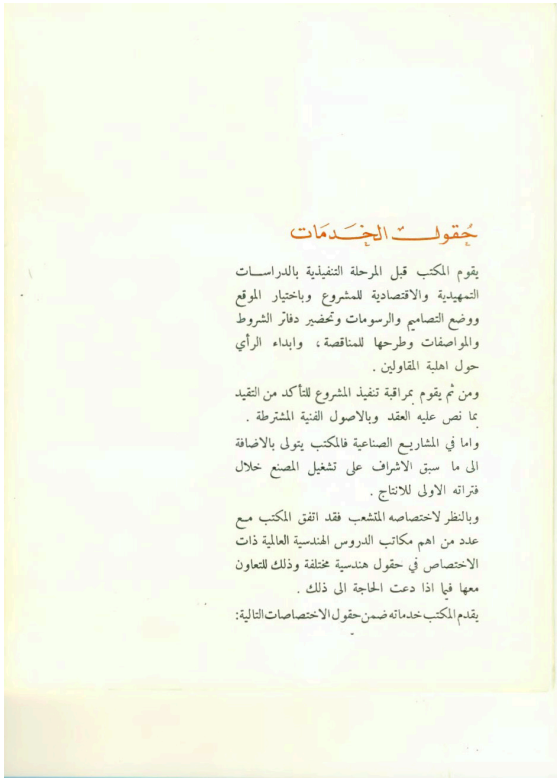
76 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), Beirut (1959). at Shiber Archive, Washington, DC., 2-4.

77 Walter Gropius, *Scope of Total Architecture* (Springfield: Collier Books, 1955) 80.

78 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), 5.

79 Gropius, *Scope of Total*, 3 cited in Shiber, *The Kuwait Urbanization*, 183.

80 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), 1-6.



حقول الخدمات

يقوم المكتب قبل المرحلة التنفيذية بالدراسات التمهيدية والاقتصادية للمشروع وباختيار الموقع ووضع التصاميم والرسومات وتحضير دفاتر الشروط والمواصفات وطرحها للمناقصة ؛ وابداء الرأي حول اهلية المقاولين .

ومن ثم يقوم بمراقبة تنفيذ المشروع للتأكد من التقيد بما نص عليه العقد وبالاصول الفنية المشترطة .

واما في المشاريع الصناعية فالمكتب يتولى بالاضافة الى ما سبق الاشراف على تشغيل المصنع خلال فتراته الاولى للانتاج .

وبالنظر لاختصاصه المتشعب فقد اتفق المكتب مع عدد من اهم مكاتب الدروس الهندسية العالمية ذات الاختصاص في حقول هندسية مختلفة وذلك للتعاون معها فيما اذا دعت الحاجة الى ذلك .

يقدم المكتب خدماته ضمن حقول الاختصاصات التالية:

19

Similarly in *The Architects' Collaborative*–TAC (1966), Gropius summarizes the organization and specialties of the office as follows:

"TAC is not a partnership of specialists; they were interested in all aspects of architectural practice which their greatest source of mutual understanding and strength. i.e. business aspects, design and presentation, specifications, landscape architecture, city planning, building supervision, model making, and information-research."[81]

Comprised of eight equal partners—Norman Fletcher, Jean Bodman Fletcher, Robert McMillan, Louis McMillan, Benjamin Thompson, John Harkness, Sarah Harkness, and Walter Gropius, who was the chair of the GSD at the time (1945)—, TAC launched its practice of architecture as a cultural product responding to the interchangeable variables of human society.[82] Gropius described the role of the architect as expressed in the collaboration among the partners in the team:

> "the conception of the architect as a self-sufficient operator who, with the help of a good staff and competent engineers, can solve any problem is isolationist in character and will be unable to stem the tide of uncontrolled disorder engulfing our living spaces. It runs counter to the concept of total architecture, which is concerned with the whole of our environmental development and demands collaboration on the broadest basis."[83]

The team did not include structural and mechanical engineering departments, but they would contract them on a project basis. The group functioned as a cohesive unit, not as separate individuals alongside "inter-group criticism,"[84] which pushed them to arrive at optimal design solutions in response to the "whole physical environment."[85] The primary factor maintaining the cohesive design process was the partners' weekly meeting devoted to both design and business,

81 Walter Gropius, *The Architects Collaborative* (Teufen, Switzerland: Niggli, 1966), 14.

82 Michael Kubo, "Architectural Incorporated: Authorship, Anonymity, and Collaboration in Postwar Modernism" (Ph.D. diss., GSD-Harvard, 2018), 51.

83 Gropius, *The Architects Collaborative*, 24.

84 Gropius, *The Architects Collaborative*, 20.

85 Gropius, *The Architects Collaborative*, 20.

Fig. 19

The services offered by ACE. Source: Arabic print of ACE's pamphlet, (1959) courtesy to Shiber Archive, Washington, DC. © 2018.

in which participants on the team exchanged and critiqued their design concepts and forms.[86] Describing the creative design process, Harkness linked it to the education process which recognizes the individual differences among students and uses them to maximize the potential of each idea. Teaching, sketching, and exchanging ideas, he maintained, facilitated the growth and change of ideas for the more effective use of buildings, especially when teachers provide "maximum recognition of the importance of the individual student."[87] ACE followed the same organization model. ACE's decision to limit the services of the firm to providing business consultation, design and presentation, building specifications, landscape architecture, city planning, building supervision, model making, and information-research without actually delivering the built project was seemingly a product of how they perceived themselves as architects who helped clients understand the socio-cultural context in which the architecture of their building project existed.

On the title page of the first printed brochure for ACE, they wrote (translated from Arabic): "the work of this office is limited to the production of technical studies and design solutions without any association with business and manufacturing whatsoever."[88] Based on the concept of a collaborative design team combining expertise in the fields of architecture, city planning, landscape design, agriculture, chemical, electrical, mechanical, and infrastructural services, the team offered technical reports, design proposals, and recommendations for contractors and construction companies. ACE partners were specialized in guiding clients through initial design studies and proposals, supervising the completion of projects on site, and monitoring the early stages of operation; in other words, they delivered what was identified as a "design build," in which large teams of architects and engineers delivered complex projects from site planning and structural engineering to detailed design, facade systems, interiors, budgeting, and administration.[89] The team of architects and engineers at ACE delivered site survey documents, recommendations, architectural design drawings, and regulations for bidding documents [Fig. 19].[90]

Since its establishment as a partnership firm in 1956, ACE expanded into a shareholding company with multi-disciplinary services in the fields of planning, architecture, engineering design, construction management, infrastructure, transportation, and supervision. In 1989, ACE acquired Sir Frederick Snow and Partners Ltd. (SFSP), a firm of consultancy engineers based in London,

86 Gropius, *The Architects Collaborative*, 12-6.

87 Gropius, *The Architects Collaborative*, 30.

88 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), 1.

89 See Kubo, "Architecture Incorporated: Authorship," 47-52. He compares the practice of SOM and TAC. based on the services each provide to the client, which highlight the different form of the practice of architecture. TAC., design, and construct architecture as "masters of building industry," their office included all teams of technicians, artists, designers, engineers, contractors, and business management experts. The architecture services begin at the initial design phases and continue until the complete delivery of the project on-site through their team of experts. SOM, on the other hand, provides a "package builder" that documents all details required to the completion of the project, but they do not necessarily participate in the construction of the project. They are also involved in recommending a contractor or a builder; See also William Hartmann, "S.O.M. Organization," *Bauen + Wohnen 11*, no. 4 (April 1957): 116.

90 Arabic pamphlet titled المكتب الهندسي الاستشاري (the Associated Consulting Engineers), 1-6.

England.[91] Today, the firm has three-headquarters, in Beirut, Athens, and Abu Dhabi, in addition to an extensive network of offices around the world in Africa and Europe.

Conclusion

The construction boom in the Arabian Peninsula and the Levant coupled with the uprise of Arab nationalism and the establishment of the Arab League in 1945 cultivated a hospitable environment for the emergence of an Arabic discipline of architecture and a discourse on urban design particular to the region. Influenced by the evolution of the modern discourse on post WWII architecture and urbanism, Arab architects, engineers, and planners proclaimed their own narrative benefiting from the oil construction boom in the Gulf, and the expertise of the Levantine pioneers. Arab architects, engineers, and planners who were immersed in the first oil construction boom had limited theoretical knowledge on the modern discourse of architecture. Despite the great ambition of the concept of *al-Muhandis al-Araby* as a technocratic expert combining the science and art of the built environment, engineering rationale dominated the Arab urban scene and new Arab cities for some time. The practice and writings on architecture and urbanism in the Arab region conflated the three disciplines of architecture, planning, and engineering, or what I have titled 'engineering-architecture'.

The re-contextualization of *al-Muhandis al-'Araby* through the lens of the local engineering consultancies unfolds an important aspect in the shaping of the urban character of Gulf cities today with focus on commercial branding of their cities as the most up to date. Architecture as a profession in the Gulf remains rooted in the broad field of engineering, rather than in art, hence the use of the terms *muhandis* (engineer), and, in some cases, *muhandis mi'amari* (architecture engineer). The title *muhandis mi'amari* was informally used in the academic world of publications, conferences, and schools to distinguish architects from civil engineers, contractors, and builders. The career titles, job descriptions, and technical responsibilities were generally combined with those of the civil engineer and the contractor. As a result of the ambiguity of the term "engineer", the discourse of architecture and its ally disciplines––art, landscape architecture, and city planning––developed minimally in the Arab region. Engineers were perceived as the social and technical experts, and the national agents for Arab modernity; thus, most of the large architecture practices were embedded within Engineering and contracting consultancies such as Pan Arab Engineering Consults (PACE) by Hamid Shuaib and Sabah Al-Rayes, Consolidated Consultant by Jaafar Tuqan, The Iraqi Consultant by Rifaat Chadirji, SSH by Sabah Abi-Hanna and Fawaz al-Marzouq, just to mention a few. The founding architects performed the role of the architect and planner while under the umbrella of engineering. Such a merger had a direct impact on the urban structure and form of

91 ACE History in https://www.ace-intl.com/history.php, accessed 12/28/2020. See also www.fsnow.co.uk.

Gulf cities which is based on continuous cycles of urban renewal, urban sprawl, and the making of new cities in the vast desert land such as the case of Masdar City, UAE (2006), The Line in Neom, KSA (2030), or Silk City, Kuwait (unrealized).

Bibliography

Al-Asad, Mohammad. *Contemporary Architecture and Urbanism in the Middle East*. Gainesville: University of Florida, 2012.

Al-Nakib, Farah. *Kuwait Transformed, A History of Oil and Urban Life. California*, USA: Stanford University Press, 2016.

Al-Nakib, Farah. "Cities and belonging in the Gulf Arab States", *Panel*, The Arab Gulf States Institute in Washington, Washington, DC, July 24, 2019.

Camacho, Ricardo, Sara Saragoça, and Roberto Fabbri. *Essays, Arguments and Interviews: Modern Architecture Kuwait*. Salenstein, Switzerland: Niggli, 2018.

Fabbri, Roberto, Sara Saragoça, and Ricardo Camacho. *Modern Architecture Kuwait: 1949-1989*. Zurich: Niggli, 2016.

Gropius, Walter. *The Architects Collaborative TAC*. Teufen, Switzerland: Niggli, 1966.

Gropius, Walter. *Scope of Total Architecture*. Springfield: Collier Books, 1955.

Gropius, Walter. *The New Architecture and the Bauhaus*. Translated by P. Morton Shand. Cambridge. MA: The MIT Press, 1998.

Himes, Adam. "Competing Visions for a Modern Emirate: The Government Centre of the State of Qatar." *International Journal of Islamic Architecture 7*, no. 1 (2018): 143-169.

Hoyt, Charles. "Oil Rich Middle East: the New Frontier for Professional Services?" *Architectural Record* (June 1975): 101-108.

Koolhaas, Rem, Reinier de Graaf, Iyad Alsaka, and Todd Reisz. *Al Manakh 2 cont'd*. Amsterdam: Stichting Archis, 2010.

Kubo, Michael. "Architectural Incorporated: Authorship, Anonymity, and Collaboration in Postwar Modernism." PhD diss., GSD-Harvard, 2018.

Mumford, Eric Paul. *Defining Urban Design: CIAM Architects and the Formation of a Discipline*, 1937-69. New Haven: Yale University Press, 2009.

Mumford, Lewis. *The Culture of Cities*. New York: Harcourt, Brace & World Inc., 1938.

Peca Amaral Gomes, Alexandra, Al-Ragam, Asseel and AlShalfan, Sharifa (2021). *Reclaiming public space in Kuwait's residential neighbourhoods: an applied policy-oriented approach*. Kuwait Programme paper series (8). LSE Middle East Centre, London, UK.

Shair, Kamil A, and Peter Bartram. *Out of the Middle East: The Emergence of an Arab Global Business.* London, New York: I. B. Tauris, 2006.

Shiber, Saba George. *The Kuwait Urbanization: Documentation, Analysis, Critique.* Kuwait: Kuwait Government Printing Press, 1964.

Shiber, Saba George. "Special Repot from Cairo." *Middle East Forum*, (July 1962): 17-8.

Shiber, Saba George. "'Engineering Conference in Cairo' Part II." *Kuwait Times*, (May 30, 1963): 4-5.

Shiber, Saba George. "A School of Design and Engineering for the Proposed 'Jerusalem University'." Master's thesis, Massachusetts Institute of Technology, 1947.

Shiber, Saba George. "A University City for the Proposed Jerusalem University." Master's thesis, Massachusetts Institute of Technology, 1948.

Shiber, Saba George. "Urban Formation and Reformation: A Descriptive and Critical Analysis." Ph.D. Diss., Cornell University, 1956.

Unknown, "Proposals for Restructuring Kuwait," *The Architectural Review Archive (1896-2005)*, Sep 1, 1974, 178-90.

Sheikh Abdullah al-Salim al-Sabah biography at: https://biography.yourdictionary.com/shaykh-abdul-lah-al-salim-al-sabah (accessed 09/24/2020).

ACE History in https://www.ace-intl.com/history.php, (accessed 12/28/2020).

B. Jack Hanly

Architectures of Oil: Earthworks and Petrochemicals in Saudi Arabia c. 1973

Environmental History, History of Technology, Ecology, Oil, The Architects Collaborative

/Abstract

This paper examines the development of the Saudi cities of Jubail and Yanbu in the aftermath of the 1973 OPEC embargo. Developed as a means of shifting away from pure resource extraction and towards value-added technology sectors, the Saudi government aspired to build up the cities as petrochemical production hubs and investment "growth-poles." The paper considers the ways in which architecture, landscape, and environment became tools of petro-capital valorization. More specifically, it looks at how the master planning efforts of the construction conglomerate Bechtel and the late modern architectural firm TAC looked towards the quality and composition of the earth as their object of management, study, and design. Such a terrestrial vision of an extractive enterprise would seem to be paradoxical, but the paper ultimately shows how an emergent discourse of ecological systems thinking legitimated the diffusion of energy and chemicals. This program, therefore, depended upon a kind of interdisciplinary convergence between architects, engineers, oilmen, scientists, and officials, who collectively manipulated these "natural" resources as the preliminary activity of Jubail and Yanbu's urban administration. These efforts exhibited a scalar flexibility – from the micrological to the territorial – that show the labile modalities of extractive activity, as well as a planning regime that adjusted itself to the vagaries of oil's global political economy. The demand to both protect the environment from and cultivate it with the cities' attendant petrochemical infrastructure demonstrated a melding of technology and nature otherwise overlooked in histories of oil and architecture.

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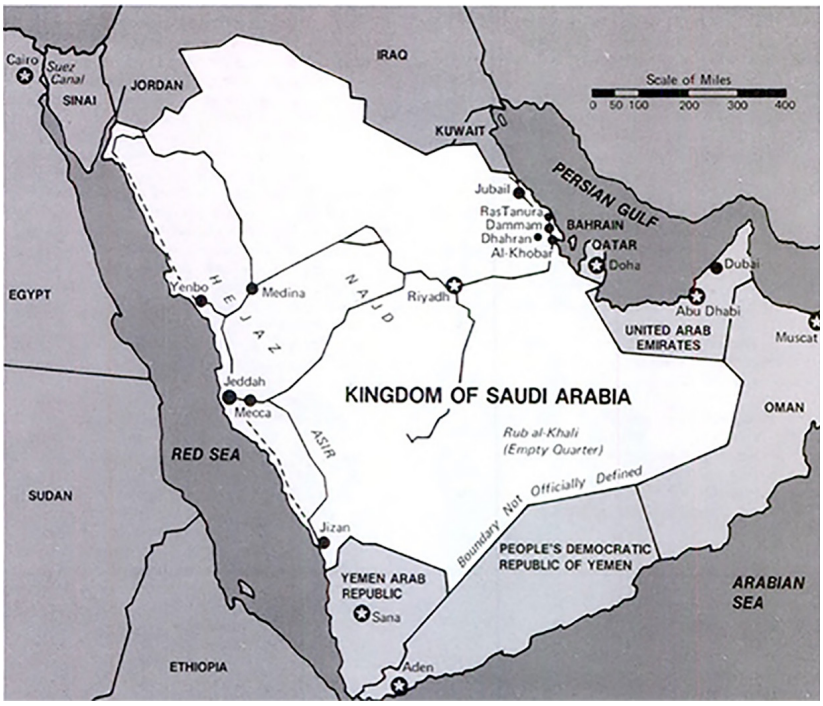
Rising from the desert on opposite ends of Saudi Arabia in the 1970s, the cities of Jubail and Yanbu were logical, if elaborate, correlates to the country's resource boom in the aftermath of the OPEC embargo. Flushed with petrodollars and eager to claim their seat among the global industrialized North, Saudi Arabia embarked on a massive and concentrated urbanization scheme across these two "growth poles." The scale of the development of the twin cities, which emerged essentially *ex nihilo* from the sand, invited comparisons to the pyramids at Giza as the largest single engineering project of its time. Excavated earth material alone reached some four hundred million cubic meters: enough soil to encircle the globe with a thirty-foot-wide embankment.[1] Bechtel, a multinational construction company, tasked by the Saudi government with building Jubail, undertook the complex feat with characteristic brawn, while Parsons Corporation, a defense and infrastructure firm, developed the smaller Yanbu. A pipeline would connect the two cities and carry oil from the fields of the Eastern Province on the Persian Gulf to the terminals and processing facilities on the Red Sea.[2]



1

At the heart of the formation of these cities was a desire to transform Saudi Arabia's inchoate industrialization by pivoting the country's economy away from a total reliance on crude oil exports. Petrochemicals offered a promising and potentially lucrative alternative to a sheer crude export economy. Rather than send crude oil to other countries, where it would be turned into costlier products such as gasoline and plastics, the Saudis sought to build their own petrochemical infrastructure. In addition, Jubail would have been home to a steel manufacturing plant, reducing the need for imported construction goods and further diversifying Saudi Arabia's industrial base. It was here that the country's aforementioned *Gas Conservation Program* found productive application, powering the cities themselves and serving as feedstock for fertilizers and other products. Jubail and Yanbu attempted to resolve a number of problematics in Saudi Arabia's drive toward modernization through comprehensive city-making.[3] [Fig.1]

Fig. 1

Map of Saudi Arabia showing Jubail on the Persian Gulf and Yenbo [sic] on the Red Sea. Connecting the two cities would be a gas pipeline.

Source: "Housing and urban development in Saudi Arabia," U.S. Department of Hous-ing and Urban Development (Washington: U.S. GPO, 1977), 3.

1 "Foundations: The New Cities," *Saudi Aramco World*, Vol. 33, No. 6 (Nov./Dec. 1982): 30-40.

2 Andrea Pampanini, *Cities from the Arabian Desert: The Building of Jubail and Yanbu in Saudi Arabia* (Westport, CT: Praeger Publishers, 1997).

3 The relationships between natural resource extraction and urbanism are just beginning to be explored. See, for example: Eve Blau, *Baku: Oil and Urbanism* (Zurich: Park Books, 2018); Felipe Correa, *Beyond the City: Resource Extraction Urbanism in South America* (Austin: University of Texas Press, 2016); Carola Hein, "Oil Spaces: The Global Petroleumscape in the Rotterdam/The Hague Area," *Journal of Urban History*, Vol. 44, No. 5 (2018): 887-929; Pierre Belanger, *Extraction Empire: Undermining the Systems, States, and Scales of Canada's Global Resource Empire*, 2017-1217 (Cambridge: MIT Press, 2018).

One problematic was the environment or, rather, the problematic was how to approach the existing landscape in the development's path. Should the Saudis treat the landscape as a tabula rasa for infrastructural outgrowths, or as a jewel of the desert to be preserved for cultural and ecological posterity? While the former would seem to be the reflexive choice for a petroleum-fueled project of such monumental proportions, we have already seen how American projects of similar motivation were confusing this paradigm. To trace this shift in priorities, this paper examines the co-production of the environment and petrochemical infrastructure at Jubail and Yanbu through an analysis of planning documents, promotional literature, and architectural design, broadly construed. The primary characters in this narrative are the Bechtel Group (engineering and organization), The Architects Collaborative (architecture and planning), and the Saudi Arabia Basic Industries Corporation (SABIC) – the interdependent vehicles of the multinational construction conglomerate, late-modern architectural office, and international joint-venture partnership. I find that each assumed a redirected gaze in the aftermath of the 1973 OPEC embargo: each looked to the qualities and composition of the earth as their object of management, study, and design.

I contend that this gaze exhibited a scalar flexibility in line with the totality of its enterprise, extending from the level of the soil to the global political economy of oil. More than being a mere disguise against possible environmentalist objectors or an outwardly projecting image of responsible planning, I argue that the management of a series of natural objects – earth, plants, and agriculture – became a practical stand-in for the management of the city and its petrochemical infrastructure, in what can be called a kind of geophysical techno-politics. Gabrielle Hecht defines techno-politics as a "strategic practice of designing or using technology to enact political goals" within an expanded geography of Cold War expertise.[4] In this and other contemporaneous planning projects, ecological administration became a proximate technique of fossil fuel resource management and, ultimately, posited a seamless exchange between the chemical and the natural. The administration of this newfound ecological vision fell to a particular kind of business model, whose decentralized structure accorded the development with a level of programmatic flexibility, which the physical planning of the cities mirrored in turn. If architecture firms had, at this time, begun to see their work in terms of energy information and its circulation, Jubail and Yanbu were built through the gathering of environmental data and their structure predetermined by oil. The paper thereby examines the travelling theories of ecological systems thinking that shuttled between practices of architecture, energy, and development, demonstrating how a global vision of petroleum extensibility was undergirded not only by the scale and strategies of the territorial, but by that of the terrestrial.

4 Gabrielle Hecht, "Introduction," in *Entangled Geographies: Empire and Technopolitics in the Global Cold War (Cambridge*: MIT Press, 2011), 3.

From Large Technological Systems to Envirotechnical Systems, and Back Again

Jubail and Yanbu, if viewed only as petrochemical company towns, would, at first blush, appear to be prime examples of what Thomas P. Hughes identified as "large technological systems". As an assemblage of physical plants, organizational structures, *human* operators, legal regimes, and material resources, the Saudi Arabian state constructed the cities as a control system consisting of hardware and software, in line with national goals and cultural exigencies. The two cities advanced according to a "pattern of evolution" defined by five-year development plans that transferred existing technology and adapted it to the context of a developing economy. Builders, architects, and planners developed the cities with specific "technological styles" oriented toward geographic and social particularities. The case of Jubail and Yanbu, however, diverges from Hughes's model in an important respect. Hughes sees the large technological system as aspiring to "a closed system that does not feel the environment... [where] managers could resort to bureaucracy, routinization, and deskilling to eliminate uncertainty," and the environment and system could each exert a one-way influence on the other.[5]

Contrary to this model, Jubail and Yanbu are significant for the ways in which the Saudi state, through its Royal Planning Commission and parastatal petroleum corporations, enlisted the environment as a material and discursive partner in the construction of petrochemical infrastructure. Rather than simply becoming objects of total control, the landscapes of Jubail and Yanbu became part of what Sara Pritchard has called "an envirotechnical system", which planners sought to simultaneously augment with, and protect from, attendant petrochemical systems. If geophysical techno-politics is the method to this story, then the envirotechnical system is its primary consequence. In her 2011 book *Confluence: The Nature of Technology and the Remaking of the Rhone*, Pritchard calls for attention to technology as nature, nature as technology, and the administrative envirotechnical regimes of both.[6] That is, the industry of the two cities, reliant on the transformation of a natural material, became a kind of nature which, in turn, reshaped the environment into a technical artifact, suffused with petrochemicals and yet projecting a pristine state. Elsewhere, Pritchard has spoken of an effort to "naturalize industrialization" in historical scholarship, not to frame it as a teleological horizon, but to see the ways the nature-culture divide falls away when we realize that technology is embedded within and dependent upon the natural world.[7]

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5 Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems*, ed. W. E. Bijker, T. P. Hughes, and T. J. Pinch (Cambridge: MIT Press, 1987), 53.

6 Sara B. Pritchard, *Confluence: The Nature of Technology and the Remaking of the Rhone* (Cambridge: Harvard University Press, 2011), 21-24.

7 Sara B. Pritchard, "The Nature of Industrialization," in *The Illusory Boundary: Environment and Technology in History, ed. Stephen H. Cutliff and Martin Reuss* (Charlottesville: University of Virginia Press, 2010), 69-100.

While envirotechnical systems are a useful optic for thinking through these developments, from a historical perspective, Jubail and Yanbu exhibited the influence of ecological systems thinking on both architectural and extractive activities – a scientific and cultural paradigm that emerged in the post-war and flourished in the 1960s, the so-called "development decade," and in the 1970s, the decade of ecology. Without undertaking an exhaustive account of ecological systems thinking, it is worth briefly noting the work of one of its figureheads, Howard T. Odum, on the question of energetics. Odum applied to natural systems the dynamic circular models of self-correcting causal mechanisms, which the science of cybernetics used to describe man-machine interactions. Cybernetics, which was originally born out of wartime demands, soon spiralled out of the industrial research laboratory and into a range of social and professional spheres. Its ability to render visible the spontaneous interactions of systems offered a compelling tool in the management of unpredictable change.[8] For Odum's part, analytical tools with which to understand flows and exchanges of energy, resources, and human activity, understood discursively and visually in the language of a circuit board.[9]

Bechtel and the Ecological "Gigaproject"

In order to understand how these cities came into being, it is important to return to the origin story of Warren Bechtel, founder of the Bechtel Group, which would go on to mastermind the two Saudi industrial cities and serve as Jubail's Master Services Contractor (MSC). Bechtel travelled from state to state doing foreman work for the westward railroads, ultimately landing in Oakland with his family in 1904. By this time, the young family man had mastered the use of a powerful excavating machine, the steam shovel, which many other crewmen were loath to take up. Bechtel eventually struck out on his own and secured rail-laying and road-building contracts, which he managed with sophisticated machinery not yet in widespread use. Sensing a coming boom due to the spread of the automobile and road networks, Bechtel turned his sights to oil and gas, envisioning a vast system of refineries and pipelines connecting the country's fossil fuel companies. It proved to be a fortuitous outlook: Bechtel partnered with Standard Oil to build more than one thousand miles of pipeline by the end of the 1920s.[10]

Bechtel's first Middle East projects came in 1943, when American oil firms sought to boost their wartime refinery output in the small country of Bahrain.

8 See Paul Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge: MIT Press, 1996); Jennifer Light, *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America* (Baltimore: Johns Hopkins University Press, 2003).

9 Representative texts include *Environment, Power, and Society* (New York: Wiley-Interscience, 1971); and the textbook *Systems Ecology: An Introduction* (New York: Wiley, 1983). Odum's tendency toward social engineering through ecosystem engineering is discussed in Peter J. Taylor, "Technocratic Optimism, H. T. Odum, and the Partial Transformation of Ecological Metaphor after World War II," *Journal of the History of Biology*, Vol. 21, No. 2 (Summer, 1988): 213-244.

10 Sally Denton, *The Profiteers: Bechtel and the Men Who Built the World* (New York: Simon and Schuster, 2016), 26.

Bechtel helped build the facility and long-distance pipelines, deepwater oil berths, highways, airports, and railroads soon followed. According to the company literature, these early efforts were insistent on the long-range development of Saudi workforces, training nationals to operate and run the tools of the trade. By 1944, the Arab American Oil Company (Aramco) had hired Bechtel for work at its Ras Tanura refinery and administrative town in Dhahran, an idyllic suburban-style enclave complete with air-conditioned interiors, detached single-family homes, and bowling alleys. Bechtel engineered and built a spectrum of technical objects for the petroleum industry in the Middle East, from pipe-fittings and transmission lines to office buildings and power plants. In 1947, it began its most complex project: the Trans-Arabian Pipeline (Tapline), a gas-gathering system bringing oil overland from the Persian Gulf to Western Europe. The Tapline cost some $230 million and pumped oil at about three hundred and twenty thousand barrels a day.[11] All of these large-scale landscape transformations were crucial precedents for Bechtel's later work in Saudi Arabia, but they manifested none of the granular engineerings through earthworks, environmental monitoring, and landscaping of the later projects.

In 1973, Bechtel enlisted the help of former US ambassador to Saudi Arabia Parker "Pete" T. Hart to conduct preliminary studies for an industrial complex on the country's eastern coast. Hart had opened the first American consulate in Dhahran in the 1950s and served in various official roles throughout the Middle East over the decades. With Hart's insider perspective and the company's formidable experience in the area, Bechtel was well situated to capture what they projected to be tens of billions of dollars in contracts. The complex's early outlines listed everything from telecommunications to agricultural and human resources development, with the availability of oil and gas for feedstock and its undeveloped deepwater port as prime factors for the location. Correspondence between Bechtel consultants and executives, however, reveals an emphasis beyond the site's potential or the firm's technical and engineering capabilities. The firm stressed its innovative "systems approach" – design-build in excess of pure planning – and suggestions for training colleges drawn from studies done by the Arthur D. Little and SRI.[12] The company also spoke to the need for a coupling of environments and infrastructure at the new complex. In a letter from the third generation Bechtel president

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Fig. 2

Aerial view of Jubail residential sectors, beyond which lies a tangle of petrochemical infra-structure.

Source: https://www.bechtel.com/projects/jubail-industrial-city/

11 Richard Finnie, *Bechtel in Arab Lands: A Fifteenth Year Review of Engineering and Construction Projects* (San Francisco: Bechtel Corporation, 1958). On Aramco's racialized workforce policies in Dhahran and their intersection with the built environment, see Robert Vitalis, *America's Kingdom: Mythmaking on the Saudi Oil Frontier* (New York: Verso, 2009).

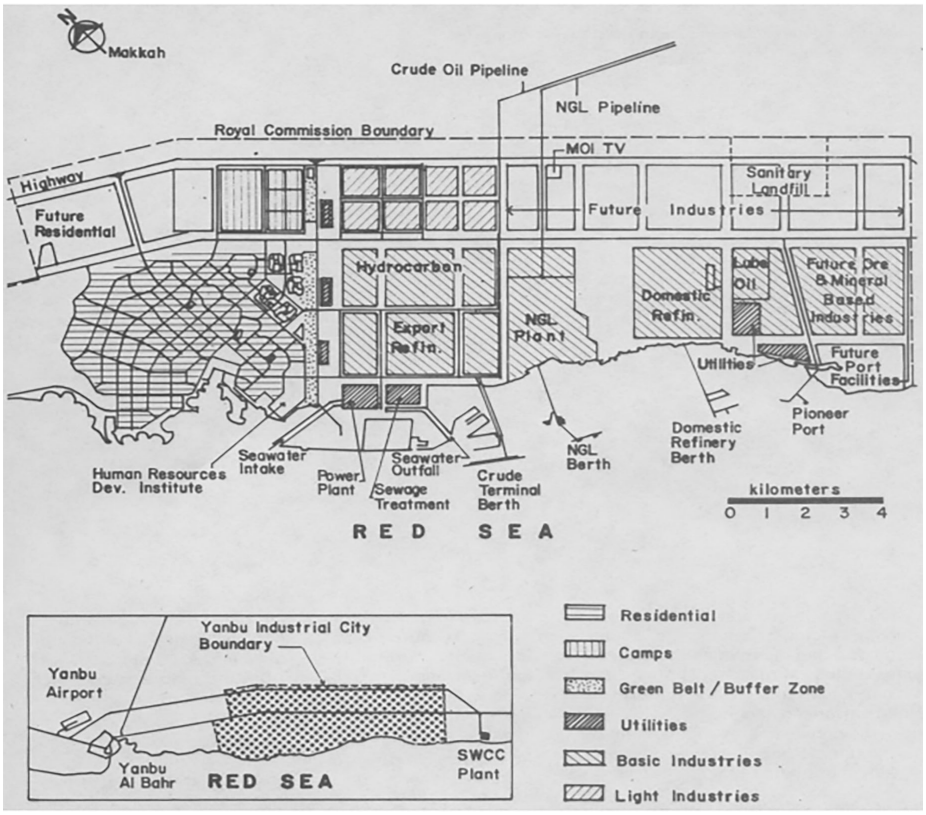
12 Various documents from Parker T. Hart Papers, #9026, Box 12, Folder 2, American Heritage Center.

Steve D. Bechtel Jr. to King Faisal, outlining the company's goals for such an undertaking, should it be approved, the businessman explained how a greater knowledge of the country's resources would contribute to the necessary infrastructural improvements:

> We are keenly aware, as I am sure is Your Majesty, of the need for *long-term advanced study* to make the *best use of natural assets* of terrain, groundwater, sea access, and human resources; and to *rationalize them with intended or expected developments* in electric power, industry, agriculture and water, transportation, communications, education, housing, public health and environmental safeguards.[13]

The letter reveals how a production of environmental knowledge through long-range resource forecasting structured the megaprojects at Jubail and Yanbu. Bechtel studied the country's "natural assets" and calculated their equivalent engineering projects. This knowledge could then be "rationalized," or co-produced with the desired national development plans, drawing what might otherwise be antagonistic forces into harmonious accord. Bechtel's letter constituted the first prong of the development's geophysical techno-politics, in which information concerning the region's surface and subsurface materials led to environmental control, subsequently designed in accordance with a predetermined set of political goals. [Fig. 2]

3a



13 Letter from Steve D. Bechtel to King Faisal, 5 May 1973. Parker T. Hart Papers, #9026, Box 12, Folder 2, American Heritage Center. Italics of the author.

Early news reports recognized that Jubail and Yanbu constituted a new kind of urban development in that they coupled macro-scale engineering – what Bechtel executives called their first "gigaproject" –with environmental protection and a totalized systems dynamics approach. In a 1982 opinion piece, MIT professor and program coordinator for the Macro-Engineering Research Group Frank P. Davidson drew attention to the humanistic potential of a rediscovered capacity for grand projects. Davidson noted that this emerging field of study was helping to resolve the leftover resistance to "bigness" by social critics: large projects were here to stay, he suggested, and systems dynamics offered economic and environmental benefits in a single package. The transdisciplinary actors contributing to this field included psychiatrists, financiers, lawyers, and architect-planners, whose cooperative organization created new, holistic knowledge. Urbanization schemes like Jubail heralded a new wave of environmentally-oriented engineering within "an institutional, as well as conceptual, mechanism for launching public-benefit programs."[14] However, to accomplish such feats the world would need a new kind of professional: the engineer-manager, capable of

3b

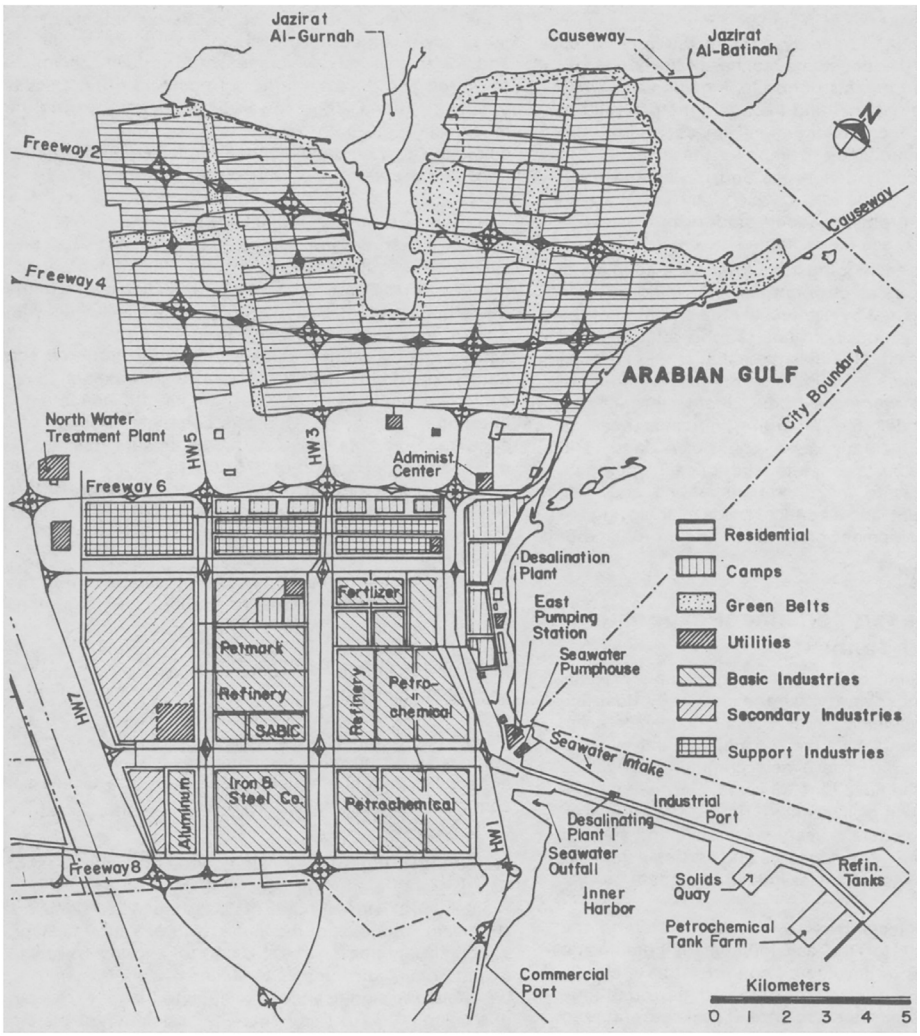


Fig. 3 a, b

The master plans of both Jubial and Yanbu show residential and social infrastructures tightly coupled with petrochemical and industrial manufacturing.. Source: Mahmoud A. Abdel-Latif and Wolfgang G. Roeseler, "Settling the Desert with Advanced Industrial Technology: Two Recent Saudi Arabian Settlement Projects," Ekistics, Vol. 52, No. 311 (March/April 1985): 163-175.

14 Frank P. Davidson, "Macroengineering: Mammoth Projects Need Love, Too," Christian Science Monitor, December 17, 1980. See also Frank P. Davidson, *Macro-engineering and the Infrastructure of Tomorrow* (Boulder, CO: American Association for the Advancement of Science by Westview Press, 1978).

leading the transition from declarations of values to their materialization in concrete and steel. Importantly, these leaders had begun to incorporate the needs of natural systems into their models of practice.[15] [Fig. 3]

The Architects Collaborative and Vegetal Expertise

If Bechtel was mustering the expertise of many different disciplines to extend the viability of its business model, so too was architecture. Though, where Bechtel was softening its imperious stance to engage both the ecosystem itself and the inhabitants of its outposts through training programs, architects were taking a different tack. By the 1970s, late modern architectural offices had achieved a global footprint completing complex projects with the efficiency and leanness of bureaucratic organization. Firms such as Skidmore Owings Merrill (SOM); Caudill Rowlett Scott (CRS); William Pereira and Associates; and The Architects Collaborative (TAC) pioneered a collaborative approach to architecture that prized flexible design methods culled from decentralized and specialized divisions.

In addition to furnishing the built works for a burgeoning post-war landscape of industrial research and production, firms began to adopt isomorphic organizational, operational, and strategic dispositions to those of their clients, aspiring to the global, integrated status of the multinational construction or energy conglomerate.[16] In doing so, they aspired to transform the landscape into a technical undertaking, applying the same professional apparatus of individual units operating under central command to the design of the "built environment" as that of a single building. In doing so, architecture modeled cybernetics' signature methods of interdisciplinary convergence in pursuit of universal applicability, and of the indiscriminate amalgam of the organic and the artificial.

The Architects Collaborative (TAC) was formed in 1945 out of a group of friends at the Yale School of Architecture. TAC's original members worked at corporate firms before joining together and seeking out an established leader to lend credibility to the young architects. The leader they found, Walter Gropius, was one of the founding members of the Bauhaus in Weimar, Germany, in 1919.[17] TAC grew from this small partnership into one of the largest US architectural firms in the 1970s, progressing from individual houses to universities and ultimately entire cities. TAC was therefore in a position to synthesize the vast scope of planning objectives at Jubail and Yanbu. This scope included the

15 These models of practice that co-produce nature and technology persist. As Mark Jarzombek has pointed out, "nature around us is an illusion constructed in tight alliance with the world of pipes, ducts, and valves." See "ARUPtocracy and the Myth of a Sustainable Future," *Thresholds* 38 (2011): 64-65.

16 On TAC, see Michael Kubo, "Architecture Incorporated: Authorship, Anonymity, and Collaboration in Postwar Modernism" (PhD diss., Massachusetts Institute of Technology, 2018). On DMJM/AECOM, see Aaron Cayer "Shaping an Urban Practice: AECOM and the Rise of Multinational Architecture Conglomerates," *Journal of Architectural Education*, Vol. 73, No. 2 (October 2019): 178-192. For an overview of these shifts, see Paolo Tombesi, "The Carriage in the Needle: Building Design and Flexible Specialization Systems," *Journal of Architectural Education*, Vol. 52, No. 3 (Feb. 1999): 134-142.

17 Walter Gropius, *The Architects Collaborative, 1945-1965* (New York: Architectural Book Pub. Co., 1966).

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design of the cities' substrate through earthworks, soil, and plantings – the individuated components of the envirotechnical system.

In documents outlining the general requirements and technical specifications for the landscaping and earthworks at Yanbu, TAC established protocols for building the city's greenery into its industrial fabric. As stated in other promotional materials and paperwork by the architects and the planning commission, earthworks, that is, the large-scale excavation, transportation, and treatment of soil, was the prerequisite operation for all subsequent efforts of city-making. Earthworks prepared this ground as fleets of earthmoving trucks, the descendants of Bechtel's steam shovel, rearranged the unstable desert soil.[18] Jubail's low-lying coastal plain required massive preparation. Excavated soil was used to create a foundation two and a half meters above water level to guard against flooding and the hazards of the sea. Though these mega-engineering activities were outside its purview, TAC documents nevertheless paid a great deal of attention to the geophysical qualities of what was being moved. While a component of earthworks certainly encompassed a subtractive clearance, another was additive: planting, which effloresced after the clearing. These dual activities, removal and replacement, constituted the earthworks category in general.[19] **[Fig. 4]**

Soil and planting, environment and object, were each subject to quality assurance measures to ensure their execution was in accord with TAC's specifications. Addressing contractors overseeing construction workers, the document advises deferment to authorized representatives for the ultimate directive in regard to soil suitability. When suitability was unclear, managers would provide

Fig. 4

Earthmoving trucks rearrange tons of the desert substrate, preparing the ground for the new cities. Source: The Royal Commission for Jubail and Yanbu, Madinat Al-Jubail Al-Sinaiyah: Mokhtat Al-Mantikah Al-Sakaniyah (Riyadh: the Royal Commission, 1978).

18 For a history of the bulldozer's material and discursive instrumentality in postwar urban planning and architectural production, see Francesca R. Ammon, *Bulldozer: Demolition and Clearance of the Postwar Landscape* (New Haven: Yale University Press, 2016).

19 Kevin Lynch, writing in a 1962 reference guide, stipulated that the "new ground must have a pleasing visual form" that maintained an equitable balance between *cut* and *fill* material. See Kevin Lynch, "Earthworks and Utilities," in *Site Planning* (Cambridge: MIT Press, 1962), 161.

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samples to architectural or technical personnel, who would then conduct soil tests and provide these results to construction managers. They could then reference previously established maxima and minima quality to determine appropriate action. Contractors were responsible for the sound interpretation of data results and for achieving the required "Field Quality Control."[20] A chain of oversight governed the handling of earth materials, just as it did in the realization of a physical building program, preparing the ground in accordance with suitable quanta. TAC's master-planning of the city ballooned outward from there but, first, the soil had to be prepared.

TAC's directives for contractors tasked with these responsibilities stipulated that they remain attentive to the geological conditions of the site, an inverted gaze to the typical figural attention of builders.[21] This may have been more practical than ontological. The delicate enterprise of building a city over a maze of pipelines, the presence of which justified the project's existence but required precautions to be diligently avoided. Building around existing utilities and avoiding explosive materials required continual examination of the substrate. Reading

20 Yanbu A3 R-4 Landscaping Section 02220: Earthworks, The Architects Collaborative (TAC), Microfilm Archive, Reel 595, Box 19, MIT Museum.

21 Yanbu A3 R-4 Landscaping Section 02220: Earthworks, The Architects Collaborative (TAC), Microfilm Archive, Reel 595, Box 19, MIT Museum.

Fig. 5

Landscaping laced the cities with greenery, which flourished due to desalination plants and petrochemicals. Source: The Royal Commission for Jubail and Yanbu, 10 Years of Accom-plishments (Riyadh: the Royal Commission, 1986).

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like a set of install instructions for large-scale landscaping, TAC's administrative documents speak to the orchestrated collisions of infrastructure and environment that characterized petrochemical city-making in Saudi Arabia. For all their talk of soil and planting, however, these documents merely set the stage for the beneficiaries of such tending: utilities in the form of pipelines, and housing structures serviced by *cul-de-sacs* of villas. Sectional drawings of roadways from Yanbu depict the concrete surface hemmed in on both sides, with parenthetical flourishes, above and below ground, of pipe and plant.[22] Such evidence shows that, in addition to the overt infrastructure of the petroleum industry, the roads, pipelines, and refineries that define the extractive imaginary, there is another, less visible component – that of dirt and plant matter. [Fig. 5]

Indeed, the Royal Commission and TAC planted upward of a million trees and shrubs at Jubail and Yanbu; yet, the degree to which administrators mandated oversight of individual plants is striking. Special planning divisions were responsible for tending to the plants at nurseries and higher officials had to authorize them suitable for collection, after which they would be acclimatized in special environments. It was again up to contractors, under the direction of "horticulturally qualified foremen," to determine the health of their charges. Plants were to be "typical of their species or variety; well-branched and densely foliated when in leaf; and free of dust, dirt and any chemical sprays and liquids which would have a deleterious effect on the plants' appearance and health."[23] Raised in glass vitrines and expelled into the desert environment, the aesthetic of the plants mirrored that of the city: precisely ordered, maintained according to scientific ideal types, and free from contamination. Despite this aspiration toward chemical

Fig. 6

Agricultural Experiment Station prepares plantings for eventual desert habitation. Source: Kathleen Kelly and R.T. Schnadelbach, Landscaping the Saudi Arabian Desert (Philadelphia, PA: The Delancey Press, 1976), 74.

22 Landscaping architectural bid construction, TAC Tube #12: Yanbu Industrial City, MIT Museum.

23 Yanbu A3 R-4 Landscaping Section 02220: Earthworks, The Architects Collaborative (TAC), Microfilm Archive, Reel 595, Box 19, MIT Museum.

purity, the growth environment itself operated as an instrument of petrochemical circulation.

Monitoring, Maintenance, and Containment

While TAC's geophysical manipulations laid the foundations for the envirotechnical system through design, another set of technics was necessary to maintain this precarious co-existence past its initial stages. In incremental five-year reports, the state's planning agency published glossy compendia of its activities at Jubail and Yanbu. These featured images of construction efforts, statistics on petrochemical production, and evocations of burgeoning social life. Organized into a progressive timeline of events, the publications exhibit shifting foci of the city-making projects in their various iterations. The array of infrastructural improvements, including an industrial port, telecommunications links, airports and housing, hold equal pride of place to the environmental planning efforts. Here, however, attention surrounds not so much the rearrangement of soil or the installment of plants, but the continuous monitoring of these elements to protect them from petrochemical contamination.[24] Saudi Arabia strove to sidestep the mistakes made by other countries in ignoring the environmental conditions of large-scale engineering systems. Part of this stemmed from a desire to construct the technical system into a global model of best practices, to incorporate the most up-to-date technology, and thereby attest to the development's sophistication. [Fig. 6]

This technology was both infrastructural and organizational: a network of testing laboratories, air and water monitoring stations, and computer models populated the landscape, from which human technicians collected data for interpretation.[25] Officials could then use this data to determine whether the system operated outside a targeted set of boundaries. It specified maximum allowable effluent and emissions, consistent pollution levels, and ideal air quality, while, in the case of emergency, computer models predicted the movement of toxic plumes. Simple spatial arrangements contributed to this cause. Residential communities were sited to take advantage of prevailing winds, with ample buffer room from production facilities. Archaeological sites were identified to be bypassed by development. The soil was treated with chemical stabilizers to prevent drifting sand from disrupting infrastructure.[26] Thus, the environmental program was attuned to both the qualities of space, from its material composition

24 Historians of technology have recently shown an interest in the social construction of environmental monitoring systems and their politics of implementation. See: Etienne Benson, *Wired Wilderness: Technologies of Tracking and the Making of Modern Wildlife* (Baltimore: Johns Hopkins University Press, 2010); Deborah Coen, *The Earthquake Observers: Disaster Science from Lisbon to Richter* (Chicago: University of Chicago Press, 2012); Jennifer Gabrys, *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet* (Minneapolis: University of Minnesota Press, 2016).

25 Architectural historians have recently turned their attention to forms of the "field station" typology. See Edward Eigen, "The Place of Distribution: Episodes in the Architecture of Place," in *Architecture and the Sciences: Exchanging Metaphors,* ed. Antoine Picone and Alessandra Ponte (New York: Princeton Architectural Press, 2003), 52-79.

26 The Royal Commission for Jubail and Yanbu, *10 Years of Accomplishments* (Riyadh: the Royal Commission, 1986).

to its formal presence in the landscape. Improvement and experiment, the twin pillars of Jubail and Yanbu's environmental program, were thus set in motion.

Overseeing these human technicians was the Royal Commission's Environmental Control Department (ECD), established in the same year, 1975, as the directorate's founding. This unit would contribute to the country's goal of building the cities into models of environmentally-sensitive manufacturing centers, and kept regional offices at both Jubail and Yanbu. The ECD also outlined regulations, health codes, and permitting standards. Environmental Impact Assessments (EIA), drawn from international standards, constrained initial designs submitted by Bechtel and TAC. Such policies steered the assemblage of infrastructures toward not only petrochemical production, which was the development's *raison d'être*, but to the production of its environment. Waste processing facilities, like a compost plant for non-hazardous and biodegradable materials, produced compost for the aforementioned horticulture activities, while stabilization and land-filling techniques furnished buildable ground out of the industrial detritus.[27]

Each one of these environmental-regulatory technologies demonstrates how Jubail and Yanbu enrolled the landscape in their project of petrochemical city-making. They also show how this landscape had to be simultaneously protected from inordinate strain and refigured into a technical object for this system to work. Promotional literature toggles between a view of the landscape as having previously been inhospitable and desolate, and a newly-lush setting, made possible by earthworks, infrastructures, and monitoring. In other words, the landscape could only be thought through the lens of the envirotechnical system. An example: despite its harsh characteristics, the Royal Commission notes that a number of desert-resistant flora and fauna existed at the sites before construction began, including camels, foxes, snakes, and a variety of migratory and endemic bird species.

Far from destroying these populations, the cities brought them forth: the landscape program provided habitat for newly flourishing birds, which expatriate Royal Commission employees documented in a dedicated publication.[28] Coastal waters featured coral reefs and offshore islands, while halophyte vegetation grew in low-lying marshes. These elements restricted certain areas of development while allowing for others. The deepwater port structures and navigational channels utilized conserved mangroves and reefs as natural infrastructural protection against storm surges, where protected areas formed a working landscape for industrial activity.[29] Touting its balanced development through ecological landscapes, the Royal Commission constructed an image of the envirotechnical system par excellence: the city as pristine, untouched natural

27 Waseem Akhtar, "Protection of Environment and Public Health in Jubail and Yanbu: The Royal Commission Efforts," *Arab News* (June 5, 2009).

28 Peter Baldwin and Brian Meadows, *Birds of Madinat Yanbu Al-Sinaiyal* (Riyadh: the Royal Commission, 1990).

29 The Royal Commission for Jubail and Yanbu, *15 Years of Accomplishments* (Riyadh: the Royal Commission, 1991).

habitat, thriving with the help of technologies and regulations implemented as a socio-political state program.

In 1988, to recognize these accomplishments, the United Nations awarded the Royal Commission of Jubail and Yanbu its International Sasakawa Environment Prize for the organization's "successful bringing together of industry and government, and for excellent planning and implementation of environmentally sound management plans."[30] Established in 1982, under the United Nations Environment Program (UNEP), the award was devised to fill a considerable gap in the kinds of projects lauded by global institutions. The Nobel Prize, officials noted, had no provisions for environmental or ecological studies and advancements; the Sasakawa Environment Prize would therefore be of a "distinctional parity."[31]

The prize, underwritten by the Nippon Foundation, highlighted sterling examples of what was coming to be termed "sustainable development" in second and third world countries. Further documentation is conspicuously absent from the UN archives—oddly, 1988 was the prize's only missing entry in the records of Secretary-General Javier Pérez de Cuéllar. However, it's possible to speculate on the genealogy of "sustainable development" as a guiding set of principles for both spatial and petrochemical management.[32] If a contemporary understanding of this term emphasizes the containment of urban territory, so as to lessen its sprawling ecological impact, the Royal Commission's ECD instead supervised the selective containment of petrochemicals from accidental incursion. The symmetry of these practices, from urban strategy to environmental control, demonstrates the transposable nature, conflicting mandates, and scalar flexibility of institutionalized environmental expertise.[33]

Productive Dispersal and Petrochemical Dispersion

As late-modern industrial hubs, however, Jubail and Yanbu are more likely the results of opposite forces. Although planned and managed by a centralized monarchy, the development of the cities stands at a juncture of production models, in the marked shift from the centralized postwar factory to its decentralized and distributed successor.[34] The increasing international location of industrial development – the spatial dislocation of capital from core to periphery – is usually attributed to the strategic decisions of multinational corporations in pursuit of comparative advantage. In the case of petrochemicals, however, a

30 "International Environment Sasakawa Prize for 1988 Awarded to World Commission on Environment & Development and Royal Commission for Jubail & Yanbu of Saudi Arabia," *Environmental Conservation*, Vol. 15, No. 3 (1988): 273.

31 "International Environment Sasakawa Prize for 1988," 273.

32 Summary of AG-019 Secretary-General Javier Pérez de Cuéllar (1982-1991), S-1051-006 – S-1051-0038.

33 This symmetry can be seen in another spatial-to-biophysical register: from Cold War containment strategy to the containment of nuclear fallout.

34 For an analysis of this shift in the context of scientific research and artistic production, see: Peter Galison and Caroline Jones, "Factory, Laboratory, Studio: Dispersing Sites of Production," in *The Architecture of Science*, ed. Peter Galison and Emily Thompson (Cambridge: MIT Press, 1999), 497-540.

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combination of market dynamics and state intervention led to the industry's dispersal into developing countries, characterized less by relocation than differential growth. The watershed of this change was 1973-1974, as production capacity plateaued in Western Europe and in the US, but net global output continued to rise. Engineering contractors such as Bechtel were important conduits for the transfer of technology, but the technology was at this point widely available, granting its recipients the bargaining power for the self-led development of petrochemical infrastructure.[35]

Administrators found that although they had the capital to purchase this technology, the country did not have sufficient manpower to absorb it. In other words, Saudi Arabia benefited from the worldwide dispersal of petrochemical manufacturing, but still could not meet the knowledge requirements demanded of its citizens. As one anonymous Bechtel executive put it, "the bottleneck is labor, from the top management level on down to the bricklayer."[36] In the rush towards development, Saudi Arabia had perhaps underestimated the difficulty in molding a rural, agrarian society into an urban, industrialized one. The construction executive's allusion to both petroleum expertise and the labor building the city makes clear the interdependencies of oil and architecture: without the directors managing resource logistics, there would be no reason for physical buildings; and without the architecture of administration, there would be no means of managing these flows.

To this end, the Royal Commission established a Human Resources Development Institute in both Jubail and Yanbu in order to keep pace with

Fig. 7

Technicians collecting samples from air monitoring equipment. Source: The Royal Commis-sion for Jubail and Yanbu, 15 Years of Accomplishments (Riyadh: The Royal Commission, 1991).

35 Keith Chapman, "Agents of Change in the Internationalization of the Petrochemical Industry," *Geoforum*, Vol. 23, No. 1 (1992): 13-27.

36 Youssef M. Ibrahim, "Development Rush in Mideast Slowed by Hunt for Skills," *New York Times*, Feburary 20, 1978.

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the goals of successive five-year plans. The intent was much the same as the country's bet on a home-grown petrochemicals industry: rather than shower American experts with lucrative contracts, Saudi Arabia would seek to build up its own class of technocrat managers.[37] The institute began as a skills training center established by the Royal Commission in 1978. With the construction of a new campus and administrative headquarters in 1982, it upgraded to an institute, and finally a full-fledged engineering and business college, the Jubail Industrial College, in 1989.[38] The centrality of this institute to the Royal Commission's overall goals demonstrates the degree to which human or knowledge resources were coeval to the more traditionally understood resources of oil. In aerial views of the institute's Jubail plan, a series of interconnected octagonal structures are linked by radial wings. An administrative structure serves as the entryway to the campus, while on either side training centers and student housing continue the octagonal motifs. Beyond this a central courtyard overhung by a tent-like skrim provided a meeting place for faculty and students, shrouding the institute's charges from the harsh desert sun. **[Fig. 7]** As one of the architectural centerpieces of Jubail, the Huma Resources Development Institute cultivated the future technicians of the city and the country at large's worldwide petrochemical diffusion.

It was not only high-modernist industrial sectors that were transformed by the new epistemological and material basis of oil, but traditional agricultural practices as the country sought to build up its agricultural sectors by utilizing the array of petrochemicals it was now producing. The fertilizer industry was a key component in achieving this goal, without which the country would be hard-pressed to inspire its soil to abundance. Fertilizer production facilities were state-owned and joint-venture enterprises under the broader SABIC organization, a consortium composed of individual companies in partnership with multinational firms; these utilized industrial feedstock like methane gas. As primary

Fig. 8

Human Resources Development Institute at Jubail shows the octagonal administrative center in foreground, student housing at right, and training wings at left. Source: The Royal Commission for Jubail and Yanbu, 15 Years of Accomplishments (Riyadh: the Royal Commission, 1991).

37 Don A. Schanche, "'Instant' Cities Sprout in the Desert as Saudis Act to Ease Oil Dependence," *Los Angeles Times*, February 17, 1981.

38 This college is still in operation today: http://www.jic.edu.sa/en/about/Pages/default.aspx. Accessed June 8, 2021.

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industries that took natural gas byproducts to produce chemicals for domestic or international use, these companies synthesized a new material basis of environmental growth.[39]

These companies initiated Saudi Arabia's own "green revolution" and created a "green desert" in the place of an unproductive one. Where such developments in other countries signaled the intervention of global institutions such as the Ford Foundation and the World Bank, and are said to have disrupted traditional farming practices in the name of multinational profiteering, this was a charge led by Saudi Arabia itself.[40] Furthermore, the newly verdant landscape did not follow from chemical innovations alone: it required the combined tools of architectural construction, petrochemical infrastructure, and communication channels between industrial colleges and state-led industrial consortiums.

Crude Translations and Contingent Planning

The worldwide diffusion of petrochemicals and the political economy of oil that governed its trajectories, in turn, structured the physical layout of the two cities, ebbing and flowing in tandem with the vagaries of this unpredictable market. Officials had to ensure that planning frameworks took into account such unknowable resource futures. In other words, they should be infinitely extensible

Fig. 9

CRS residential housing in Yanbu demonstrates human-scaled regionally inspired form. In their repetitive plan-form and accretive morphologies, housing formed the crux of the flexible city making by which Jubail and Yanbu would develop. Source: Charles E. Lawrence, Saudi Search (Houston, TX: CRSS Research Division): 11-13.

39 Robert Crane, *Planning the Future of Saudi Arabia: A Model for Achieving National Priorities* (New York: Praeger Publishers, 1978).

40 SABIC's first chairman, Ghazi Abdul Rahman Al Gosaibi, was part of a new generation of technocrats in the 1970s who resisted the authoritarian and traditionalist monarchy. Gosaibi was known fondly as Saudi Arabia's "godfather of renovation." See Henry H. Albers, *Saudi Arabia: Technocrats in a Traditional Society* (Bern: Peter Lang Publishing, 1989).

and yet remain contingent in nature.[41] Residential sectors of the industrial cities can be seen as a barometer for this contingent planning in both its sectoral arrangement coupled with development plans and their ultimate occupancy. Though comprehensive in scope, the plans formed a flexible conceptual framework for both the physical layout and social infrastructures of the projected city. In addition to landscaping and soil, therefore, these housing communities would constitute the ideal growth patterns for the city in strategic phased dimensions, allowing officials to test and refine specific designs through its earliest development. [42] [Fig. 8]

Plans for the cities allowed for such contingent arrangement by virtue of their open district framework, nucleated into individual urban areas and linked by highways and green corridors. Comprehensive development could thereby proceed in a cohesive fashion, but in a phased manner that would not overextend the country's resources. Saudi planning officials emphasized flexibility as the key to this mode of planning in both spatial requirements and programming: flexible arrangements allowed for this reassessment to occur, which in turn affected the rate and order of change at ground level. These updated decisions were to incorporate the forecasting of future resources on the one hand, and the translation of plan components into locational distribution on the other.[43] This translation entailed a number of simultaneous processes: the "translation" of crude oil into value-added petrochemicals; the exchange of products for currency on the world market; the allocation of capital to plan components; and the reorientation of components in relation to available resources. Extensible districting through residential sectors was both the precondition for contingency planning, as well as the object of the plan's periodic stock-taking.

As a project manager for Bechtel in Jubail in the 1970s, architect Gordon Linden helped direct these modifications. After completing his bachelor of arts in architecture at Berkeley in 1968, Linden joined the Peace Corps and served in Venezuela, working on a number of municipal projects there. Upon returning to the US and completing a master of urban planning at the University of Southern California, Linden was hired by Bechtel to go back to Venezuela, where he worked on the planning of cities around oil refineries in the states of Anzoátegui and Monagas. This experience of building social infrastructures alongside oil infrastructures in a nation contending with vast resource wealth led directly to his work for Bechtel, when his friend Michael Cobb asked him to go to Saudi Arabia in his stead. Linden was tasked with updating the conceptual iteration of the master plan, which was almost at its second five-year phase, around 1978.[44]

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41 For a discussion on the "pattern" of development as a flexible model attuned to the contingencies of cultural and economic circumstance, see: Arindam Dutta, *The Bureaucracy of Beauty: Design in the Age of Its Global Reproducibility* (London: Routledge, 2004). See also: M. Ijlal Muzaffar, "Fuzzy Images: The Problem of Third World Development and the New Ethics of Open-Ended Planning at the MIT-Harvard Join Center for Urban Studies," in *A Second Modernism: MIT, Architecture, and the "Techno-Social" Moment*, ed. Arindam Dutta (Cambridge: MIT Press, 2013), 310-341.

42 *Madinat Al-Jubail Al-Sinaiyah: Mokhtat Al-Mantikah Al-Sakaniyah* (Riyadh: the Royal Commission, 1978), 8.

43 *Madinati Al-Jubail Al-Sinaiyah 1403 H. Master Plan Update* (Riyadh: Royal Commission, 1983), 21.

44 Gordon Linden, in an interview with the author, conducted by phone on March 20, 2018.

Part and parcel of these five-year planning phases were interdisciplinary studies undertaken by firms contracted under Bechtel's directive, including but not limited to environmental, sociological, demographic, and future estimates. These statistical operations used space planning techniques for the projected populations of plant workers and combined these with the desired social institutions such as schools and hospitals. Linden stated:

> The hierarchy of industry has attached to it a logic of employment, housing, family status, etc. It all trickles down to demand for community facilities. It changes all the time because of technology and industry change. What was done twenty years ago for steel or plastics isn't done anymore, so that changes the whole structure of what you need. As far as infrastructure, that's one of the gambles of the master plan is that you establish some threshold for the services—power, telecom, water—and then you invest in a phasing. That allows you to say we're going to build two hundred units over here, a school over here, a park. If there's no take-up on the units, then you defer for another five years. [45]

Linden's conceptual equivalence between architectural production and petrochemical production reveals the co-construction of these two fields at Jubail and Yanbu, where the global political economy of oil regulated the spatial program of city-making. This is where petroleum as both process and form takes shape and where its materiality inflects the life-worlds of its administrators. Circulation of petrochemicals acquired an identifiable figure as it advanced across the envirotechnical system laid out by planners, architects, engineers, and officials.

Conclusion

As we have seen, the geophysical administration of transformed earth-matter served as the analogical precursor to the management of the city, its petrochemical infrastructure, and its populations. Technopolitics came to be imbricated with the materiality of the landscape, producing a hybrid formation, the envirotechnical system, that projected an incongruous image of wildlife and extraction pleasantly coexisting cheek-by-jowl. For the planners of Saudi Arabia's grand new cities, an ecologically infused system thinking naturalized the diffusion of petrochemicals and charted a path for achieving system stability. Architects aided in this administration of the extractive environment through their attention to chemical and energetic synthesis across tabula rasa landscapes, which became yet another self-correcting causal mechanism in the accumulation of petro-capital. In Saudi Arabia, oil came to be regarded as the principal force for the construction of society, at a time when Western countries saw energy scarcity as a threat to dearly held ways of life. The growing role of energy "information" and computer data helped direct these efforts, as immaterial "resources" signaled ways of transcending apparent limits to growth. The architecture of

45 Gordon Linden, in an interview with the author, conducted by phone on March 20, 2018.

oil in Saudi Arabia, therefore, includes the immense master plans of Jubail and Yanbu, the laboratories and infrastructures within them, as well as the landscapes manipulated and reshaped in their name.

Bibliography

Albers, Henry H. *Saudi Arabia: Technocrats in a Traditional Society*. Bern: Peter Lang Publishing, 1989.

Ammon, Francesca R. Bulldozer: *Demolition and Clearance of the Postwar Landscape*. New Haven: Yale University Press, 2016.

Akhtar, Waseem. "Protection of Environment and Public Health in Jubail and Yanbu: The Royal Commission Efforts." *Arab News*, June 5, 2009.

Armstrong, David M. "Dispersal vs. Dispersion: Process vs. Pattern." *Systematic Biology*, Vol. 26, No. 2 (June 1977): 210-211.

Baldwin, Peter and Brian Meadows. *Birds of Madinat Yanbu Al-Sinaiya*. Riyadh: The Royal Commission, 1990.

Belanger, Pierre. *Extraction Empire: Undermining the Systems, States, and Scales of Canada's Resource Empire*, 1217-2017. Cambridge: MIT Press, 2018.

Benson, Etienne. *Wired Wilderness: Technologies of Tracking and the Making of Modern Wildlife*. Baltimore: Johns Hopkins University Press, 2010.

Bern, Lars. "The Creation and Concentration of Natural Capital: Two Examples." *Ambio*, Vol. 2, No. 7 (November 1993): 495-496.

Blau, Eve. *Baku: Oil and Urbanism*. Zurich: Park Books, 2018.

Cayer, Aaron. "Shaping an Urban Practice: AECOM and the Rise of Multinational Architecture Conglomerates." *Journal of Architectural Education*, Vol. 73, No. 2 (October 2019): 178-192.

Chapman, Keith. "Agents of Change in the Internationalization of the Petrochemical Industry." *Geoforum*, Vol. 23, No. 1 (1992): 13-27.

Coen, Deborah. *The Earthquake Observers: Disaster Science from Lisbon to Richter.* Chicago: University of Chicago Press, 2013.

Crane, Robert. *Planning the Future of Saudi Arabia: a Model for Achieving National Priorities*. New York: Praeger, 1978.

Davidson, Frank P. "Macro-engineering: mammoth projects need love, too." *Christian Science Monitor*, December 17, 1980.

Davidson, Frank P. *Macro-engineering and the Infrastructure of Tomorrow*. Boulder, CO: American Association for the Advancement of Science by Westview Press, 1978.

Denton, Sally. *The Profiteers: Bechtel and the Men Who Built the World*. New York: Simon & Schuster, 2016.

Dowie, Mark. "The Bechtel File: How the Master Builders Protect Their Beachheads." *Mother Jones*, (September-October, 1978): 28-38.

Dutta, Arindam. *The Bureaucracy of Beauty: Design in the Age of its Global Reproducibility*. London: Routledge, 2004.

Eigen, Edward. "The Place of Distribution: Episodes in the Architecture of Place," in Antoine Picone and Alessandra Ponte (eds.), *Architecture and the Sciences: Exchanging Metaphors*. New York: Princeton Architectural Press, 2003.

Edwards, Paul. *The Closed World: Computers and the Politics of Discourse in Cold War America*. Cambridge, MA: MIT Press, 1996.

Edwards, Paul. *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* Cambridge. MA: MIT Press, 2010.

Fend, Peter. *Ocean Earth: 1980 bis heute*. Stuttgart: Oktagon-Verlag, 1994.

Finnie, Richard. *Bechtel in Arab Lands: A fifteenth-year review of engineering and construction projects*. San Francisco, CA: Bechtel Corporation, 1958.

"Foundations: The New Cities." *Aramco World Magazine 33*, no. 6 (November-December 1982): 30-40.

Gabrys, Jennifer. *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet.* Minneapolis: University of Minnesota Press, 2016.

Galison, Peter and Caroline Jones. "Factory, Laboratory, Studio: Dispersing Sites of Production." In *The Architecture of Science*, edited by Peter Galison and Emily Thompson. Cambridge: MIT Press, 1999.

Gropius, Walter. *The Architects Collaborative, 1945-1965*. New York: Architectural Book Pub. Co., 1966.

Hagen, Joel B. *Entangled Bank: The Origins of Ecosystem Ecology*. New Brunswick, NJ: Rutgers University Press, 1992.

Hecht, Gabrielle, ed. *Entangled Geographies: Empire and Technopolitics in the Global Cold War*. Cambridge: MIT Press, 2011.

Hein, Carola. "Oil Spaces: The Global Petroleumscape in the Rotterdam/The Hague Area." *Journal of Urban History 44*, no. 5 (2018): 887-929.

Hughes, Thomas P. "The Evolution of Large Technological Systems." In *The Social Construction of Technological Systems*, edited by W.E. Bijker, T.P. Hughes and T.J. Pinch. Cambridge: MIT Press, 1987.

Ibrahim, Youssef M. "Development Rush in Mideast Slowed by Hunt for Skills." *New York Times*, Feburary 20, 1978.

"International Environment Sasakawa Prize for 1988 Awarded to World Commission on Environment & Development and Royal Commission for Jubail & Yanbu of Saudi Arabia." *Environmental Conservation 5*, No. 3 (1988).

Jarzombek, Mark. "ARUPtocracy and the Myth of a Sustainable Future." *Thresholds* 38 (2011): 64-65.

Kubo, Michael. "Architecture Incorporated: Authorship, Anonymity, and Collaboration in Postwar Modernism." PhD diss., Massachusetts Institute of Technology, 2018.

Light, Jennifer. *From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America*. Baltimore: Johns Hopkins University Press, 2004.

Lynch, Kevin. *Site Planning*. Cambridge: MIT Press, 1962.

Muzaffar, M. Ijlal. "Fuzzy Images: The Problem of Third World Development and the New Ethics of Open-Ended Planning at the MIT-Harvard Join Center for Urban Studies." In *A Second Modernism: MIT, Architecture, and the "Techno-Social"*, edited by Arindam Dutta. Cambridge: MIT Press, 2013.

Odum, Howard T. "Energy, Ecology, and Economics." *Ambio*, Vol. 2, No. 6, Energy in Society: A Special Issue (1973): 220-227.

Odum, Howard T. *Environment, Power, and Society*. New York: Wiley-Interscience, 1971.

Odum, Howard T. *Systems Ecology: An Introduction*. New York: Wiley, 1983.

Pampanini, Andrea. *Cities from the Arabian Desert: The Building of Jubail and Yanbu in Saudi Arabia*. Westport: Praeger Publishers, 1997.

Parker T. Hart Papers (#9026), American Heritage Center.

Pritchard, Sara. *Confluence: The Nature of Technology and the Remaking of the Rhone*. Cambridge: Harvard University Press, 2011.

Pritchard, Sara. "The Nature of Industrialization." In *The Illusory Boundary: Environment and Technology in History, edited by* Stephen H. Cutliff and Martin Reuss. Charlottesville: University of Virginia Press, 2010.

The Royal Commission for Jubail and Yanbu. *10 Years of Accomplishments*. Riyahd: the Royal Commission, 1986.

The Royal Commission for Jubail and Yanbu. *15 Years of Accomplishments*. Riyahd: the Royal Commission, 1991.

The Royal Commission for Jubail and Yanbu. *Madinat Al-Jubail Al-Sinaiyah: Mokhtat Al-Mantikah Al-Sakaniyah*. Riyadh: the Royal Commission, 1978.

The Royal Commission for Jubail and Yanbu. *Madinati Al-Jubail Al-Sinaiyah 1403 H. Master Plan Update*. Riyahd: the Royal Commission, 1983.

Saudi Arabia Basic Industries Corporation, 1994 Annual Report.

Schanche, Don A. "'Instant' Cities Sprout in the Desert as Saudis Act to Ease Oil Dependence." *Los Angeles Times*, February 17, 1981.

Taylor, Peter J. "Technocratic Optimism, H.T. Odum, and the Partial Transformation of Ecological Metaphor after World War II." *Journal of the History of Biology*, Vol. 21, No. 2 (Summer 1988): 213-244.

The Architects Collaborative (TAC) Collection, MIT Museum.

Technology Transfers to the Members of OPEC: Hearings before the Subcommittee on Domestic and International Scientific Planning, Analysis and Cooperation, U.S. House of Representatives, 95th Congress (2), September, 1978.

Tombesi, Paolo. “The Carriage in the Needle: Building Design and Flexible Specialization Systems.” *Journal of Architectural Education*, Vol. 52, No. 3 (Feb. 1999): 134-142.

Vitalis, Robert. *America’s Kingdom: Mythmaking on the Saudi Oil Frontier*. New York: Verso, 2009.

Worster, Donald. *Nature’s Economy: A History of Ecological Ideas*. Cambridge, UK: Cambridge University Press, 1994 [1977].

Ben Tosland

Between tradition and modernity: Max Lock and the Ubullah Neighbourhood Plan

Tradition, Modernity, Planning, Architecture, Basra

/Abstract

Ubullah is a zoned neighbourhood to the north of Basra, which the British planner and architect Max Lock was commissioned to plan in 1956 by the Basra Port Directorate. This followed a series of separate but relatable plans in southern Iraq completed in plan form during the previous two years. This article critically assesses how the Ubullah Neighbourhood Plan straddles both tradition and modernity within Iraq's wider developing context, both through its physical architectural and townscape features, as well as its segregated location, away from the city centre. Owing to Basra's location, within Iraq yet close to the Gulf, it negotiates wider geographies than its national picture; Lock's plan acknowledged these through the scale to which he planned and the forms and types of building he aimed to procure through the publication of the Ubullah Neighbourhood Plan. This article further places the plan within its architectural and planning context, illustrating similar modern works within the Gulf, Iraq and Europe which forms Lock's professional context. Ultimately, the plan was doomed to failure; from the outset, it was a plan that made sense for Lock to complete due to his portfolio of work in Basra and southern Iraq, yet difficulties with the location's proximity to the city and its cut off nature meant Ubullah would be an isolated enclave on the periphery of the city. In addition, national politics and growing disquiet with the influence of the British within Iraq and neighbouring countries in the Gulf ensured the Ubullah plan by Lock was shelved.

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Dr. Ben Tosland holds a Ph.D. in architecture from the University of Kent where he studied the works and influences of European architects working in the Persian Gulf between 1956 and 1982. He has published works on the planner and architect, Max Lock, and his work in Basra and more widely in southern Iraq. He recently published a review of Lukas Stanek's Architecture in Global Socialism: Eastern Europe, West Africa and the Middle East in the Cold War in the EAHN's Architecture Histories journal. Other work forthcoming includes an article in the Twentieth Century Society's journal on British architects working abroad and a piece on Rifat Chadirji for the Collective for Architecture Lebanon. He is currently working on a project which involves the architects Gillian Hopwood and John Godwin's work in Nigeria throughout the twentieth century.

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Introduction[1]

Today historians widely accept that the narrative of modernism includes the global south, though this has not always been the case. Within this expanding chronicle, Max Lock's (1909-88) international work – particularly his master plans in southern Iraq, roles working for the UN in Iraq and Jordan, extensive lecture tours through India, Sri Lanka and South America as well as university teaching commitments -- has been overlooked.[2] It was common practice for planning consultants to journey far for an array of government agencies in the post-war period, encapsulated in personal correspondence between Lock and a friend to which she commented 'while you travel all over the world I will not lead a stick-in-the-mud life!'.[3] The commonality of peripatetic Western – predominantly British -- planners and architects working in the Gulf during the 1950s resulted from the heavy-handed influence of capital, imperial interests in oil and trade routes through the region.[4] In general, foreign experts worked on hierarchical, capital-led schemes, planting new pieces of urban fabric - a familiar narrative in the nineteenth and twentieth centuries, established in existing literature, with specific reference to the work of Robert Home, Anthony King, Mark Crinson and Iain Jackson.[5] In some respects, the status of the British expert abroad was sometimes self-congratulatory; the March 1957 edition of *Architectural Digest,* titled 'In the Middle East', Raglan Squire's haughty editorial declared that Britain 'led the way in town planning' and that 'serious architects seek to develop a regional style'.[6]

Combining both contemporary planning theory with the development of regionalism, Max Lock and Partners accepted a commission from the Basra Port Directorate for a neighbourhood plan, in an area known as Ubullah, in northern Basra in 1956. Through an international network of designers, and benefitting from the Iraqi British influenced, colonial system sympathetic to the Western expert, Lock gained several contracts in southern Iraq. The scheme for the small 365.5 acre site at Ubullah was mentioned in embryo in an earlier plan

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1 Archive abbreviations used: MLA - Max Lock Archive, University of Westminster; FCO - Foreign and Commonwealth Office, papers from the National Archives at Kew; BP ARC – British Petroleum Archive, held at the University of Warwick. All other archives are denoted with their full title where necessary.

2 Several British officials sat on the Iraq Development Board, including M. G. Ionides, the former secretary of the British National Council of Building Material Producers and Director of Development in Jordan, meaning Lock had significant connections to gain work in Iraq, as well as being popular among the architectural and political elite at the time.

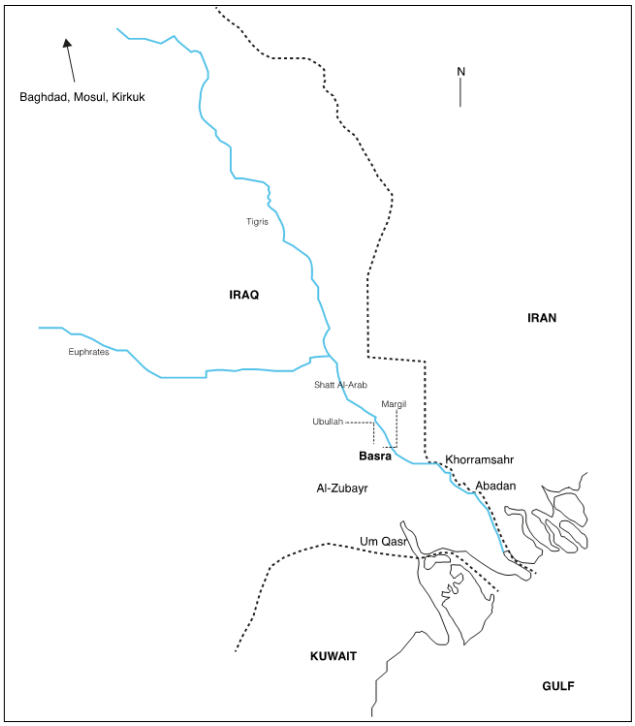
3 MLA 4.8, Letter: Rebecca to Max Lock (20th November 1957).

4 Gwendolyn Wright defined and etymologised the word 'peripatetic' as deriving from *'peripatētikos*, referring to Aristotle's practice of continually walking to and fro while teaching… strangers may notice qualities that locals don't see, whether because of overfamiliarity or simply being bogged down in the myriad details of specialised knowledge'; Gwendolyn Wright, "Architects as Migrants", in *The Arab City: Architecture and Representation*, eds. Amale Andraos and Nora Akawi (New York: Columbia University Press, 2016), 74.

5 Robert Home, *Of Planting and Planning: The Making of British Colonial Cities* (Oxford: Routledge, 1997); Lukas Stanek, *Architecture in Global Socialism: Eastern Europe, West Africa and the Middle East in the Cold War*(Princeton: Princeton: University Press, 2020); Iain Jackson, & Jessica Holland, *The Architecture of Edwin Maxwell Fry and Jane Drew* (London: Routledge, 2014); Anthony D. King, *Spaces of Global Cultures: Architecture, Urbanism and Identity* (London: Routledge, 2006); Mark Crinson, *Empire Building: Orientalism and Victorian Architecture* (London: Routledge, 1996); Mark Crinson, "Abadan: planning and architecture under the Anglo-Iranian Oil Company", *Planning Perspectives* 12,no. 3 (1997): 341-359.

6 Raglan Squire, ed., "In the Middle East", *Architectural Digest* (March 1957): 73–108. Full quote reads: 'serious architects seek to develop a regional style: perhaps within the next decade they will have found the way'.

for Margil (1955), by Lock, also in north Basra **[Fig. 1]**, partly suggesting it made sense for Lock to undertake the commission.[7] Added to this, Lock's practice worked on a major plan for Basra (1956) and for the port of Um Qasr (1955), with Lock exclaiming in a phone call to Squire that the addition of work in Ubullah would 'suit me very well!'.[8] Lock's planning methodology was a departure from the top-down approach exhibited elsewhere in the world during this period. His pioneering, socially-led principles using specialist consultants and building specifically for 'artisans, junior clerical staff and workmen' exemplified this.[9] Lock's objectives for the project, in his words, was to 'design one [neighbourhood] that is economical to build, that is sociologically integrated, that respects the tradition of living established among Iraqi families, and aims at minimizing extremes of climate' and as such, this article critically evaluates these objectives alongside the finalised plan within the wider context of development in the Arabian Gulf.[10]



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The absence of interest in Lock's career until now is an oddity when considering his connections with politically powerful figures and members of the architectural establishment. He was an important figure in political circles, having designed a house for the director general of the Basra Port Directorate, Sami Fatur, and it is thought from correspondence that it is likely King Faisal II knew of Lock's architectural work.[11] On top of this, and prior to undertaking work in Iraq, he was commissioned in 1952 by Nehru – then president of India – to conduct a review into the progress of housing and town development in the country.[12] Notwithstanding these acquaintances, he worked with some of the most progressive thinkers, planners and sociologists of his day to produce his plans. Material uncovered in Lock's archive suggests that he mixed with leading modernist architects, including Serge Chermayeff, Josep Lluís Sert and Walter Gropius while working at Harvard University in 1957; professionally, he worked with Jacqueline Tyrwhitt, Griselda Rowntree and Ruth Glass who all – each in their own right – were imperative to establishing holistic

7 Ben Tosland, "Planning southern Iraq: placing the progressive theories of Max Lock in Um Qasr, Margil, and Basra in the context of Iraqi national development, 1954-1956", *Planning Perspectives* 34, no. 6 (2019): 1023-1044.

8 MLA 10.5, Letter: Max Lock to R. C. Kelt (OBE) of the Port Directorate, (4th Feb 1955). Lock said Squire was apparently 'anxious to get the work of planning Mosul but no longer particularly keen to step into the field of Basrah'

9 Esra Akcan, *Architecture in Translation: Germany, Turkey and the Modern House* (Duke: Duke University Press, 2012); MLA 6.20, Lock, M. (1956) *Ubullah Neighbourhood Plan*, (Unpublished Plan: Max Lock and Partners)

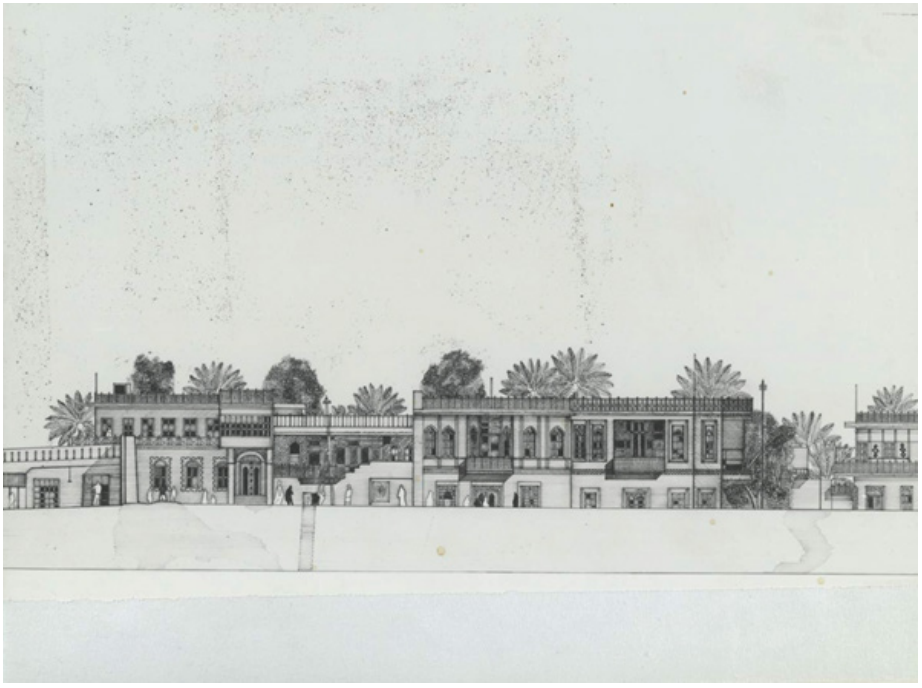
10 Lock, *Ubullah Neighbourhood Plan*, 11.

11 MLA 12.2, Letter: Max Lock to R. D. Gwyther of Coode and Partners, (27th May 1954); For Lock's biographical details, see: Tosland, "Planning southern Iraq", 1025-1026.

12 MLA 10.5, Letter: R. C. Kelt to Max Lock, Comments on the design for the Director General's House, (21st February 1955), the exact wording of the letter is as follows: 'I think you can assume that the scheme is for one building only and I know that the Director General (Sami Fatur) explained this scheme to His Majesty when he was in Baghdad recently'; MLA 10.5, Letter: Max Lock to R. C. Kelt (OBE) of the Port Directorate, (4th Feb 1955), in this long letter, Lock makes reference to designing a bedroom for the Crown Prince in the house for 'His Majesty'.

Fig. 1

Map of southern Iraq, showing the locations in which Max Lock and Partners produced plans but also the proximity to both Iranian and Kuwaiti borders (Author, 2019)



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sociologically led approaches to planning in the mid-twentieth century.[13] Other contemporaries working in similarly sensitive fashions included the likes of Doxiadis Associates and Lewis Mumford, both of whom were influenced by Patrick Geddes.[14] Crossovers between those he worked with and those who had similar methods were common, as such, Tyrwhitt worked with Lock on earlier iterations of the more well-known Middlesbrough Survey (1944) but also forged a professional relationship with Constantinos Doxiadis, with whom she cofounded and edited the influential journal, *Ekistics*, from 1955.[15]

Methodology

This essay builds largely upon an earlier published work in *Planning Perspectives* on Max Lock's trilogy of plans in southern Iraq, which neglected an in-depth study of the Ubullah Neighbourhood Plan owing to its position within the earlier plans for Margil and Basra.[16] It further adds to the detailed commentary on the Ubullah Neighbourhood Plan within the PhD thesis *European architects at the confluence of tradition and modernity in the Persian Gulf, 1954-1982*; this essay is an important addition to this owing to its critical stance.[17] When researching and writing about architectural and planning projects in the Gulf, numerous constraints present themselves dictating and limiting choices.

13 Ellen Shoshkes and Sy Adler, "Planning for healthy people/healthy places: lessons from midtwentieth century global discourse", *Planning Perspectives* 24, no. 2 (2009): 197–217,; Tosland, "Planning southern Iraq", 1026.

14 Lefteris Theodosis, *Victory over Chaos? Constantinos A. Doxiadis and Ekistics 1945-1975*, (Unpublished PhD Thesis: Universitat Politècnica de Catalunya, 2015), 205-208; Frank G. Novack, *Lewis Mumford and Patrick Geddes: The Correspondence* (New York: Routledge, 1995); Through the publication of a select 160 letters, Novack's work shows how Mumford was initially influenced by Geddes and developed his own planning methods independent of Geddes.

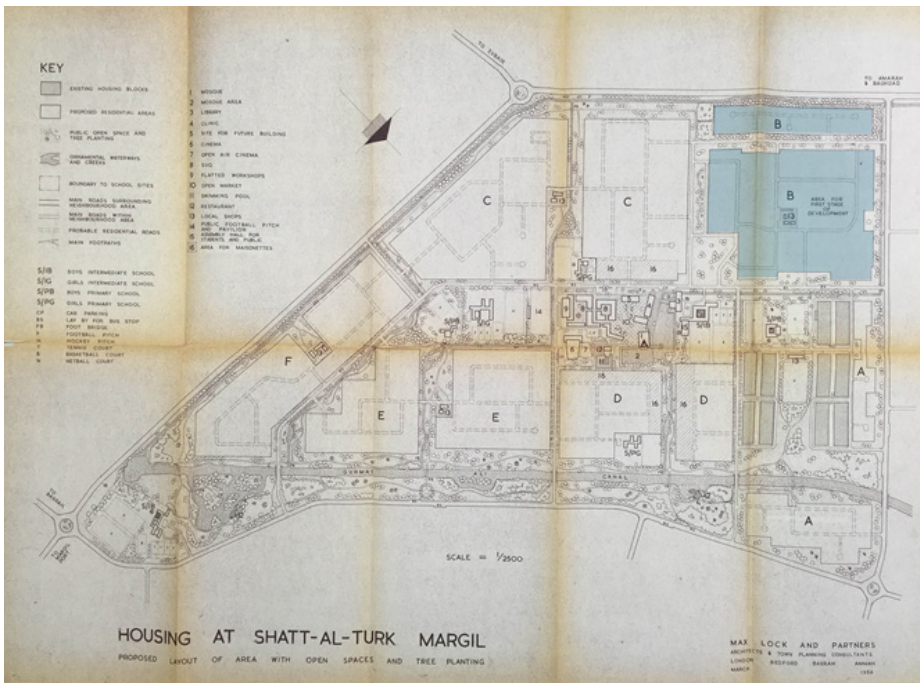
15 Ellen Shoshkes, "Martin Meyerson and Jacqueline Tyrwhitt and the Global Exchange of Planning Ideas", *Journal of Planning History* 9, no. 2 (2010): 75-94 (77).

16 Tosland, "Planning southern Iraq".

17 Tosland, *European architects at the confluence of tradition and modernity in the Persian Gulf, 1954-1982*.

Fig. 2

An example of Makiya's recording of traditional buildings in Baghdad, a method similar to Lock's in the recording of the built environment (ArchNet: taken from the Mohamed Makiya Archive, MIT)



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Importantly, by choosing a scheme located in the Gulf, this enables the context of other architects' work who are habitually overlooked in the literature, such as Mohamed Makiya, to be brought forward and studied showing the significance of these architects rather than the usual Western case studies by architects firmly in the zeitgeist deployed to appreciate lesser-known schemes. Makiya, in particular, with his team at the University of Baghdad sought to record the traditional buildings along the Tigris through detailed drawings [Fig. 2]; this likeness is seen in the photographs that Lock took and have illustrated this essay – it is clear what Lock was seeing in these photographs, as features such as mashrabiya, minarets and tall buildings alongside sleeping terraces in houses all feature within his proposals for Ubullah.

The most important and legible document which underpins this essay was the *Ubullah Neighbourhood Plan*; a twenty-four-page, A4 in size, document that features pull-out A2 size pages with drawings and diagrams to explain and contextualise Lock's proposals. Considering the plan was for a whole section of city, twenty-four-pages is scant, though it makes clear that it is to be read in conjunction with the earlier *New Basrah Plan*, the sociological and economic research of which was extensive.[18] In addition, only Block B out of the seven blocks intended to make up the whole plan was in detail, and the remaining blocks marked on the masterplan in outline [Fig. 3].[19] Ubullah was more or less built from a tabula rasa and Lock had spent months at a time residing in Basra assessing the sociological, economic and climatic factors that went into forming ideas for both plans.

Fig. 3

Map of the layout of Ubullah, showing Area B in the top right (north-west) corner of the neighbourhood which was the only area planned in any sort of detail (MLA 6.20)

18 Lock, *Ubullah Neighbourhood Plan*, 11.

19 MLA 6.20, Housing at Shatt-al-Turk: Proposed Layout of Area With Open Spaces and Tree Planting, November 1956.

Iraq, Max Lock and the Ubullah Neighbourhood Plan

The Ubullah Neighbourhood Plan's publication came during a period of major change in Iraq. Architecture and planning were under the influence of the British-founded Iraq Development Board, which oversaw large changes to Baghdad and the employment of some of the world's leading architects intended to 'trailblaze' the way for contemporary architecture.[20] Fahim I. Qubain's illuminating study, *The Reconstruction of Iraq 1950-57* (1957), shows the financial workings of the Iraq Development Board in this period; crucially he presented the budgets for the 'Development Board Program for 1951-6', where 'Building' had earmarked eighteen million Iraqi Dinars out of a total proposed expenditure of 155 million. To emphasise how large this budget was, Qubain's evidence depicted that despite resolute efforts to spend it there remained a surplus at the end of each year, excusing this problem by suggesting that 'it is not easy to spend money in such magnitude, rapidly and efficiently, on a well-conceived development programme.'[21] Qubain also demonstrated that the client who tendered the Ubullah Neighbourhood Plan, the Basra Port Directorate, was a subsidiary of the Iraq Development Board thus contributing to their development programmes in the form of Soviet style five-year plans.[22] One of the overarching practical intentions of the period, not only to 'raise the standard of living of her [Iraq's] people' was to improve the infrastructural links between the former three distinct Ottoman Vilayets that made up Iraq, regardless of the cultural and geographic differences between the southern area, central and north.[23]

The planning of towns and districts at the microscale, such as Ubullah, thus intended to fit with the macro-vision the Board had for the whole of Iraq.[24] Most schemes designed in the 1950s by Western architects and planners in Iraq remained unrealised, primarily because of the regime change in 1958, also prompting questions about where the eighteen million Iraqi Dinars set aside for building was being spent on, if it was not on material or labour in building?[25] Aside from expensive Western architects' fees, some contemporary sources suggest it might have been lost through bureaucratic corruption or by the Board

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20 Tanis Hinchcliffe, "British Architects in the Gulf, 1950-1980", in *Architecture and Globalisation in the Persian Gulf Region*, ed. by Murray Fraser and Nasser Golzari (London: Routledge, 2013), 23-36.

21 Fahim Qubain, *The Reconstruction of Iraq: 1950-1957* (New York: Praeger, 1957), 40-41: it should also be noted that 70% of this budget was derived from the net revenues received from the oil companies (page 35).

22 Qubain, *The Reconstruction of Iraq*, 20: describes the Basrah Port Authority as being a 'semi-autonomous organisation' referring to the decades before the founding of the Iraq Development Board; FO 371/109887 Letter from D. A. Logan to C. T. E Ewart-Biggs, Foreign Office, 8th May 1954.

23 Qubain, *The Reconstruction of Iraq*, 35.

24 Arthur Salter, *The Iraq Development Board: A Plan of Action* (London: Caxton Press, 1955), 35. Infrastructural projects, including roads and railways, were of importance to the national picture fostered by the Iraq Development Board and the economic and infrastructural reports commissioned to Lord Salter, who had interests in road and infrastructure building both in Britain and Iraq. Growing dependence on Iraqi oil in Britain and the increasing output of oil in Basra further boosted prominence to international logistics within more localised plans at the time.

25 Lukas Stanek, "Miastoprojekt Goes Abroad: The Transfer of Architectural Labour from Socialist Poland to Iraq (1958-1989)", *The Journal of Architecture* 17, no. 3 (2012):361-386; Stanek, *Architecture in Global Socialism:* Following the scrapping of these proposals, schemes thought up by Eastern architects, primarily from Poland, became popular in the ensuing period due to the new political siding with the Soviet Union and the Eastern sphere of influence, as outlined by Łukas Stanek's chapter on Baghdad in *Architecture in Global Socialism* and his earlier articles on Miastoprojekt. However, in this period many of the clients working in Iraq were also Western, and it was events such as the Iraq Revolution that curtailed this trend.

merely being an 'instrument for foreign powers'.[26] Archival evidence looks to confirm the latter; in a report from 1953, the Board were founded to be more favourable in awarding contracts to British firms rather than keeping work inside Iraq, directly contradicting their own aims to train Iraqis to undertake work themselves.[27] Despite these obvious biases, the Board's outward politics sought to appease its critics, with its plan's stipulation that there was the need for education and public health programmes. Ultimately, the Board believed these would create 'more efficient human beings who would make greater contributions to the economic and political development of the nation': a self-thwarted, unsuccessful aim too interested in awarding contracts to their own compatriots.[28]

One of the causes of foreign (primarily British) interest in Basra during the twentieth century was its strategic location that benefitted both trade and the military.[29] Conversely, for the developing nation of Iraq, its position meant it was - to alter a phrase describing the eighteenth century development of St. Petersburg – 'a window to the world'.[30] Basra is located on the Shatt al-Arab river with the Iranian border to its immediate east and Kuwait to the south; Ubullah is close to the major port area at Margil and Basra International Airport both in the north of the city. It had proximity to the Arabian Gulf, of which Iraq had a narrow coastline of just twenty-seven miles, and this period also saw the creation of a port at Um Qasr, which gave access to nautical routes south, east and west towards the Gulf of Aden and the Suez Canal beyond **[Fig. 1]**.[31] Lock's association with the earlier plan for Um Qasr ensured that he was aware of the economic aims of the Iraq Development Board, highlighting the national importance of the building of a sea port. Throughout the planning and production of that report numerous issues presented themselves, which Sami Fatur described as a 'stumbling block', specifically with the border between Iraq and Kuwait encouraging unease between the two nations.[32] In spite of this, Basra's influence grew economically due to its links to the rest of Iraq, the Levant and

26 Stanely J. Habermann, "The Iraq Development board: Administration and Program", *Economic Review* 1, no. 9 (1955): 179-186.

27 FO 371/104702, The National Archives, Unfair procedure of the Iraq Development board in awarding contracts, (1953); Qubain, *The Reconstruction of Iraq: 1950-1957*, 32.

28 Salter, *The Iraq Development Board: A Plan of Action*, 35; Haberman, Economic Review, 179-187: suggests that it was documented that in the creation of irrigation systems, the Board generally opted for American and British consultants while French and German contractors regularly won work because of attractive low bidding; contracts were rarely kept inside Iraq despite this being a public aim of the Development Board.

29 William L. Cleveland & Martin Bunton, *A History of the Modern Middle East* (Philadelphia: Westview, 2016), 195-201.

30 Marshall Berman, *All That is Solid Melts into Air* (London: Verso, 1982), 176-178. Berman writes: 'The building of St. Petersburg is probably the most dramatic instance in world history of modernization conceived and imposes draconically from above… The city was to be, as an early Italian visitor said, 'a window to Europe': in physical terms – for Europe was now accessible as it had never been – but, equally important, in symbolic language. First of all, Peter insisted on establishing Russia's capital here in this new city, with a window open to Europe, and scrapping Moscow, with all its centuries of tradition and religious aura.' Important similarities follow, with Berman describing St. Petersburg's geography as being based around islands and canals, comparing it to other historic merchant hubs such as Amsterdam and Venice, but also that its development was 'draconically' top down – both uncanny similarities to Basra and its development in the 1950s.

31 MLA 3.26, Max Lock, *Report on Um Qasr,* (Unpublished: Max Lock and Partners, 1955), 3.

32 MLA 10.5, Letter: Director General of Ports and Navigation to Max Lock, 2nd July 1954.

Europe beyond.[33] Resulting from economic growth, internal migration and the urbanisation of Iraq's previously rural-based economy, Basra's population rose sixty-one percent to 165,000 people between 1947 to 1957; the success of oil fields in towns like Az Zubayr and the export of its oil through Basra along the riverine links and the Gulf was the catalyst for Lock's various commissions.[34]

Geographically, Ubullah was made up of 'virtually desert of alluvial sub-soil and sand, without trees', only marked by the earlier completion of 200 houses which were part of a failed attempt at building 3,000 dwellings for 15,000 people.[35] Lock took this plan, originally intended to be on a grid-iron of straight streets and altered it to become a more detailed 'township' which prioritised both socially contextual housing, within an area focusing significantly on the urban realm **[Fig. 3]**. Ubullah was a departure from previous Western designed Gulf company towns spatially, this is most notable when juxtaposed against the layouts of Abadan and Ahmadi by the aforementioned Wilson Mason and Partners whose work broadly characterised the actions of European architects in this region.[36] While not quite from nothing, one of the aims of the Ubullah scheme was to integrate the existing 'isolated' housing blocks within a plan that focused on the 'character of each housing community, to the landscaping and civic design […] and the arrangement of open spaces and water courses'.

Lock's own ideological position drew upon Geddes' theory of conservative surgery to create his plans and architecture, using what he called *civic diagnosis*, a term coined with the aid of Glass.[37] The theory would imply that there would need to be some sort of malleable urban fabric to shape, yet the principles of it could still be applied to an area of land which was broadly featureless, as Ubullah was.[38] The edges of Ubullah are hard, with major thoroughfares encouraging traffic past the neighbourhood making it an impermeable urban block; because of this condition, Lock's plan sought for the new area to become semi-independent from the centre of Basra (fig. 3). Evidence of this is found in the retail strategy for the area, acknowledging that while Ubullah would not have the same scale of urban centre that Basra had, though this would be easily accessible through local transport links if the Ubullah neighbourhood's commercial centre did not suffice; the thinking being that Ubullah's core would adequately serve day-to-day needs. Ubullah would have internal traffic, however, though the 'residential

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33 Adil A. Khattab, *Basra City: A Study in Urban Geography*, (Unpublished PhD Thesis: SOAS, 1972), 159. In addition to this, Basra boasted its own international airport – designed by British architects Wilson Mason and Partners, who had a strong colonial link with the designs of New Delhi having worked under Lutyens meaning it worked towards a collective British identity abroad through architecture.

34 Basra's population grew from 368,799 in 1947 to 502,884 in 1957. (Qubain, *The Reconstruction of Iraq*, 7 and 263).

35 Lock, *Ubullah Neighbourhood Plan*, 1.

36 Crinson, "Abadan: planning and architecture under the Anglo-Iranian Oil Company", 341-359; Reem Alissa, *Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi, 1946-1992*, (Unpublished PhD Thesis: University of California, Berkeley, 2012).

37 Unknown, "Civic Diagnosis of the City of Hull", *Architects' Journal*, (29th July 1943):71; Ola Uduku, "Networking and strategic deal-making in the Caribbean: Using archives to examine Max Lock's 1950s planning adventures in the West Indies", *ABE Journal* (Online, 2013) https://doi.org/10.4000/abe.3392 (last accessed October 27, 2021).

38 Tosland, "Planning southern Iraq", 1032.

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roads within these neighbourhoods are so arranged that they discourage through traffic from taking short cuts via the middle of the neighbourhood, the roads being routed in a circuitous fashion in the best way to serve the houses themselves'.[39]

The neighbourhood planning concept, which underpinned Lock's Ubullah scheme is integral to understanding his work, with such theories being prominent in international examples of modernist architecture and master-planning. As established, Ubullah was a subdivided community, and on this small scale there is a clear comparison to the layout and distribution of buildings in Tema designed by Lasdun with Maxwell Fry and Jane Drew (1952) in the Gold Coast (modern day Ghana).[40] Like Ubullah's proximity to the port area in Basra on the Shatt Al-Arab, Tema is a small harbour that formed part of a wider plan for the Volta River project.[41] Spatial distribution of buildings is important to this concept and varies from example-to-example on various scales. The houses in Tema 'were set around schools and recreation areas', a distribution similar to Ubullah's.[42] Additional influences are found in the internationally renowned Chandigarh master plan, where Drew designed the city's Sector-22 with housing design contributions from Fry; it is known Lock visited these for his report on the progress of housing and town development in India, and subsequently influenced his work in Ubullah.[43]

Vital to Lock's neighbourhood concept was creating a walkable, permeable interior. Lock designed the centre with community in mind, complete with facilities such as shops and a central mosque, which architecturally was to set a high standard for future building in Basra.[44] In terms of townscape, this centre would be legible in the narrow twelve-feet-wide-streets that surrounded it with the mosque's landmark minaret depicted in perspective views along enclosed

39 Unknown, "Civic Diagnosis of the City of Hull", 2-7.

40 Iain Jackson, "The planning of late colonial village housing in the tropics: Tema Manhean, Ghana", *Planning Perspectives* 29, no. 4 (2014): 475-499.

41 Michelle Provoost, "Tema: Maxwell Fry and Jane Drew", *Delft Architectural Studies on Housing* 12, no. 13 (2015). http://dash-journal.com/tema-manhean/ (last accessed October 27, 2021);

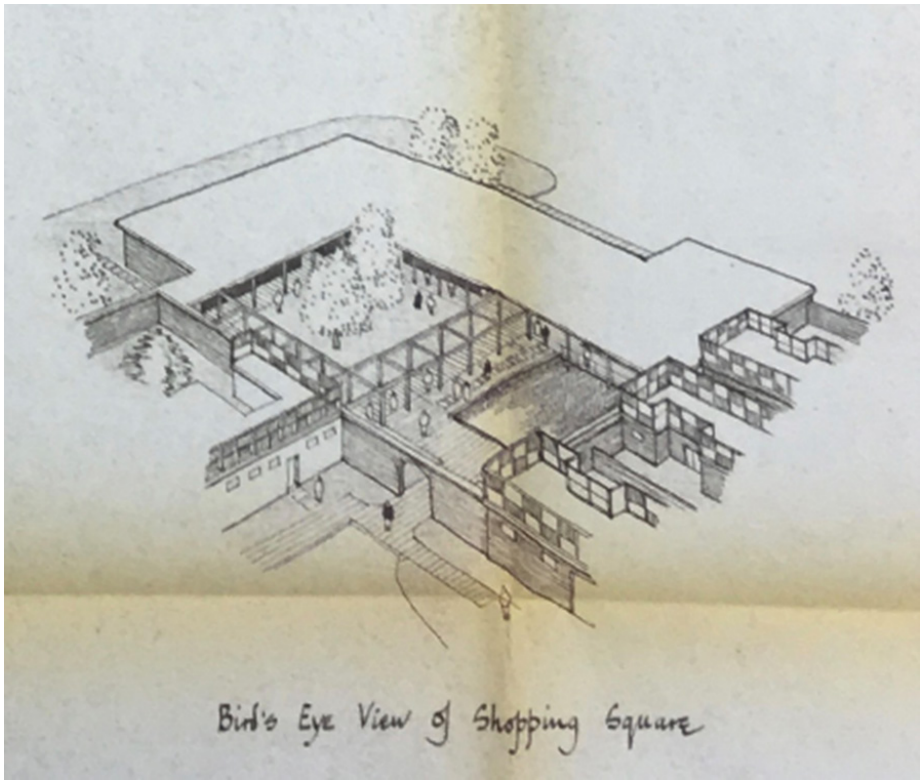
42 Jackson, "The planning of late colonial village housing in the tropics: Tema Manhean, Ghana", 479.

43 Iain Jackson, "Maxwell Fry and Jane Drew's early housing and neighbourhood planning in Sector-22, Chandigarh", *Planning Perspectives* 28, no. 1 (2013): 1-26.

44 Lock, *Ubullah Neighbourhood Plan*, 7.

Fig. 4

Civic centre with the education centre and health clinic with an illustrative mosque terminating the view, with the reflective pools central to the image. Note also, decorative mashrabiya along the 'traditional' buildings to the left of the image (MLA 6.20, Lock, (1956) The New Basrah Plan)



thoroughfares [Fig. 4].[45] Its hierarchical position was to be clarified through the intended reflection of the mosque's elevation in an ornamental 'basin of water'.[46] Use of Minarets, or other religious buildings, at the centre of public space is commonplace in plans and is a configuration familiar throughout history, its position also provided a strong focal point for Lock's hand-drawn perspectives of the proposals. The mosque was intended not to be alone in this shimmering reflection, with an assembly hall for students, a library and a health clinic surrounding the mosque also visible in the water-ornament.[47] However, placing the traditional mosque alongside a health centre and education buildings – tangible symbols of science, education and by association, modernity – demonstrated the juxtaposition of a modernising society with conservative values as well as serving a specific, townscape purpose.

This makes clear that Lock's focus on the minaret was not wholly religious, but more for orientation as he demonstrated that his intentions for the centre of Ubullah was to be a functional, communal place, forming part of the built identity for the area. In wayfinding terms, to take Kevin Lynch's metaphor, the central minaret acts as 'the piles of stones along the Saharan *Medjbed*', which lines a route of hundreds of miles across the sand 'leading from water hole to water hole'.[48] In the *Kuwait Urbanization*, Saba George Shiber compounded the importance of the minaret within a low-rise townscape, typical of Gulf towns, saying that:

Fig. 5

The shopping square in the Ubullah Neighbourhood, showing a covered exterior with planting at the centre, arched entrance ways and reflective pools all in proximity to low-rise houses with sleeping terraces (MLA 6.20)

45 Gordon Cullen, *The Concise Townscape* (London: The Architectural Press, 1966), 133: Cullen infamously said that 'If I were asked to define townscape I would say that one building is architecture but two buildings is townscape'; street widths for Ubullah are defined in: Lock, Ubullah Neighbourhood Plan, 3.

46 Lock, *Ubullah Neighbourhood Plan*, 7.

47 MLA 6.12, Report: Max Lock, *The New Basrah Plan* (Unpublished: Max Lock and Partners, 1956), fig. 30.

48 Kevin Lynch, *The Image of the City* (Boston: MIT Press, 1960) 130.

> …These are the tall, vertical graceful and skyward looking minarets reaching upward into the firmament as if to remind one that there is something else to this world other than buildings and cars. And as these minarets point to the sky to a religious and functional need, they provide the strongest architectural contra-composition that Kuwait possesses… whatever the architectural merits of the mosque itself may be in any particular case, the minaret is a witness reminding one that architecture and civic design are not dependant on fussy design, expensive materials and extravagance but, rather, on the interplay of space, form and direction.[49]

Situated between the large-scale forms of the mosques and the small scale of housing, sat the civic centre which Lock designed to be reminiscent in its forms of the centres of Harlow or Stevenage constructed in Britain during this period. While it includes social and visual clues that it is not a British 'New Town', through the inclusion of 'Tudor' arches, it comprises more subtle hints that it is a centre designed for a Gulf nation.[50] Included in the plans was an axonometric that depicted minimal openings on the elevations of buildings with open roof terraces above, highlighting slim walls traditionally made from reeds which allowed air to permeate the terrace while affording privacy. The civic centre is thus clearly mixed use, and not intended to be too large, especially that Lock, albeit unsuccessfully, was trying to incorporate the neighbourhood within the sphere of Margil and Basra's larger centres. The layout of the centre is similar to other concepts of Gulf architecture from the ensuing decades: there was a large

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Fig. 6

Lock's photos of the low-rIse landscape of sarifa developments that his plan sought to alleviate due to the belief that they were unsanitary (MLA 6.12)

49 Saba G. Shiber, *The Kuwait Urbanization* (Kuwait: Kuwait Government Printing Press, 1964), 392.

50 John Boughton, *Municipal Dreams: The Rise and Fall of Council Housing* (London: Verso, 2018), 77: Boughton further says that 'The New Towns embody much of the social idealism of this post-war era, particularly of its hopes for greater mixing between classes', which as will be explained, was not necessarily the case in Ubullah, and was more similar to the pit-villages of Durham which he further described as being 'not so much towns as barracks: not the refuge of a civilisation but the barracks of an industry'; this industry, being coal, draws obvious parallels to the growing importance of the ports in southern Iraq and oil economy that funded Basra's growth.

roof without the terraces which covers retail space, with a flat roof and simple columns creating a loggia surrounding a planted square **[Fig. 5]**. Lock suggested that the buildings in the civic centre were to be 'utilitarian', but they follow the traditional forms of the 'suq pattern', fronting onto covered arcades with 'service courtyards' at the back of stalls with independent access for trade vehicles.[51] Due to Lock's professional network of Tyrwhitt, Fry and Drew during this period, it is likely that this shaded loggia has precedents in Fry and Drew's Sector-22 Chandigarh with the Public Works Department there, but also in the fact that shading walkways is a historic, and sensible, precedent for urban design in hot countries.[52] Lock asserted that it would be of a similar material palette to the residential areas allowing for 'colourwash' and brickwork, used throughout, thus creating a visual language and identity for the neighbourhood.[53]

Socially, forty-two percent of the growing population resided in sarifas, which provided 'unsanitary living conditions' for a modernising society and with the aid of Lock's various plans it was aimed to redistribute this population to a net density of around '91 persons per acre' **[Fig. 6]**.[54] This did not come to fruition quick enough, with acts of social unrest throughout the 1950s, Qubain commented that 'Iraq was on the brink of a revolutionary upheaval which would fundamentally change its political and social order […] in short, the issue resolved itself into a race between reform and revolution', with housing issues a *raison d'être* for protests.[55] Essential reforms came second in this race, with the Iraq Revolution occurring ten weeks after the publication of Qubain's study.[56]

For this redistributed population, house design complemented the urban centre Lock sought to create while focusing on spaces between houses was at the forefront of the neighbourhood plan. Of this, Lock stated that:

> 'the houses too, are not strung out along these residential roads in military fashion, but are grouped in small squares and courtyards inter-con-

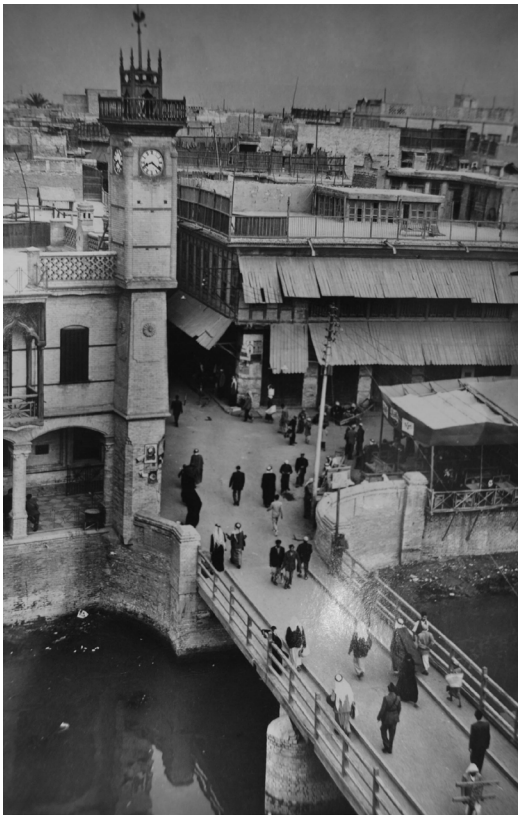

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Fig. 7

The traditional urban space in Basra, with a landmark for guidance as the clock tower, a covered loggia to the left, awnings for shade to the right and a tightly enclosed street moving away from the river-way. Roof terraces with reed coverings for privacy are also clearly seen in the distance (MLA 6.20)

Fig. 8

Example of a realised Doxiadis scheme of housing, showing 'Gossip Square' in West Baghdad (c.1958), which utilised earthly materials such as stone and bricks, while introverting the spaces to look inwards (Pyla, P. 'Back to the Future: Doxiadis's Plans for Baghdad')

51 Lock, *Ubullah Neighbourhood Plan*, 1-7.

52 Jackson, "Maxwell Fry and Jane Drew's early housing and neighbourhood planning in Sector-22, Chandigarh", 1-26.

53 Lock, Ubullah Neighbourhood Plan, 20.

54 Qubain, *The Reconstruction of Iraq*, 197, gives the stats for existing sarifa dwellers in 1957 in Basra; Lock, *Ubullah Neighbourhood Plan*, 8-10: shows the aim for redistribution of population with a gross density of '41 persons per acre' (houses, parks, schools etc.), a net density of '91 persons per acre' (net being the space devoted to houses, courtyards and internal roads).

55 Qubain, *The Reconstruction of Iraq*, 31.

56 Michael G. Ionides, "Review of: The Reconstruction of Iraq: 1950-1957. by Fahim I. Qubain", *International Affairs*35, no. 4 (1959: 485-486. While this review by the former member of the Iraq Development Board says this, it is noted that Robert Strausz-Hupé's 'Foreword' in the first edition of the book contextualises the following chapters with information on the 'military coup'.

nected by quite narrow streets (16' and sometimes 12'), so that a number of enclaves are formed, each different in design and character, and by their arrangement provide a social homogeneity that a long, straight monotonous street is not able to give.'[57]

Arguably, the focus on not constructing 'straight and monotonous streets' was a spatial, critical, response to much of the town planning in the years prior to the introduction of the Town and Country Planning Act (1947), partly brought in to curb monotonous sprawl and the perceived blighting of the English landscape.[58] Twinning this concern, which focuses on much larger scale infrastructure, with the creation of small squares and courtyards, demonstrated a vital contrast of scales and issues that Lock aimed to solve through spatial praxis.

There are further likenesses and contrasts to schemes in the Gulf from the time, with Lock's focus on the smaller scale contrasting the town planning visions of Minoprio, Spencely and Macfarlane in both Baghdad (1956), but

Fig. 9

A development in Riyadh showing dwellings on a 'pedestrian' street in a traditional style, constructed from imported materials (DOXSAU-A2: 23305)

57 Lock, *Ubullah Neighbourhood Plan*, 3.

58 William G. Hoskins, *The Making of the English Landscape* (London: Hodder and Stoughton); F.M.L. Thompson, (1982) *The Rise of Suburbia* (London: Palgrave Macmillan, 1955).

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more importantly Kuwait City (1952). In these plans, there was little in the way of research and detail, moreover, they looked to raze city fabric and zone the areas with large-scale highways dividing up blocks.[59] Doxiadis Associates' work in Baghdad, specifically with the implemented master plan at Sadr City (1955-8), better contextualises Lock's Ubullah Neighbourhood Plan, through its break-down of scale. It is an urban block within the wider city - like Ubullah is to Basra – and Doxiadis' key focus was the design of housing units within public squares (figs. 8 and 9). On completion, photographs show narrow enclosed streets, with vital nodes within the townscape for stopping and meeting, enabled through

Fig. 10
Max Lock's photograph of a 'traditional' Basra street, with detailed overhanging Mashrabi-ya over the street (MLA 6.12)

59 Stanek, *Architecture in Global Socialism*, 177.

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well-designed street furniture and objects that created shade.[60] Lock's plan for Ubullah was similar, in the plan he stated:

> 'Within these small squares trees would be planted and seats provided in the shade; there would also be drinking fountains. Some of the narrower streets can be arched in the local tradition, as exemplified in the nearby town of Zobair (*Az Zubayr*), the object being to get as much shade as possible during the six hot months, and to break the cold winds during the winter.'[61]

Lock's proposed urban layout of Ubullah fused elements of tradition and modernity: this idea was at the core of the *New Basrah Plan* (1956), the Ubullah Neighbourhood Plan, and Lock's theory of *civic diagnosis* itself.[62] Lock's other reports look specifically at the Ottoman influence on Iraqi architecture, with images of mashrabiya and detailed woodwork on cantilevered bays hanging over the street **[Figs. 10-11]**.[63] In Ubullah, he proposed that due to the narrow street widths it would be possible to have 'arched streets', which he said was

Fig. 11

Detail on one of the Ottoman style mashrabiya that Lock noted as being common in Basra (MLA 6.12)

Fig. 12

Arched street in Kuwait, a common feature that Lock would have noticed when he spent time in the city (Magnum Photos: George Rodger's Kuwait archive, 1952)

60 Paniota Pyla, "Back to the Future: Doxiadis's Plans for Baghdad", *Journal of Planning History* 7, no. 1 (2008): 3-19.

61 Lock, *Ubullah Neighbourhood Plan*, 3.

62 MLA 6.12, Lock, New Basrah Plan; Tosland, 'Planning southern Iraq', 1023-1044.

63 Tosland, "Planning southern Iraq", 1023-1044.

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'in the local tradition'.[64] In Az Zubayr, the arched streets worked in tandem with their characteristics, such as exhibiting 'bends, twists and narrowness', for full environmental impact.[65] The form of the archway is also apparent in Kuwait City, a place where Lock spent time conducting site visits to Ahmadi, a Kuwait Oil Company built town to the south of the city [Fig. 12].[66] Ubullah's urban form was generated from the shapes of houses and the requirements for cooler streets; instead of planting trees for shade, the natural form of the city was to enclose areas with these narrow streets. In addition to these environmental credentials, the archways contributed to the social function of the city in that they provided a shaded space in the summer months for people to meet as well as somewhere to shelter in the wind and rain of the winter.[67]

Another notable use of these archways in a modern idiom was by Fry Drew and Partners.[68] In 1959, they designed parabolic arches for their streets in Gachsaran, Iran, carrying forth the trend of building urban archways in hot countries in planned neighbourhoods.[69] The arches, as Iain Jackson noted in his study on Fry and Drew, were used in Chandigarh to create a 'village setting' described as 'intimate', 'secluded' and 'personal'; the tradition of which was intended to shield those within the development from the outside.[70] While these forms were not entirely for aesthetic, those built by Fry and Drew suggest an engineered

64 Lock, *Ubullah Neighbourhood Plan*, 4.

65 Firas S. A. Al-Qatrani, (2015) "The old city of Al Zubair. The emergence and physical reality (1571-1882 Iraq)", *Bulletin of Geography* 27, no. 1 (2015): 28.

66 MLA 18.17, 'Box Headed: Please Return to Max Lock, Kuwait 1961': Lock produced plans for the Kuwait waterfront which were never realised, this box in the MLA depicts various photos of Kuwait; other notes from the archive indicate field work in Ahmadi looking at the flora that successfully grew in the city.

67 Al-Qantrani, "The old city of Al Zubair", 28-29.

68 Jackson, "Maxwell Fry and Jane Drew's early housing and neighbourhood planning in Sector-22, Chandigarh", 19.

69 MLA 12.2, Letter: Max Lock to R. D. Gwyther of Coode and Partners, (27th May 1954): The three cities Lock toured and lectured in, at the request of Nehru, were Chandigarh, Faridabad and Nilokheri.

70 Jackson & Holland, *The Architecture of Edwin Maxwell Fry and Jane Drew*, 235.

Fig. 13
Tudor' arches in Al Zubayr (c.1940s) (Alqatrani, 'The old city of Al Zubair')

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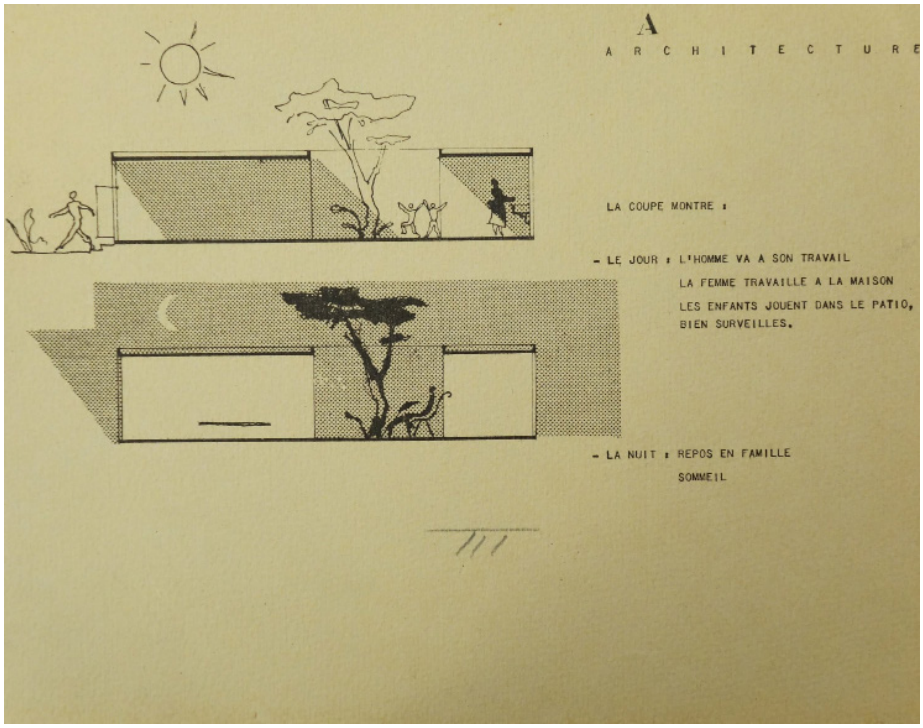

element to them; incorporating visual variety in contrast to Lock's, who would have intended them to be as economical as possible.[71] Materially, the historic arches in Az Zubayr are constructed from *al tub*, evidenced by the textures on the elevation and the breaking off of material on the elevations around it **[Fig. 13]**.[72] Conversely, Fry Drew and Partners' arches in Gachsaran were built from stone and are more representative of the surrounding mountainous landscape in which it is located **[Fig. 14]**.[73] Both iterations are a response to the local environment through their traditional forms, but this is even more apparent in the materials they used.

Fig. 14

Parabolic arch designed by Fry Drew and Partners for Gachsaran (1959) (RIBA Pix)

Fig. 15

Diagram for the intended usage of the worker dwellings Candilis-Josic-Woods designed in Abadan (1956). The annotation translated reads: 'The cut shows: The day: the man goes to his work; The woman works at home; Infants play in the patio, well watched; At night: the rest of the family sleep' (Shadrach Woods Archive: Box 05 Folder 03B)

71 Lock, *Ubullah Neighbourhood Plan*, 11.

72 Al Tub translates to a specific type of 'adobe' construction typical of traditional building typologies in the global south; adobe itself is from the Spanish and the material has further similarities to vernacular forms found in Britain and more northern countries in the building of cob and rammed earth structures.

73 RIBA Library, FRY780-FRY825, 46 Photo transparencies, 'Gachsaran new town for the Iranian Oil Exploration and Production Company, Iran, designed in 1959 by Fry Drew & Partners'.

As Ubullah's role within the development of Basra was to redistribute the population who relied on sarifa developments, housing solutions were imperative; in solving this, Lock designed six separate house types within the report.[74] This was not without issue, and by aiming to build specifically for the lower-classes of the oil companies in a 'redistributed' area it meant that the Ubullah Neighbourhood Plan was a zoned location away from the city centre.[75] These problems allude to underlying racism and classism, given that the plan was formed under the assumption that the neighbourhood would house lower status Iraqi workers, who required a town layout and houses that spatially represent Iraqi traditions.[76] Classism was deeply endemic in Europe and specifically Britain in this era. Well-known commentators, including George Orwell, published criticism regarding the British middle-classes' snobbery and hatred towards the working classes, as exemplified in his pithy adage *'the lower classes smell'*.[77] Despite this, Lock had written in a letter to friend and colleague, Ben Polk, that 'every job has to be considered on its merits and there are some planners who do their planning from a taxi and others who spend months probing about 'among sites and smells which neither Brahmin nor Britain has schooled themselves to endure", the latter half Lock was quoting Geddes.[78] While Lock's bottom-up methods were uncommon among the planning elite in which he mixed, the overarching aims to segregate the population from above was certainly classist, and as such Lock's work was complicit in fuelling archaic prejudices.

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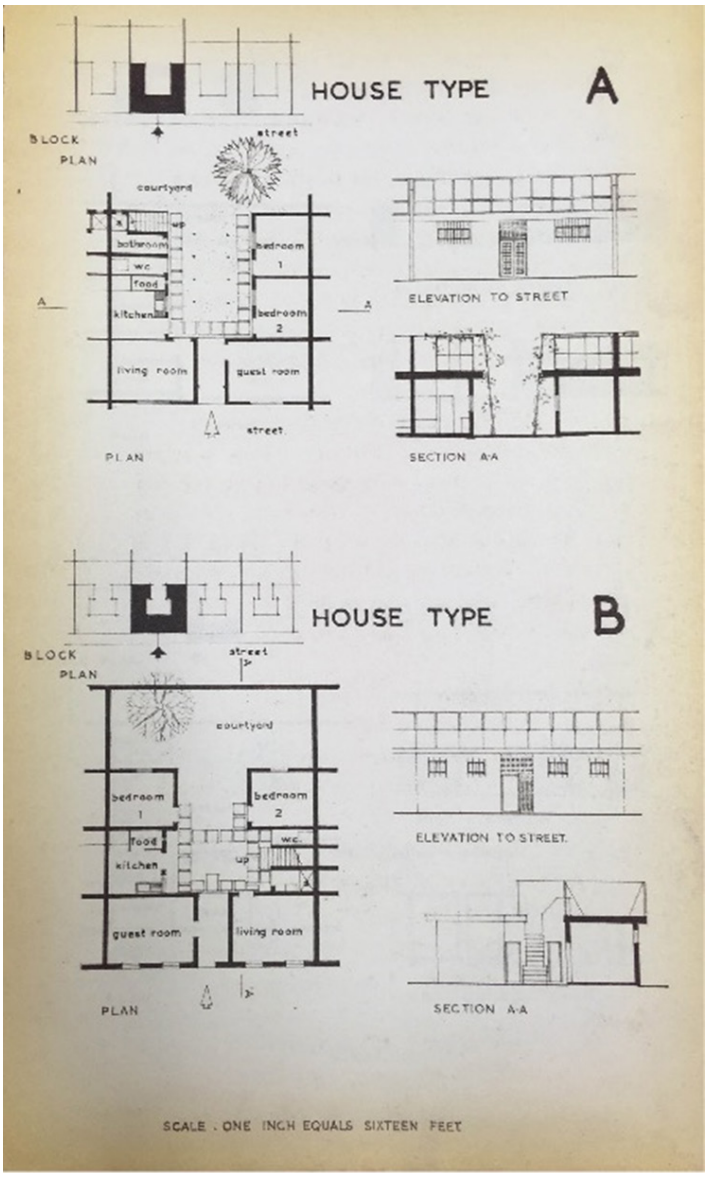


As recognised in Lock's objectives for the Ubullah Neighbourhood Plan, traditional forms and modern standards of sanitation influenced the scheme. The houses were to be 'sturdier and more permanent' than the

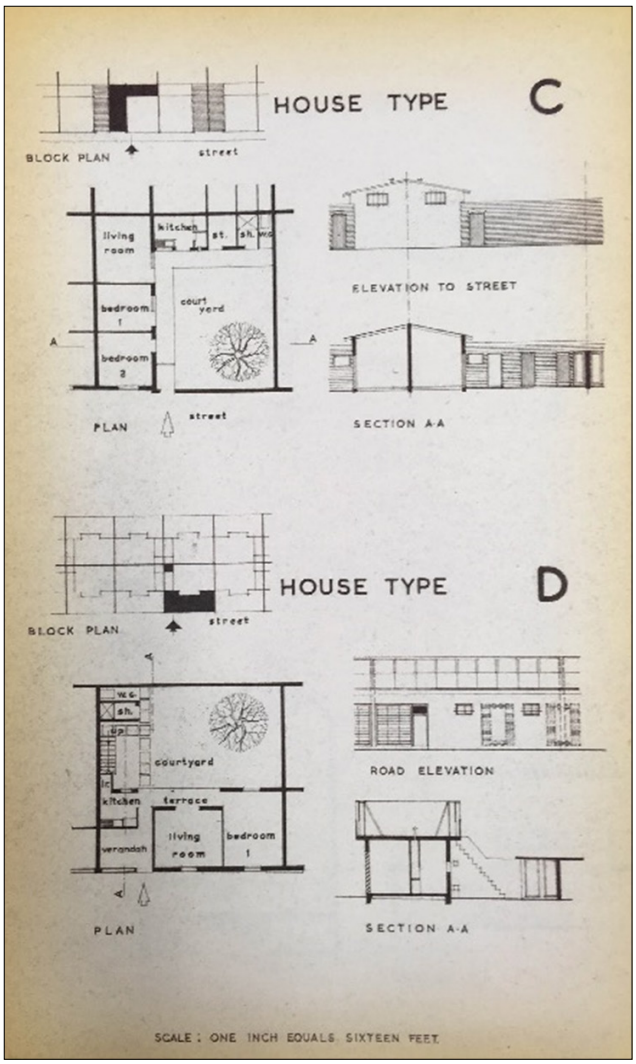
74 Lock, *Ubullah Neighbourhood Plan*, 20.

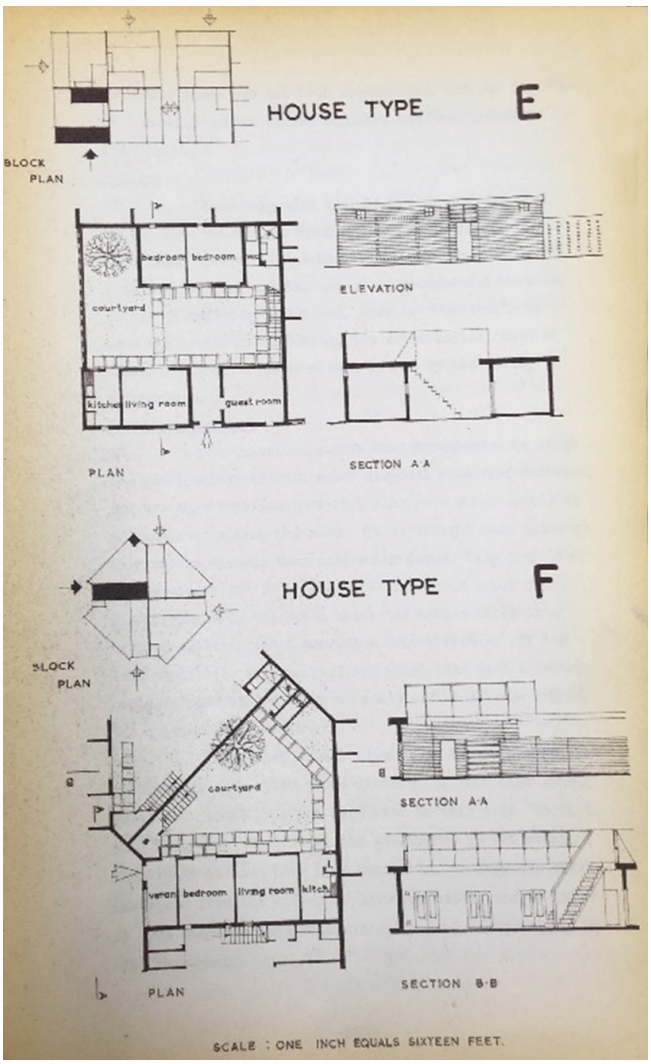
75 Lefèbvre described urban life as a lived opportunity for 'meetings, the confrontation of differences, reciprocal knowledge and acknowledgement (including ideological and political confrontation), ways of living patterns' which coexist in the city; Farah Al Nakib, argued that this quote argues against zoning and segregation of classes within the city, and thus 'eliminates unexpected confrontations'. (Farah Al Nakib, *Kuwait Transformed: A History of Oil and Urban Life* (Stanford: Stanford University Press, 2016), 14 and 199).

76 Neveen T. H. Abdelrehim, *Oil Nationalisation and Managerial Disclosure: The Case of Anglo-Iranian Oil Company, 1933-1951*, (Unpublished PhD Thesis: University of York, 2010), 84: Abdelrehim summarised this as being 'Housing for the British was outstandingly superior to that provided for the Iranians and this was always the case because Iranians were not promoted above a certain level and housing was based on employee position at work.'

77 George Orwell, *The Road to Wigan Pier* (London: Penguin, 1937), 119.

78 MLA 12.2, Letter: Max Lock to Ben Polk, 18th January 1957.





working class sarifa dwellings, offering traditional modes of private out of doors living based on the established classist and racist Western company structures that prevailed in the region. Such ideas were not unique to Lock, other Western experts working in the Gulf during this period actively sought this mix of traditional but modern typology including Candilis-Josic-Woods' housing proposals in Abadan.[79] Candilis-Josic-Woods provided extensive diagrams to show how their schemes were socially influenced, with modern looking people for scale living a domestically modern – though apparently Western – lifestyle, acting, as Henri Lefebvre put it, as a reducer of reality to a 'graphic synthesis' of the 'modality of an accepted (i.e. imposed) 'lifestyle" in these particular types of worker housing [Fig. 15].

Continuing with Lefebvre, elements of the Ubullah Neighbourhood Plan, particularly with regards to housing, looked to produce the 'lowest possible threshold of tolerability' for its inhabitants.[80] Lock was concerned with budgets and it is clear the Plan was not well funded by the Basra Port Directorate and he specifically mentioned in the Plan's conclusion that 'these six house types have

79 Ben Tosland, *European Architects at the Confluence of Tradition and Modernity in the Persian Gulf, 1954-1982* (Unpublished PhD Thesis: University of Kent, 2020), 109-149.

80 Henri Lefèbvre, *The Production of Space* (Oxford: Blackwell, 1974), 338 and 316.

Fig. 16-17-18

The six types of house Lock designed for Neighbourhood B in the Ubullah Neighbourhood Plan; all, apart from Type C have roof terraces for sleeping and feature courtyards to encourage the traditional out of doors living. The diwannia and harim are not segregated, as was the traditional custom, meaning the male would have to conduct business elsewhere perhaps in one of the new public spaces Lock's team accounted for. (MLA 6.20)

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been designed primarily with a view to combining practicability with economy' [Figs. 16-17-18].[81] Apropos facades, Lock assessed the role of his house designs within the townscape, carefully considering the materials from which they would be built. In the report he suggested that 'all the houses are faced with the local brick, but a number of them will be colour-washed in carefully selected colours to give a variety, freshness and life to the individual street composition', the materiality thus reflecting that of the civic centre in the creation of a new visual language and identity. Climatically, these carefully chosen colours would be 'light' to 'help reflect the heat from the walls'. While a greater influence was placed upon the external appearance of these houses, little effort was evident in their interiors with 'internal finishes being kept to a minimum' and the consideration that 'it will not be possible to plaster the walls of the habitable rooms'.[82] It is implausible that the interior walls could not have been plastered for financial reasons, especially given the large surplus in the Iraq Development Board's budget at this time and its close relationship to the Basra Port Directorate.[83]

As Qubain alluded to, events like the Al Wathbah uprising in 1948, contributed to the growing anti-Imperial and anti-British sentiment within the wider Iraqi population, who were tired of Western influence over the economy and politics.[84] Elsewhere, there had been direct unrest from the Iranian populace regarding the treatment of oil workers by the Anglo Iranian Oil Company (AIOC) leading to the renaming of the company to the National Iranian Oil Company (NIOC) in 1948, in large part, as Neveen Talaat Hassan Abdelrehim and Rasmus Christian Elling's work has shown, this was to do with the quality of housing and the hierarchical, racial, structure of the company, though imperial attitudes remained.[85] In Basra, the sustained discontent in the early 1950s, came to a head in the oil and dock worker strike in 1953, where the British fired guns upon protesters maiming eight and murdering one.[86] Despite these contemptible events, the British-backed companies wrongly perceived their own actions as being benevolent

81 Lock, *Ubullah Neighbourhood Plan*, 23.

82 Lock, *Ubullah Neighbourhood Plan*, 3-20.

83 Qubain, *The Reconstruction of Iraq: 1950-1957*, 40-41.

84 Qubain, *The Reconstruction of Iraq: 1950-1957*, 37.

85 Abdelrehim, *Oil Nationalisation and Managerial Disclosure*, 84; Rasmus Christian Elling, "War of Clubs: Struggle for space in Abadan and the 1946 Oil Strike", in *Violence and the city in the Modern Middle East*, ed. Nelida Fuccaro (Stanford: Stanford University Press, 2016), 189-211.

86 Samira Haj, *The Making of Iraq, 1900-1963: Capital, Power and Ideology* (New York: State University of New York Press, 1997), 106.

Fig. 19

An example of 'hovels' the AIOC showed to justify the creation of new dwellings for workers (BP ARC 68184 Anglo-Iranian Oil Company, (1952) AIOC Workers' Terms Bettered Iran's Labour Law. (London: AIOC).

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and in the NIOC's own condescending published material from 1952 the British had referred to the traditional vernacular of the region as 'hovels', while presenting their newly – albeit economically built – structures as being 'proper houses' [Figs. 19-20].[87] Despite this context, Lock's requirement to drive for economy shows the continual lack of concern from British actors in the provision for adequate housing in the region for workers. Worker housing across the region was, if indirectly, aligned to the notion of *habitat du plus grand nombre*. Formally presented at CIAM IX (1953), it built upon the 'vague concept' of habitat discussed at CIAM VII (1949) having direct links to other architects working in the Gulf at this time, including Georges Candilis, whose theoretical roots were founded in Michel Écochard's schemes in north Africa, France and Syria.[88] While this concept was predominantly related to European urban centres recovering in the post-war period, the application of its principles were sought in schemes built from nothing in Gulf oil towns.

Considering clients' apathy in spending money on adequate materials for worker housing, all Lock could do about climatic sensibilities was spatial and aesthetic. While the climate was at the centre of choosing the colour scheme on the exterior, roof insulation to 'mitigate summer heat' was not up to standard so for the buildings to stay cool Lock relied upon the 'arrangement of the dwellings themselves in close terrace formation […] a considerable factor in keeping the rooms cool in summer and warm in winter.' He mentions elsewhere, explicitly, about the 'low standard of insulation' and suggests other spatial methods to protect the interiors from the outside heat in the summer months. These included: 'Overhanging roofs of 1' 6" inches will shade the wells from the sun and in a number of cases use should be made of projecting brick pattern work; this will help to shade the wells, at the same time creating a pleasant effect in the strong sunlight'. Economy further drove the design choices in House Type 'C', which instead of having a roof terrace for sleeping, featured a pitched roof over the living room and bedrooms to 'give variety to the layout as a whole' but 'serves also as an experiment to find out whether this type of construction

87 BP ARC 68184, Anglo-Iranian Oil Company, *AIOC Workers' Terms Bettered Iran's Labour Law*, (London: AIOC, 1952).

88 Tom Avermaete & Joan Ockman, *Another modern: The postwar architecture and urbanism of Candilis-Josic-Woods* (Rotterdam: NAI, 2005), 139.

Fig. 20

The new workers' housing provided by the AIOC intended to better the conditions of workers BP ARC 68184 Anglo-Iranian Oil Company, (1952) AIOC Workers' Terms Bettered Iran's Labour Law. (London: AIOC).

is in fact cheaper'.[89] Direct comparison to Fry and Drew's worker housing in Gachsaran is possible, where their buildings, largely founded upon their climatic research in Africa, featured mono-pitched, inaccessible roofs.[90] Their work, however, did have benefits allowing for more space in the courtyard-houses, higher ceilings, addition of filtered light to darker lit areas and greater air circulation with the addition of vents placed high in the ceiling, acting like the traditional *bādgīrha*, or wind catcher, the forms of which are featured in Bernard Rudofsky's *Architecture Without Architects* (1967) [Fig. 21].[91]

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Conclusion

If, like Lefebvre said, city life was dependent on 'the confrontation of differences', Lock's neighbourhood zoned away from the historic centre of Basra would not have succeeded if realised.[92] Perhaps more importantly, within the Geddesian context from which Lock's planning theory emanated from, the Ubullah Neighbourhood Plan would almost certainly have been a hybrid of Geddes' thoughts on organicism and morphology. Geddes talked of the city as being a 'specialized organ of social transmission' – he added further that the city 'accumulates and embodies the cultural heritage of a region and combines it […] with the cultural heritage of larger units, national, racial, religious, human […] it is the instrument primarily of the regional memory, but serves also as the

Fig. 21

An image from Architecture without Architects showing bâdgirhā creating a distinctive skyline, but something from which Western architects often drew influence from in their works in the Gulf (Rudofsky, *Architecture without Architects*)

89 Lock, *Ubullah Neighbourhood Plan*, 20-23.

90 Jane Drew, "Housing in Iran' in 'In the Middle East", *Architectural Digest* (March 1957) : 73–108.)

91 Bernard Rudofsky, *Architecture Without Architects: A short introduction to Non-Pedigreed Architecture* (Albuquerque: University of New Mexico Press, 1965).

92 Al-Nakib, *Kuwait Transformed: A History of Oil and Urban Life*, 14 and 199.

memory of larger groups'.[93] In this sense, where Lock combined traditional forms with modern thinking and the creation of a new part of city fabric, there was an attempt to pool the abstract ideas behind cultural heritage and imagined communities; though the fact remains, the Ubullah community would have been segregated and homogenous given its intended role within the redistribution of the population of sarifa dwellers in the economically developing centre of Basra.[94] In understanding the Ubullah Neighbourhood Plan as a fragment of the wider city, its condition - hemmed in by roads and purposefully designed to ensure people stayed in the neighbourhood as much as possible -- shows that it would not have been a successful, organic addition to Basra in the Geddesian sense, with a major flaw within its thinking being the compromise between existing traditions and the desired modernity.

In addition to its urban condition and the physical plan itself, viewing the Neighbourhood Plan within its wider, national political and economic context, there were bureaucratic issues with central funding and surpluses un-relinquished for the plan. This problem was widespread within other colonies of sorts at the time, particularly where companies – like the AIOC in southern Iran – owned large swathes of land and actively sought to repress local populations while planning and building for their own higher income workers. While Lock's work sought to alleviate what was viewed as social problems with the sarifa dwellings, the new, modern, alternative would not have been 'better', it just would have redistributed the population out of sight in the northern reaches of the city where people would require either the ownership of a car or the money for a bus fare to get to the centre of Basra. Additionally, this would require a functioning public transport system, something which is not covered within the twenty-four-page plan for the Ubullah Neighbourhood. Car ownership, however, was considered and eighteen garages with small amounts of parking in public squares and in the centre was given – though for a population supposedly of 15,000 people, this is miniscule and indicates further that Ubullah would have been an isolated neighbourhood within the larger city.[95] The British-led Iraq Development Board were far more concerned with national infrastructure projects at the time, including a programme of dam building, construction of power stations, improvement of roads and railways, mostly to further the efficiencies of business within Iraq and its position within the ailing British Empire to be too worried about the shortfalls of Lock's plan within the growth of Basra.

As shown, the Ubullah Neighbourhood Plan had obvious theoretical and practical flaws. There is no doubt Lock's intentions were sociologically compassionate

93 Volker M. Welter, *Biopolis: Patrick Geddes and the City of Life* (Boston: MIT Press, 2002), 92-93. For Welter, his understanding of Geddes' approach to the city's production was neither 'an accidental human product nor the result of conscious design to create it' – the Ubullah Neighbourhood Plan was clearly conscious and obviously not an accident.

94 Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso, 1983); Edward Said, *Orientalism* (New York: Pantheon, 1978): Said devotes a whole section of the chapter 'Scope of Orientalism' to the idea that communities are an imagined concept through literature and art that encourages a commonality between people who have never met.

95 Lock, *Ubullah Neighbourhood Plan*, 17.

but misplaced; the plan was entirely complicit in consolidating the existing discriminatory company structures that prevailed in southern Iraq at the time, influencing the physical morphology of the city and as such can only be considered as a failed piece of planning. Regarding Basra, there had been considerable interest in its historic narrow streets in the British architectural press and Lock's own photographs show an idealised version of the Ottoman influenced architecture in the city. Lock's apparent enthusiasm for retaining – or in Ubullah's case drawing from – existing nearby fabric was by no means sentimental if it meant social improvements. Linguistically, there was an air of superiority and belief of benevolence through the 'profane act of cleaning up the place' and 'restoring some historical splendour' in earlier plans of Iraqi cities, which Iain Jackson called a 'well-rehearsed description of colonial prejudice coupled with a fascination for the exotic and technological adaptations to the extreme conditions'.[96] At a glance, the traditional sleeping terraces of the houses, the arched streetways, vistas of minarets are all contextual additions to the proposed new townscape and contribute to abstract ideas and images of the national and regional forms of building. Where the Ubullah Neighbourhood Plan failed, was its dismal attempt to combine this within the modernising city, leaving Ubullah as a lower-class remote outcrop and its working class local populace housed out of sight away from the contemporary centre of Basra.

96 Iain Jackson, "The architecture of the British Mandate in Iraq: nation-building and state creation", *The Journal of Architecture* 21, no. 3 (2016): 383.

Archive Sources

BP ARC 68184, Anglo-Iranian Oil Company, *AIOC Workers' Terms Bettered Iran's Labour Law,* (London: AIOC, 1952).

FRY780-FRY825, RIBA Library, 46 Photo transparencies, 'Gachsaran new town for the Iranian Oil Exploration and Production Company, Iran, designed in 1959 by Fry Drew & Partners'.

FO 371/104702, The National Archives, Unfair procedure of the Iraq Development board in awarding contracts, (1953)

FO 371/109887, The National Archives, Letter from D. A. Logan to C. T. E Ewart-Biggs, Foreign Office, 8th May 1954.

MLA 3.26, Max Lock, *Report on Um Qasr*. Unpublished: Max Lock and Partners, 1955.

MLA 4.8, Letter: Rebecca to Max Lock (20th November 1957).

MLA 6.12, Report: Max Lock, *The New Basrah Plan.* Unpublished: Max Lock and Partners, 1956.

MLA 6.20, Housing at Shatt-al-Turk: Proposed Layout of Area With Open Spaces and Tree Planting, November 1956.

MLA 10.5, Letter: Max Lock to R. C. Kelt (OBE) of the Port Directorate, (4th Feb 1955).

MLA 10.5, Letter: R. C. Kelt to Max Lock, Comments on the design for the Director General's House, (21st February 1955).

MLA 10.5, Letter: Director General of Ports and Navigation to Max Lock, 2nd July 1954.

MLA 12.2, Letter: Max Lock to R. D. Gwyther of Coode and Partners, (27th May 1954).

MLA 12.2, Letter: Max Lock to Ben Polk, 18th January 1957.

MLA 18.17, 'Box Headed: Please Return to Max Lock, Kuwait 1961

Bibliography

Abdelrehim, Neveen T. H.. *Oil Nationalisation and Managerial Disclosure: The Case of Anglo-Iranian Oil Company, 1933-1951*.Unpublished PhD Thesis: University of York, 2010.

Akcan, Esra. *Architecture in Translation: Germany, Turkey and the Modern House*. Duke: Duke University Press, 2012.

Akcan, Esra. "Global Conflict and Global Glitter: Architecture of West Asia (1960-2010)." In *A Critical History of Contemporary Architecture,* edited by Elle Haddad and David Rifkind, 317-345. London: Ashgate, 2014.

Alissa, Reem. *Building for Oil: Corporate Colonialism, Nationalism and Urban Modernity in Ahmadi, 1946-1992.* PhD Thesis: University of California, Berkeley, 2012.

Al-Nakib, Farah. *Kuwait Transformed: A History of Oil and Urban Life*. Stanford: Stanford University Press, 2016.

Al-Qatrani, Firas S. A.."The old city of Al Zubair. The emergence and physical reality (1571-1882 Iraq)." *Bulletin of Geography* 27, no. 1 (2015): 28.

Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso, 1983.

Avermaete, Tom, and Joan Ockman. *Another modern: The postwar architecture and urbanism of Candilis-Josic-Woods.* Rotterdam: NAI, 2005.

Berman, Marshall. *All That is Solid Melts into Air*. London: Verso, 1982.

Boughton, John. *Municipal Dreams: The Rise and Fall of Council Housing*. London: Verso, 2018.

Cleveland, William L., and Martin Bunton. *A History of the Modern Middle East*. Philadelphia: Westview, 2016.

Crinson, Mark. *Empire Building: Orientalism and Victorian Architecture*. London: Routledge, 1996.

Crinson, Mark. "Abadan: planning and architecture under the Anglo-Iranian Oil Company." *Planning Perspectives* 12, no. 3 (1997): 341-359.

Cullen, Gordon. *The Concise Townscape*. London: The Architectural Press, 1966.

Dillon, Brian. *Essayism.* London: Fitzcarraldo Editions, 2017.

Drew, Jane. "'Housing in Iran' in 'In the Middle East'." *Architectural Digest* (March 1957): 73–108.

Foucault, Michel. *Order of Things*. London: Routledge, 1966.

Habermann, Stanely J.. "The Iraq Development board: Administration and Program." *Economic Review* 1, no. 9 (1955): 179-186.

Haj, Samira. *The Making of Iraq, 1900-1963: Capital, Power and Ideology.* New York: State University of New York Press, 1997.

Hinchcliffe, Tanis. "British Architects in the Gulf, 1950-1980." In *Architecture and Globalisation in the Persian Gulf Region*, edited by Murray Fraser and Nasser Golzari. London: Routledge, 2013.

Hobsbawm, Eric, and Terrence Ranger, (eds.). *The Invention of Tradition*. Cambridge: Cambridge University Press, 1983.

Home, Robert. *Of Planting and Planning: The Making of British Colonial Cities*. Oxford: Routledge, 1997.

Hoskins, William G. *The Making of the English Landscape*. London: Hodder and Stoughton, 2005.

Ionides, Michael G. "Review of: The Reconstruction of Iraq: 1950-1957. by Fahim I. Qubain." *International Affairs* 35, no. 4 (1959): 485-486.

Jackson, Iain. "The architecture of the British Mandate in Iraq: nation-building and state creation." *The Journal of Architecture* 21, no. 3 (2016): 375-417.

Jackson, Iain, and Jessica Holland. *The Architecture of Edwin Maxwell Fry and Jane Drew*. London: Routledge, 2014.

Jackson, Iain. "Maxwell Fry and Jane Drew's early housing and neighbourhood planning in Sector-22, Chandigarh." *Planning Perspectives* 28, no. 1 (2013): 1-26.

Jackson, Iain. "The planning of late colonial village housing in the tropics: Tema Manhean, Ghana." *Planning Perspectives* 29, no. 4 (2014): 475-499.

Khattab, Adil A. *Basra City: A Study in Urban Geography*. PhD Thesis: SOAS, 1972.

King, Anthony D.. *Spaces of Global Cultures: Architecture, Urbanism and Identity*. London: Routledge, 2006.

Lefèbvre, Henri.- *The Production of Space.* Oxford: Blackwell, 1974.

Lefebvre, Henri. *Writings on Cities*. Oxford: Blackwell, 1996.

Lynch, Kevin. *The Image of the City.* Boston: MIT Press, 1960.

Novack, Frank G.. *Lewis Mumford and Patrick Geddes: The Correspondence.* New York: Routledge, 1995.

Orwell, George. *The Road to Wigan Pier.* London: Penguin, 1937.

Provoost, Michelle. "Tema: Maxwell Fry and Jane Drew', Delft Architectural Studies on Housing" 12, no. 13 (2015) http://dash-journal.com/tema-manhean/ (last accessed October 27, 2021);

Pyla, Paniota. "Back to the Future: Doxiadis's Plans for Baghdad." *Journal of Planning History* 7, no. 1 (2008): 3-19.

Qubain, Fahim. *The Reconstruction of Iraq: 1950-1957*. New York: Praeger, 1957.

Rudofsky, Bernard. *Architecture Without Architects: A short introduction to Non-Pedigreed Architecture*. Albuquerque: University of New Mexico Press, 1965.

Said, Edward. *Orientalism.* New York: Pantheon, 1978.

Salter, Arthur. *The Iraq Development Board: A Plan of Action*. London: Caxton Press, 1955.

Shiber, Saba G.. *The Kuwait Urbanization.* Kuwait: Kuwait Government Printing Press, 1964.

Shoshkes. Ellen, and Sy Adler. "Planning for healthy people/healthy places: lessons from midtwentieth century global discourse." *Planning Perspectives* 24, no. 2 (2009): 197–217.

Shoshkes, Ellen. "Martin Meyerson and Jacqueline Tyrwhitt and the Global Exchange of Planning Ideas." *Journal of Planning History* 9, no. 2 (2010): 75-94.

Squire, Raglan "In the Middle East", *Architectural Digest* (March 1957): 73–108.

Stanek, Lukas. *Architecture in Global Socialism: Eastern Europe, West Africa and the Middle East in the Cold War*. Princeton: Princeton: University Press, 2020.

Stanek, Lukas. "Miastoprojekt Goes Abroad: The Transfer of Architectural Labour from Socialist Poland to Iraq (1958-1989)", *The Journal of Architecture* 17, no. 3 (2012): 361-386.

Peter Chomowicz

The Urban Imaginary in Doha, Qatar

Qatar, Ontology, Urbanism, Hermeneutics, Modernity

/Abstract

This article examines the urban and architectural development of Doha, Qatar since 1950 with a focus on the last few decades and the construction of a modernist skyscraper skyline. It views the city stereoscopically, as both fact and symbol. From one perspective the city is a basic architectonic and morphologic fact; from another view it is a powerful ontological and epistemological symbol. My main contention is that both aspects are needed to understand how the rapid urbanization of the Arabian Gulf city uses the built environment to find an orientation in history, particularly when 'history' in this context seems in its own right a tool fraught with contradictions.

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> From its offices come the commands that put the world in order. In fact, the skyscrapers are the brain of the city, the brain of the whole country. They embody the work of elaboration and command on which all activities depend. Everything is concentrated there: the tools that conquer time and space – telephones, telegraphs, radios, the banks, trading houses, the organs of decision for the factories: finance, technology, commerce.
>
> – Le Corbusier[1]

Cities the world over are often known by their icons. Paris and the Eiffel Tower, London's Big Ben and New York's Twin Towers – an icon so powerful its destruction on 9/11 reshaped American foreign policy and much of the global world order. These skyscraper images place the viewer in the city and the city in the world whether or not we have ever visited them. The iconography of the skyscraper offers clues as to the urban lifeworld of those who experience them; New York's unrelenting focus on commerce and its inexorable impulse to constantly sweep aside the old and replace it with new, shinning and more stunning monuments, for example. On the other hand, writing about a city from only the standpoint of its skyscraper image threatens to reduce our understanding of the rich complexity of urban life to a familiar postcard snapshot. Yet, it is my hope that understanding the stratification of architectural embodiments - from abstract symbol to concrete situation - of a rapidly developing high-rise cityscape will illuminate a central concern of the modern Arabian metropolis, namely, its search for an ontological orientation in history. [Fig. 1]

Fig. 1

West Bay skyline at night: Burj Qatar in the centre illuminated in red (Source: Arendt Kuester, 2017).

1 Le Corbusier. *The City of To-morrow and Its Planning*. Translated by Frederick Etchells. (New York: Dover Publications, 1987). Originally published as *Urbanisme* (Paris: Editions G. Crès & C., 1924), 7.

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were often portrayed through grainy black and white photos as the heroic protagonists of the Arabian saga. As those images and way of life faded, a new picture emerged upon the very same landscape, the exploitation of seabed oil, and a decade later in the 1980s natural gas, and with it the rise of the modern city.

Until the 1950s, Doha was a meagre coastal entrepôt, clinging precariously to the muddy shores of the Arabian Gulf. Its 12,000 souls made their living through fishing, pearl diving, and slave trading. With almost no modern institutions or infrastructure until the eve of oil, Doha existed much as had for thousands of years.[2]

The interwar period was particularly hard on Doha. Japan's introduction of the cultured pearl, together with the Great Depression, collapsed the Arabian Gulf pearl industry resulting in a mass migration and nearly halving Doha's population. The situation improved after World War II and by 1949 when the first oil tanker left Qatar, the peninsula was poised for rapid development.[3]

By the 1970s Qatar was awash in cash and its emir, Sheikh Khalifa bin Hamad Al-Thani (b.1932-2016, r.1972-1995) desired a modern metropolis. Khalifa hired one of Britain's most respected architecture and planning firms, Llewelyn-Davies,

2 J.G. Lorimer, *Gazetteer of the Persian Gulf, Oman and Central Arabia* (Calcutta, India: Superintendent Government Printing, 1915). Republished by Gregg International, Westmead, United Kingdom, 1970, 57-119.

3 Ali Ajjaj, "Social Development of the Pirate Coast", *Middle East Forum 38* (1962): 75-80; and Rosemarie Janet Said Zahlan, The Creation of Qatar, (London: Croom Helm, 1979).

Fig. 2

Aerial image of Doha (Source: Hunting Aerosurvey, 1956).

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Weeks, Forestier-Walker and Bor (hereafter Llewelyn-Davies) to remake Doha.[4] With extensive Middle East planning experience, Llewelyn-Davies drew up Qatar's first and only officially adopted urban masterplan. Based upon a ring and radial road system, the new city plan formalized the urban edge with a corniche motorway holding back the muddy and feted Arabian Gulf. The excavated soil was dumped on the sand bars to the north of the city creating what is commonly called 'West Bay' **[Fig. 2]**. Such a plan and its enactment presented a radical reconceptualization of the city's infrastructure, setting the stage for its breath-taking development that began in the 1990s.[5] **[Fig. 2, 3, 4]**

Fuelled by revenue from exploiting the world's largest natural gas field lying just offshore from Doha, the city was poised to enact massive socio-cultural change, a historic reorientation across nearly every register of its institutional order.[6] In *The Consequences of Modernity*, Anthony Giddens points out the essential underlying causes of contemporary discontinuities that fit well with our analysis of Qatar: the pace of change, the scope of change, and the nature of modern institutions.[7] All facets are clearly expressed in the emerging high-rise architecture of West Bay. The fact that it simply did not exist before 1975 is testimony enough to illustrate Giddens' point. More particularly, and in keeping with our stereoscopic analysis of the skyline as an architectural fact, West Bay's high-rise buildings enable new government, commercial, and residential

4 1972 Report from the British Embassy in Qatar to the Foreign Office 8/1891.

5 Llewelyn-Davies, Weeks, Forestier-Walker and Bor, State of Qatar Planning Study (London, 1972-1974).

6 British Petroleum, *Statistical Review of World Energy*, (69th Edition, 2020): 32.

7 Anthony Giddens, *The Consequences of Modernity* (Stanford: Stanford University Press, 1990).

Fig. 3

Aerial image of Doha showing the pre-1950 coast edge and the West Bay central business district (Source: Google Earth, 2020).

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enterprises. As a symbol, West Bay announces a constitutive interconnection to other waves of social transformation happening across the globe, embodying institutions simply not found in any prior historical Arab-Islamic epoch. The skyscraper invokes an urban image of a capitalist, neo-liberal, open access society: wage labour, global finance, international brands, and the freedom to choose where one lives, and works are all conjured by the skyscraper. Even the very idea of living or working in an urban high-rise building is anathema to a desert-bound encampment that undergirds Bedouin social relations but has since become an object of pride as it takes its place among the many other skyscraper silhouettes of the modern, urban world.

Giddens specifically cites the city as an example of such discontinuities: 'Modern urban settlements often incorporate the sites of traditional cities, and it may look as though they have merely spread out from them. In fact, modern urbanism is ordered according to quite different principles from those which set off the pre-modern city from the countryside in prior periods.[8] In West Bay we see the role of the high-rise building – a uniquely modern fact and symbol – as a manifestation of the tensions wrought by socio-architectonic discontinuities that underly Doha's institutional and urban order.

Doha's master planning and skyscraper history

Since 1972 two different emirs have commissioned six different master plans from four different firms to envision a future Doha. One of Sheikh Khalifa's first acts when becoming emir after wresting control in a bloodless coup from his cousin was to set about reorganizing the government and replanning the city. The tandem acts of enlarging the Cabinet by appointing more ministers and

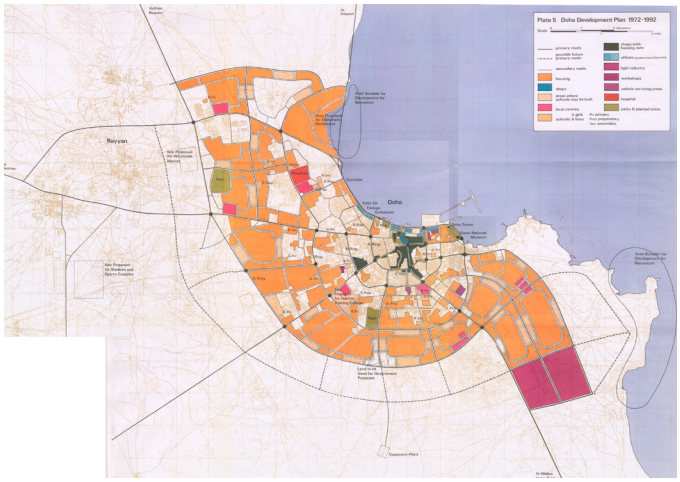
Fig. 4

Aerial photograph of West Bay (Source: Peter Chomowicz, 2015)

8 Giddens, *The Consequences of Modernity*, 6.

hiring the British architecture and planning firm Llewelyn-Davies, gave Khalifa the means to create a new city.

The 1972 Llewelyn-Davies plan addressed all the levers necessary to build a 'modern' state. The master plan focused primarily on Doha, but also on smaller cities in the peninsula, weaving together planning concepts, financial mechanisms, implementation strategy, and governmental oversight. The plan was a clear reflection of Khalifa's desire to right what he publicly described as his predecessor's inability to improve the lives of everyday Qataris. The master plan stressed the need to create a city conducive to living and working. Since the 1950s Qatari's were enticed to vacate their ancestral homes in the city centre for newly built homes, called 'villas' on the city's outskirts. Fuelled by low interest loans, land grants, and a 'social allowance' paid to Qataris according to clan stature, created a city devoid of Qatari nationals. The humble mud-brick and concrete block homes they left were rented to Iranian, Indian, and Pakistani immigrants who ran shops and lived in Qatar for years, even generations, without hope of citizenship. This left Doha a sprawling city of low-paid laborers and crumbling infrastructure, something the Llewelyn-Davies plan sought to change.



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6

Sadly, the financial windfall from the oil price boom of the 1970s did little to improve the existing city. We can speculate regarding why, but in the end the emir preferred to create his modern capital from scratch upon the vacant land – and water – that lay just north of Doha. Three recommendations from the Llewelyn-Davies plan were adopted and very much continue to contribute to the city's development: enhancing the city's main road system of concentric rings and crossing radials, building the Corniche to formalize and pedestrianize the city's coastal edge, and the creation of West Bay.[9]

We do not know if it was a conscious decision or just coincidence that the emir chose a California planning firm to succeed Llewelyn-Davies to design the 'New Doha'. An upstart from a 'non-city' had now outdone a London-based firm who had planned much of the urban Middle East. The Llewelyn-Davies plan called for sweeping social and architectural change to the original tight-knit fabric of Doha. Their civic, sustainable approach that championed public policy, pedestrian passage, and a sensitive balance between old and new could perhaps have only come from a Keynesian era British firm. Likewise, a spontaneous

Fig. 5
1972 Llewelyn-Davies master plan (Source: Llewelyn-Davies Architects)

Fig. 6
1975 William L. Pereira West Bay master plan (Source: William L. Pereira Architects)

9 Llewelyn-Davies, Weeks, Forestier-Walker and Bor, State of Qatar Planning Study (no publisher, 1972-1974).

plan to pit the old city against the new one; a new city built with new wealth, to be experienced from behind the wheel of an automobile, and built literally upon the sea itself, an imagined city whooshing up from the ocean's depth, could perhaps only come from a place like the New World's Los Angeles suburban sprawl. [Fig. 5, 6]

William Pereira was charged with imaging a 'New Doha' directly north of the existing city. His was not a repudiation of the Llewelyn-Davies plan as it had little to do with rehabilitating Doha's existing condition. The only place Pereira's plan referenced Doha is where the new plan must, almost unfortunately, overlap the old. The essence of the Pereira plan lay in several bold strokes. First, extend the ring-road system to the north creating a linkage from the historic centre of Doha to the new development areas to the north. Second, he proposed a series of cul-de-sac residential neighbourhoods very much on the Western suburban model. Third, continue Llewelyn-Davies' earlier proposal to complete the waterfront Corniche by deep dredging of the low-lying sand deposits that stretch north of Doha harbour. This sand, together with other excavations, was used to create much of what is today called 'West Bay' but is in fact the north end of the city. Many residents still refer to the housing area of West Bay by its Arabic descriptive – if somewhat pejorative – term *dafna* (literally burial), meaning landfill. *Dafna* would be home to the first national university – Qatar University – a new central business district, housing for 'senior Qatari managers', and a hotel and resort area.[10] The Sheraton Hotel, which was to be Doha's largest and tallest structure for many years, first appeared here in 1981. The entire area was linked to old Doha by a series of north–south primary roads and secondary transverse connectors. [Fig. 7]

7 |

Fig. 7
Doha, QGPC in the lower left, Sheraton Hotel in the upper right, early 1980s (source: MMUP).

10 For a detailed description of Qatar's senior staff housing see Hassan Rashid H. Al-Derham "The Establishment of Performance Criteria for the Evaluation of Procurement of Senior Staff and Private Housing Projects in the State of Qatar" (Ph.D. Dissertation, University of Glamorgan, 1999).

In short, New Doha was everything old Doha was not: progressive, educated, home to wealthy 'senior government officials', with a beautiful view of the conquered sea. New Doha represents the moment when Doha decided it no longer needed or wanted a past. Engineering feats funded by oil wealth meant anything was possible. This is the moment when Qataris threw off their traditional understanding of being at the environment's mercy and picked up the new Western mantra that they could be masters over any resource: land, sea, concrete, asphalt, people and, most especially, history. [11]

Although the Pereira plan never received an official Emiri Decree, as had the Llewelyn-Davies plan, the Emir nonetheless thrust it upon the Qatari people in one quick step. New Doha sprang up quite literally from the sea floor, coming to represent both the emir's vision for his nation and the endless possibilities to refashion the future. Today, much of *Dafna*'s luxury housing looks tired and shabby. The land plots and villas originally built to house the government elite are minuscule by contemporary standards of 'luxury'. The waterfront is still very much under development and the skyline of nearly 100 high-rise office and apartment towers – none, except the Sheraton, also designed by Pereira, more than ten years old – continues to change almost weekly.

Method

My desire to understand the Doha skyscraper stereoscopically, from one perspective as an architectural fact and, from another, as a powerful ontological symbol, means observing the ways in which its inhabitants 'see' and 'use' the city. By observing how West Bay functions as an image and as an imaginary reveals how people situate themselves in the meaningful world of social action, deriving an orientation toward sources of meaning. Methodologically, by closely observing everyday intersubjective interactions as grounded in an urban neighbourhood that many consider the image of the city par excellence, reveals how architects, their patrons, and participants understand, navigate, and find meaning and stability in a topography undergoing constant change.

Data collection for this article comes from a variety of sources. From 2011 to 2016 I conducted forty-one in-depth personal, semi-structured interviews across a wide spectrum of Doha residents. The individuals interviewed ranged in age from twenty-two to eighty-two years, with an average of forty-six years; 43 per cent female and 57 per cent male. Qatari nationals formed half with the rest coming predominately from other Arab countries and the Indian subcontinent. Lengths of time in Doha ranged from two years to sixty-eight with an average of thirty-four years. Roughly 85 per cent were Muslim, 10 per cent Hindi and 5 per cent of no practicing faith. Within the Muslim fraction nearly all were Sunni, though several came from the Shir'ah, Baha'i and Alewite traditions.

11 This view is supported by interviews with Qatari research participants: male, age 50, engineer; male, age 60, government official; male, age 73, retired military officer; female, age 63, homemaker; male, age 59, oil executive.

8

The interviewees ranged in social and economic status from members of the royal family to a household of Filipina maids who have 'absconded', to use the local parlance, from their kafala sponsors, and gone into hiding. Levels of literacy, status, and nationality indicated degrees of access to urban institutions and the West Bay enclave. Gender seemed to be the first determinant of spatial or institutional access. Fewer distinctions were made on religious grounds as nearly all were Sunni Muslims, as are the majority of Qatari nationals.

Subscribing to methods rooted in grounded theory and the phenomenology of perception meant maintaining a consistent line of semi-structured questions related to the build environment. The interviews were transcribed and coded at the paragraph level giving me insight into the role West Bay plays in their everyday lives and how the skyscraper topology and typology as fact and symbol orients a personal ontology against or because of its rapidly changing nature.

Dislocation of space, place and time

A hallmark of the modern age is our ability to control time and space independently. For all of human history until the invention of mechanical clocks, events occurred in a physically specific situation, rooted in fundamental natural conditions and the belief in a divinely created cosmos. The clock and concomitant rise of industrial production and economic specialization broke this ancient relationship. Few images in our social imaginary conjure this notion more powerfully than the glowing office tower. One imagines thousands of workers toiling behind computer terminals, connected to global markets, trading commodities, or simply exchanging information the world over. Day or night shifts of arbitrageurs trade the world's resources.

We do not know if West Bay's current high-rises are truly occupied by fleets of

Fig. 8

QDP. Qatar Petroleum District and billboard for Msheireb. The representation of the 'real' in one mega-development flows together with 'real' in another (Source: Peter Chomowicz, 2015).

financial wizards as in large global cities, but West Bay now has its own financial centre, the Qatar Petroleum District (QPD). The QPD financial enclave comprises almost 700,000 square metres of gross floor area, including hotels, corporate training centres, banks, food and retail outlets and prayer rooms. Though nearly in the heart of West Bay, it is nonetheless advertised as forming its own district, much in the way we think of peripheral financial centres like London's Canary Wharf, or New York's World Financial Center. The concentric architectural rings reinforce its insular image, almost as if a nascent financial 'centre' must be hermetic and on the city's fringe. **[Fig. 8 - 9]**

9

Comparing the billboard image of the QDP [Fig. 8] with the actual building itself in the background [Fig. 9], we wonder about the role each plays in the image of Doha, what I shall refer to below as the 'urban imaginary', a term borrowed from Charles Taylor's essay 'Modern Social Imaginaries'.[12] Taylor's term, in turn taken from Benedict Anderson's *Imagined Communities*, is a framework for probing the ways in which societies think of social reality not in a disengaged mode, but rather, as Taylor says, in 'the ways in which they imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations which are normally met, and the deeper normative notions and images which underlie these expectations'.[13]

Taylor's view moves beyond social theory because to speak of an 'imaginary' means to interrogate how everyday people 'imagine' their surroundings; it expresses what is widely shared in a culture; and the social imaginary 'is that common understanding which makes possible common practices, and a widely shared sense of legitimacy'.[14] My extension of Taylor's 'social' imaginary to 'urban' imaginary focuses our attention on the spectrum of symbolic articulation embodied in architectural language ranging from pure form to projected image. In the case of the QPD, the image of a definitive financial district seems to matter most; its 'realness', whether traders are trading, seems less important.

The business activities of many global financial districts often enjoy little direct connection to localized activities, yet they remain indebted to nearby cultural centres, for example Wall Street to Tribeca, or Canary Wharf to the West End. But, in the high-rise district itself, space, place, and time operate semi-autonomously, fostering relations between absent partners. As Giddens rightly says:

In conditions of modernity, place becomes increasingly phantasmagoric: that

12 Charles Taylor, *A Secular Age* (Cambridge: Belknap Press Harvard University, 2007).

13 Taylor, *A Secular Age*,171 and Benedict Anderson, Imagined Communities (London: Verso, 2006).

14 Taylor, *A Secular Age*, 172.

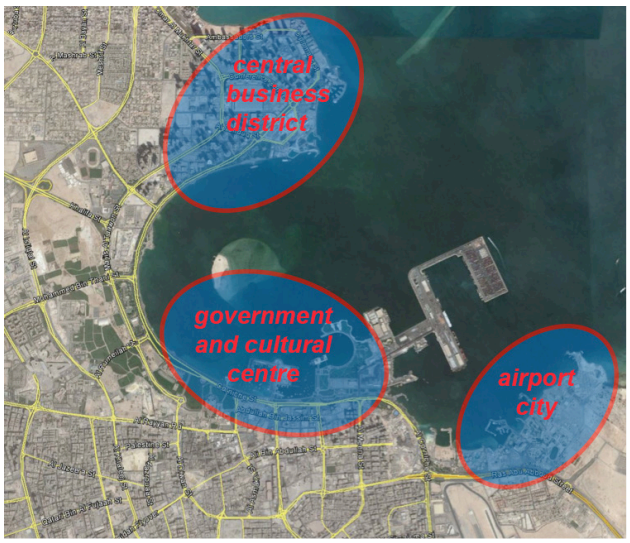
Fig. 9

Photograph of QDP under construction (Source: Peter Chomowicz, 2013).

is to say, locals are thoroughly penetrated by and shaped in terms of social influences quite distant from them. What structures the locale is not simply that which is present on the scene; the 'visible form' of the locale conceals the distanciated relations which determine its nature.[15]

For Giddens, the separation of space, place, and time is crucial to modernity's extreme dynamism because it provides the fundamental mechanism of modern social life, namely, the rational bureaucratic organization (state, corporate, etc.) through a 'disembedding' of social activity from its situated context. Modern organizations depend on vast, interconnected networks, what Sassen characterizes as flow: the movement of bits, bytes, money, and men across the globe at the behest of global capital centres such as those mentioned above.[16] Such a 'disembedding' of social systems, says Giddens, lifts out social relations from local contexts and restructures them across immense spans of time-space.

Giddens' characterization of urban evolution fits Doha well. Doha harbour embodies both the city's historic locus and the contemporary view of the city's centre. Around the Corniche we find the three main nodes of Doha master planning: the airport in the south, government and culture in the mid-arc, and the commercial district in West Bay at the northern tip [Fig. 10].



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The dialectic of urban fragments, embodied in the high-rise skyline when seen from the Corniche promenade, pits the new against the old; the image of modernity in glass and steel seems to rise from the sea itself (which it is given West Bay is an artificial peninsula of seabed reclamation) against the image of tradition in dusty and dilapidated concrete blocks sprawling out towards the desert's expanse. Horizontal: earthen, tribal, ancient, Islamic. Vertical: glass, democratic, modern, bureaucratic. However, ancient tribal practices and Islamic customs are still very much alive within the glass towers across the bay. Visiting government ministries, as I often did while living in Doha for many years, readily exposed me to the more obvious hierarchies and segregations, for example women-only lifts and areas within open plan offices for women, their cubicle walls higher than those of their male colleagues. Less

15 Giddens, The Consequences of Modernity, 19.

16 Saskia Sassen, *Globalization and Its Discontents: Essays on the New Mobility of People and Money* (New York: The New Press, 1998); Saskia Sassen, *The Global City* (2nd ed. Princeton, New Jersey: Princeton University Press, 2001); Saskia Sassen, *A Sociology of Globalization* (New York: W.W. Norton & Co, 2007).

Fig. 10

Map of Doha harbour highlighting the three primary zones of activity (Source: Google Earth, 2015).

11

obvious is the primacy of face-to-face communication, trust built from personal relationships. Deal making and decision making are, in my personal experience, and as expressed by all my research participants working within or alongside government ministries, very much beholden to traditional clan affiliations and animosities, some dating back generations. **[Fig. 11]**

One cannot mistake West Bay as being made for and by Westerners. In addition to the many American and European hotels, banks, and company headquarters, most foreign embassies are also found here (West Bay's alternative name is the Diplomatic District), along with dozens of apartment towers. All these institutions and for the most part their equally foreign architects vividly paint a distanciated portrait. Each building is in its own way a disembedding 'symbolic token', the medium of interchange that we might find in any city the world over.[17] This reminds us of the early work of Diller and Scofidio in *Back to the Front: Tourisms of War*: the further tourists travel and the more exotic their surroundings, the greater the desire for the familiar. [18] Coming to Doha in the early 1980s may not have been exotic but it held a certain Gulf-Arabian authenticity. At the time of its construction in the 1980s, the pyramid motif seems at home on a barren desert plain, reminding one of its Egyptian forebearers, but without any other context for the hotel it no doubt felt as if a spaceship had landed. Nearly all my participants in their mid-thirties and older, vividly describe life alongside the new hotel. Some view it as a lodestone of sorts, a temporal and directional compass to judge urban development and one's location within the constantly changing landscape. One's location among the new streets and buildings springing up around Doha is ascertained by referencing the hotel, they say. And one could easily see the rapidity of West Bay's development as the Sheraton became engulfed by its surroundings. The younger interviewees in this group, particularly women, remember fondly family picnics on the sandy peninsula accompanied only by the hotel. In Giddens' parlance the Sheraton Hotel is a symbolic token by which the city's inhabitants reflect on the rapidity of distanciation.

Distanciated symbolic tokens abound in West Bay, none more potent than the economic image of the skyscraper. Anyone can inhabit the office tower provided

17 Giddens, *The Consequences of Modernity*, 22

18 Ricardo Scofidio and Elizabeth Diller, *Back to the Front: Tourisms of War* (F.R.A.C. Basse-Normandie, 1996).

Fig. 11

West Bay seen against the traditional Arabian dhow sailboat (Source: Peter Chomowicz, 2013).

they pay rent, performing activities within that are always based on electronic commerce and information exchange, instantiating the symbolic token of money.[19]. For Marx, money, the 'universal whore', broke the personal relationship between exchanging partners by substituting an abstract medium. Anything can be traded for anything through money's universality as a pure commodity.[20] The rise of financial engineering over the last few decades, particularly futures contracts, points to money's space-place-time distanciation mechanism. It is Georg Simmel, however, who gives Giddens a view of money's spatial implications:

> The role of money is associated with the spatial distance between the individual and his possession … Only if the profit of an enterprise takes a form that can be easily transferred to any other place does it guarantee to property and the owner, through their spatial separation, a high degree of independence or, in other words, self-mobility… the power of money to bridge distances enables the owner and his possessions to exist so far apart that each of them may follow their own precepts to a greater extent than in the period when the owner and his possessions still stood in a direct mutual relationship, when every economic engagement was also a personal one.[21]

Simmel and Giddens move us beyond the generalizing rubric of West Bay's high-rise landscape as representing a neo-liberal economic model (which it does) and dive deeper into money's ability to hold disparate events simultaneously. This is a new institutional horizon in Qatar's history.[22]

In *Dubai: The City as Corporation*, Ahmed Kanna compellingly argues for an understanding of Dubai's urban morphology as a capitalist, profit-seeking enterprise. Says Kanna, the 'urbanscape of the contemporary Emirati city is envisioned by rulers and urbanists… as a visualized and imagistic city' – meaning the emir must have architectural icons designed by internationally renowned 'starchitects', and these structures, when taken in aggregate as a cityscape, in turn represent a neo-liberal, free-market-driven form of globalization that is both a kind of family-state power and inclusive cosmopolitanism.[23] Dubai's current emir, Sheikh Muhammad bin Rashid Al-Maktoum, often refers to himself as Dubai's CEO, a reference, Kanna believes, that extends across the city creating an image of the ruler as entrepreneurial, efficient, and always acting in the best interests of his 'shareholders'; the shareholders, Dubai residents, national and

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19 Guy Debord, *Society of the Spectacle* (New York: Zone Books, 1994); and Henri Lefebvre, *Critique of Everyday Life* (vols. 1–3. London: Verso, 1991).

20 Karl Marx, *The Grundrisse* (Harmondsworth: Penguin Books, 1973) quoted in Giddens, *The Consequences of Modernity*, 22-23.

21 Georg Simmel, *The Philosophy of Money* (London: Routledge and Kegan Paul Ltd, 2011) quoted in Giddens, *The Consequences of Modernity*, 24-25.

22 For a full treatment of the development in human history from limited access or natural states to open access orders see Douglas C. North et al., *Violence and Social Orders* (Cambridge: Cambridge University Press, 2009).

23 Ahmed Kanna, *Dubai: The City as Corporation* (Minneapolis, Minnesota: The University of Minnesota Press, 2011), 137.

12|

13|

expatriate alike, are similarly inspiredtowards a life of commercial business interests.

Though both Dubai and Doha share a history of emirs cultivating family members and prominent clans towards the creation of family corporations, Dubai ultimately chose a different path, one that encouraged foreign direct investment to offset dwindling oil extraction. As a result, Dubai enjoys several enormous free-trade zones that exempt employees from UAE employment and visa requirements, and media censorship, while allowing foreign corporations full ownership and profit repatriation of their Dubai operations. By contrast, Doha has only one free-trade zone, the Qatar Science and Technology Park (QSTP), which operates under the Qatar Foundation on a different model from Dubai's. Furthermore, Qatar's highly restrictive *kafala* labour laws bind expatriate employees of any status - from domestic maid to managerial professional - to their employers. While Doha may appear as capitalist and freewheeling as Dubai, in reality its business climate is far more insular, and highly controlled by the emir.[24]

The Architecture of West Bay

In the architecture of West Bay, we often see motifs extracted from across the Arab world and used in ways foreign to their origins. The desire of the – mostly Western – architects to appear 'local' and knowledgeable about 'Islamic'

Fig. 12
The Burj Qatar (Source: Peter Chomowicz, 2013).

Fig. 13
The facade of the Burj Qatar illuminated with one of several computer-controlled lighting patterns (Source: Peter Chomowicz, 2013).

24 Matthew Gray, *Qatar: Politics and the Challenges of Development* (Boulder, Colorado: Lynne Reinner Publishers, 2013).

14

customs requires the importation of the motif from elsewhere in what, to a Westerner, is 'Islamic architecture's' cultural field; a practice acceptable to Qatari clients who wish to appear 'cultured' to the global audience and respectful of traditions to locals. The architectural situations seen in Figures 12 through 18 are chosen as examples of these tensions underlying the institutional and urban order of Doha's development.

It is probably safe to say Doha's most 'iconic' (that is both widely recognized and admired) building **[Fig. 12, 13]** is the Burj Qatar (Qatar Tower) designed by French architect Jean Nouvel and completed in 2012. According to Hafid Rakem, a partner in the Office Jean Nouvel, the façade's star-shaped pattern **[Fig. 14]** was inspired by a column in a local Doha mosque, and its *mashrabiya* skin permits the use of clear glass, which is highly unusual in the Middle East.[25] The *mashrabiya* referred to by Rakem is a simple screening device found throughout the Islamic world but particularly in the Eastern Mediterranean **[Fig. 15]**.[26] When combined with geometric patterning the *mashrabiya* is now one of the Gulf's most ubiquitous architectural motifs. Everything from window shades, fences, gates, and even etched patterns on highway underpasses to the supreme example of the Burj Qatar are adorned with interlocking star patterns. With Doha lacking a richly developed iconography of its own, most Western designers use southern Spain, Iran or ancient Baghdad and Damascus for inspiration for their highly evolved aesthetic innovations rather than the humble motifs of Gulf origin.

15

Wrapping the tower in a *mashrabiya* accomplishes several

25 Oliver Ephgrave, "Site visit: Burj Qatar," Construction Week Online, 10 October, 2012. https://www.constructionweekonline.com/article-18872-site-visit-burj-qatar

26 Linguistically, the word stem, shrbt, means 'to drink', which reveals the word's architectural origin denoting an oriel window cantilevering from a second floor room that holds cool water. The projecting space, which is surrounded by a wooden lattice on three sides, allows ventilation to cool the stored water, and promotes cross-ventilation for the entire floor, eliminates direct solar heat gain and in the ultraconservative Gulf enables women to see what is going on in the street below without permitting foreign eyes to see inside their homes. A more extreme version of the mashrabiya is found in an architectural device particular to the Gulf, the tarma, from the Arabic word for dumb or mute, which is a small earthen or wooden box protruding from an upper story into the 'public' alley or sikka below. The tarma allowed women to perch themselves above their front door to hear life outside their cloistered home without revealing themselves. As the name implies the women could not speak to or see the people below. And of course, those on the street never knew when someone might be listening from within the tarma. For a lengthy discussion of the tarma and other privacy practices in the Arabian fereej of Saudi Arabia see Mahary A. Al-Naim, "The Home Environment in Saudi Arabia and Gulf States: Growth of Identity Crises and Origins of Identity", *Crissma Working Paper* No. 10 (Milano: Pubblicazioni dell'I.S.U., Università Cattolica, 2006), 222.

Fig. 14

The Burj Qatar mashrabiya skin (Source: Peter Chomowicz, 2013).

Fig. 15

Example of an Egyptian mashrabiya from the Museum of Islamic Art, Cairo, Egypt (Source: Milad Moawad, 2021).

16|

practical goals. First, it greatly helps reduce solar heat gain by limiting the sun's direct contact with the inner glass curtain wall.[27] Varying the density of the *mashrabiya* to correspond with the sun's arching intensity helps reduce the façade's monotony while improving the interior view and increasing natural daylight. Like the original *sikka mashrabiya* (narrow alleyway mashrabiya) that prevented strangers from peering inside domestic interiors, Nouvel's façade similarly helps keep public eyes from peering into the lit interior spaces at night. And, of course, the polished aluminium skin when combined with programmable exterior lighting creates its dramatic night-time image.

The Burj, like Norman Foster's similarly shaped AIG tower in London, makes no attempt to create a public realm connected to the street. Indeed, the Burj's main lobby, submerged one level below the street **[Fig. 16]**, further enhances its separation from the city. Dappled light filtering through the aluminium canopy and water vapour from the irrigation sprayers create a grotto-like atmosphere. Entry to the Burj's main lobby through a submerged, hidden garden removes the building's connection to the street in two senses: from the physical street of cars, traffic, and pedestrians, and from the street of human interaction. Creating a verdant oasis in the middle of arid, sandy Doha is somewhat of an Orientalist cliché: Howard Roark reading *Tales of the Arabian Nights* under a Najd date palm.

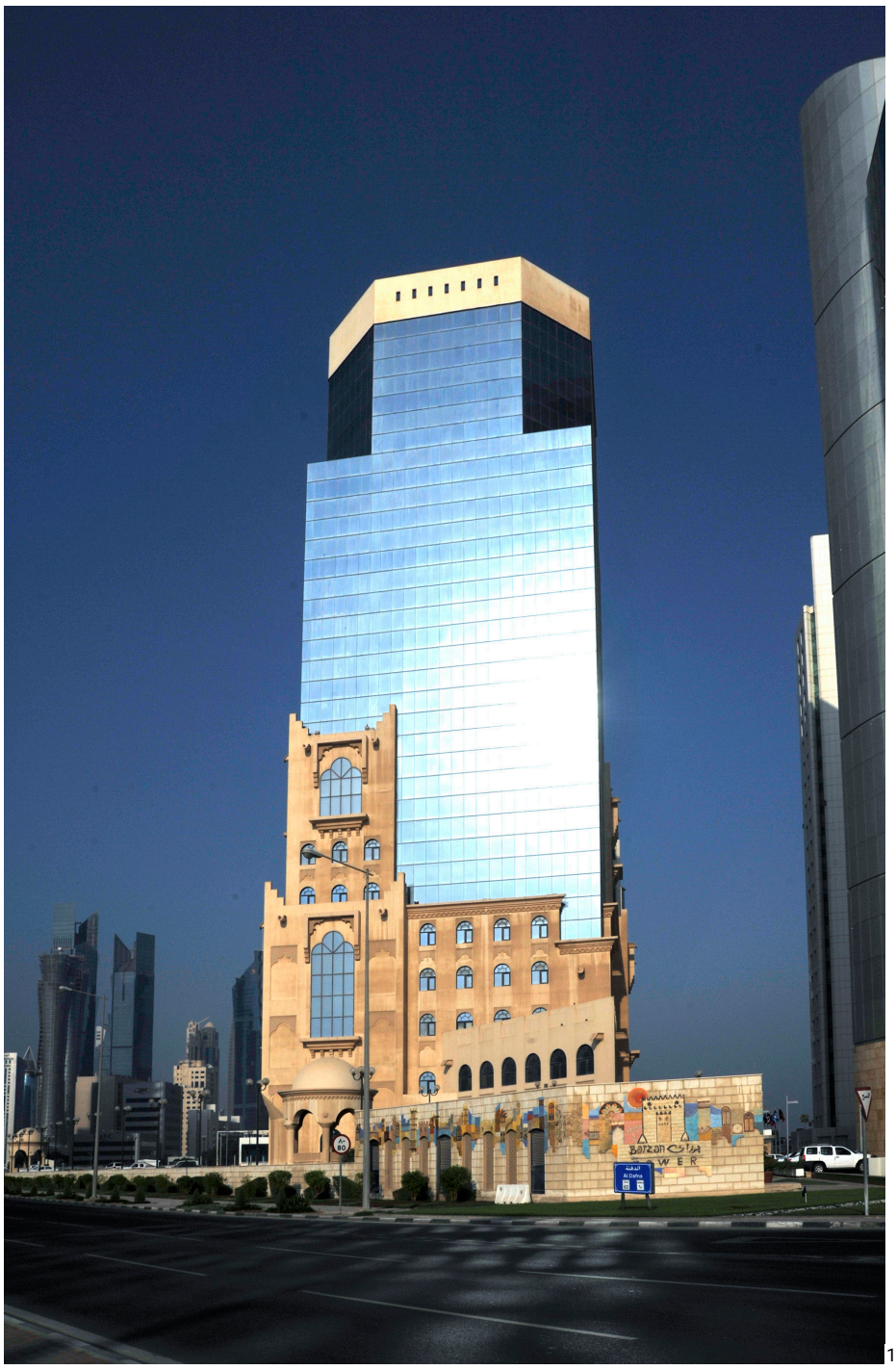
The Burj Qatar's architectural language, rooted in cultural signs such as the *mashrabiya*, makes the foreign high-rise form intelligible through its connection to the background language operating in the culture, even if we understand 'local culture' to come from distant Arab lands.[28] The building clearly expresses

27 Despite the aluminium outer skin designed to reduce solar heat gain, the building's enormous elevator core placed on the north side of the circular plan misses the easiest and least expensive opportunity to shade the south-facing interior, likely a decision based upon the desire to maintain the more dramatic view over the harbour to the south.

28 The main criticism of the Burj Qatar is its striking resemblance to Jean Nouvel's previous tower in Barcelona, Spain: the Torre Agbar.

Fig. 16

Burj Qatar 'grotto' one level below street level (Source: Peter Chomowicz, 2013).



17|

a Western, highly technological modernity, yet its façade pattern consciously acknowledges the humble domestic screen. Like the Burj Qatar, the two examples seen in Figures 17 and 18 of West Bay skyscrapers are chosen to illustrate different architectural attempts to bridge cultural meanings. The Barzan Tower **[Fig. 17]**, completed in 2000, houses the Ministry of Labour (MOL) and was designed by Qatari architect Ibrahim Jaidah of the Arab Engineering Bureau.[29]

29 'The building is known by its developer name, Barzan Tower. A multistory office building clad in deep-blue reflective glass and aluminium curtain walls, with rental office space of 13,600 square metres. The first nine floors are treated in a traditional architectural style, in contrast to the 21-story glass-clad tower above. A rigid central cast in-situ reinforced concrete core was developed around a central vertical service shaft that contains lifts, staircases and services. The architect's challenge was to achieve a balance between the requirements of a modern office building while preserving traditional Qatari architectural methods'. "Barzan Tower," Aga Khan Trust for Culture, accessed March 2015, https://archnet.org/sites/5126

Fig. 17

Barzan Tower hosting the Ministry of Labour offices (Source: Peter Chomowicz, 2013).

18|

A short distance away is the Supreme Educational Council (SEC) headquarters [Fig. 18], designed by Ashghal, the Qatar Public Works Authority.[30] Both buildings attempt to synthesize a modernist high-rise and Arabic heritage; the resulting hodgepodge of vocabularies underscores Doha's reliance on architectural image to reconcile iconographic differences and the more deeply held beliefs they represent. Vesely points out that nineteenth-century European architecture found it increasingly difficult to relate a contemporary 'style' to its past.[31] Overshadowed by historists who held history as discrete epochs, the only arc of continuity relating one period to another is the change in style and not in underlying concepts. In both Europe and Doha, the problem of style corresponds to the conflict between ideas as ahistorical representations of tradition and the historically bound uniqueness of an epoch.[32]

The Barzan Tower makes no apology for creating an 'Arab street' façade that gives way to a featureless curtain wall above. The blue glass skin seems embarrassed by its own presence, seeking to dissolve into the colour of the sky. The SEC building aggrandizes and abstracts the parapet crenulations of Arab mud-brick forts found mostly in Oman, completing the architectural pot-pourri with a mosque-like structure embedded midway on the façade. The two examples act as co-determiners of action, to use Charles Taylor's words. They act as high-rise buildings, what is expected in West Bay, but still seek intelligibility to an

30 Date of the building's completion unknown.

31 Dalibor Vesely, *Architecture in the Age of Divided Representation* (Cambridge: The MIT Press, 2004), 261.

32 Veseley, *Architecture in the Age,* 262.

Fig. 18
Supreme Educational Council (SEC) building (Sources: Peter Chomowicz, 2015)

Arab-Islamic social construction. Each is an individual actor, but through their agglomerative design approach help co-determine each other's presence.

19

All cities the world over express varying degrees of the 'consequences of modernity'. What I wish to add is the notion that cities like Doha express through architecture a restless dynamism between the divine order – what, from Taylor, I call a vertically oriented culture – and a separate human order, the horizontal. The tension between the two orders as centres of power is manifest in the architectural dialectic across the bay: ordered and rational Western-inflected buildings on one side of the bay and, to use a phrase from the Msheireb redevelopment architect Tim Makower, a higgledy-piggledy, chaotic neighbourhood, on the other side. A 2008 view of the Msheireb fereej neighbourhood with the West Bay skyline in the distance illustrates the dialectic of what I am calling the horizontal versus vertical urban and institutional order **[Fig. 19]**. 2010 digital rendering of Msheireb development **[Fig.**

20

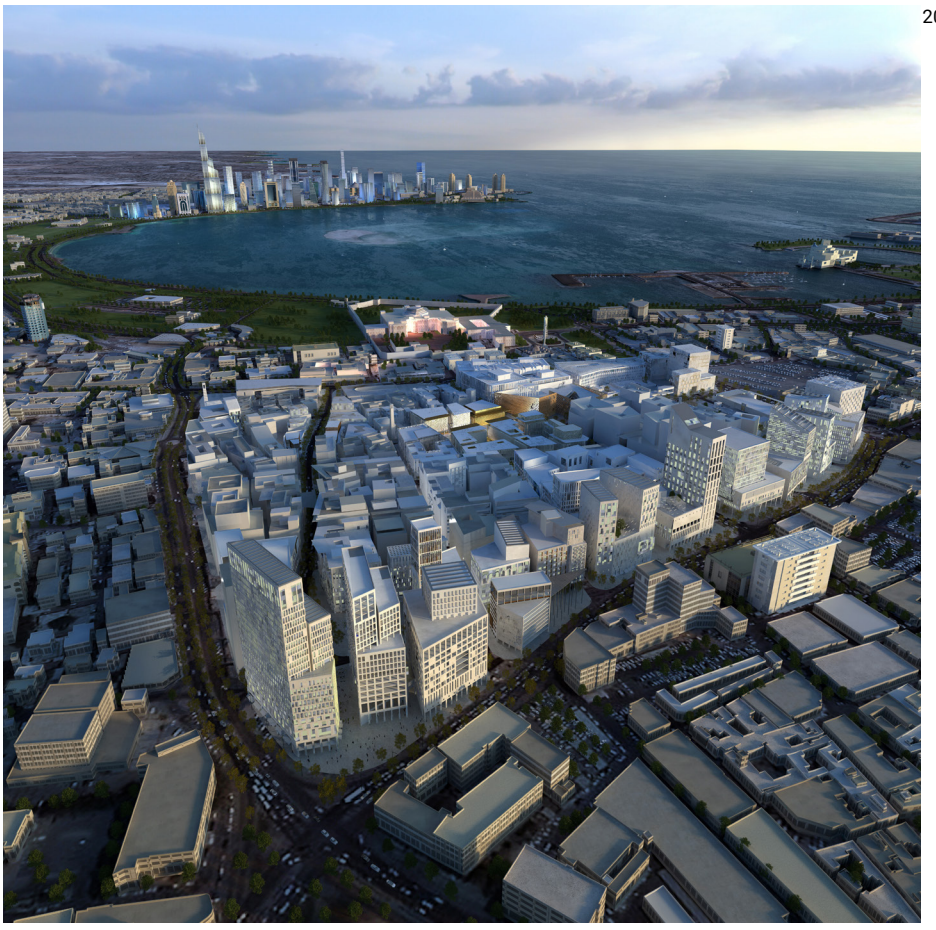


Fig. 19

In the foreground, Msheireb fereej (Source: Peter Chomowicz, 2009).

Fig. 20

Nearly the same perspective as fig. 19, a computer rendering of Msheireb Downtown Doha, with the West Bay skyline in the distance (Source: Msheireb Properties, 2010).

20], reveals why the regime wished to erase the image of the historic fabric seen in Figure 19 and replace it with a 'modern' version, or, according to Msheireb's own marketing strap line attributed to the emir's wife Sheikha Moza, 'A rising homeland that confidently embraces modernization and proudly observes tradition'.[33] In the cross-bay dialectic we indeed see both homelands rising, in that the buildings are getting taller, and both are struggling against their own height and scale to remain 'traditional'. The key point I wish to emphasize is the institutional order within both 'rising' landscapes struggles to remain ontologically Islamic against its modern embodiment.

The speed of creating West Bay's skyscraper landscape testifies to the regime's ability to easily overcome the kinds of resistances we might expect in other vertically oriented cities: money, planning and nature. Creating an image of modernism, we might say 'cut and pasted' from the icons of late capitalist cities and combining it with a similar view of Islamic iconography's transportability ostensibly describes a vast planning matrix whose warp of traffic movements and weft of historical references attempt to synthesize the modern with the traditional. Underlining West Bay's grand plan are the remnants of antique custom that claim to observe and preserve power. However, the resulting city is no more local than its models such as Canary Wharf or the World Financial District. In its search for a 'city' commensurate to its historical orientation, Doha's leaders neglect the manner in which the 'actor' is claimed by the stratification of contexts, the claims made by culture.

The rapid creation of West Bay's institutional depth begins with an abrupt rise from primordial conditions – the sea – to establishing earth, supporting a city, comprised of architecture, enabling customs embodied in typical situations, culminating in *praxis*, authentic action within a culture's commonly held concerns. The full arc of the institutional horizon from what is most common to all – earth – to *praxis* connects the particular to the universal, bridging the 'actor' to her lifeworld of meaningful social action. Within urban topography and its structure of differentiation, architecture provides the immediate horizon of praxis. Yet in West Bay this stratification as I have just outlined omits the deeply held connection between articulation and embodiment. Instead of finding a range of articulations from the most abstract to the most concrete and a corresponding spectrum of architectural and symbolic embodiments we find instead an ambiguity that veers between ancient Islamic hierarchies and modernism's nihilism. The irony of West Bay is it seems every bit as much a 'city' as its high-rise contemporaries but, lacking a coherent institutional horizon, what remains is a continual search for what a 'city' truly is.

Ceremony in the urban order

Fashion in Qatar gives everyone an instant understanding of rights, privileges,

33 Fay Sweet, *Heart of Doha: A Blueprint for the Future* (London: EDAW/Aecom, 2009).

and normative behaviours within an ancient hierarchy. For example, the emir, and men from the royal family or wealthy sheikhs, wear crisp white *thobes*, and on special occasions a gold embroidered *bisht* (robe). Next in the social hierarchy is the typical male Qatari national, who wears a white *thobe* and head covering, the *guttra*, and for women a black *abaya* and some form of head or face covering. Western managerial expatriates typically wear business attire; their wives dressing modestly in loose-fitting skirts. At the bottom of the chain sit the 2 million Asian workers in bright coloured coveralls. However, on certain occasions the urban landscape transforms our understanding of Doha's caste system.

Take for example 'National Day', the annual celebration of Qatar's independence **[Fig. 21]**. Since 2007 the country's residents have thronged to the Cornice to enjoy a spectacular firework display, wave flags, and parade along the coastal highway. The event has become so massive that the entire city is gridlocked for hours by the thousands of cars pouring towards the coastal urban edge. The great collective ritual of a cheering crowd suspends for a moment class and caste; we unite in common action to cheer the nation but, given that the spectacle takes place within the urban representation of the West Bay backdrop, we cheer just as loudly for the city and the emir who made it all possible. We imagine ourselves to be living in a triumphant metropolis, one that started to rise from the sea only a few years before. Fireworks and crowds once a year do not make a city. But the common, shared action, in a shared public sphere, tends towards the key horizontal forms of the social imaginary.

21

Benedict Anderson refers to events like Qatar's National Day celebration as emblematic of national identity, in stark contrast to religious or regnal identity.[34] The actual event that National Day celebrates is not widely known. One might imagine that memorable dates such as 3 September 1971 when Qatar ended its protection treaty with the British and became independent, or 22 February 1972 when Sheikh Khalifa overthrew his cousin would be worth celebrating. Why then did Sheikh Hamad in 2007 declare 18 December as National Day? Officially, the date commemorates the historic day in 1878 when Sheikh Jassim bin Mohammed Al-Thani succeeded his father as leader of the tribes of Qatar. This day in history is every bit as much a national fiction as the contemporary celebration. Better to cheer an historic transition of power rooted in clan supremacy than either its colonial underpinnings or history of internecine conflict and political coups. Architecture and its image are used cleverly to further implant the regime's political legitimacy. Everyone, regardless of class, gender, ethnicity, or nationality,

Fig. 21

National Day Parade (Source: Al Jazeera News, 2014).

34 Benedict Anderson, *Imagined Communities* (London: Verso, 2006).

celebrates an urban triumph made possible by the seamless power handling of the Al-Thani. Conversely, the urban high-rise backdrop that literally shadows National Day symbolizes Al-Thani rule. Throughout the latter half of the 20th century leading Qatari families often used real estate, vacant land, and architecture in the formation of national identity and political power consolidation. West Bay moves this impulse to an international level.

In the celebration of National Day what is shared is not common action as we might expect but rather common emotion. The spectacle of the event, enjoyed by millions, magnifies our attachment. We are caught up in the moment, something larger than ourselves drawing from us a deeper sense of belonging. Nearly all of Qatar's 2 million migrant workers are 'bachelors', single young men, living and working in Qatar solely to support families in India, Nepal or the Philippines. I routinely ask my taxi driver, whom I use almost every afternoon to drive home from work, how his day is going. His answer is always the same, 'just work sir, nothing else. My life is only work and money.'[35] The middle-aged Qataris I interviewed, particularly women, feel intensely the push of modernity: education, career, leadership; and the pull of tradition: marriage, children, family, spending their day in the constant negotiation between work and home. Both social segments – the Indian bachelor and the Qatari female – spend much of their lives deeply embedded within the bounded confines of their socially constructed life-worlds.[36] This is hardly unusual in any city, though in Qatar the highly segregated nature of the culture accentuates life's insularity. The emir and his urban imaginary help attune the nation to something outside themselves, lifting the widely divergent social segments out of common, everyday life and uniting them in an urban spectacle. The high-rises give us a belief that our hard work is contributing to something larger than just ourselves. When we celebrate the city we cheer the emir and the urban institutions.

Despite the widely held belief in the West that our age is secular, most Doha residents are decidedly not. Religion plays the defining role in the understanding of being for the many Muslims, Hindus, and Christians in Qatar. This makes it even more possible to accept a 'calling' from a singular personality, such as the emir. In the vertical, higher-time society that I have been arguing is the structuring principle of Qatari society, despite its secular age imagery, the king fulfils his traditional and historical role as sovereign over his people and Allah sovereign over all things. John Calvet points out the incompatibility of this view with the modern doctrine of state sovereignty.[37] While the emir's political power seems absolute, he is theologically very much equal to his fellow co-religionists. However, the implication that his authority is divinely mandated further blurs in what ways his power is absolute. The emir's city is not Heavenly Jerusalem, but it is a singular imaginary, holding Qatar's vastly divergent populations in

35 Male, aged 54, from Karala, India, living in Qatar 33 years.

36 Female Qatari research participant demographics: age 33, management executive; 35 administrative assistant; 40 corporate official; 29 doctoral student; 60 homemaker.

37 John Calvert, *Sayyid Qutb and the Origins of Radical Islamism* (New York: Columbia University Press, 2010), 215.

common, at least for a moment. For the briefest instant when hundreds of thousands join on 18 December, the city becomes what Hannah Arendt describes as a public sphere of differences held in common.[38] The question thus arises: what is the 'city' on the other days of the year?

The drama of National Day set against the skyscraper backdrop looks tremendously like something that would happen in a democratic state, Macy's fireworks in New York City on the 4th of July for example. The strong sense of collective identity, solidarity, belief in the rule of law, and commitment to one another typical of democracy seems conspicuously on view during Qatar's National Day. Western expatriates often feel, perhaps through our association with our North Atlantic homelands, that the state is for the people, whose freedoms and expressions are guaranteed. Such an understanding was simply not possible in pre-modern societies. Doha's urban imaginary, particularly on National Day, fuses politics and religion in a bewildering way. Jurgen Habermas describes the historical dimension of religion in the public sphere:

> [The] law and the monarch's judicial power owe their sacred aura to mythical narratives that connected ruling dynasties with the divine. At the same time, archaic ritual practices were transformed into state rituals – society as a whole represents itself in the figure of the ruler. And it is this symbolic dimension of the fusion of politics and religion for the description of which the concept of 'the political' can properly be used. The collectivity sees itself mirrored in the ruler's self-representation as a political community that *intentionally* – i.e., consciously and deliberately – produces its social cohesion through the exercise of political power. Thus 'the political' means the symbolic representation and collective self-understanding of a community that differs from tribal societies through a reflexive turn to a conscious rather than spontaneous form of social integration. In the self-understanding of this kind of polity the locus of control shifts toward collective action. However, 'the political' as such could not become a topic of discourse as long as mythic narratives remained the sole means of symbolic representation.[39]

While I acknowledge that Habermas' theory of communicative action, outlined in the above quote, fails to distinguish levels of involvement, privileging rational thought excessively, he does remind us that 'the political' was inseparable from theology and political authority was defined and justified in sacred higher time. He further suggests that modern secular states operate without such an order. Since the seventeenth century the sacral foundation of 'the political' has been replaced with an egalitarian view of society. Habermas further notes, that 'the secularization of the state is not the same as the secularization of society'; nor

38 Hannah Arendt, Arendt, *The Human Condition* (Chicago, Illinois: The University of Chicago Press, 1998); and Hannah Arendt, *Between Past and Future* (New York, NY: Penguin Books, 2006). See also Max Weber, *The City*, edited by Don Martindale and translated by Gertrud Neuwirth. (New York: The Free Press, 1966).

39 Jürgen Habermas, "The Political: The Rational Meaning of a Questionable Inheritance of Political Theology," in *The Power of Religion in the Public Sphere*, edited by Eduardo Mendieta and Jonathan Vanantwerpen (New York: Columbia University Press, 2011), 18.

in our case is the secularization of the image of a society the same as the secularization of the underlying society.[40] In the European transformation of political authority from cosmic-religious to secular, a void nonetheless remains at the central spot once held by the central authority. Claude Lefort suggests that in the course of the democratic transformation, 'the political' has not completely lost its association with religion: 'We can say that the advent of a society capable of organizing social relations can come about only if it can institute the conditions of their intelligibility, and only if it can use a multiplicity of signs to arrive at a quasi-representation of itself'.[41]

Paradoxically, Qatar inverts this formula. The emir very much retains his historic, cosmic-theology at the society's centre, but he goes to great lengths in creating the multiplicity of signs and symbols that represent not itself, as Lefort suggests, but rather its complete opposite, namely a secular, horizontal democracy.

The skyline on any given day represents our participation in some form of collective emotion. There is no football club, stadium, or hero without adoring fans. There is no corporation, skyline, or emir without a supplicant public. The role of the image allows adherence to God and belonging to the state at the same time. One need not belong to the institutions in the image. I can still adhere to God, and belong to the state, which seem contradictory, by not participating in the state's institutions. I enjoy, take pride in the image, but I do not find meaning in it.

Conclusion

In this article I have attempted to understand in what ways Doha residents are involved with their city through an analysis of the high-rise skyscraper. The analysis has been broadly sketched out across two axes: the first ranges from cultural engagement embodied within particular architectural situations to the opposite extreme of disembodied projection as a representation of a utopian imagination. The second axis looks at the difference between a vertical, higher-time oriented society and that of a horizontal, equidistant society: the difference between sacred and secular. Both dimensions of the analysis, seen through architecture's unique cultural role, begin to illuminate facets of Doha's particular urban order.

Unlike earlier historical epochs in which architecture and architectural space are represented in pictorial, perspectival images, Doha, because of Islam's prohibition on the image, is forced to rely on architecture as image; not the image of architecture, but architecture's ability to carry representational meaning in communicating differences held in common. In an era when media and images mediate our perception of social reality, we have, in Doha - a city stripped bare of

40 Jürgen Habermas, "The Political: The Rational Meaning of a Questionable Inheritance of Political Theology," 23.

41 Claude Lefort, "The Permanence of the Theologico-Political," in Claude Lefort, *Democracy and Political Theory*, translated by David Macey, (Cambridge: Polity Press, 1988), 219.

visual references - a unique opportunity to understand the cultural and ontological legacy bequeathed to us through modernism in general and modern architecture in particular.

The modernist vertical skyline of West Bay set against the traditional, low-rise rambling residential neighbourhood across Doha Bay embodies a tension felt throughout Doha's institutional and urban order. We might, on the one hand, believe the city, and regime, have cultivated a kind of synthesis between the modern understanding of individual agency and a world divinely ordered. On the other hand, such glaring ontological juxtapositions could not be anything but unstable and destined to collapse. Seen another way, the search for historic orientation pits the hierarchy under Allah, embodied in the emir, enshrined in *sharī'ah*, and articulated in customs, against the absence of hierarchy – except of course the power that wealth brings. Power in free-market capitalism, as referenced in West Bay, is only that of wealth. In Doha's case the emir, his immediate family, and several mercantile clans therefore occupy the apex of both religious and economic hierarchies. Whatever the case, and I believe it is too early to formulate a telos for Doha, these tensions provide stability in its own right as a search to orient the culture amidst a bewildering and blistering pace of architectural and urban transformation. [Fig.22]

22

Fig. 22

The Emerald City (Source: Peter Chomowicz, 2013).

Bibliography

Aga Khan Trust for Culture. "Barzan Tower." (https://archnet.org/sites/5126). Accessed March 2015.

Ajjaj, Ali. "Social Development of the Pirate Coast", *Middle East Forum* 38 (1962): 75-80.

Al-Derham, Hassan Rashid H. "The Establishment of Performance Criteria for the Evaluation of Procurement of Senior Staff and Private Housing Projects in the State of Qatar." Ph.D. Dissertation, University of Glamorgan, 1999.

Al-Naim, Mahary A. "The Home Environment in Saudi Arabia and Gulf States: Growth of Identity Crises and Origin of Identity." *Crissma Working Paper,* no.10. Milano : Pubblicazioni dell'I.S.U. Universita Cattolica, 2006.

Anderson, Benedict. *Imagined Communities*. London: Verso, 2006.

Arendt, Hannah. *The Human Condition*. Chicago, Illinois: The University of Chicago Press, 1998.

Arendt, Hannah. *Between Past and Future*. New York: Penguin Books, 2006.

British Foreign Office 1972 Report from the Qatar Embassy 8/1891.

British Petroleum, Statistical Review of World Energy, 69th Edition, 2020.

Calvert, John. *Sayyid Qutb and the Origins of Radical Islamism*. New York: Columbia University Press, 2010.

Debord, Guy. *Society of the Spectacle*. New York: Zone Books, 1994.

Elsheshtawy, Yasser. *Dubai: Behind an Urban Spectacle*. London: Routledge, 2013.

Ephgrave, Oliver. "Site visit: Burj Qatar," *Construction Week Online*, 10 October, 2012.

Giddens, Anthony. *The Consequences of Modernity*. Stanford, California: Stanford University Press, 1990.

Gray, Matthew. "A Theory of 'Late Rentierism' in the Arab States of the Gulf. Center For International and Regional Studies." *Occasional Paper* No.7, Doha: Georgetown University, 2011.

Gray, Matthew. *Qatar: Politics and the Challenges of Development*. Boulder, Colorado: Lynne Reinner Publishers, 2013.

Habermas, Jürgen. "The Political: The Rational Meaning of a Questionable Inheritance of Political Theology". In *The Power of Religion in the Public Sphere*, edited by Eduardo Mendieta and Jonathan Vanantwerpen. New York: Columbia University Press, 2011.

Kamrava, Mehran. *Qatar: Small State, Big Politics.* Ithaca: Cornell University Press, 2013.

Kanna, Ahmed. *Dubai: The City as Corporation*. Minneapolis, Minnesota: The University of Minnesota Press, 2011.

Kantorowicz, Ernst H. *The King's Two Bodies*. Princeton, New Jersey: Princeton University Press, 1997. First published 1957.

Le Corbusier. *The City of To-morrow and Its Planning*. Translated by Frederick Etchells. New York: Dover Publications, 1987. Originally published as Urbanisme. Paris: Editions G. Crès & C., 1924.

Le Corbusier. *1964. The radiant city. New York: Orion*. First published in 1935 as La Ville Radieuse.

Lefebvre, Henri. *Critique of Everyday Life*, vols. 1–3. London: Verso, 1991.

Lefort, Claude. "The Permanence of the Theologico-Political", in Claude Lefort, *Democracy and Political Theory.* Translated by David Macey. Cambridge: Polity Press, 1988.

Lorimer, J. G. *Gazetteer of the Persian Gulf, Oman and Central Arabia*. Calcutta, India: Superintendent Government Printing, 1915. Republished by Gregg International, Westmead: United Kingdom, 1970.

Marx, Karl. *The Grundrisse.* Harmondsworth: Penguin Books, 1973.

North, Douglas C., John Joseph Wallis and Barry R. Weingast. *Violence and Social Orders*. Cambridge: Cambridge University Press, 2009.

Ross, Michael L. *The Oil Curse: How Petroleum Wealth Shapes the Development of Nations. Princeton*. New Jersey: Princeton University Press, 2013.

Sassen, Saskia. *Globalization and Its Discontents:*

Essays on the New Mobility of People and Money. New York: The New Press, 1998.

Sassen, Saskia. *The Global City*, 2nd ed. Princeton, New Jersey: Princeton University Press, 2001.

Sassen, Saskia. *A Sociology of Globalization*. New York: W.W. Norton & Co, 2007.

Scofidio, Ricardo and Elizabeth Diller. *Back to the Front: Tourisms of War*. Caen: F.R.A.C. Basse-Normandie, 1994.

Simmel, Georg. *The Philosophy of Money*. London: Routledge and Kegan Paul Ltd, 2011.

Sweet, Fay. *Heart of Doha: A Blueprint for the Future*. London: EDAW/Aecom, 2009.

Taylor, Charles. *A Secular Age*. Cambridge: Belknap Press Harvard University, 2007.

Vesely, Dalibor. *Architecture in the Age of Divided Representation*. Cambridge: The MIT Press, 2004.

Weber, Max. *The City*. Edited by Don Martindale and translated by Gertrud Neuwirth. New York: The Free Press, 1966.

Zahlan, Rosemarie Janet Said. *The Creation of Qatar*. London: Croom Helm, 1979.

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Aramco and Al-Malaz Housing Schemes: The Origins of Modern Housing in Saudi Arabia

Post-oil Residential Architecture; Saudi Housing Projects; In-situ and Prefabricated Housing; Aramco Home Ownership Program; Al-Malaz Housing Project

/Abstract

This paper examines two influential, modern housing schemes outside the oil compounds in Saudi Arabia. The first, Aramco's Home Ownership Program from the early 1950s, built houses for Saudi oil workers and their families. The second, the Al-Malaz Housing Project, sponsored by the Saudi Government in the late 1950s, produced houses for government employees. These two schemes mark the beginning of the dramatic and widespread overturning of vernacular building traditions in Saudi Arabia. In contrast to the prefabricated lightweight buildings inside the oil compounds these houses were constructed using heavy masonry, mainly locally-made concrete blocks and concrete floor slabs, and they were built in situ. Nevertheless, they are strongly linked to the imported architectural design and construction techniques found inside the compounds.

For Aramco, the need to provide better accommodation for Saudi workers was highlighted by the vastly different conditions for expats and local Saudi workers. Inside the camps, expats lived in modern, imported, prefabricated timber buildings laid out in neat suburbs. Local workers lived outside the fence in ramshackle "Coolie Camps" made up of traditional barastis, tents and other structures put together from salvaged materials. While the Aramco program led to the construction of thousands of houses mainly in the eastern oil-rich regions, Al-Malaz, in the capital of Saudi Arabia, signified mainstream acceptance of modern housing design and construction by the Saudi government. Al Malaz was the first of numerous government-sponsored and developer-led housing schemes using modern, non-traditional designs and heavyweight in-situ, and later prefabricated concrete construction.

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Introduction

In the early days of oil exploration and extraction in Saudi Arabia, from the mid-1930s to the early 1950s, the Arabian American Oil company (Aramco) established American-style expat residential gated compounds populated with neat rows of imported, prefabricated timber houses. Surrounding the compounds, outside the fence, the Saudi and Arab workforce built themselves ramshackle squatter's camps. American workers used to call these camps the "Coolie camps"[1] and the "slums of Aramco."[2] In every oil field around the eastern side of Saudi Arabia during the 1940s, whether it was in Dhahran, Ras Tanura, or even Abqaiq, two communities could be recognised: the Americans and the Arabs. For example, in 1946, the residential compound of the Dhahran oil field, the first to be established in the Kingdom, was divided into two main communities: the planned, neat, gated, and well-maintained American Camp, home to about 370 Americans, and the unplanned "eyesore"[3] Saudi camp of more than 3,300 Saudi workers.[4] **[Fig. 1]** Hamad A. Juraifani, a former Saudi employee of Aramco, described the two communities located in Ras Tanura's oil field during that time as the Americans "had the community, you know, with the nice houses and so on, on the beach. And they housed the expatriates. The Saudis, they were divided into two levels. Those that are higher grades are put into homes with fans, but no air-conditioners. And the rest are put in tents. And I remember, four people to a tent."[5]

1

Fig. 1

Conditions in the Saudi camps. Left: Saudi camp in Dhahran. Source: Photograph by Fahmi Basrawi included in Munira Khayyat, Yasmine Khayyat, and Rola Khayyat, "Pieces of Us: The Intimate as Imperial Archive," *Journal of Middle East Women's Studies* 14, no. 3 (2018). Right: *Saudi Camp in Abqaiq*. Source: Image from an unknown photographer included in *Abqaiq: Plants and People* (Khobar: Almohtaraf, 2016).

1 Robert Vitalis, "Wallace Stegner's Arabian Discovery: Imperial Blind Spots in a Continental Vision," *Pacific Historical Review* 76, no. 3 (2007): 423.

2 Loring M. Danforth, C*rossing the Kingdom: Portraits of Saudi Arabia* (Oakland, California: University of California Press, 2016), 44.

3 Jon Parssinen and Kaizir Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran," *JAE* 35, no.3 (1982): 15.

4 Roy Lebkicher, *Aramco and World Oil* (New York: R.F. Moore, 1952); and John B. Philby, *Arabian Jubilee* (London: Robert Hale Ltd., 1952).

5 Scott McMurray, *Energy to the World: The Story of Saudi Aramco* (Houston: Aramco Services Company, 2011), 168.

Most shacks built in the Saudi camps were modelled on traditional, single-roomed *barasti* houses which were made from light wooden members and reeds using a kind of weaving technique. This building type was replicated using scraps and waste or discarded building materials. **[Fig. 2]** The windows, if there were any, were covered by makeshift wood shutters. Dirt floors were covered with mats. While Saudis living in these camps were familiar with the imported, prefabricated houses and an implanted Westernised way of living inside the compounds, they did not have the means or the desire to replicate this in their own camps. Over time, the "Coolie camps" expanded and conditions deteriorated as more locals were drawn to the sites of oil production, either to work directly in the oil industry or to benefit from the economic activity it generated. The huge disparity between the living conditions of the expats and those of the local Saudi workers pushed the Saudi oil workers to start demanding better housing and working conditions. Aramco and the Saudi Government realised they needed to step in after two strikes over working and housing conditions in the early 1950s.[6]

2

It became clear very early on, in the rapid transformation of Saudi Arabia following the discovery of oil, that Saudis were fiercely determined to protect and maintain their national and cultural identity, and their Muslim religion. Before the Dhahran camp became a gated compound, the Saudi workers tried to establish their identity and challenge what they saw as a foreign cultural and religious invasion.[7] At Dhahran, the Saudi government and the local community worked together to build a mosque, now known as Dhahran Mosque, and to set up a school for local kids. Architecturally, the mosque followed Ottoman architectural principles with 73 domes. It was built with mostly raw local materials, such as limestone and mortar, with no imported tools or lightweight construction

Fig. 2

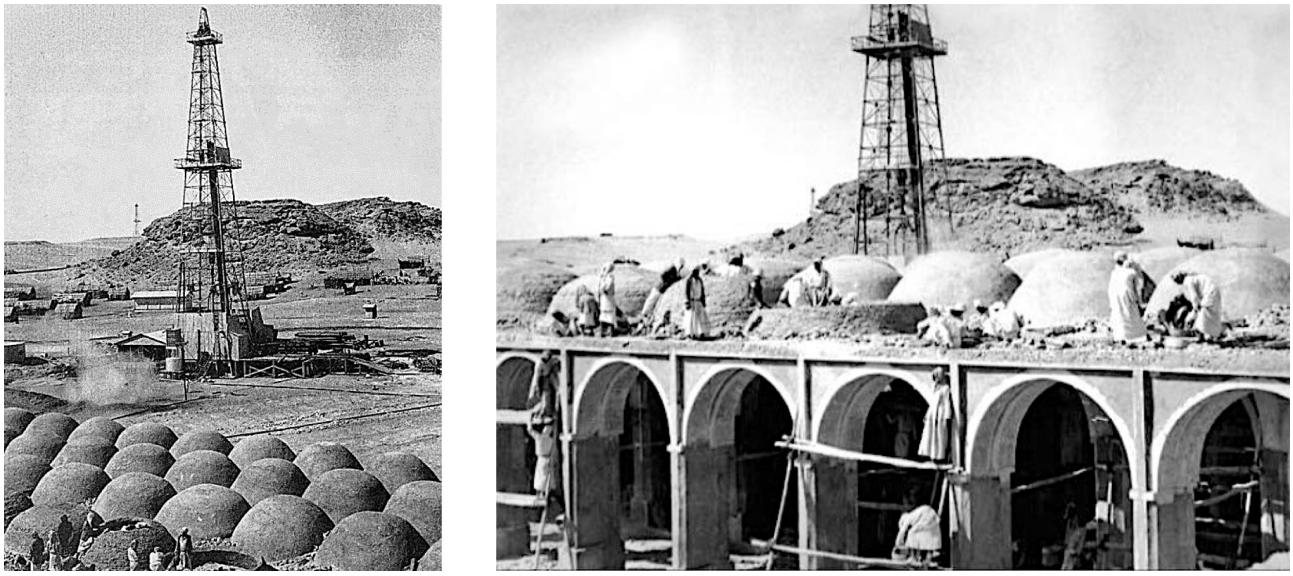
Housing Conditions in the Saudi camps. Left: *A ramshackle house within the Saudi camps.* Source: King Abdulaziz Foundation for Research and Archives (Darah). Right: *Saudi houses during a fire in early 1950s* (this fire was one of the main reasons to ask for better living conditions). Source: Photographer unknown, included in *Abqaiq: Plants and People.*

6 Helen Lackner, *A House Built on Sand, a political economy of Saudi London* (London: Ithaca Press, 1978).

7 This sense of alienation has been voiced by many writers in the field of Muslim cities and Saudi architecture. See Yousef Fadan, "The development of Contemporary Housing in Saudi Arabia (1950–1983): A Study in Cross-Cultural Influence Under Conditions of Rapid Change" (PhD diss., Massachusetts Institute of Technology, 1983).

materials and techniques.[8] **[Fig. 3]** Construction of the mosque allowed the Muslim community working for Aramco to worship and it also attracted other Saudis from the area. While the mosque was built from scratch, the school Aramco opened in the Dhahran camp in the mid-1940s was housed in one of the existed *barastis*. The mosque, the school, the abundance of water within the camps[9] and the availability of work encouraged large numbers of rural migrants, looking for new job opportunities in the oil industry, to settle within the Saudi camp.

3



Seeds of Change

While gradually becoming more open to interaction with foreigners during the late 1940s, Saudi workers continued to be very protective of their families and their traditional cultural and religious practices. Initially, most Saudi workers came to the camps without their families, since there was no proper housing, and also to maintain a separation with the expat community. However, as Frank Jungers, the former president and CEO of Aramco, pointed out, this "posed a tremendous problem", particularly for education and healthcare for women and girls: "they were out in the villages, and they couldn't travel alone."[10] This practice was a way of limiting direct interaction between women and non-relative men without the presence of the *Mahram*.[11] Jungers furthers his explanation about the work-related issues associated with this social practice by stating that "the [Saudi] employee had to go home when he heard about an illness and get the

8 Mohammad Zami and Abdulaziz Bubshait, "Enhancing the importance of conservation of architectural heritage in Saudi Arabia: a case study of Dhahran Mosque" (paper presented at the 3rd International Architecture Conservation Conference and Exhibition, Dubai, 2012).

9 There were many water wells dug by Aramco in the late 1930s in the Saudi eastern region.

10 Frank Jungers, "From Construction Engineer to CEO and Chairman of Aramco, 1948-1978," an oral history conducted in 1992 by Carole Hicke, included in *American Perspectives of Aramco, the Saudi-Arabian Oil-Producing Company, 1930s to 1980s* (Berkeley, California: Regional Oral History Office, The Bancroft Library, University of California, 1995), 54.

11 *Mahram* – un-marriageable kin in Islam – is an Arabic term that describes a man relationship to a woman. A *mahram* to a woman in Islam is any male relative that cannot marry the woman. Parents, grandparents, siblings, siblings of parents are a few examples of women's *mahram*.

Fig. 3

Dhahran Mosque during construction. Source: Saudi Aramco.

family and bring them to the [camp's] hospital, try to get the women taken care of, and take them back home. We lost a lot of employee time doing this."[12]

To address both the issues of the poor conditions in the "Coolie camps" and of the need for workers' families to live close by, the government and Aramco agreed that the best option was to rebuild existing towns and also to establish new towns near to the oil fields. They also agreed to improve conditions in existing oil field camps. Dammam and Al-Khobar were the closest towns to the Dhahran oil wells and were the first towns to be planned using Western urban planning techniques, particularly the layout of housing using orthogonal urban grids and zones.

Over time, Aramco and the Saudi government urged the transformation of the country to become more receptive to industrial changes and modernisation. In their paper, "A Traditional Community and Modernization: Saudi Camp, Dhahran", Jon Parssinen and Kaizir Talib reflect on the importance of the transformation of the Saudi "eyesore" camp in this process.[13] Several years after Aramco established the Dhahran camp, the company began helping local workers to transform the Saudi camp into a more permanent settlement. In 1950, for example, Aramco helped its Saudi oil workers build sixty 22-man dormitories. Locally available construction materials, such as stone and gypsum plaster, were used to build these dormitories. Non-Aramco employees also built several houses around the mosque. The houses they built, although they were not particularly well-made, were unique in terms of their building methods and physical forms. The imported, prefabricated timber construction materials and techniques used within the American camp were eschewed. Interestingly, the houses that the employees built for themselves combined local building design principles with newly-introduced heavyweight building materials. **[Fig. 4]** Internally, the organisation of spaces reflected privacy and climatic concerns. Spaces were divided according to gender roles and functions and were often centred around a courtyard. The courtyard was basically a mixed-use space for cooking, washing, relaxing and playing. These houses were attached and arranged in a more traditional and irregular fashion. There were no regular setbacks from the street, for example. This way of clustering and attaching houses together reduced heat gain through the sides of the houses. Moreover, each housing block was subdivided by small alleys, "which gave the appearance of an old, traditional Arab community"[14] and created shaded sidewalks. Based on this form of growth, the Saudi Dhahran camp "thrived" with its residents having "no barriers in [their] community", as one of the residents explained: "when there is a birth we are happy together, when there is a death we mourn together… there are no secrets, and we share everything."[15] Surprisingly, people who lived and grew up in these camps believed at the time that they would not "have any role

12 Jungers, "From Construction Engineer to CEO and Chairman of Aramco, 1948-1978," 54.

13 Parssinen and Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran." 15.

14 Parssinen and Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran." 15.

15 Parssinen and Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran." 16.

in [the] modernisation"[16] of Saudi Arabia. In reality, however, they were part of pioneering the country's contemporary residential architecture, particularly with their use of industrially produced construction materials.

4 |

In contrast to the lightweight and prefabricated construction materials available within the oil camps, heavyweight building materials, particularly concrete blocks, suited the Saudis culturally and technologically, perhaps due to the analogical relationship with traditional earth-building techniques. In the mid-1940s, the Saudi royal family had already started to use newly imported construction materials to build their palaces and offices. Portland cement and concrete blocks were used in the second phase of building *Al-Murabaa Palace*[17] between 1942 and 1946.[18] *Al-Ahmar Palace*[19] is considered to be the first Saudi palace built using reinforced concrete and *Al-Nasiriyah Complex*,[20] which included royal palaces and more than 70 housing units, was built using similar construction techniques. Mudbricks and earth-based construction materials were largely abandoned from the early days of the newly established kingdom. The emergence of middle-class families in the early fifties also played a major role in changing Saudi society, economy and culture and, consequently, building. Many Saudis became businessmen, contractors, and entrepreneurs. As an example, Saudi businessman Yousef Al-Zuawawi opened his masonry plant in the early 1950s. He toured Europe searching for new machines and equipment that could be imported to Saudi, stating that "on February 22, 1951, I went to Europe on a buying trip…in Germany, I bought cement block-making machines;

16 Parssinen and Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran." 15.

17 Al-Murabaa, which is King Abdulaziz's first palace outside the Riyadh walls, was initially built in 1938 using mud bricks and wooden materials. In 1942, the palace was expanded using newly introduced materials, represented by factory-made concrete blocks.

18 Abdulrahman Alangari, "The Revival of the Architecture Identity: The City of Arriyadh" (PhD diss., University of Edinburgh, 1996).

19 Al-Ahmar palace is a mansion built by king Abdulaziz for his son King Saud in 1943.

20 Al-Nasiriyah is King Saud's family Palace and was opened in the mid 1950s. The palace complex also included more than 70 large and small villas, which were also built using the same construction materials.

Fig. 4

Permanent houses in Dhahran Saudi camp before and during demolition in the early 1980s. Source: Photograph by Kaizir Talib, included in Jon Parssinen and Kaizir Talib, "A Traditional Community and Modernization: Saudi Camp, Dhahran," JAE 35, no.3 (1982).

they are on their way now."[21] From the government's perspective, the benefits of supporting this transformation from traditional to modern construction were enormous. It allowed the government and Aramco to take advantage of post-World War II industrial and technical achievements within the field of construction. Additionally, it allowed many Saudis to establish new businesses which, in turn, helped the government to hire local contractors instead of relying on international companies, which tended to be more expensive and time-consuming. It also meant more exchange between Saudis and foreign people.

Aramco Home Ownership Program

To show commitment to improving Saudi housing, Aramco, with help from the government, launched its *Saudi Home Ownership Program* in 1951.[22] The company offered to financially help Saudi employees with interest-free loans to secure or build a house near its camps in the recently-established governmental-owned municipalities. The program started slowly, and its impact was not significant, as the unplanned communities surrounding the American camps continued to grow. However, following the strikes in 1953, the Saudi Government, through a government decree, recommended that some improvements to the program should be made by Aramco to alleviate the Saudi worker's housing crisis.[23] The company agreed to pay for 20 percent of each house built under its *Home Ownership Program*. At that time, the program policy made it clear that no loan was to be approved if the house did not meet Aramco's American-based standards.[24] This condition clearly limited Saudi workers' ability to take advantage of the program, since there were not any trained local architects familiar with the American company housing standards. As a result, Saudis employees started, with the company permission, to contact the company's architects, contractors, and engineers with requests to help and assist with design and construction. In fact, to ensure the execution of the program as planned, and to help Saudi workers, Aramco opened three regional offices, located in the company's three main camps: Dhahran, Ras Tanura, and Abqaiq. The offices handled the paperwork, legal concerns, and payments. They also ensured that design and construction were planned according to Aramco's standards. [Fig.5] Yousef Fadan, a Saudi architecture professor, describes the offices main tasks.

> These offices were set up to provide technical advice to employees and to attract their attention to the practical aspects and economics of the building materials they ought to use, as well as to inform them of the most modern house designs and encourage them to install modern

21 In an interview, conducted by C. S. Coon on February 10, 1952, Al-Zuawawi spoke English fluently and almost without accent. See: Carleton S. Coon, "Operation Bultiste: Promoting Industrial Development in Saudi Arabia," in *Hands Across Frontiers*, eds. Howard M. Teaf Jr. and Peter G. Franck (Ithaca, New York: Cornell University Press, 1955), 332.

22 Roy Lebkicher, *Aramco handbook* (Dhahran: Arabian American Oil Company, 1960).

23 Lackner, *A House Built on Sand: A Political Economy of Saudi Arabia.*

24 Fadan, "The development of Contemporary Housing in Saudi Arabia (1950–1983): A Study in Cross-Cultural Influence Under Conditions of Rapid Change."

housing equipment such as electricity, running water, air conditioners and sanitary facilities. The last and most important role of these offices was to implement the obligatory rule of building the houses according to plans designed and drawn by licensed architects…[25]

5 |

Many Americans became involved in the company's homeownership program. Their roles varied based on the project needs. T. Coleman, a Californian building contractor who worked under Aramco's Arab Industrial Development Division (AIDD), played a fundamental role during the first stages of the program. He was assigned to meet with the Saudi workers and translate their ideas into architectural sketches, which was then drawn by a Sudanese draftsman. His role was also extended to negotiate with potential contractors, act as a building inspector during construction, and oversee the whole project. In addition to Coleman, there were many other American architects, engineers, and field representatives who participated in the program during its various stages. For example, Donald M. Bammes, who received a B.Sc. in Architecture from Kansas State College in the late 1930s, worked as head architect in 1951, and as manager in Aramco's Home Ownership Program in 1954.[26] Darrold A. Wagner, John Forbes, George Tweedy, and ED Gelinas worked as field representatives for the same Program in the mid-1950s. Their roles varied from overseeing the construction progress to handing over the units and houses to their new owners. This form of involvement and relationship between the Saudis, as homeowners, and the American architects and engineers indeed strengthened the Saudi worker's trust in their American colleagues.

Eventually, because of the time it took and the cost of designing and building an individual house for every Saudi worker, Aramco decided to offer a small number of designs to choose from. Workers were only allowed to ask

Fig. 5
An Aramco engineer presenting a house model to a housing program beneficiary. Source: Saudi Aramco.

25 Fadan, "The development of Contemporary Housing in Saudi Arabia, 124.

26 Donald M. Bammes," *Al-Ayyam Al-Jamilah* 6, no. 1 (March 1962).

6

for minor changes to these standard house designs.[27] This approach limited the non-oil related workload of the design team. A study conducted in 1974 by Candilis Metra International Consultants, a French planning firm that prepared the plans for several cities in the Saudi Eastern region, states that between 15 to 25 percent of the first houses built under the program were identical and shared the same architectural characteristics.[28] A type of domestic architecture completely new to Saudi Arabia – the standard single-family detached villa – evolved from this project. Carleton S. Coon, a professor of Anthropology at the University of Pennsylvania, who carried out several research trips in the Middle East from 1924, visited Saudi Arabia in February 1952 and described one of the houses: [Fig. 6]

> The house consisted of a wall surrounding the lot of land, rooms for family use facing on the inner court, except for one room, the *mejlis*, or men's sitting room, which was separate. Each bedroom opened separately onto the court; there were no inside doors. In some houses, rooms were built on the roofs as a second story and, in others, one or more rooms on the roof provided maximum air circulation during the hot summer. Throughout the house inside walls were built with horizontal slits to permit air movement without impairing privacy. The toilets were all water closets of the Eastern or squatting type.[29]

While, initially, more than 100 of these standard villas were built, the prototype designs soon changed, abandoning any references to traditional mudbrick houses and embodying a much more modern, Westernised approach. The company's architects had been educated in the United States during the first half of the 20th Century, so it was to be expected that they would disregard local, vernacular buildings and precedents, and set about fulfilling a modern, "functional"

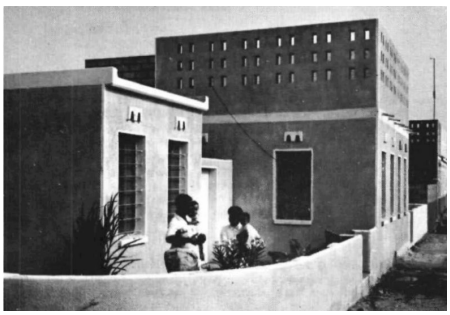
27 Saleh Al-Hathloul, "Tradition, Continuity, and Change in the Physical Environment: The Arab- Muslim City," (PhD diss., Massachusetts Institute of Technology, 1981).

28 Candilis Metra Int., *Eastern Region Plan, Existing Conditions*, (Dammam: June 1974).

29 Coon, "Operation Bultiste: Promoting Industrial Development in Saudi Arabia," 343.

Fig. 6

Aramco's first houses in the early 1950s. Source: Saudi Aramco.



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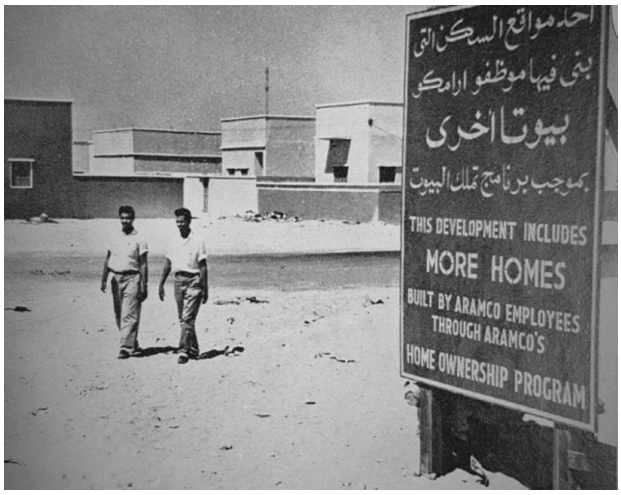

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agenda.[30] The new houses were basic cubic forms placed on a gridiron pattern of streets laid out in the Saudi desert. [Fig. 7] In contrast to traditional, inward-facing courtyard houses, in the new house designs, spaces were arranged within an enclosed form, in which all windows opened to the exterior, public space of the street or onto a yard surrounded by a low fence. This was a dramatic change in the understanding of how houses functioned, particularly in relation to traditional concepts of privacy. Modern design principles and space arrangements became the central focus. Once the owners moved in, they often modified their house by increasing the height of the fence surrounding the yard, for example. New spaces, such as a designated dining room, were introduced and other traditional spaces, like the interior courtyards and multi-use rooms, were left out. The newly introduced dining room, in particular, was often not furnished with a dining table and chairs as the act of eating on a table was, according to religious custom, considered a showing-off act.[31] While this shift in prioritising the house spaces and arrangements and introducing new elements reflects international architectural trends, it also indicates Aramco's commitment to the rapid modernisation of housing in the kingdom. During the late 1960s, regional modernism influenced the houses built by the program as cultural and religious factors started to have more impact on the designs. [Fig. 8]

30 American architects, during that time, hoped for full use of modern technology and they often applied scientific approaches in programming, planning, and designing the built environment to sufficiently understand the users' needs and translate them architecturally. See Catherine Bauer Wurster, "The Social Front of Modern Architecture in the 1930s," *Journal of the Society of Architectural Historians* 24, no. 1 (1965): 48-52.

31 Jamel A. Akbar, "Support for Court-yard Houses Riyad, Saudi Arabia," (Master diss., Massachusetts Institute of Technology, 1981).

Fig. 7

Aramco's housing during and after construction in the mid-1950s. Source: Saudi Aramco.

Fig. 8

Aramco's houses in the late 1960s. Source: Saudi Aramco.

In addition to introducing westernised house designs and urban planning through their Home Ownership Program, Aramco adopted and refined the use of heavyweight concrete construction. Concrete blocks had been used in the first wave of owner-built house construction outside the camps, mentioned earlier; however, this was taken to a new level. Factory-made concrete blocks were used in both exterior and interior walls of the houses and concrete slabs for floors and roofs became standard. [Figs. 7 and 8] Externally, the concrete blocks were rendered and, internally, a plaster finish was applied. There was more reliance on the use of imported, industrially manufactured fitting and fixtures, western-style toilets and bidets, taps, and door and window hardware, for example. [Fig. 9] This rapid change effectively sidelined many traditional master-builders and tradesmen who, up until this time, had been largely responsible for the construction of Saudi traditional houses. Despite their high level of hands-on skill and knowledge of traditional building techniques, once professional architects, engineers, and contractors became available, local master-builders were bypassed by both the company officials and house owners.[32]

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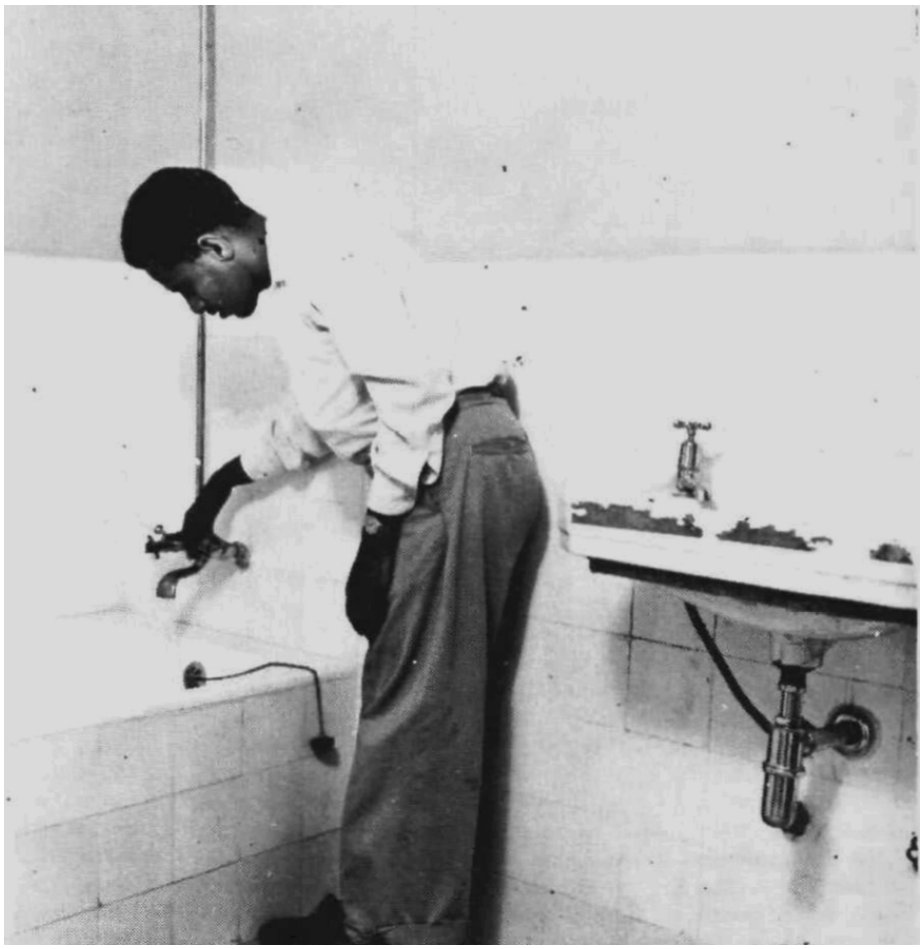


Fig. 9

A resident checking bath fixtures in his new house in 1958. Source: Saudi Aramco.

32 Fadan, "The development of Contemporary Housing in Saudi Arabia (1950–1983): A Study in Cross-Cultural Influence Under Conditions of Rapid Change."

Instead of engaging master-builders to construct their houses, the company aimed at increasing the capacity of the local building industry by training local builders in the knowledge and skills required to build with modern construction materials and methods. In March 1951, the first contract to build eleven identical, houses through *Aramco's Home Ownership Program* was awarded to five local contractors.[33] Distributing this relatively small project in this way allowed Aramco to better understand the local capacity to build new western-style houses. Aramco trained and mentored these local contractors and entrepreneurs, much as it did with its own Saudi oil-industry workforce, providing financial, material and technical support. This method of handling the program benefited and helped the local economy. Less than a year later, in February 1952, Aramco awarded a new contract to build another 300 houses, identical to the eleven already built, to a single local contractor, Abdallah Bin Darwish Fakroo, who used to be called the "Levitt of Arabia."[34] Mr. Fakroo had already secured high-capacity block-making machines and other construction equipment by that time, and this ensured his capacity to complete the project. As Aramco expanded over the years, the program gained more popularity among the company's Saudi workforce. By 1959, more than 2,100 houses, mainly versions of the standard, single-family villa, had been built under this program. [35] Looking back, it is clear that *Aramco's Home Ownership Program* played a leading role in the kingdom's transition from traditional modes of house design and construction to a completely new type of Saudi residential architecture.[36]

Al-Malaz Housing Project

In 1957, the Saudi government administrative offices and ministries were transferred from Makkah and Jeddah, in the western region of Saudi Arabia, to Riyadh City, in central Saudi Arabia.[37] This move created a need to accommodate government employees and the government announced a new housing project in an area called Al-Malaz, outside the main city boundaries and close to the new ministries' buildings. At the time, the project was called the "*Employees City*."[38] Since there was no specialised governmental agency for housing at that time, the Ministry of Finance initiated and administered this housing project. Using the *Aramco Home Ownership Program* as a model of success, the Saudi government sponsored the Al-Malaz housing project using a similar approach.[39] The connection between Al-Malaz housing scheme in the central of Saudi Arabia and developments that were taking a place in the oil-rich eastern region has

33 Coon, "Operation Bultiste: Promoting Industrial Development in Saudi Arabia."

34 Coon, "Operation Bultiste: Promoting Industrial Development in Saudi Arabia."

35 Lebkicher, *Aramco handbook*.

36 Anis-ur-Rahmaan, Bushra A. Rahmaan and A. Al-Shaye, "Innovation Diffusion in Housing: A Conceptual Probe in Saudi Arabia," J. King Saud University: *Architecture and Planning* 2 (1990): 3-21.

37 William Facey, *Riyadh, the Old City: From its Origins Until the 1950s* (London: Immel, 1990).

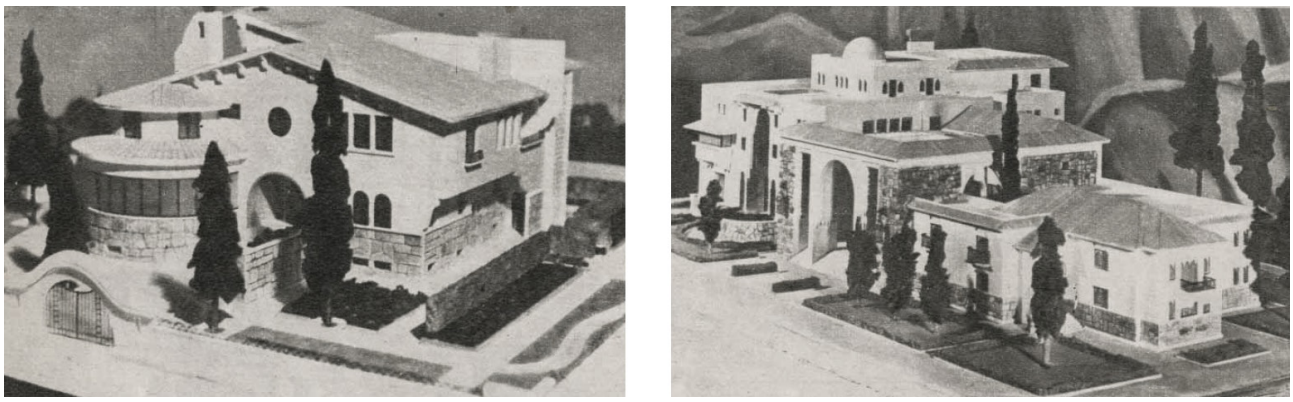
38 Suliman Alhudaithi, "*Madinat Almoadafeen Qabel 65 Aam: Iskan Bltaqseet mn Almoratab*" [Employees City 65 years ago: Housing with free-interest loans], *Aleqtisadiah*, 11 January 2019.

39 Al-Hathloul, "Tradition, Continuity, and Change in the Physical Environment: The Arab- Muslim City."

been explored in Fahad Al-Said's essay "The pattern of structural transformation of the Saudi contemporary neighbourhood: The case of Al-Malaz, Riyadh, Saudi Arabia." He writes that:

> Al-Malaz neighbourhood urban pattern is a reflection of the Saudi contemporary built environment transformation from the traditional process to the contemporary self-conscious process. Prior to its foundation the traditional ownership system and easement rights were in full practice… Consequently, the different neighbourhoods zoning, street layouts, and house expansions are no longer a by-product of its users' needs, but rather a planned one. Al- Khobar city planning, and Dammam city future expansion layouts which were proposed by ARAMCO's engineers in 1937 were the first to introduce the villa type house to the average Saudi through its homeownership plan in 1951. In other words, the message to the future neighbourhoods was clear: municipality controls, grid-iron street layout, and a villa type house.[40]

The Ministry of Finance, being new to this kind of building project, sought professional help, particularly from American architectural and engineering consulting firms, some of whom had previously worked with Aramco.[41] Three local contractors, all with different experiences and histories, were engaged to design and construct their version of the contemporary Saudi house. In total, the project consisted of 754 houses and three apartment buildings. Archival research has identified some of the Western and Arabian engineers and workers who became involved in the project. For example, Professor Ahmed Sidiqi, an Egyptian architect who was commissioned by the Egyptian Government to work in Saudi Arabia, was the main architect for the Arabian Engineering Company, one of the companies appointed by the Saudi government to work on the Al-Malaz project. During that time, Sidiqi also designed a number of royal palaces for Saudi princes and businessmen.[42] [Fig. 10]



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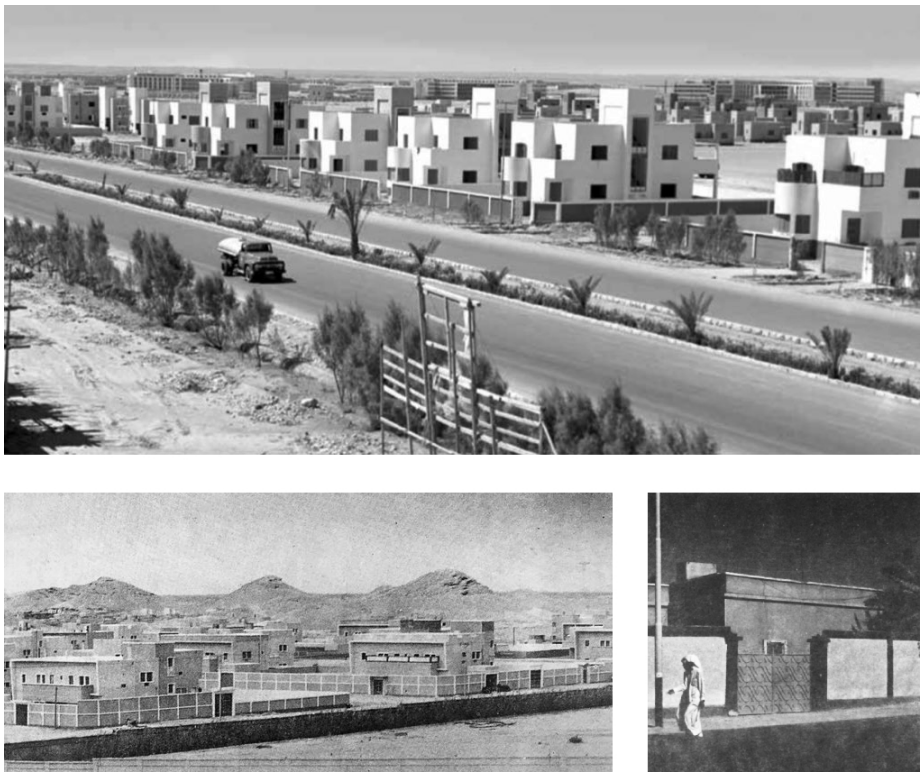
40 Fahad Al-Said, "The pattern of structural transformation of the Saudi contemporary neighbourhood: The case of Al-Malaz, Riyadh, Saudi Arabia" (conference, the 39th ISoCaRP Congress, Cairo, Egypt, October 17-22, 2003).

41 Alangari, "The Revival of the Architecture Identity: The City of Arriyadh."

42 *"Jazerat Al-Arab Tusabiq Alalam fi Alnahdah Alomraniah"* [The Arabian Peninsula is competing the world with its urban development], Almosawar, 1954.

Fig. 10
Two palace models designed by the Arabian Engineering Company, an Egyptian Architecture firm, for the Saudi Royal Family.
Source: Almosawar.

At Al-Malaz, the three contractors designed and constructed three versions of the modern Saudi family house: a double-storey house for the senior leaders and managers and a single-storey house for lower status employees. [Fig. 11] *Using Aramco's Home Ownership Program* as the model, all of Al-Malaz houses were built using concrete blocks and reinforced concrete slabs. In relation to their design, the houses introduced new concepts in interior layout, which were quite unfamiliar and very different from traditional domestic architecture in the central region of Saudi Arabia. The spaces and functions of the house were contained within one closed block form, usually centred around the living room. The houses were set back from their site boundaries as the result of new regulations and windows in the lower floors of the four house facades opened onto a yard enclosed by a high wall. Windows on the upper floors were often positioned at the centre of the room and opened to a balcony. A designated dining room was introduced along with new cooking equipment, a refrigerator, an inside toilet/bidet, and a bathtub. The house was designed to function with Western-style furniture such as sofas and dining chairs and tables. Externally, balconies and terraces overlooking the yard replaced the courtyard and rooftop, which had been used as sleeping space at various times throughout the year.



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The urban planning of Al-Malaz was without local precedent and followed a Western gridiron pattern with intersecting streets dividing the housing into residential blocks. Once it was completed, Al-Malaz became known as *"Riyadh Al-Jadidah"* (the New Riyadh), an indication of the new modern way of living that the community embodied. While the houses were not the first to be built using new construction materials, architectural styles, and modern urban

Fig. 11

Three different types of housing built by the government in Al-Malaz. Source: Riyadh during king Saud Reign.

planning forms – houses built through *Aramco Home Ownership Program* and Al-Nasiriyah complex were built several years earlier –, it is believed that the Al-Malaz housing project had the most effect on Saudi residential architecture. Saleh Al-Hathloul, a Saudi architecture professor and the former Deputy Minister for Town Planning at the Saudi Ministry of Municipal and Rural Affairs (MOMRA), in his PhD titled *Tradition Continuity and Change in the Physical Environment: The Arab-Muslim City*, explored why Al-Malaz's residential units became the prototype of future residential types in Saudi Arabia. His research concludes that, because the project was sponsored by the government for its employees, it became an authoritative example of a modern neighbourhood. The project reflected the government's vision on how fast-growing cities around the kingdom should be planned and built and it became the model for most Saudi cities from that time.[43]

Once the new gridiron planning form was established at Al-Malaz, it became the model for the future expansion of the city boundaries. In 1968, the government engaged the highly influential Greek architect and planner Constantinos Doxiadis to prepare an Ekistics-style master plan for Riyadh City, now Saudi's Capital city. Doxiadis was also commissioned to provide masterplans for other cities in the central and northern regions of the country.[44] Similarly, in the early 1970s, Robert Matthew's & Partners, planned cities in the western regions, and Candilis Metra and Kenzo Tange did the same for the eastern region.[45] To some, the decision to invite Doxiadis to provide a plan for Riyadh, which was seen as "a traditional, almost sleepy, Arabian small town," was extremely strange.[46] In response, and to emphasise the importance of the old Arabian village, the master plan Doxiadis prepared for Riyadh was based on dividing the growing city into superblocks of 2 x 2 kilometres, in which each block would represent a semi-independent urban area with a set of religious, shopping, educational, and health facilities. Yet, while significant attention was given to traditional urban development, the gridiron approach with its superblocks was considered foreign to the Saudi society culture and tradition, which led many to question what they saw as a "non-traditional approach."[47] In particular, it shifted the urban focus away from mosques and other religious buildings and precincts. Mohammed Eben Saleh, a former architecture professor at King Saud University, suggests that:

> this type of urbanization disrupted the urban fabric and weakened the compactness between neighbours and the security and safety of residents… This necessitates the search for urban solutions and alternatives, which increase the density, reduce the cost of infrastructure, revive the

43 Al-Hathloul, "Tradition, Continuity, and Change in the Physical Environment: The Arab- Muslim City."

44 Initially, it began with Doxiadis new master plan for Riyadh city. See Deborah Middleton, "Growth and Expansion in Post-War Urban Design Strategies: C. A. Doxiadis and the First Strategic Plan for Riyadh Saudi Arabia (1968-1972)" (PhD diss., Georgia Institute of Technology, 2009).

45 Fahad Al-Said, "Territorial Behaviour and the Built Environment: The Case of Arab-Muslim Towns, Saudi Arabia" (PhD diss., University of Glasgow, 1992).

46 Charles L. Choguill, "A Survey of Saudi Arabian Urban Problems," J *King Saud University: Architecture and Planning* 20, (2008): 4.

47 Charles L. Choguill, "A Survey of Saudi Arabian Urban Problems," 5.

social communications in the built environment, and encourage pedestrianization and daily marketing.[48]

Reflecting on this, in 1992, the Saudi Ministry of Municipal and Rural Affairs contracted two local planning consultants to redesign the 2 x 2 kilometre superblocks while taking into consideration vernacular and traditional Arab planning principles and characteristics. The planners developed new hybrid forms that disrupted traffic flow within residential areas and included traditional urban forms with narrow alleys and dead-ends. **[Fig. 12]** Their proposed plans were primarily pedestrian-dominated to reawaken the old town. The mosques for Friday prayers were prioritised and provided with large areas for religious and ceremonial activities. These mosques were within walking distance of the new housing. Housing lots were arranged in groups and each group of housing was clustered around a semi-private area which was often exclusively accessible to the residents and their visitors only. However, as preferences changed after the building of the Al-Malaz Housing Project, even some of MOMRA new proposed plans were challenged by the elite and land speculators, as this group wanted wider streets which increased land value. However, the modified 2 x 2 superblocks remained the model for city expansion in Saudi Arabia from the late 1990s.

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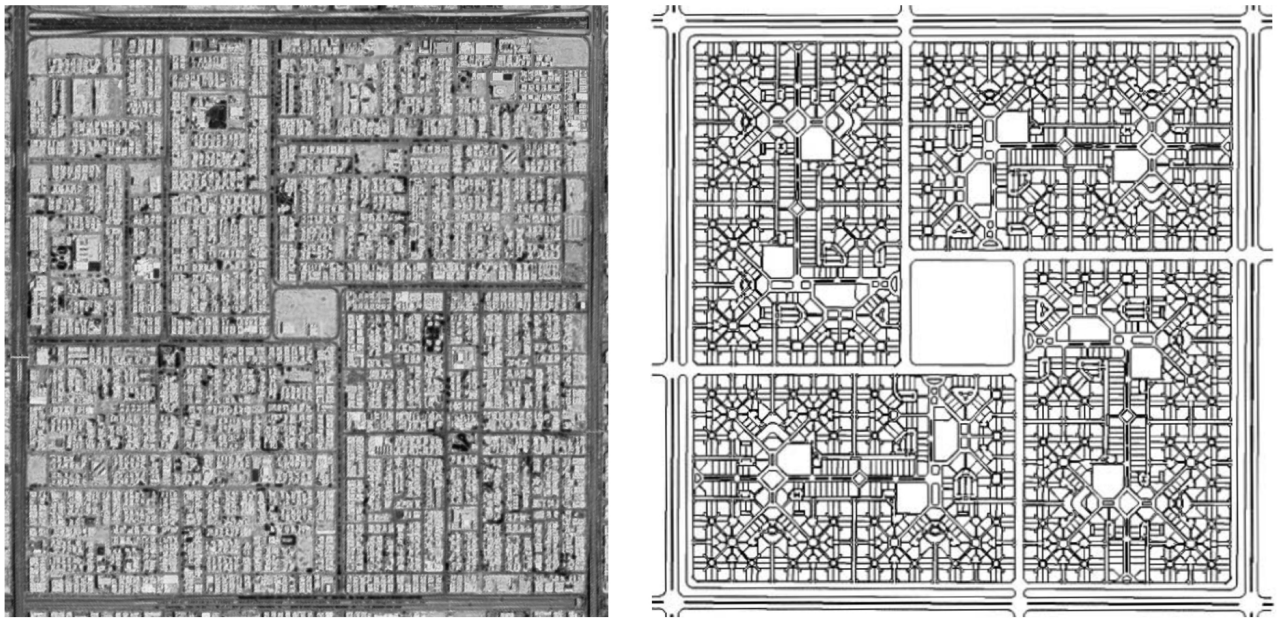

Fig. 12

A Comparison between Doxiadis Superblock and one of MOMRA's proposed new Superblocks. Left: Google Maps screenshot showing one of Doxiadis superblocks in Riyadh city. Source: Google Maps. Right: one of MOMRA's proposed variation of the 2 x 2 superblocks. Source: Mohammed Eben Saleh, "The evolution of planning & urban theory from the perspective of vernacular design: MOMRA initiatives in improving Saudi Arabian neighbourhoods," *Land Use Policy 18,* (2001)

Doxiadis' Riyadh master plan, with its squared and rectangular housing blocks, was soon populated with villa-style houses that had been introduced in the *Aramco Home Ownership Program and Al-Malaz Housing Project*. As this new residential form gained popularity during the 1960s and 1970s, the conflict between the old and the new, traditional versus modern, and regional versus

48 Mohammed Eben Saleh, "The evolution of planning & urban theory from the perspective of vernacular design: MOMRA initiatives in improving Saudi Arabian neighbourhoods," *Land Use Policy* 18 (2001): 186.

international, began in relation to Saudi residential architecture.[49] Scholars, who have studied post-oil Saudi society,[50] point out that the Saudi villa did not evolve from Saudi residential and vernacular architecture. Abdullah Al-Ghathami, a professor of criticism and theory at King Saud University, suggests that the story of modernity in Saudi Arabia is unique, as it occurred when the society was divided into two different groups: conservatives and modernists.[51] He notes how the extreme conservative *Imams*, prayer leaders, used *Khutbat Al-Jum'ah*, which is the talk that precedes Friday's prayer, to warn people about the dangers of modernity and its advocates. However, he argues that the phenomenon is revealed in various social practices and norms. For example, the change manifested itself within the basic construction material, as it changed "from mud with its direct connection to the earth – where human and culture meet – to concrete, the industrialised material with its total separation between the environmental factors and the memory of place."[52] According to Al-Ghathami, because of this, there is now "a monstrous union between the new place and the human..."[53] Eben Saleh highlights that, in contrast to its contemporary, consistently modern form, Saudi traditional architecture "was a result of a complex interaction between multiple variables and took place within difficult circumstances. Such variables include economic, political, religious, cultural and physical constraints."[54]

Conclusion

The Aramco and Al Malaz housing projects were the vanguards of a rapid move from traditional lightweight *barasti* and heavyweight earth houses to modern, western-style houses made predominantly of concrete. The choice of concrete, initially concrete blocks and concrete slab floors, as the preferred construction material is notable, given that most of the houses imported into the oil compounds were lightweight and made of prefabricated timber. It was these prefabricated timber houses that were the first modern buildings most of the local oil workers would have been exposed to. When it came to building their own houses, initially in the squatter camps that spread out from the gated oil compounds, the building material of choice was always concrete, where possible. It is not clear why this was the case but, historically, in Saudi Arabia, earth-made buildings were more highly regarded and prestigious than lightweight structures. There is a direct analogical relationship between concrete and earth building and this may have influenced the choice. Despite some resistance

49 Mashary Al-Naim, "Identity in Transitional Context: Open-Ended Local Architecture in Saudi Arabia," *International Journal of Architecture Research* 2, no.2 (2008).

50 Professor Mohammed Eben Saleh, Yousef Fadan, Saleh Al-Hathloul, Ali Bahammam and Abdullah Al-ghathami, to name some.

51 Abdullah Alghathami, *Hekayat Al Hadaathah fi Al-mamlakah Al-Arabiya Al-Saudia* [*The Story of Modernism in the Saudi Arabia*] (Casablanca: The Arab Cultural Centre, 2004).

52 Abdullah Alghathami, *Hekayat Al Hadaathah fi Al-mamlakah Al-Arabiya Al-Saudia*, 164.

53 Abdullah Alghathami, *Hekayat Al Hadaathah fi Al-mamlakah Al-Arabiya Al-Saudia*, 173.

54 Mohammed Eben Saleh, "The Development of Energy Efficient Building Systems and Technique for Housing the Masses in Hot Dry Climates with Special Emphasis on Saudi Arabia" (PhD Diss., University of Michigan, 1980): 51.

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from local people, from the early 1960s, the cities and suburbs of Saudi Arabia were rapidly populated with modern, western-style concrete housing and other buildings.

In 2019, research visits to some now uninhabited houses[55] in both the Aramco and Al-Malaz projects revealed a remarkable and widespread phenomenon. Most of the houses were significantly modified by their owners after moving in. This seems to indicate that the new housing was not a particularly good fit with the social, religious and cultural customs of their new owners. It seems that most were, in fact, not given much choice "but to adopt [the] new spatial concepts and organisations."[56] Some of the houses still retain their original architectural features, but most have been significantly altered and remodelled. **[Fig. 13]** Exploring the interior of one of the abandoned houses revealed some of the architectural elements and features that would have been very unusual and unfamiliar at that time. External walls were thin and lacked appropriate insulation, which made the houses gain heat easily in summer. Unlike traditional, loadbearing earth construction, the houses had a structural concrete frame that was visible, since the columns were thicker than the walls. The toilets and bathrooms were located in the centre of the house instead of their traditional

Fig. 13

Photos of the current condition of the Arabian Engineering Company (Aren) prototype house, built for the government employees in Al-Malaz. Photograph by Author.

55 During the research visit, we located several uninhabited houses. The one visited in Al-Malaz is located in Al-Jamiah Street, a busy street located in the centre of Riyadh city.

56 Al-Naim, "Identity in Transitional Context: Open-Ended Local Architecture in Saudi Arabia," 141.

corner locations,[57] which required their doors to be labelled in Arabic. [Fig. 13] The toilets and bidet position and orientation followed religious requirements as the person should not face or turn their back to Makkah, Muslim's holiest city, while using the toilet. Electrical outlets in the houses followed U.S codes. While the use of U.S codes and electrical fittings was very common internationally at that time, their use in Saudi Arabia was only associated with Aramco and government-sponsored housing projects, revealing the level of involvement of U.S companies who supervised both projects. Parapet walls were short, which most residents did not like, as the roof was traditionally used as a sleeping area several times over the year during hot weather. Within a short time after moving in, most increased the parapet wall height using various light and heavy construction materials. Some of the original occupants personalised and modified their houses, while others did not occupy the houses for a long time. Increased wealth, in particular, enabled some to buy large blocks of land and build more prestigious houses within a relatively short time. Interestingly, the houses they built were also "modern", with almost no reference to traditional and regional influences, which seems to indicate an acceptance of the inevitable modernisation of Saudi housing.

57 Akbar, "Support for Courtyard Houses Riyad, Saudi Arabia."

Bibliography

Al-Ghathami, Abdullah. *Hekayat Al Hadaathah fi Al-mamlakah Al-Arabiya Al-Saudia* [The Story of Modernism in the Saudi Arabia]. Casablanca: The Arab Cultural Centre, 2004.

Al-Naim, Mashary. "Identity in Transitional Context: Open-Ended Local Architecture in Saudi Arabia." *International Journal of Architecture Research* 2, no. 2 (2008).

Al-Said, Fahad. "Territorial Behaviour and the Built Environment: The Case of Arab-Muslim Towns, Saudi Arabia." PhD diss., University of Glasgow, 1992.

Al-Said, Fahad. "The pattern of structural transformation of the Saudi contemporary neighbourhood: The case of Al-Malaz, Riyadh, Saudi Arabia." *The 39th ISoCaRP Congress*, 2003.

Anis-ur-Rahmaan, Bushra A. Rahmaan and A. Al-Shaye. "Innovation Diffusion in Housing: A Conceptual Probe in Saudi Arabia." J. King Saud University: *Architecture and Planning* 2 (1990): 3-21.

Bammes, Donald M. *Al-Ayyam Al-Jamilah* 6, no. 1 (March 1962).

Candilis Metra Int. *Eastern Region Plan, Existing Conditions*. Dammam: June 1974.

Choguill, Charles L. "A Survey of Saudi Arabian Urban Problems." J. King Saud University: *Architecture and Planning* 20, (2008).

Coon, Carleton S., and William A. Eltiste. "Operation Bultiste, Promoting Industrial Development in Saudi Arabia." In *Hands Across Frontiers*, edited by Howard M. Teaf Jr. and Peter G. Franck. Ithaca, New York: Cornell University Press, 1955.

Danforth, Loring M. *Crossing the Kingdom: Portraits of Saudi Arabia*. Oakland, California: University of California Press, 2016.

Eben Saleh, Mohammed. "The evolution of planning & urban theory from the perspective of vernacular design: MOMRA initiatives in improving Saudi Arabian neighbourhoods." *Land Use Policy* 18, (2001).

Facey, William. *Riyadh, the Old City: From its Origins Until the 1950s*. London: Immel, 1990.

Fadan, Yousef. "The Development of Contemporary Housing in Saudi Arabia (1950– 1983): A Study in Cross-Cultural Influence Under Conditions of Rapid Change." PhD diss., Massachusetts Institute of Technology, 1983.

Lackner, Helen. *A House Built on Sand: A Political Economy of Saudi Arabia*. London: Ithaca Press, 1978.

Lebkicher, Roy. *Aramco and World Oil*. New York: R.F. Moore, 1952.

Lebkicher, Roy. *Aramco handbook*. Dhahran: Arabian American Oil Company, 1960.

McMurray, Scott. *Energy to the World: The Story of Saudi Aramco*. Houston: Aramco Services Company, 2011.

Middleton, Deborah. "Growth and Expansion in Post-War Urban Design Strategies: C. A. Doxiadis and the First Strategic Plan for Riyadh Saudi Arabia (1968-1972)." PhD diss., Georgia Institute of Technology, 2009.

Parssinen, Jon, and Kaizir Talib. "A Traditional Community and Modernization: Saudi Camp, Dhahran." *JAE 35*, no. 3 (1982): 14–17.

Philby, Harry St John Bridger. *Arabian Jubilee: An Account of the Reign of Ibn Sa'ud, King of Saudi Arabia. With Plates, Including Portraits*. London: Robert Hale, 1952.

Vitalis, Robert. "Wallace Stegner's Arabian Discovery: Imperial Blind Spots in a Continental Vision." *Pacific Historical Review* 76, no. 3 (2007): 405–37.

Wurster, Catherine. "The Social Front of Modern Architecture in the 1930s." *Journal of the Society of Architectural Historians* 24, no. 1 (1965): 48-52.

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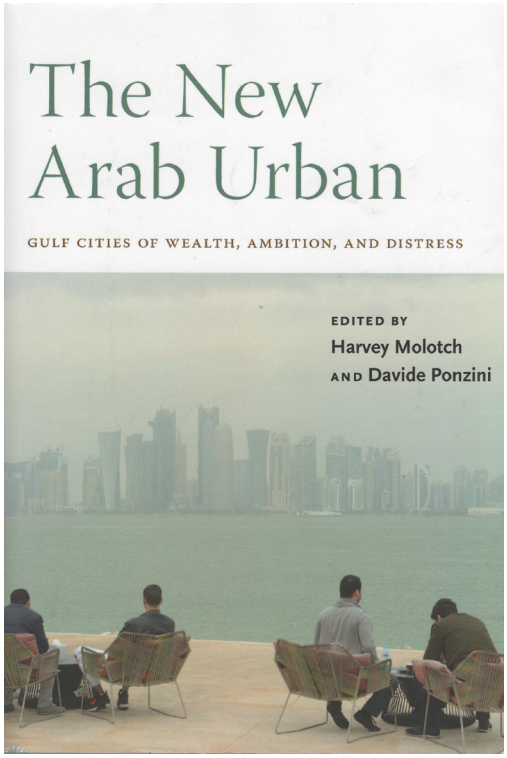

REVIEW OF

The New Arab Urban: Gulf Cities of Wealth, Ambition, and Distress
Edited by Harvey Molotch and Davide Ponzini

Cover Photo by Michele Nastasi. Design by Adam B. Bohannon.

Critics, History, Architecture, History of the Critics

/Abstract

In this volume, editors Harvey Molotch and Davide Ponzini take a decidedly different approach to the analysis of Gulf cities to show that what is happening in the United Arab Emirates and Qatar is not so abnormal and is more indicative of emerging trends in urbanization than what first meets the eye. Organized under four thematic sections, the volume brings together a wide-array of essays, generated by a diverse group of scholars from a numerous disciplines including architecture, architectural history, urban planning, area studies, political science, sociology, geography, and art. Taking cues from Robert Venturi, Denise Scott Brown, and Steven Izenour's well-known book, *Learning from Las Vegas* (1972), this volume situates Gulf cities within the transnational contexts of colonialism, globalization, neo-liberalism, and emergent trends of human and capital migration.

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Cities in the Gulf have seen some of the most extensive building and urban transformation projects of at least the last twenty to thirty years. The making of projects such as Burj Khalifa in Dubai, Masdar City, or the New York University (NYU) Campus in Abu Dhabi

involve a wide array of multinational institutions, investors, and professionals. Furthermore, these developments have taken place within contexts of boom and bust, wars, and political upheavals in the larger region. Yet, the formation of cities such as Abu Dhabi, Dubai, or Doha have received relatively little attention. Much of what exists treat Gulf cities as anomalous developments shaped by oil wealth and the autocratic regimes of the region. In this volume, taking cues from Robert Venturi, Denise Scott Brown, and Steven Izenour's well-known book, *Learning from Las Vegas* (1972), Harvey Molotch and Davide Ponzini take a decidedly different approach to show that what is happening in the Gulf is not so abnormal and, in fact, is more indicative of emerging trends in urbanization than what first meets the eye.

The essays in this book are organized under four thematic sections which also identify the primary analytical frameworks contained in the volume. The first section, "The Gulf as Transnational," aims to dispel perceptions of the Gulf as a regional anomaly and provides the underpinnings of the theoretical positions proposed by the editors in the introduction. In the opening essay titled, "Giving the Transnational a History," Alex Boodrookas and Arang Keshavarzian exposes the historical and ongoing orientalisms through which the Gulf has been framed, "as a region somehow exempt from the structural constraints of empire and capital" (35). Instead, as a way to foreground the essays in the volume and to "de-exceptionalize Gulf cities" (38), they draw attention to key strands in recent literature on the region that illustrate, "… the translocal processes that manufactured these cities as 'global' objects… with particular local and historical circumstances," (38) that both produce and challenge binary categories between citizen and noncitizen, resident and migrant, nomadic and urban. The authors then provide a transnational history of urban fragmentation in the region from the nineteenth century to the present, through a survey of recent literature and research. In the second chapter titled, "Problematizing a Regional Context," Amale Andraos interrogates the production and representation of the dichotomous categories of "local" and "global," "traditional" and "modern" through an examination of a number of architectural and urban projects, exhibitions, and archives supported and organized through collaborations between local and international firms and benefactors. The essay examines an impressively large number of case studies that include, to list only a few, Burj Al Arab Hotel in Dubai and the Louvre Abu Dhabi; the Arab Image Foundation (AIF) and the Arab Center for Architecture (ACA); and Solidere, the reconstruction of downtown Beirut. Through this valuably broad outlook, Andraos surveys the meanings and experiences produced against the background of British imperialism and postcolonial frameworks. Davide Ponzini's essay, "Mobilities of Urban Spectacle," is an excellent sequel to Andraos's analysis, as it not only adds to

the pool of significant urban and architectural projects carried out in the Gulf, but also examines them within a context of other development projects from around the world, often carried out by the same parent company based in the Gulf. Through case studies such as Qatar Investment Authority (QIA) or Dubai-based Emaar, the essay explores how such semi-public/semi-private entities are now implementing the development models carried out in over twenty countries including Turkey, Montenegro, Malaysia, England, and the United States. Among the specific projects that the essay explores are QIA's Shard in London and the UniCredit Tower in Milan.

Michele Nastasi's essay, "A Gulf of Images," opens the second section of the book, titled, "Assembling Hybrid Cities," but it is also a great sequel to discussions of transmissions of urban spectacle in the previous section. The essay interrogates the typical architectural image of iconic buildings in the Gulf devoid of people and specific context. Especially in contexts where the contrast between the architectural edifice and the surrounding urban landscape is great, it shows how the architectural photograph works to position cities such as Dubai or Abu Dhabi among other global cities, minus the differences in social and economic contexts, thus discounting their significance in determining the ways these rhetorical objects speak. In the second essay of this section titled, "Planning for the Hybrid Gulf City," Laura Lieto provides a candid account of her experience working as a "Western" expert in the planning of the center of Jubail City, in Saudi Arabia. One of the central ironies that Lieto's essay brings forward is the European experts' countering of the Saudi Government's requests to conceptualize this space as a European plaza with arguments to shape it around traditional forms of the *souk*. Setting the legitimacy of European experts' concerns regarding climate and sustainability to one side, Lieto cleverly foregrounds the topic of the essay with a discussion of the orientalizing myths about the traditional forms of the so-called orient while drawing attention to the limits of planning practice in transcending preconceived forms, identities, and imagery. Hybridity emerges as a quasi-strategy for avoiding pastiche and addressing pertinent issues of sustainability. These questions spill over to the last essay of this section, where Hillary Ballon (for whom the volume is dedicated) chronicles the planning and construction of one of the most comprehensive examples of a new paradigm in the globalization of higher learning: New York University's Abu Dhabi Campus (NYUAD). Ballon, who was also directly involved in the planning of the project, provides a matter of fact account of the basic components of the project (from its beginnings with the personal relationship between Sheikh Mohammed bin Zayed al Nayhan, the crown prince of Abu Dhabi and NYU president John Sexton to its design process, including site selection and the configuration of design ideas, such as sustainability, density, and walkability, associated with a modern campus) while also bringing attention to the conceptualizations of hybridity represented in the project. Ballon notes, quoting Rafael Vinoli, the project architect, that the Campus was designed as a "New Village, neither replicating the image of the traditional Islamic neighborhood, nor the character of

Greenwich Village (NYU's New York location), but instead an amalgam of both, as a metaphor for the central idea of the institution" (170).

In the third section of the volume, three essays explore how components of Gulf cities act as, "Urban Test Beds for Export." Mina Akhavan opens this section with a tour de force essay that examines Dubai as a completely new type of port city, the likeness of which is not found in the West. Emerging simultaneously with containerization and megaships and capitalizing on ideas of free trade zones and transnational infrastructure of transshipping, Akhavan traces the coming of age of the Dubai port city model. Comprised of mega shipping ports and airports, Dubai somehow thrives without connections to bases of resource extraction, agricultural hinterland or a manufacturing plant. Gökçe Günel, in, "Exporting the Spaceship: The Connected Isolation of Masdar City," explores the contradictions of an experimental sustainable city built in complete isolation from its social, political, and economic contexts. Framing her analysis against the historical and theoretical backgrounds of Buckminister Fuller's, *Operating Manual for Spaceship Earth* (1969) and Timothy Mitchel's, *Carbon Democracy* (2013), Günel explores whether Masdar city and institute, MIT's technology and development program, is a spaceship or a lifeboat in the desert, as it ultimately seeks a sustainable future in the Gulf. Sarah Moser's account of Cityquest forum, held each winter since 2013 in King Abdullah Economic City (KAEC) concludes this section. It examines how this annual meeting of invited elites sponsored and led by Saudi elites, including Fahd Al-Rasheed, CEO of KAEC and a number of other Saudi development corporations operating in different parts of the world. Moser provides an up-close analysis of how Cityquest, "normalizes neoliberal assumptions of urban development" (226), while it also positions Saudi Arabia as a new expert within a global network of new planned cities.

Yasser Elsheshtawy's essay, "Real Estate Speculation and Transnational Development in Dubai," opens the last section of the book titled, "Audacity, Work-Arounds, and Spatial Segmentation." Here Elsheshtawy provides a brief but excellent prehistory of planning in Dubai from the postwar period to the present. In an alternate organization of the volume, this essay could appear earlier in the book to examine John Harris's master plan (1959-71) and how it contrasts with the way the city and its skyline looks today, as a result of the Dubai Structural Plan (1995) and the 2020 Urban Master Plan. However, the essay's focus is not on the master plans, but on how they impact the older, and in this case, the postwar urban fabric of the city, in and around the low-rise district of Satwa. From this pedestrian view, low to middle class citizens of the city become visible for the first time in the volume, set against the high-rises of the city now in the background. In "Consuming Abu Dhabi," Harvey Molotch examines the culture of consumption in the Gulf in relation to the region's social and political structure. Borrowing Neha Vora's term, "consumer citizenship" (257) Molotch shows how power, dissent, and belonging are negotiated through a "monarchical social contract," where conformism is rewarded by access to franchises and degrees of conspicuous consumption. Businesses, travel, cars, houses, and apartments

act as bargaining chips for consolidating alliances and establishing hierarchies among constituents. "Shopping remains a craft – an avenue of human agency especially relevant in contexts where birth so influences status" (258), writes Molotch, also drawing attention to the work-arounds that are there to include or exclude non-citizen factions based on their consumption status. In the last essay of the volume, "A Quest for Significance," Steffen Hertog brings forward the question that has been brewing beneath the surface of all the essays. Identifying the primary categories under which many of these, "soft-power projects" fall, Hertog explore the question of why the Gulf's, "most daring and visible projects cater to Western-defined "liberal" international norms and tastes" (277).

In a concluding chapter, the editors reassess and highlight the findings of the essays for possible take-aways. Overall this is a tour-de-force collection that brings together studies from a particularly diverse group of university administrators, professionals, and scholars representing a wide array of disciplines including architecture, architectural history, urban planning, area studies, political science, sociology, geography, and art. So much so that one can't help but wonder if the book, *Learning from Las Vegas*, that the editors put forward as an inspiration to this one, gives the wrong prelude to a volume of substantial depth and breadth. A classic in its own right, *Learning from Las Vegas*, was, by comparison, limited in its scope and didn't really explore the variety of frameworks through which the commercial strip can be made truly legible. By contrast, the essays in this volume ask a wide range of questions about Gulf cities and show how they are far from temporary and anomalous products of oil monarchies and wealth. Therefore, one particular way the Las Vegas book resonates through this volume is that, similar to the way it brought attention to the commercial strip, this volume is a call to heed the Gulf cities as they are one of the most robust products of global finance and they serve as a model for other cities around the world.