IN SEARCH OF A DIRECTION IN THE CONTEMPORARY ARCHITECTURE OF ARABIA

by Sikander I. Khan Bachelor of Architecture University of Dundee Scotland, United Kingdom 1982

Submitted to the Department of Architecture in partial fulfillment of the requirements of the degree of Master of Science in Architecture Studies at the

Massachusetts Institute of Technology

June, 1988

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5 Signature of Author___ Sikander I. Khan ۱ Department of Architecture May 13, 1988 Certified by_ Professor R. B. Lewcock Aga Khan Professor of Design for Islamic Cultures Thesis Supervisor Accepted by Julian Bienart Chairman Departmental Committee for Graduate Students Rotch uzera abrilie Totochogy JUN - 3 1988 LIBRARIES

To Rafi: for all the things that might have been.

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Submitted to the Department of Architecture on June 12, 1988 in partial fulfillment of the requirements for the degree of Master of Science in Architecture Studies.

Abstract

There is a new breed of contemporary buildings evolving in the Middle East that incorporates all the pragmatic functions of the 20th century, but, at the same time, attempts to capture the spirit of the indigenous architecture in its particular context.

This thesis seeks to investigate and understand the approach of architects who have attempted to design in a kind of semi-abstracted continuation of the Arab tradition.¹ In order to be able to appraise the relationship of the built forms created by these designers to the issue of articulating an Arab identity, this essay has chosen to address contemporary institutional architecture.²

¹ Although I would like to have examined the work of Muslim architects like Rasim Badran, Abdul Wahid El-Wakil, Halim Abdul-Halim, Dr. Makiya, Samir Khairallah and Jaafar Toukan (who have both worked in the Gulf and attempted in a variety of ways in their architecture to synthesise their cultural background and a Western architectural education system), unfortunately their works so far have dealt primarily with mosques and commercial buildings and not really addressed Institutional Architecture.

² Why I decided to analyse this particular type of building has been succinctly summed up by Dr. Sami Angawi, Director of a special Saudi Arabian Governmental organization investigating the environmental effects of "The Hajj" on the city of Mecca. He states, "Residential architecture may take hundreds of years to change, whereas monumental architecture is much more directly influenced by the wishes of the ruling power. Thus Government buildings are a good example to understand new trends in the architectural style of the city." It should be further noted that Dr Angawi was specifically referring to the Middle East.

The two buildings chosen as an example of this relationship are The Sief Palace Complex, Kuwait City, Kuwait by Reima Pietila, and the Ministry of Foreign Affairs in Riyadh, Saudi Arabia by Henning Larsen.

The purpose of this study is threefold. First it evaluates the architectural vocabulary of each project in order to understand transformations intended to lead to the evolution of a new architectural vocabulary. Secondly, it is a cautionary tale to designers who set about buildings that attempt to respond to the exigencies of both internationalism and tradition, and finally it focuses on issues of guidance to state agencies.³

Thesis Supervisor:	Professor R. B. Lewcock.
Title:	Aga Khan Professor of Design for Islamic Cultures.

³ In Continuity and Change: Workshop 2: "Designing an Urban Fabric for the Twenty-first Century" (p. 111) Professor F. Vigier states: "Government clients are...not totally unreasonable creatures. You can introduce new ideas and point out consequences of a position. At least bring them to the point where, even if they don't change their minds, they will know better in advance what they are getting into. This is a very important role that we ought to play, but do not play as often as we should."

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank the following people for their contribution in crystallizing my thoughts:

Professor Lewcock, my advisor, who, allowed me to follow my own intellectual directions wherever they took me throughout the two years of the masters program and helped me focus and balance the direction of the thesis.

Professor Grabar, for his significant feedback that helped me in structuring the theoretical background of the thesis. In addition to which exchanging views on all aspects of architecture was always a source of great inspiration.

Mr. Tom Payette, (designer, Aga Khan Hospital, Karachi, Pakistan) for the valuable discussions that we had and for sharing his insights into the many problems of a practicing architect trying to create an architecture appropriate to the region.

Professor Cho Padamsee, from London University, for his incisive questions and valued criticisms.

Professor William Porter, for his advice, suggestions, and guidance in the initial formulation of this thesis, which became an integral part of the final document.

Khaled Asfour, for his support, encouragement and constructive criticism and most of all, laughter throughout the formulation and realization of the thesis.

In addition I would like to thank Shraddha Sejpal for her 'Mac' which allowed me to instantly put my thoughts onto 'chips'; Tim and Dia Roan for their critical comments which helped me make some aspects of the thesis more explicit; Ray, Shyamu and Babji for their valiant efforts; Cheryl for not telling me what she thought; Raj and Ashima for their continual friendship which I didn't always deserve; Tanya and Beryl for their major miracles; all my colleagues inside and outside the D.I.S unit.

Finally, I would like to thank both my parents for their love over the years, and my new parents for accepting me as a part of their family and also giving me the honor of allowing me to marry their daughter, now my best friend, Imrana, without whom this thesis would never have been possible.

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FOREWORD

Before I begin a comparison between the Sief Palace Area Buildings and the Ministry of Foreign Affairs, I believe that it is critical to establish the limitations within which the comparison is being made in this thesis . Firstly, it is essential to state that even though I have the advantage of being a permanent resident in Kuwait, I visited the Sief Palace Area Buildings only once. As I had no dealings with the Ministry of Foreign Affairs or the Council of Ministers, I was not allowed into the private offices nor was I allowed to take photographs. Thus my impressions are limited to the external public spaces, the walkways and some of the courtyards. Consequently, all my information from the parts of the buildings that I could not visit as well as the plans, sections, elevations and photographs of the buildings come from the sources below:

Architects' Statements on the Sief Palace Complex

- Pietila, Reima. "Sief Palace area buildings. The genius loci of the Kuwaitian waterfront." <u>Arkitektur</u>, vol., 80, no. 1, 1983, pp. 44-49.
- Quantrill, Malcolm. "Reima Pietila talks about the context of architecture." <u>Montana State Architectural Review</u>, no. 2, spring 1984, p. 16-19.
- Quantrill, Malcolm. "Architecture, Context and Modernism." Rizzoli International Publications, Inc. N.Y. 1985. pp. 104-122.
- Salokorpi, Sinikka. "An interview with Pietila: An architectural Philosopher." Look at Finland, no. 2, 1986. pp. 4-9.

Articles Specific to the Sief Palace Complex

Connah, Roger. "The Sief Palace Extension." Living Architecture no. 5. pp. 128-131.

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Clouten, Neville. "Sief Palace area buildings." <u>Architecture & Urbanism</u>, no. 6, July 1983, pp. 26 - 50.

- Miller, William, C. "Reima: Architecture, Context and Modernism." "Intermediate Zones in Modern Architecture." <u>Society of Architectural</u> <u>Historians Journal</u>, vol. 45, no. 3, Sept 1986, pp. 304-305.
- Petrilli, Antonio. "Reima Pietila: Architecture, Context and Modernism." Spazio e Societa, vol. 9, no. 34, June 1986, pp. 74-75.
- Randall, Janice. "Sief Palace area buildings, Kuwait." <u>Mimar</u>, no. 16, April - June 1984, pp. 28 - 35.
- Streeter, Raymond, A. "Reima Pietila: Architecture, Context and Modernism." Journal of Architectural Education vol. 40. no. 1, Fall 1986, p. 32.

Gardiner, S., Kuwait: The Making of a City New York: Longman, 1983.

The advantage that I had of living in Kuwait in terms of being able to access the Sief Palace Area Buildings was not applicable in the case of the Ministry of Foreign Affairs, in Riyadh. If I had lived in Riyadh, it is possible that I might have been granted permission to tour the building as a part of my research. However, the disadvantage of not having visited the Ministry of Foreign Affairs has been more than made up in the number of publications available to me. In comparison to the Sief Palace Area Buildings, the Ministry of Foreign Affairs has been extensively documented, in addition to being nominated and then short-listed as part of the Aga Khan Award for Architecture in 1986. Thus written material exists from Larsen himself, William Curtis, the technical reviewer of the Aga Khan Award for Architecture in 1986, and from numerous architectural critics. These references are as follows:

Architects' Statements on the Ministry of Foreign Affairs Building

Larsen Henning. "Lessons from the Orient." <u>Diadolos</u>, no. 10, 1983, Dec 15, pp. 94-103.

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Larsen Henning. "Winning Design for the New Foreign Ministry Building." <u>Architectural Design</u>. vol., 51, no. 3 - 4, pp. 32-35.

Larsen Henning. "Ministry of Foreign Affairs Building in Riyadh." <u>Architecture & Urbanism</u>, Oct - Dec., 1986, pp. 14-23.

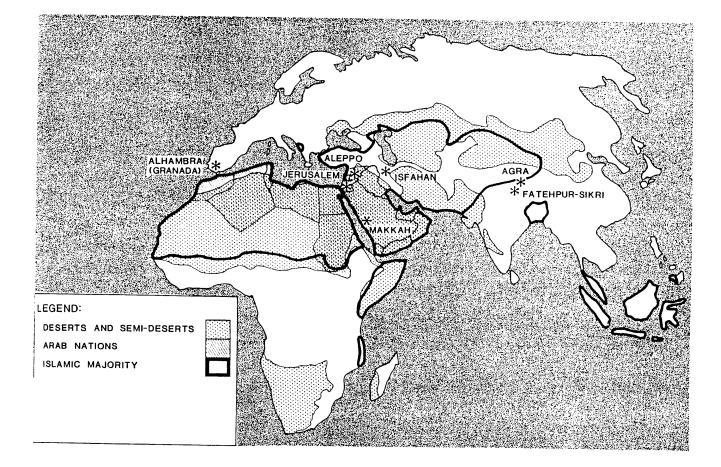
Articles Specific to the Ministry of Foreign Affairs

- Abel, Christopher. "Larsen's Hybrid Masterpiece." Architectural Review no., 1061, July 1985, pp. 24-39.
- Burney, Jan. "Danish modernism with Saudi Arabian tradition." Building Design. no., 730, March 15, 1985, pp. 2.
- Celani, Maria. "Space and Light: Interview with Henning Larsen." Spazio e Societa, vol. 9, no., 34, June, 1986, pp. 6-17.
- Curtis, William. "Ministry of Foreign Affairs, Riyadh, Saudi Arabia." <u>The Aga Khan Award for Architecture 1986</u> Technical Review Summary SAU. 563
- International Union of Architects, <u>11 Entries for the Headquarters of the</u> <u>Ministry of Foreign Affairs</u>, Saudi Arabia, Paris, Editions l'Equerre UIA, 1981.
- Lund, Nils-Ole, "Ministry of Foreign Affairs, Riyadh." <u>Arkitektur DK</u>, v 29, no., 7, Dec 1985, pp. 261-328.

Nazerian, Selim, "Riyadh Reactions" Architectural Review # 1065, July 1985, p. 18.

Peterson, E. P. "Ministry of Foreign Affairs, Saudi Arabia." Living Architecture, # 4, 1984, pp 102-129.

N.B. Firstly it is possible that the buildings as executed differs in some aspects from the publications and drawings discussed in this thesis. Unfortunately, this limitation also applies to some of the other projects in the country.



1. The Islamic Regional Context.

ARABIAN HISTORICAL CONTEXT

From a historical point of view, it is always difficult to know where to start when referring to the Arabian Peninsula. Where should one set the point of relevance? Should it be from the earliest documentation that is known, should it be from the beginning of Islam, or should it be from documentation that is readily available? There is really no definitive answer in all situations; rather, different situations merit alternative methodologies of approach.

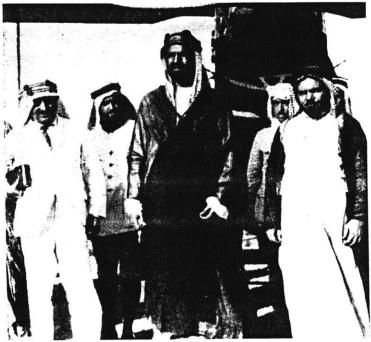
From my point of view, for this thesis which deals with the contemporary urban fabric, there would be little purpose in going very far back, the simple reason being that both attitudes and urban fabric in Kuwait and Saudi Arabia have changed radically in the last forty years, and particularly in the last fifteen. Thus it would be more appropriate to commence with the factors that have had a substantial role in the process of transformation. This catalyst, as we all know, is the "liquid gold," oil. But can we pinpoint with any accuracy the "moment of change" when an event, or a combination of events, be they a culmination of incidents within the culture of that particular society or the result of external intervention, creates a new situation within which lie the seeds for a complete transformation of both society and its urban fabric ? The instant at which this "moment of change" occurs is not always perceived as such, for at times it is a collection of concurrent, or simultaneous, events that collectively become the moment. But only in retrospect does their significance become apparent.

THE DISCOVERY OF OIL The 1900 to 1920s

The commercial history of Kuwait, until this point, had existed at financial subsistence levels and depended totally upon forms of commerce like caravans, pearl-diving and fishing. The first recorded break with this traditional way of life, and all that it stood for,



2. H.H. Shaikh Ahmad al Jaber al Sabah, Ruler of Kuwait 1921-1950.



3. Abdul Aziz with Amin Rihani (left)

was initiated as early as November 3rd, 1911, during the reign of Shaikh Mubarak al Sabah.⁴ On this day Mr Greenway, Managing Director of the Anglo-Persian Oil Company (APOC), first made inquiries regarding the possibility of obtaining an oil concession.⁵ He wrote to the British Political Resident, Captain Shakespear:

"...I would like you to put forward an application on behalf of the Anglo-Persian Oil Company for a Prospecting License, the draft terms of which I will send to you later on if you think that there is any chance of a Concession being obtained." ⁶

However, Captain Shakespear replied that presently Kuwait's Arab and Turkish neighbors were struggling for supremacy in the area, and conditions were too disturbed for such an application to be put forward.⁷ Thus it was not until 1914 that an APOC geologist visited Kuwait to examine the oil seepages at Burgan and Bahra. Due to the outbreak of World War I, it was not until 1917 that Shaikh Salim granted permission to APOC to make its first geological survey.⁸ However, the final stages of the war prevented any progress with this application until May, 1921. On May 9th, 1923, while APOC was once again attempting to initiate its proposal, an unexpected telegram was received by Shaikh Ahmed al Jaber al Sabah: ⁹

"I have most important letters from Ameen Rihani who has made inquiries regarding myself and Company advising Your Excellency not to grant oil concessions to any other Company

⁴ In accordance with modern practice, the spelling of Kuwait, and Shaikh are used. At the time of the Kuwait oil-concession negotiations, the variants 'Koweit' and 'Sheikh' were in use.

⁵ See (later Sir Charles, then Lord) Archibald Chisholm, The First Kuwait Concession Agreement (London : Frank Cass, 1975), p. 86.

⁶ For the complete section of this particular part of the letter see Chisholm, p. 3.

⁷ Chisholm, p. xi.

⁸ Shaikh Mubarak had died in 1915, and was succeeded by Shaikh Jaber who died early in 1917. See Chisholm, p. 3.

⁹ Chisholm, p. 5.



4. The first known portrait of Abdul Aziz, photographed by Captain Shakespear in Kuwait, March 1910.



5. Captain Shakespear, British political agent in Kuwait.



6. Major Frank Holmes.

representative will bring by the next steamer the letters and terms without seeing the terms offered by my Company. My to present to your Excellency. I am pleased to inform you that I have secured the approval of His Highness Ibn Saud of my company and secured the concession against all other Companies who negotiated with his Highness." Major Holmes

The arrival of Major Holmes and his small company, Eastern & General Syndicate Ltd (EGS), was to be the beginning of a lifelong friendship and would involve the Shaikh in ten years of bargaining before the final agreement would be signed.¹⁰

The 1930s

On the night of May 31st, 1932, oil was struck in Bahrain and, when it was tested the next day, it proved to be in commercial quantities. This discovery was to radically change the tempo of the competition in the negotiations to acquire oil concessions in Kuwait. But by the beginning of 1933, negotiations had still not been finalized. On May 14th, 1933, due to a variety of reasons both external and internal, all negotiations with APOC and EGS (now backed by the Gulf Oil Corporation) were suspended.¹¹ On December 14th, 1933, as Shaikh Ahmed had been advised seven months earlier, APOC and the Gulf Oil Corporation formed a joint company. This new collaboration was named the Kuwait Oil Company (KOC) and was incorporated in London on February 2nd, 1934. The major tenet of KOC was equality between partners. This development the Shaikh seemed to welcome, as Chisholm states:

"...a combine of two interests [APOC Gulf] and both of which were valued to him, but neither of which he was willing to favor to the exclusion of the other." ¹²

¹⁰ Three months previously Shaikh Salim had died, and was succeeded by Shaikh Ahmed al Jaber. See Chisholm, p. 91.

¹¹ His belief was based on information received by him from Holmes that the competitors would shortly combine and save him from the difficulty and odium of deciding between them; see Chisholm, p. 35.



7. Major F. Holmes stands between Abdul Aziz and Sir Percy Cox at Uqayr, November 1922.

¹² Chisholm, p. 45.

Gulf, APOC, and their KOC negotiators, Holmes and Chisholm, were optimistic that now, with a joint platform, a Kuwait Concession Agreement would be concluded with Shaikh Ahmed after a few weeks, and possibly a few minor alterations. This optimism was to be disappointed.¹³ It was not till December 23rd, 1934, that Shaikh Ahmed signed the final agreement, virtually according to the terms that he had originally demanded.

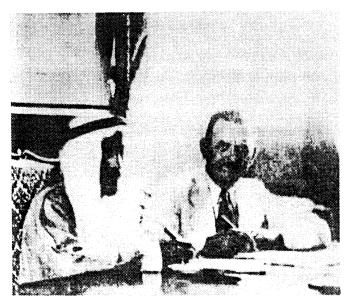
Once the agreement had been signed, administrative and technical staff, equipment and materials began arriving in Kuwait in December, 1935. The drilling of the first well started in May, 1936, but eventually reached 7,950 feet without locating any oil. Meanwhile, preparations to drill at Burgan had been proceeding and the first well there, begun on October 26th, 1937, struck high-pressure oil in large quantities at 3,672 feet on the night of February 23rd, 1938, precisely one week before the discovery of oil in commercial quantities in Saudi Arabia. KOC had discovered the giant Burgan field in the neutral zone between Saudi Arabia and Kuwait, one of the largest oil reservoirs in the world.¹⁴

In the case of Saudi Arabia, the first oil concession was granted in May, 1923, by King Abdul al-Aziz Ibn Saud to Major Holmes. However, the financial syndicate that Holmes represented was unsuccessful in persuading any oil company that there were substantial quantities of oil in Arabia to make it worth the risk involved. Thus the concession covering the 30,000 sq. miles in Eastern Saudi Arabia was allowed to lapse through failure to make certain nominal annual payments.

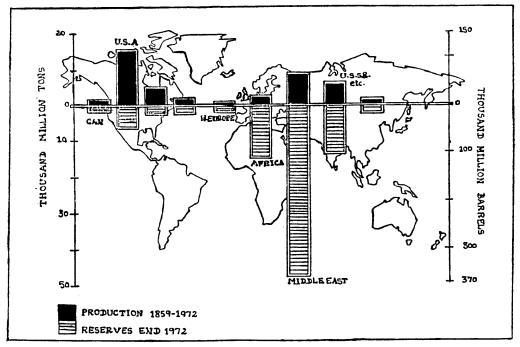
Objectively speaking, this concession and its subsequent termination did not represent the actual start, as nothing materialized. It would be closer to the truth to say that, as far as the history of Saudi Arabia is concerned, this definite break with the past is said to be "the day in 1930 when King Abdul al-Aziz somewhat reluctantly decided to allow

¹³ Ibid., p. 43.

¹⁴ Ismail Nawwab, Peter C.Speers, & Paul F.Hoye, ARAMCO: Arabia and the Middle East (Netherlands: Van Boekhoven - Bosh, 1981), p. 188.



8. The oil concession, Abdullah Suleiman and Lloyd Hamilton of Socal sign, 29th, May, 1933.



9. Total Oil Discovered by 1972

foreigners to investigate and evaluate the potential oil and other mineral resources of his country." ¹⁵

Legally, according to the history of the California Arabian Standard Oil Company (CASCO), a name synonymous with the production of oil in Saudi Arabia, the instant of the break with the past came on May 29th, 1933. On this historic day, the Saudi Arabian Minister of Finance, Shaikh Abdallah al-Suleiman, and a lawyer by the name of Lloyd Hamilton of the Standard Oil Company of California signed an agreement, giving the company the exclusive right to "explore, prospect, drill for, extract, treat, manufacture, transport, deal with, carry away and export oil and oil products." ¹⁶

However it was not until March 3rd, 1938, five frustrating years later at the Dammam no. 7 well, that CASCO first discovered a substantial enough reservoir of oil for the drilling operations to be a financially feasible proposition.¹⁷ Once Saudi Arabia was in the oil business, exploration proceeded at a fanatical pace, and it became quickly apparent that the Kingdom had the largest proven and provable oil reserves in the world -- the Ghawar field onshore and the Safaniya field offshore.

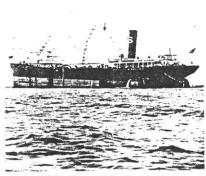
By the end of the 'thirties, it was becoming clear that Kuwait and Saudi Arabia, rather than Texas, possessed the world's largest reservoirs. This practically undeveloped peninsula was an area from which the major share of world oil production would come, and reciprocal development take place, in the future.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ For a more extensive detailed history of the exploration for, discovery, and production of oil in Saudi Arabia, see Nawwab, p. 176.





10. Craters from small fifty-pound bombs.

11. The D.G. Scofield.

The 1940s

On April 28th, 1939, King Abdul al-Aziz visited Dhahran, where he inspected the installations, dined with the owners of CASCO aboard the D. G. Schofield,¹⁸ and, on May 1st, 1939, opened the valve that let the first barrel of oil flow into the first tanker berthed at Ras Tanura. After the successful visit of the King, but just prior to CASCO exercising the rights of expansion agreed on in principle at this meeting (extending the northern and southern parts of the concession westwards and also including Saudi Arabian rights in the Neutral zone) war broke out and engulfed Europe. At the time, the United States and Saudi Arabia were still neutral.

However, on a moonless night in 1940, war came unexpectedly to CASCO, when four crews of audacious Italian airmen flew from the island of Rhodes in Greece and bombed Dahran.¹⁹ The rest of the war passed without incident, but the effect of the bombings and the economic state of Europe meant that for oil exploration in Saudi Arabia this proved to be a depressed time, with virtually no oil being pumped, due to the problems of materials, manpower and transportation.

A similar situation was to be found in Kuwait. In July, 1942, all of KOC's operations had to be suspended, and all wells plugged with cement, on the instructions of the Allied Governments because of the very critical condition of war then in the Gulf.²⁰

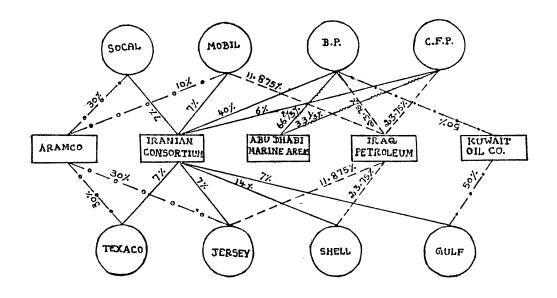
Immediately after the German surrender, on September 2nd, 1945, the need for crude oil dramatically escalated. Anticipating this demand late in 1943, the Americans began construction of the Ras Tanura refinery in Saudi Arabia which went into service in March, 1945. By the end of September, 1945, Aramco was producing over two million

¹⁸ The SOCAL tanker picked to load the first shipment; see Ismail Nawwab, p. 200.

¹⁹ Years later ARAMCO learned that the air raid was an attempt to knock out the Bahrain Petroleum Company (BAPCO) refinery on the Island of Bahrain, which was a British-protected state, and the attack on Dhahran was an error by the pilot who, having lost his bearings, mistook Dhahran for Bahrain. See Nawwab, p. 200.

²⁰ Chisholm, p. 81.

12. Ownership links of oil companies in the Middle East



13. Major International Firms in the Middle East, 1976

Host Country	B.P.	C.F.P.	Gulf	Shell	Mobil	Jersey	SOCAI	Texaco
Iran	x	x	x	x	x	x	x	x
Iraq	x	x		x	x	x	x	x
Bahrain							x	x
Kuwait	x		x					
S. Arabia					x	x	x	x
Qatar	x	x	x	x	x			
U. A. E.	x	x	x	x	x			
Oman		x	x					

barrels per month; by the end of that year it had produced over twenty-one million barrels of oil.²¹ In Kuwait, too, by early 1945, the war situation had so improved that KOC operations could be resumed. The plugged wells were reopened, development of the oil field went rapidly ahead, and in June, 1946, the first exports were made. Six million barrels were exported by the end of that year.

The 1950s and 1960s

If we examine the ownership and structure of the international oil exploration and production corporations, it is immediately become apparent that all the major oil companies belong to the Western powers. The United States is the home of five of the eight major ones -- SOCAL, MOBIL, TEXACO, Jersey and Gulf -- in addition to the majority of the emerging new arrivals in the international oil industry.

The United Kingdom is the second most important country, having a government-owned majority share in British Petroleum (BP) and a 40% share in Royal Dutch Shell. The graph clearly indicates the relationship of the eight major oil companies;²² seven of these are either in the U.S.A. or the U.K. However, reality is not as simple as the graph.

The various oil companies, with their enormous resources, fought with each other, at times ruthlessly, especially in bidding for concessions and establishing a share in the market. Once was been established, there were substantial cooperative ventures in the domain of production and transportation.²³

²¹ On January 31st, 1944, the California Arabian Standard Oil Company changed its name to the more appropriate Arabian American Oil Company, soon to become known as ARAMCO. See Nawwab, p. 201.

²² S. Manoharan, The Oil Crisis: The End of an Era. (New Dehli, S. Chand & Co., 1974) p. 11.

²³ In the early 70's work was begun on the Maritime oil terminal 'Seadock' off the Texas coast. In this project an estimated \$400 million was raised by AMOCO, Atlantic Ritch field, Cities Services, Continental, Crown Central, Humble, Mobil, Phillips and Shell oil. See Manoharan, p. 10.

Country	Year of Discovery	Proved Reserves (millions of Barrels)
Iran	1908	63,000.
Iraq	1909	34,000.
Bahrain	1932	6,800.
Kuwait	1938	67,400.
Saudi Arabia	1938	110,000.
Qatar	1940	5,700.
Neutral Zone	1953	6,300.
United Arab Emirates	1958	31,200.
Oman	1963	5,800.

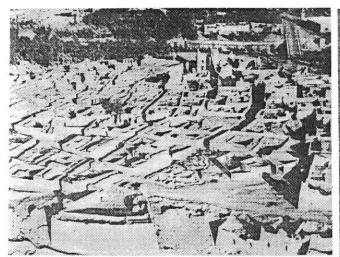
14. Crude Oil Production, Reserves and Year of Discovery, Middle East Countries, 1976

This was becoming the case in the Middle East, where most of the concessions had been awarded by the late forties and the early fifties. Thus this period and the early fifties became a time for consolidation. In Saudi Arabia, the year 1948 was especially important; in November of that year, arrangements were completed for the Standard Oil Company of New Jersey, now Exxon, and Texaco, to acquire 30%, and the Socomy-Vacuum Oil Company, now Mobil Oil Corporation, to acquire 10% of the shares in the ownership of ARAMCO which until this point had been owned principally by SOCAL. This maneuver ensured that there would be no competition in this lucrative market.

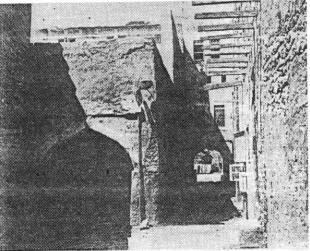
The unrivaled benefits in Saudi Arabia of this multi-national consortium were not to last long, for in December, 1950, probably the single most important change in the 1933 Saudi concession took place. This change in terms was called the 50-50 agreement. By this pact, the Saudi government's income from ARAMCO's operations came to be linked primarily to the profit the company made, not to the number of barrels produced and sold. Kuwait was soon to follow suit; in 1951, the Kuwaiti government also negotiated a change in the terms of the 1934 agreement, making it a 50-50 profit sharing.²⁴

This change in the method of calculating and the resultant increased income from both countries' major natural resource was to be the precursor of many dramatic changes both in the social attitudes and urban fabric of the respective countries. This new arrangement meant that suddenly a substantially larger revenue was available to the government. In a short space of time, both countries were lifted from a state of scarcity and subsistence to prosperity and wealth.

²⁴ M.A. Ajtony, The Expanding Role of Kuwait National Petroleum Company, (Kuwait: KNPC., 1969), p. 63.

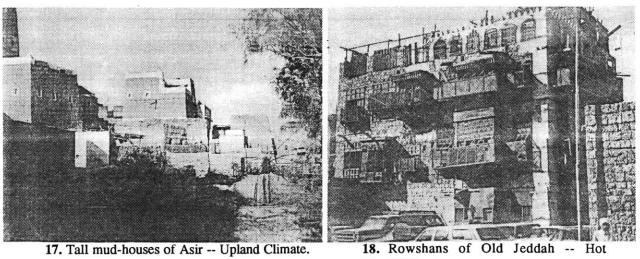


15. Aerial view of Dariya -- Hot-Dry Climate.



16. Narrow shaded and covered pedestrian paths in Qatif and Kuwait -- Composite Climate.





17. Tall mud-houses of Asir -- Upland Climate.

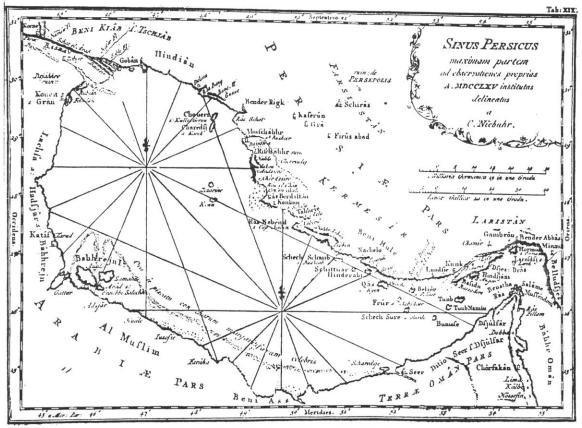
Humid Climate.

THE EVOLUTION OF KUWAIT CITY AND RIYADH

The vision of the Arabian peninsula held by the majority of the people in the west not familiar with this particular part of the world is dependent on the image portrayed in populist reviews that relate primarily to the Arabs and oil. The notion is that the whole peninsula is one large desert. This is not the case, for if we were to look at the various regions of the peninsula, we would find a number of distinct terrains; the sand deserts of the south, the eastern and southern mountains, the coastal strip and the central plateau many with an architecture that are a response to numerous factors of the particular region among which one of the most important is the climate. Of the above four regions the coastal strip is the region in which Kuwait City is located and the latter is the belt in which Riyadh is located, on a plateau six hundred meters above sea level.



19. Natural Vegetation of the Arabian Peninsula.



20. C. Niebuhr's map of the Arabian Gulf.



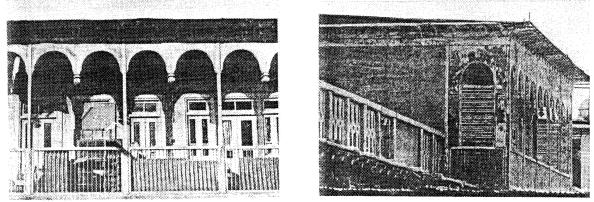
21. It is possible that this is a portrait of Niebuhr himself.

Let us stop for a moment, go back in time, and look at the history of the development of the urban frameworks and the architecture of Kuwait and Saudi Arabia until the early fifties, so as to try and visualize these countries as they were before they were impacted by the enormous inflow of oil wealth.

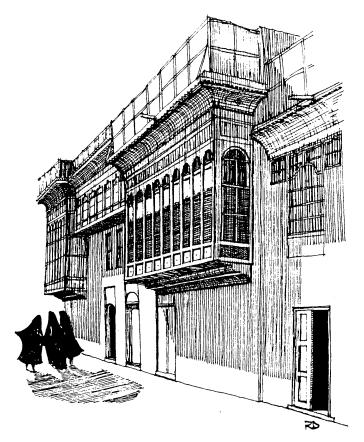
"It is likely that Kuwait town was already in existence as a small village, possibly defended by a tiny fort, when the Sheikhs of the Bani Khalid, in the interior, chose it as their summer resort, ca. 1670 A.D. Migration of a subtribe of the 'Anaza reached the southern shore of the bay around the year 1710. From this tribe are descended both the al-Sabah, the ruling family of Kuwait, and also the al-Khalifa, who are now the ruling family of Bahrain. The name 'Kuwait' was probably derived from the Arabic for "a little fort." In 1756 the Danish explorer Niebuhr made enquiries about it and drew a map of the town, which he describes as having a working population of 10,000 people 'who live on the produce of pearls and fishing.' 800 boats sailed from 'Gren' or 'Kuet', as Niebuhr spelled it, down the Arabian Gulf to trade on the coasts of India and Africa." ²⁵

Thus Kuwait grew rapidly, especially during the second half of the 18th century after the conquest in 1776 by the Persians of the city of Basra, which lay on a major caravan route to the Mediterranean. Trade between India, Baghdad, Aleppo, Smyrna, Sanaa and Constantinople no longer went via Basra, but through Kuwait. The rise of prosperity in Kuwait meant that many members of the merchant community from Basra moved to Kuwait to carry on business, and brought with them a different kind of housing, in essence much closer to the Ottoman type. This differed from the characteristic buildings of Kuwait, in that, unlike their blank walls with virtually no openings at the ground floor

²⁵ Ronald B.Lewcock, Traditional Architecture in Kuwait and the Northern Gulf (London: Art and Architecture Research Papers, 1978), p. 12. The author refers to C. Niebuhr, Beschreibung von Arabian, (Copenhagen: 1772), p. 341.



22. & 23. The Behbehani House in Watiya, Kuwait.



24. A typical house in Kadhimiyeh, Baghdad.

except the doorways, and their small windows punched through at the middle level, and the terrace at the roof level, "the Turkish house had a grand timber balcony with elaborate trefoil arches along the full width of the front, and a screened timber balustrade above that to ensure privacy on the roof." ²⁶

As a result of this stability, in 1793 the English transferred their trading factory from Basra to Kuwait; however, this was not to last for long because of the hostile presence of the Wahhabis of Central Arabia. Even though they were always successfully repulsed, the factory was moved back to Basra in 1795.

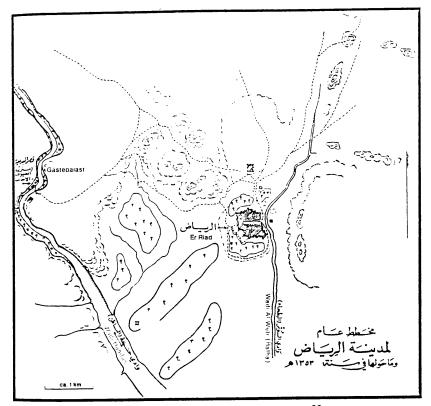
In 1801, an attempt was made by the Sultan of Muscat to capture the town, but this attempt failed.²⁷ The unsettled state of the Gulf at this time led to a temporary decline in trade, and consequently in the prosperity of Kuwait.

In order to solve the problem of living with the constant possibility that the country might be invaded, a treaty between Kuwait and Turkey was drawn up in 1829 in which Kuwait recognized Turkish sovereignty and formed a close association with the government of Baghdad. The Shaikh thereafter flew the Turkish flag. Finally, a treaty was concluded with the British in 1899 which excluded the Turkish influence and established Her Majesty's Government as the supreme power.

In comparison to the al-Sabah Family, the Saudi dynasty (which now rules the Kingdom of Saudi Arabia) started its rise to power as the result of a religious revival movement by Shaikh Mohammed Ibn Saud in support of Shaykh Mohammed Ibn Abd al-Wahab. Muhammad Ibn Saud, the friend and protector of Shaykh Muhammad, died in 1765, but under his very able son and successor, Abdul Aziz, the movement continued. In 1773 - three years before the American Declaration of Independence - Abd' al-Aziz captured Riyadh and within fifteen years controlled all of Nejd. Then, in the winter of 1789-90,

²⁶ Ibid., p. 34.

²⁷ For further detailed information refer to S.B.Miles, Countries and Tribes of the Persian Gulf (London: 2nd ed., 1966)



25. Early Map of the city of Riyadh.²⁸

²⁸ Although this map was documented in 1953 it is very likely that as a city Riyadh, except for temporary structures, did not grow beyond the city wall for reasons of security.

the Muwahhidun crushed the paramount tribe of al-Hasa, the Bani Khaled. Two years after that battle, Shaykh Mohammed Ibn Abd al-Wahab died, but the movement that he founded, "Wahhabism," did not die with him. In 1803, Abd al-Aziz was succeeded by his son Saud and within three years, by 1806, Saudi forces controlled al-Dariya in Nejd, the Holy cities of Mecca and Medina and most of the Arabian peninsula, including Hejaz, Yemen, and parts of Iraq and Syria.

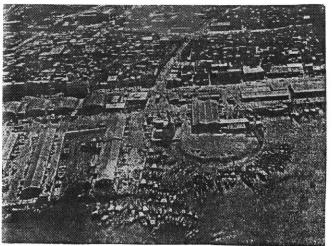
In Constantinople, meanwhile, the Ottoman Sultan had been alarmed at these incursions into what were nominally territories of the Ottoman Empire. He therefore ordered Muhammad Ali Pasha, the Governor of the Ottoman province of Egypt, to undertake a punitive expedition against the Saudis. After an unsuccessful expedition led by his son, Tusun Pasha, he was forced to go to Arabia himself; he initially achieved considerable success against the foe, but had to return to Egypt for political reasons. In 1818, Ibrahim Pasha of Egypt arrived in Nejd. Besieging the Saudi ruler Abdullah, Ibrahim captured al-Dariya, sent Abdullah as prisoner to Constantinople, and levelled al-Dariya. A year later, believing that the House of Saud was destroyed, he returned to Egypt.

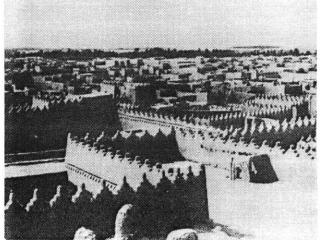


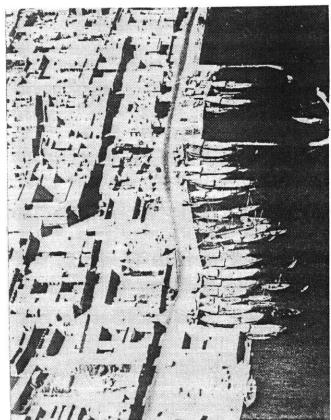
26. Ibrahim Pasha.

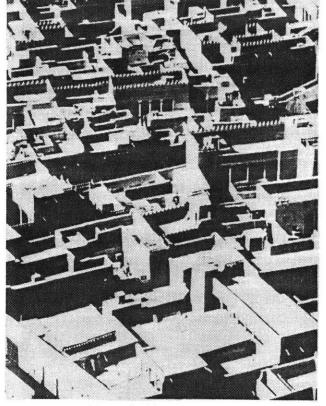


27. Muhammad 'Ali Pasha.









It is possible that the photograph at the top (28) and the one above (29) in terms of the flotilla of sailing vessels on the beach and in the harbour, is what Kuwait harbour looked like.

Above, looking along the Roof tops of Riyadh (30) and below into the urban fabric (31).

During the siege of al-Dariya, Turki ibn Abdullah, the nephew of the Saudi leader Abd' Allah, had taken refuge in a nearby town, but in 1823 he felt the time was ripe for a counter-attack. He quickly captured al-Dariya and went on to Riyadh; thus he was the first member of the House of Saud to make Riyadh his capital. Turki was succeeded by his son Faisal. In 1838, Egyptian forces were once again sent to put down the Saudis, and Faysal was captured. In 1843 Faisal, who had escaped from Egypt, returned to Riyadh. During his reign, the English traveller William Palgrave, visited Riyadh in 1865 approaching from the north, and wrote:

> "Before us stretched a wild open valley, and in its foreground, immediately below the pebbly slope on whose summit we stood, lay the capital, large and square, crowned by high towers and strong walls of defence, a mass of roofs and terraces, where overtopping all frowned the huge but irregular pile of Feysul's royal castle, and hard by it rose the scarcely less conspicuous palace, built and inhabited by his eldest son Abdullah. Other edifices too of remarkable appearance broke here and there through the maze of grey roof tops." ²⁹

Commenting on Kuwait, which he visited at roughly the same time, he states:

"Fifty years since their harbour with its little town was a mere nothing; now it is the most active and most important port in the Northern Gulf...thanks to good administration and prudent policy ...and better anchorage than most in the neighborhood, draw to Koweyt hundreds of small craft which else would enter the ports of Aboo-shahr or Basra." ³⁰

²⁹ Charlotte Breese, Eleanor Cozens, The Riyadh Album: the Traditional & Modern City & its Environs (London: Stacey International, 1983), p. 10.

³⁰ Lewcock, p. 12. The author refers to W.G. Palgrave's Narrative of a year's journey through Central and Eastern Arabia 1862-63, London: MacMillan, 1868.



32. Mubarak al-Sabah, Ruler of Kuwait.



33. The young Abd al-Aziz.



34. Abdul Aziz's army

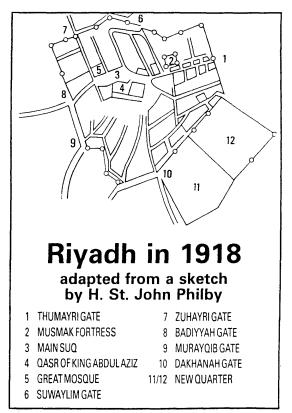
Two years after Palgrave's visit to Riyadh in 1865, Faisal died, and for the next thirtyfive years after his death there was no peace or prosperity for the house of Rashidi; Al Rashid had risen to power and taken advantage of the uncertainty in the Saudi succession. This conflict was to occupy the Saudis for decades. After a series of attacks and counter attacks, the capture and then subsequent loss of Riyadh to the Rashidis, Abd' al-Rahman ibn Faisal was forced to abandon the city; he took to the desert in the south where he had friends among the tribes. Later he moved to Qatar, then Bahrain, and he finally took refuge in Kuwait, where father and son Abdul Aziz ibn Abd al-Rahman Al Faysal Al Saud spent the better half of a decade as guests of Shaikh Mubarak al-Sabah. It was here that Abd' al-Aziz planned the creation of a united Saudi kingdom. In 1901, Abd al-Aziz decided that it was time for the House of Saud to win back its lands. However, it was not until January 16th, 1902, that Riyadh was taken. The capture was to mark the dawn of a new age in the history of Arabia and a turning point in the House of Sa`ud.



35. William Gifford Palgrave..

Two years later, in August 1904, the first British Political Agent in Kuwait, Major S.G.Knox, took up residence in August, 1904 in a house along the waterfront. In the course of events, alterations were made by Captain Shakespear, the second Political Agent, to the building; these made it substantially different from the typical Kuwaiti house in that it had verandas, but was similar in design to other European residences in the Gulf. Except for a short time in 1918-19, when another Political Agent, Col. P.G.Loch,moved to the "Quarantine Building" ³¹ outside the town walls at Shuwaikh, a house similar to the original veranda house, this house was to become the British permanent residence until 1935. This type could be classified as the Colonial Veranda House.

³¹ Lewcock, p. 33. The author refers to Zahra Freeth, who states that although the house existed it was derelict in her childhood.



36. Map of Riyadh by H. St. John Philby.

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After 1911, there was a pause in the campaigns to unify and consolidate central Arabia, and Abdul Aziz spent more time in Riyadh. He rebuilt the old Qasr as the seat of the government and used the Musmak fortress as a prison. The city walls, as documented in Philby's map, were given towers, Bab Badiyyah to the west, Shuwaylim facing southwest,Bab Dukhanah to the south, Al Suwaylim to the northeast, and the main gate, Thumayri, facing east.³²

When Raunkiaer visited Kuwait in 1912, he estimated that the town had grown to about 25,000 people and was over 2km in length along the waterfront, where all the larger houses were situated. On the inland side, there was a "movable town, that is to say of caravaneers and Bedouin, scattered over part of the desert which penetrates like the arm of the sea into the real Kuwait...In the innermost corner of the inlet of wastes begins the bazaar, with numerous lanes and partly covered streets." ³³

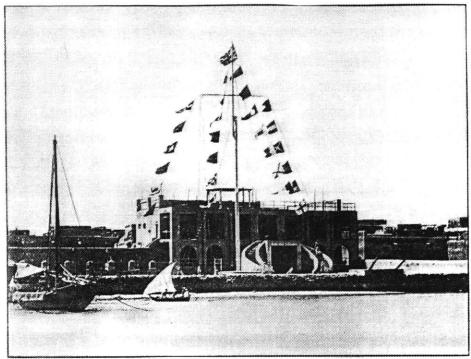
In the winter of 1913, Captain Shakespear, the political agent in Kuwait, visited King Abdul Aziz in Riyadh. The meeting was to lay the foundation of the Anglo-Saudi treaty of 1915 whereby Britain recognized Ibn Saud as the hereditary leader of Nejd, al-Hasa, Qatif, Jubail, and their dependencies in exchange for support in World War I.

Unlike Kuwait, which lay on the major trading routes and had extensive contacts with the east, Riyadh was located in the hinterland. Thus even by 1918 in the map made by the British agent, John Philby, Riyadh still appears as a small town with a surface area of around 1 km. square and a population of 15,000, compared to Kuwait which, by 1914, had become a prosperous trading community with strong links with Muscat, Basra, Persia, Bombay, Calcutta and Constantinople. This increasing prosperity had swollen the population to about 35,000, concentrated mainly in the town, "which contained more than 3,500 houses and about 500 shops." ³⁴

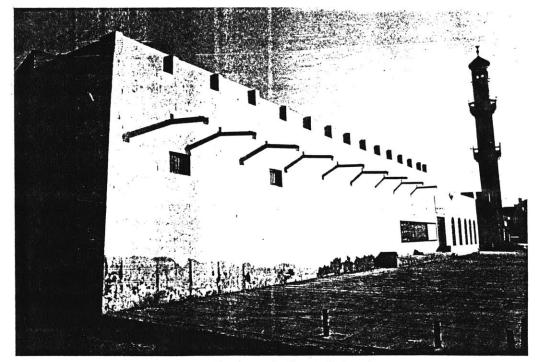
³² Breese & Cozens, p. 8.

³³ Lewcock, p. 27; author refers to B.Raunkiaer, Through Wahabiland on Camel back, (Copenhagen; 1916; English Translation, London: Routledge, 1969.)

³⁴ Ibid., p. 14



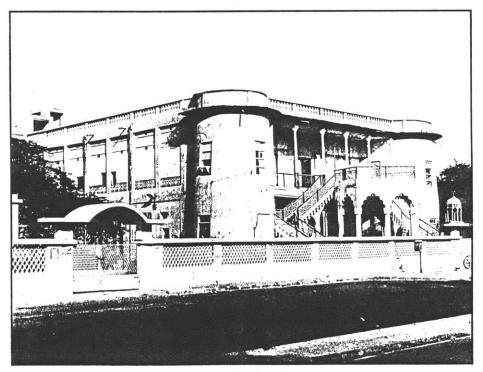
37. The Dickson House. The facade facing the sea.



38. Bayt al-Ghanim. The facade facing the sea.

As a result of his friendship with Shaikh Mubarak, and because Kuwait had a more pleasant climate, two of the largest well-known houses had been built by Shaikh Khazal al-Khan, a close friend of the Emir.³⁵

The first, which is now known as Bayt al-Ghanim, dates from 1916. This house is designed around a very large courtyard which is two storeys high on all but one side. A deep veranda on both levels is supported by wooden columns carrying square stalactite capitols of the traditional Persian type. The other house built by the Shaikh, afterwards known as Bayt Abdullah al-Jabar, is a veranda house, "built with two circular pavilions flanking the main eastern facade. The upper facade has slender polygonal poles with square stalactite capitols of the traditional Persian type supported on masonry pillars below." ³⁶ Both these houses show the influence of Persia in the architecture of Kuwait.



39. Bayt Abdullah al-Jaber.

35 Ibid., p. 34. Author states that this was information given to him by Zahra Freeth.

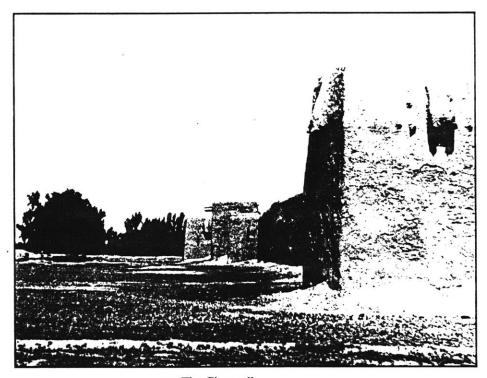
36 For a detailed description of both the houses, see Lewcock, p. 34.

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Unlike Arabia, which was at a stage of consolidation, Kuwait was still vulnerable as late as 1920 when an Ikhwan - brethren - force attempted to seize the country. The Emir retired to his fort at al-Jahra and there, with many of his subjects, succeeded in withstanding a historic siege. The raiders, after suffering serious losses, were forced to withdraw. As a result of this threat, the existing wall of the town, which had been "...more for show than...for protection...not a foot thick...[with] a trench...built around the wall," ³⁷ was reputedly reinforced in a record time of two days in the month of Ramadan, 1920, creating a wall with four major gates Jahra, Naif, Sha'ab and Dasman and one smaller northern gate. Between the gates, "the city wall averaged 5m in height and somewhat more than 1.5m in thickness." ³⁸



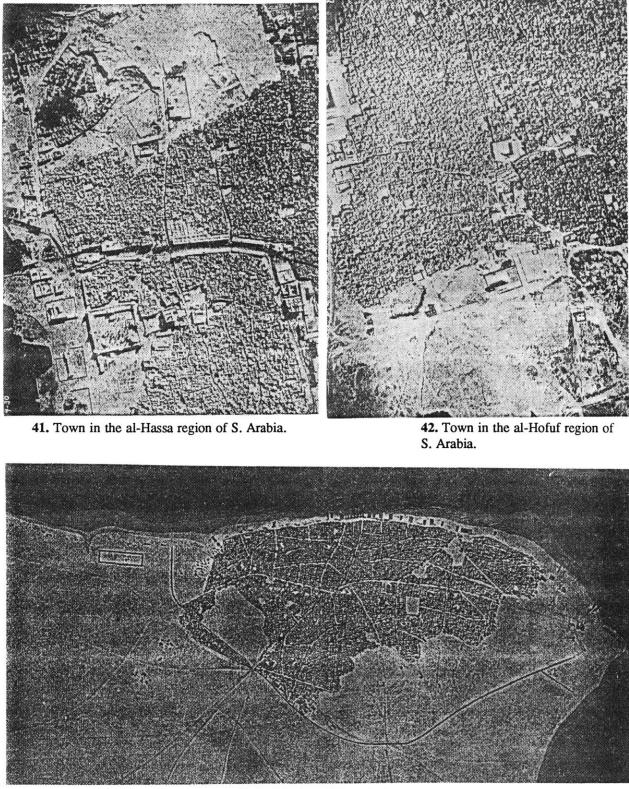
40. The City wall.

Wrote Freya Stark in 1937, "So perfect a small town, everything being right in the right surroundings, the lovely place and people...I know no place with such a charm of remoteness that is yet not solitude." ³⁹

39 Ibid, p. 27. Lewcock refers to letters written on 9th April and the 29th April, 1937, published in

³⁷ Lewcock, p. 34. Author refers to J.H.Stoqueler in Fifteen months Pilgrimage in Khurzistan and Persia, (London 1832)

³⁸ Ibid., p. 27.

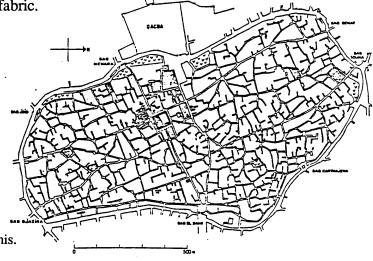


43. Aerial view of Kuwait city.

Freya Stark, Letters, (London: 1977).

Thus, if we look at both the towns, Kuwait -- a narrow built up strip along the coast "with a total population of approximately 50,000 of which roughly 37,000 were settled inhabitants and 13,000 Bedouins" ⁴⁰ -- and Riyadh -- despite development outside the walls, in principle a small fortified town with a population of approximately 46,000 -- in the forties just a decade before they were transformed by the wealth brought in by oil, we can see similarities to towns typical of that particular climatic region of the Islamic world. Towns as far removed as Medina Fez, al-Hofuf, al-Hassa, and Tunis, although not exactly similar, evoke in the mind of the beholder an image which characterizes them unmistakably as Arab. In order to understand this characteristic, it is necessary to extract the common features inherent in the urban structure and the architecture of these kinds of towns.

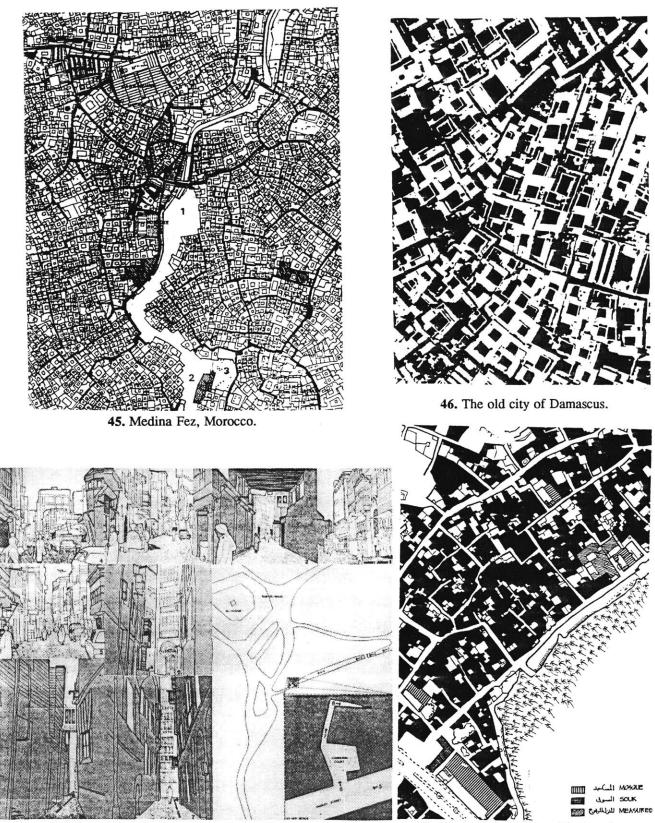
Looking at the typical town from the air, one is impressed by the clearly delineated urban form and a distinct, overall urban structure with a system of hierarchies all tied together by an almost lace-like cellular pattern -- "The impression of the limit, size and function of the individual building is thus blurred, and the possibility of recognition of the extent of the public functions is eliminated." ⁴¹ This is further emphasized by definitive boundaries like the wall in relation to the landscape it occupies, in such a way that there is an abrupt end to the urban fabric.



44. Street plan of medieval Tunis.

⁴⁰ Ibid, p. 11.

⁴¹ Henning Larsen, "Ministry of Foreign Affairs Building in Riyadh," Architecture & Urbanism, 193 - 195, Oct.-Dec. 1986, p. 16.



47. Mecca: A path from the market to the house.

48. Town close to the old city of Riyadh similar in its organic layout.

From the ground, what impresses the observer about the dense development of traditional cities is the street patterns which, if observed all through the region, have certain characteristics. These can theoretically be separated and analyzed, but in reality they evolve concurrently, determining the spatial characteristics of the urban form.

Firstly, there are the levels of hierarchy, the main spines that link all the major elements of the fabric like the gates, the Friday mosque, the bazaar, the quarters, and so on. These elements, especially the mosque, provide the fulcrum around which elements revolve. On a level of ascending scales, this moves from the local mosque to the Friday mosque and finally to the Grand mosque.

The spines are then linked to the secondary and tertiary streets and finally the Sabat (dead end alleyways). Due to the importance of privacy in the Islamic world, the streets take on the form of a continuous labyrinth, occasionally crossed by an overpass and punctuated by barahas, small open spaces of human scale in the interior of the settlement. The visitor easily loses his sense of direction in such labyrinthine alleyways. However, for the person living in the particular quarter, the narrow alleyways, curves, angles and the decorative elements all become points of reference that are easily comprehended. This is overlaid with public, public / private, and private spaces. In areas where needs change, like commercial areas where the transporting of goods is an important criteria, street widths also respond by becoming wider, the principle being that the built environment directly responds to the needs of the user.

The organic growth and the general massing of the town adds another layer of complexity which Jamal Akbar, in his unpublished paper "Accretions of Decisions: A Design Strategy," attempts to explain. Here he argues that the traditional Muslim city evolved out of "an absence of formal regulations with a dependence on dialogue, agreements and consensus, which accounted for the irregular growth of generations of adding and



49. A simplified silhouette of a town in Cappadocia, Turkey.

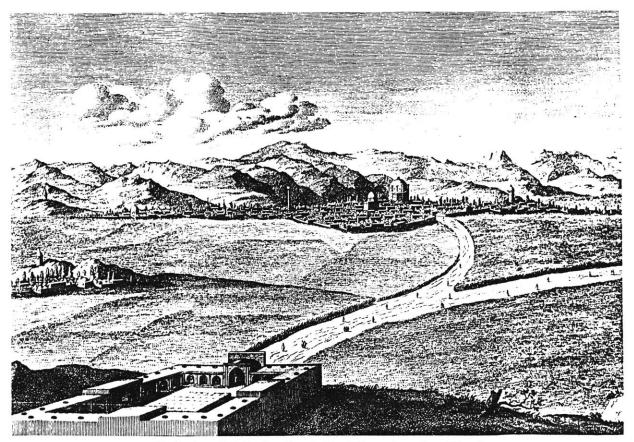


50. A simplified silhouette of the old city of Sanaa, Yemen.



51. A simplified silhouette of the old city of Jerusalem: the wall in the foreground, and the minarets and domes forming the vertical elements.

infilling." ⁴² These factors, religion and particular physical location and climate are the dynamic factors that have influenced Arab city formation; they can be summed up architecturally by a skyline dominated by domes, minarets or a combination of both,the physical realization of the influence of Islam forming the vertical highlights of the basically horizontal, introverted, organically unified city surrounded by a wall.⁴³



52. A view of Sultaniya, Iran in the 17th century, from Chardin.

- 42 Jamal Akbar, "Accretions of Decisions: A Design Strategy." Paper submitted at the International Symposium." Theories and Principles of Design in the Architecture of Islamic Societies. Sponsored by the Aga Khan Program for Islamic Architecture at Harvard & MIT, 6, 7, & 8 Nov., 1987.
- 43 There are, however, many exceptions to this where either the physical characteristics of the topography or a fortress, castle, or religious monument may dominate the city. Good examples of this would be Old Jerusalem, Mecca & Alleppo.

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The 1950s and 1960s

During the fifties & sixties, Kuwait City and Riyadh landed abruptly in the Western midtwentieth century, with the entire evolutionary period of the industrial revolution left out. Suddenly the cities' entire appearance and character began to be transformed. A new era had begun; a new way of life had to be constructed. In both cases, something had to be done quickly; an order had to be imposed as the populations of Kuwait and Riyadh, 150,000 and 109,000 respectively, were rapidly outstripping all facilities.

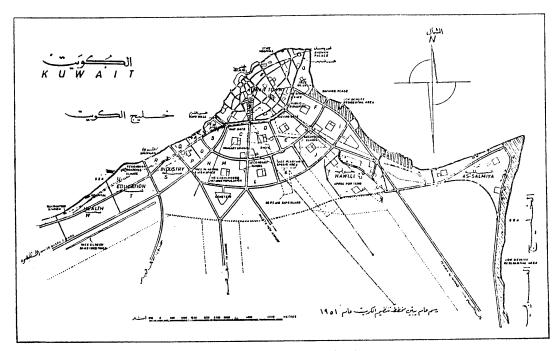
It was at this point that another "moment of change" occurred that was to determine the future of the urban fabric of the city of Kuwait. In February 1951, a Kuwaiti agent in England, an Englishman named Kemp, contacted Minoprio and Spencely when they were completing Crawley New Town, just south of London. It was through Kemp's introduction that Minoprio was commissioned to design the first city plan for Kuwait. Based only on the prior experience of Minoprio & Spencely, it is difficult to understand why they were awarded the project. It is possible that the Kuwaitis required a master plan for the modernization of the old town. Thus, as the influence of the British was still paramount in Kuwait, in a most pragmatic manner they chose the best known town planners available. In an interview with Stephen Gardiner, Anthony Minoprio states:

"We didn't know much about the Moslem world and the Kuwaitis didn't know what they wanted...All we could give them was all we knew" -- and that was the New Town.⁴⁴

When asked about his first impressions of Kuwait town, Minoprio made two statements:

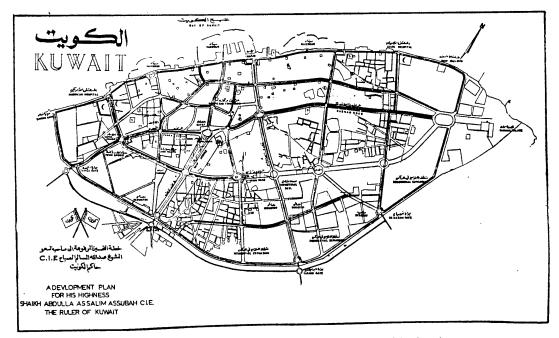
"The first thing that I saw when we got to the old town was the wall, fourteen feet high, to keep invaders out. I didn't believe that it would have done the job - it was only mud brick. But I thought it was nice and I wanted it kept. It was always my intention to

⁴⁴ Stephen Gardiner, "The Making of a City" (unpublished MS.), p. 15.



The Master Plan of Kuwait for His Highness Shaikh Abdullah al-Salem al-Sabah

53. The overall development plan for the country.



54. The detailed plan for the vehicular circulation inside the city.

keep things of value. Besides, my idea was that it would have made a strong edge to the city center." ⁴⁵

Regarding the town he stated,"There was just a town." ⁴⁶ By this, Gardiner states that Minoprio meant:

"...there was nothing unique, no mosques with gleaming sea-blue domes, sparkling minarets and reflective water gardens with ancient associations - nothing, in fact, in the way of those sublime ceramic abstractions with memories of streams and flowers found, for example, at the Alhambra in Spain, or at Isfahan and Baghdad." ⁴⁷

It is undeniably true, that Kuwait was unlike most of the other old Arab cities such as Cairo, Damascus, Baghdad, Jerusalem, Tunis and others in the sense that it contained few large, religious, historic or architectural structures to act as starting points, foci of planning. "Yet a town did exist, and one of as much quality as old Algiers, Muscat and Bahrain." ⁴⁸

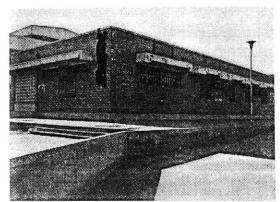
With this impression he began his new plan for the old town.

Minoprio's and Spencely's plan was accepted in 1952. The recommendations of the master plan were as follows: Firstly the development of an efficient road system; the city was to have four ring roads of increasing diameter radiating inland. These were to be bisected by radial roads that would have the first ring road as its focus. Secondly the redevelopment of the central area of the old town inside the wall to provide good sites for important public buildings, and the replanning of the Bazaar and commercial area to

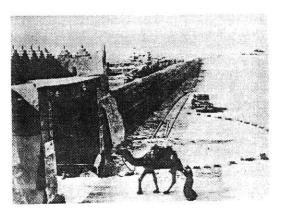
- 47 Ibid.
- 48 Ibid.

⁴⁵ Ibid., p. 15.

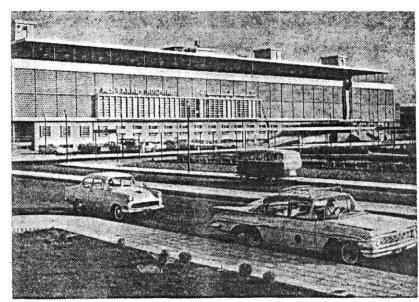
⁴⁶ Ibid., p. 17.



55. Western designed school from the fifties



56. The old wall (1950)



57. The Sabah Hospital

enable these to expand and develop along more spatial lines to cope with the town's increasing trade. Thirdly, the expansion of the town outside the wall by the development of the eight neighborhoods accommodating 48,000 people, and the expansion of Hawalli and Dimna two existing villages near the coast. Finally the development of specialized industrial educational and health zones outside the wall along the coastal road towards Jahra.⁴⁹

Regarding the wall, he states:

"...we didn't forget it. We made a green belt that followed its semi-circular line from the shore to the west to the shore to the east of the town, in memory of the wall. This was to act as the boundary for the new city center." ⁵⁰

By the end of the fifties, the Kuwaitis were already dissatisfied with the results of the advice they had been given. Even though the city was rapidly expanding, according to Hamid Shuaib, the chief architect to the Kuwait Municipality, "Work was slow in the Fifties; there wasn't the money to do more than schools, put in services, build the hospital." ⁵¹ [When it was done] "building was sporadic - a bit there, a bit here -- a muddle. There was no...[systematic]...follow up of the Master Plan." ⁵²

On June 15th, 1960, an extremely controversial figure took up the post of Architectural and City Planning Advisor to the Government of Kuwait, first at the Public Works Department, then both at the Development Board and the Municipality; his name was Dr. Saba George Shriber.⁵³ Referring to his appointment I quote from a letter written by

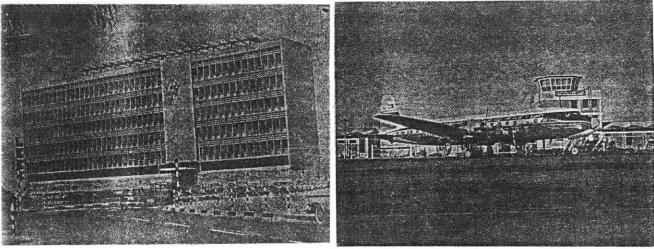
⁴⁹ For further details see Saba George Shriber, The Kuwait Urbanization (Kuwait: Kuwait Government Printing Press, 1964), Appendix 2, p. 525.

⁵⁰ Ibid. p. 15.

⁵¹ Ibid., p. 24. The hospital referred to in this context is the Sabah Hospital completed in 1961.

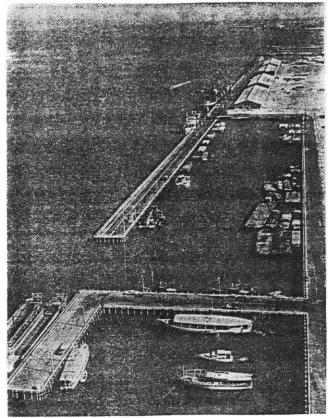
⁵² Ibid., p. 25.

⁵³ He received his B. Arch (Hons.) from Cairo University (1946), his M. Arch & M.C.P degrees at M.I.T in (1947-48) and his PhD in City and Regional Planning from Cornell University (1956), and died in 1968, aged 45.



58. Ministry of Guidance and Information.

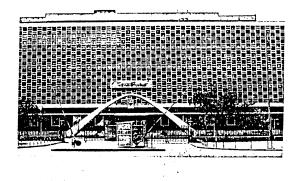
59. A view of the "transitional" airport built in 1961.



60. Kuwait Port (1962-4).

H.H. Sheikh Sabah al-Salem al-Sabah: "what is cause for satisfaction is the participation of Dr. Saba George Shriber in the share of the development planning for the future of Kuwait." ⁵⁴ In the four years that Dr.Shriber was in Kuwait, he was to play an important role in the planning of the city and also write a great many articles on the past, present, and especially on the future of Kuwait which were to culminate in his book "The Kuwait Urbanization."

By 1964, the Ministry of Guidance and Information (1961), the airport (1961), the Municipality Building (1962), and Kuwait port (1962-4) had all been built and a proposal had been made for the development of the waterfront.⁵⁵ However, the local papers were beginning to comment on the process of development in the country. The Daily News on 10th April under the heading "This kind of Bungling should stop" states in essence that "more than one major project has failed and more than one eyebrow has been raised and one wonders if there will ever be an end to such failures" ⁵⁶ What was wanted was a thorough planning study, and, in 1965, the year that Shuaib became assistant to the Director of the Department at the Municipality, he called for expert advice from Professor Thaisi of Holland and from Dr. Omar Azzam, the representative of the United Nations Middle East Planning Affairs Bureau. This move led to the appearance of Colin Buchanan on the scene.

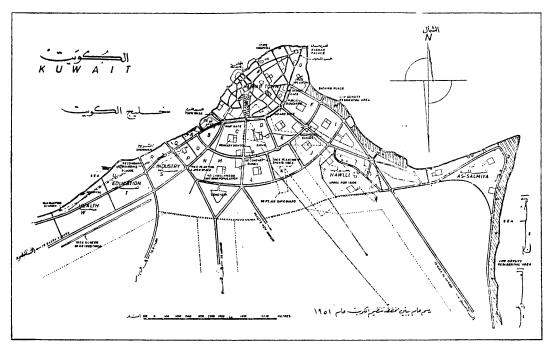


61. Original National Assembly.

⁵⁴ Shriber, "Foreword,"

⁵⁵ For further information, see Shriber, p. 94, and Appendix 11, p. 542.

⁵⁶ Ibid., p. 96.



62. Minoprio and Spencely's Master Plan for the country submitted in 1952.



63. Bucannan and McCulloch's Master Plan for the country submitted in 1968.

Buchanan first went out there in 1967. The following year, both Buchanan and McCulloch, his partner at the time, went to Kuwait where they were given a brief by Hamid Shuaib and the Planning Board. So it was that the 1968 Master Plan evolved. McCulloch states, "As far as the city went, we had no alternative but to carry on from where Minoprio had left off - to extend his plan. Some of the old town was left then, but much of it had been demolished." ⁵⁷ So, in a sense, the Kuwaitis were in the same situation that they had been in 1952; there was a plan, and the money to execute it, but not the experienced architects who could turn dreams into realities. So they went back to Dr. Azzam who, in turn, went to see Sir Leslie Martin, Professor of Architecture at Cambridge.

This meeting was once again to fine-tune architecturally the direction that the emerging city of Kuwait was to take. Asked how it all happened by Gardiner, Martin said, "Chiefly, I suppose, because of Azzam. He told me that the Kuwaitis were anxious for quality but they didn't have much idea how to go about getting it." ⁵⁸

As a result of this, and subsequent meetings, it was decided that there was to be a panel of four advisors and a Chairman. The Chairman was the Prime Minister Shaikh Jaber al Ahmad al Jaber al Sabah (later the Emir), the international advisors Professor Franko Albini, Sir Leslie Martin, and Dr. Omar Azzam, and Hamid Shuaib as the local representative. Martin states, "having the Prime Minister as the Chairman was a critical factor in the operation. It meant getting things done - quickly." ⁵⁹

They decided on a plan where four firms of architects from different countries would be commissioned to study the planning of the new city of Kuwait. These were Candillis, Josic and Woods of France, Bico Belgiogose (BBPR) of Italy, Peter and Alison Smithson of England, and Reima Pietila of Finland; "the Kuwaitis wanted reasonably well known names, of course." ⁶⁰

⁵⁷ S.Gardiner, p. 29.

⁵⁸ Ibid., p. 26.

⁵⁹ Ibid., p. 30.

⁶⁰ Ibid., p. 26.



64. Pietila's Master Plan for Kuwait City emphasizing the development of the waterfront.

⁶⁰ Ibid., p. 26.

They wanted each of the architects to think about the city, and to express their thoughts as architectural ideas - visually, not as written reports. They were given one year to do this.

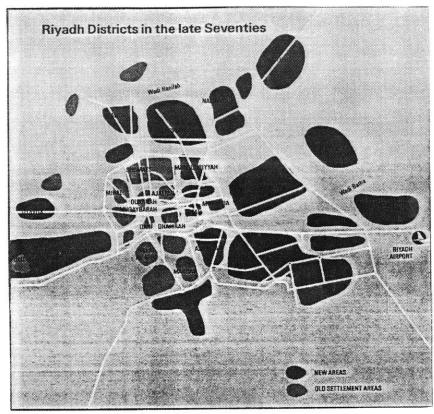
The designs from the four firms were all interesting, as they concentrated on different aspects of the city. Candilis's group concentrated on the a residential neighborhood, BBPR chose to examine new surroundings for the old Souk, Peter and Alison Smithson were concerned about the design for Government buildings. Reima Pietila was clearly focussed about several issues, one of which was the waterfront as some sort of recreation area, with cars banned from the Gulf road; another was the location of Government buildings near the Sief Palace. Yet another was that the residential neighborhoods had to return to the city center if life was not to fade away there in the future.

All the architects approved the preservation of the character of the old Souk and the maintenance of the green strip. However, as far as the expansion of the 1952 Master Plan beyond the fourth ring road went, there was unanimous disapproval. The alternative offered was that, instead of the city spreading out, an attempt should be made to densify the existing fabric along the lines of Pietila's suggestions.

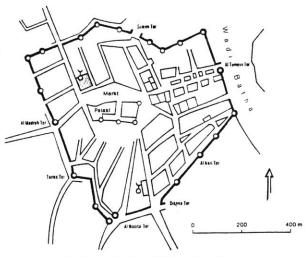
Candilis's housing had to be dropped as it was too expensive, and Peter and Alison Smithson's Ministry of Public Works building went to another architect because of the professional fees; ⁶¹

However, it was a time of great expectations.

⁶¹ In a conversation with Professor Lewcock on March 7th, 1988, he stated that the Smithsons, close friends of his had, related the whole account to him and said that "the reason that the project was not given to them was, that rather than they wanting a fee that was too high, the 3% fee that they were being offered in comparison to the normal rate for projects of this nature was too low."



65. Riyadh Districts in the late seventies.



66. The old city of Riyadh is the Dhahirah district in the map above.

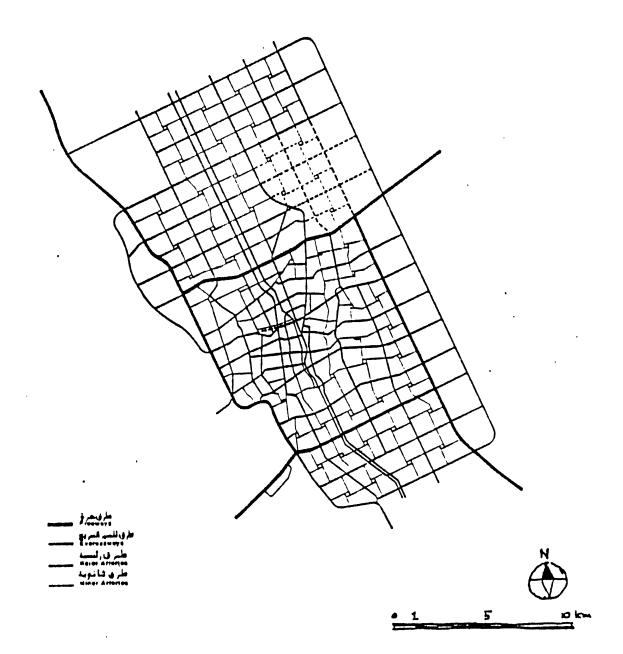
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Riyadh, too, was witnessing the beginning of its building boom, a time when modern facilities came to the city; electricity replaced kerosene lamps and asphalt roads were laid on sandy tracks. The city walls, except for the gates, were demolished in 1951, and, for the first time, materials other than sun-dried mud brick were used to build new houses. Two buildings from this period are the Qasr al-Hamra, one of the palaces built by the late King Saud in 1948, and the Royal Technical Institute, built in 1950. Most of the buildings that were built in this period were designed by Egyptians; they reflect, as such, the style that was prevalent in Egypt at the time. During this period, the three hundred and fifty-seven mile railway line with Dammam was opened, the new airport was inaugurated, and, rather than Jeddah (which previously, due to the combination of its geographical location, its natural harbour and its proximity to Mecca, had been the major commercial and international city in Arabia), Riyadh was firmly established as the capital of Saudi Arabia.

It was a period of dramatic increase in population in most parts of the city, due primarily to the influx of both government workers, as their offices were moved from Jeddah to the capital, and foreign workers in search of job opportunities. In this period of expansion, the city first experimented with the idea of city planning, however, it was to be fifteen years later than in Kuwait that the Government of Saudi Arabia, also recognizing that, due to the substantial growth of the fifties, control and direction of the city fabric were essential, decided to initiate action in announcing an international tender for a Master Plan at the end of 1967. The Master Plans were submitted in 1971, and the proposal by Doxiades Associates approved by the Council of Ministers in 1973, twenty-one years after that of Kuwait had been approved. The contract states:

"...the master plan study will identify, in quantitative terms, present and future needs affecting the urban development of Riyadh, will formulate policies, and will prepare a Master Plan and Programme to ensure the proper development of the city to the year 2000." ⁶²

⁶² Konstantine Doxiades, Riyadh Existing Conditions, (Greece: Technicon Grapheion Doxiade, 1968), p. i.



67. Riyadh-Doxiades Master Plan showing the Hierarchy of main road network and city structure.

Commenting on the planning process and the implications of this in terms of the city, Saleh al-Hathloul states:

> "This has been one of the most fatal mistakes in the planning process in Saudi Arabia. The client, in this case the city of Riyadh...was never represented in the early stages of the plan's preparation and assumed only a minor role in the later stages. This was the case for other cities as well, and this process is still being followed in the preparation of the new Master Plan by SCET International / SEDES." ⁶³

The policies of the plan touch on the form and shape of the expansion, built up against open space, and a large variety of others. With respect to the overall policy it states:

"In order that the city of Riyadh will be able to grow within the broader area that surrounds it, it should take a shape or form that is adapted to dynamic growth. Such a pattern should be openended with a central spine allowing the city to grow as its population increases." ⁶⁴

Thirteen years earlier in September 1960, when laying out the master plan for the city of Islamabad in Pakistan, Doxiades stated:

"The proper name for the city of the future is 'Dynapolis,' 'dynamicpolis' or city, which, in contrast to the 'staticpolis' or city of the past, will possess the potential of dynamic development, will have development built into it. This city will be able to develop freely and naturally [as long as it is within the grid] along a planned and pre-determined course." ⁶⁵

⁶³ Saleh A.Al-Hathloul, "Tradition Continuity and Change in the Physical Environment: The Arab-Muslim City, "Ph.D., Department of Architecture, M.I.T., 1981, Part 11, footnote 36.

⁶⁴ Al-Hathloul, p. 173.

⁶⁵ Konstantine Doxiades, Program and Plan for the Islamabad Capitol Development Authority (Greece: Doxiades Associates, Sept., 1960.)

Looking at the remarkable similarity between the two statements thirteen years apart, and then comparing it to the statement found later on in the master plan on the Scale and Character of the City:

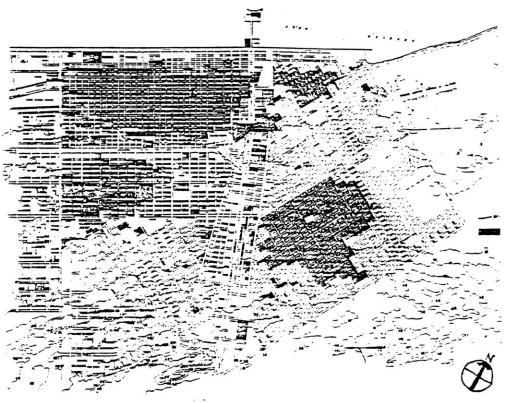
"...the task is not simply the development of a well-structured master plan that will function well, but also of a master plan expressing the characteristics of Riyadh, Saudi Arabia. There are, therefore, certain conditions to be respected. These conditions are imposed by the existing city and its traditional elements, by the climate and its character.

... the difficult task ahead is not that of creating an entirely new city, but a city that will be a continuation and extension of an existing one. Respect the old one and build a new environment in harmony with it, is the task for the future.

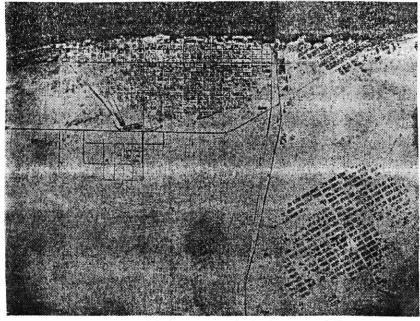
...physical dimensions, in turn, reflect human dimensions, human contacts and human life. These values are the values that must be preserved in the planning and design of the future city."⁶⁶

Bearing in mind the initial two statements, in light of the plan executed by Constantine Doxiades which imposed a totally Western plan on this new part of Riyadh -- with wide streets, villa-type houses and the set backs, resulting in the the exact opposite of the traditional Saudi environment that could still be found in the old section of the city -- one cannot but speculate about the sincerity of Doxiades in his statement that " There are, therefore, certain conditions to be respected...imposed by the existing city and its traditional elements."

⁶⁶ Ibid., p. 179.

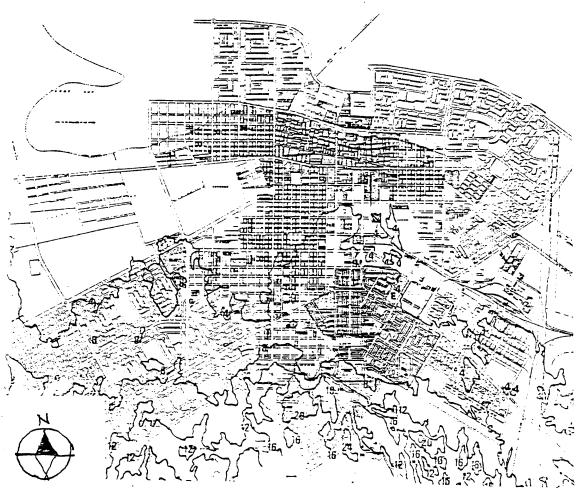


68. Al-Khobar master plan 1974.



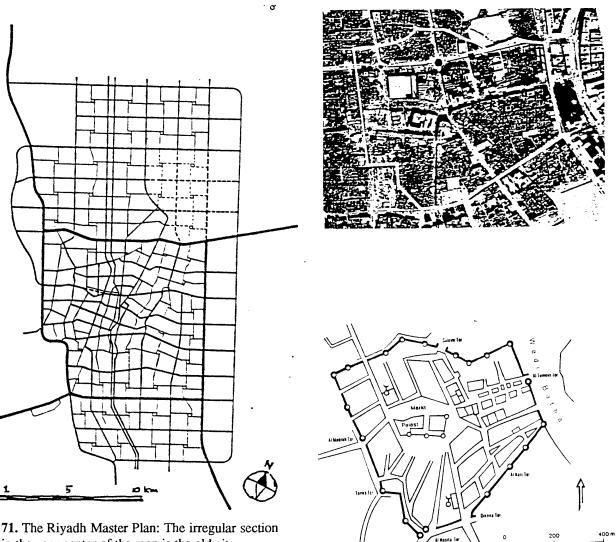
69. An aerial photograph of Al-Khobar in 1964 as the city was developed by ARAMCO.

After this award, Master Plans by international consultants for other cities in the Kingdom followed. In 1971 Robert Mathew, Johnson-Marshall and partners were assigned to plan the western region's cities of Mecca, Medina, Jeddah, Taif, and Yanbu. The planning of the eastern region's cities, Dammam, al-Khobar, al-Qatif, al-Hasa, and al-Jubail, was awarded to Candillis, Metra International in 1973.⁶⁷ In the same year the central and northern regions were assigned to Doxiades.⁶⁸



70. Dammam Master Plan, 1974: Areas laid out by the Municipality.

- 67 The monopoly enjoyed by the Western architectural practices and the ease with which they formed collaborations with each other can be seen in the fact that we see the same old names and their architectural trademarks all over the peninsula. Candillis later worked on Kuwait with Josic and Woods.
- 68 Ibid., p. 174.



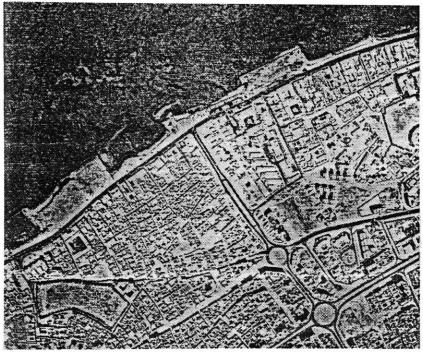
71. The Riyadh Master Plan: The irregular section in the very center of the map is the old city.

72. Philby's 1918 map shown in the map above by the white line.

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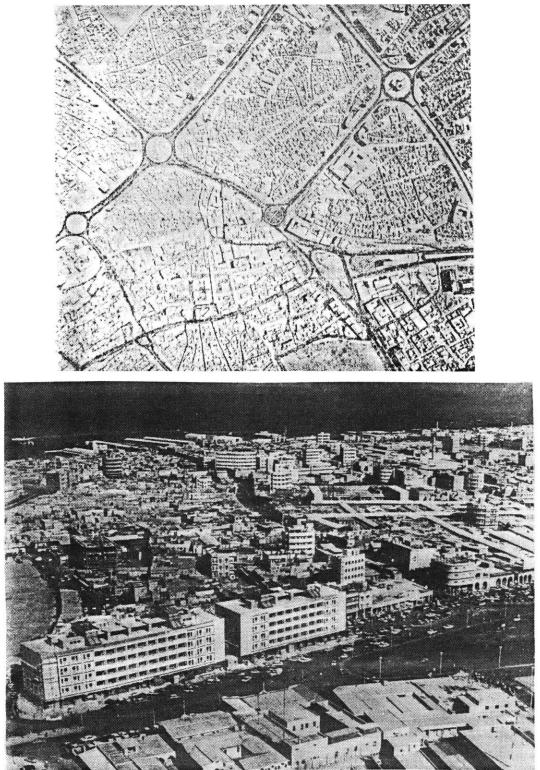
The scales on the maps give an indication of the relative sizes of the old city and the new.

Summarizing the development of both the city fabrics just prior to the 'Oil Crisis' in 1973 (which marked another stage in the development of the cities), we can say that in both Kuwait and Riyadh several major changes had occurred. On a city level, there had been the imposition of a grid, acknowledging the automobile as the primary mode of transportation while at the same time defining and separating the residential neighborhoods. In the case of Kuwait, this grid has, due to the geography of the existing town, taken an oval form. The edge of the inland side of the innermost oval defines the extent of the city center; the other arcs, or ring roads as they are referred to, define bands of residential neighborhoods.⁶⁹ These bands are in turn divided by radial roads originating from the city center. In contrast, Riyadh, which did not have the same geographical constraints that have added a certain variety to Kuwait's city form, was planned on the North-South and East-West endless supergrid that has become the trademark of the majority of American cities. Even though the forms are different, the basic hierarchy of both these is the same: circulation beginning with major freeways, then the expressways, arterial roads, collector roads and then local roads.



73. The superimposition of the vehicular circulation system on the old city of Kuwait.

⁶⁹ At the time that Miroprio & Spencely planned the city there were 4 Ring Roads. As the city expanded this was extended to six.



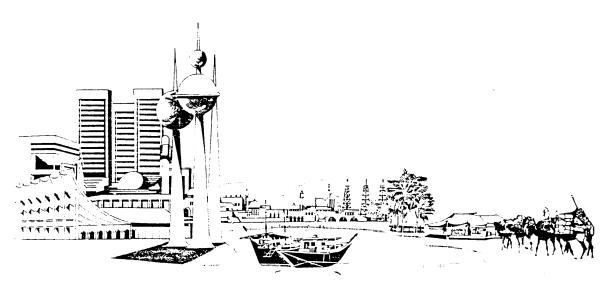
The aerial photograph at the top of the page (74) is an example of the superimposition of the traffic circulation on the old city of Kuwait and the photograph directly above (75) shows the corresponding change in the architecture of the city.

As far as both the old cities were concerned, there was not a great deal left. The traditional part of the residential sector of the town by and large had almost totally vanished; what remained was in a state of ruin except for a very few buildings. In Kuwait, of the notable buildings remaining, Bayt al-Badr, Bayt al-Ghanim & Bayt Abdullah al-Jabar are good examples of the kinds of house that used to exist along the waterfront. Commenting on the city and referring to the vernacular, Serjeant states "I have seen in my own time, the destruction of places like old Kuwait, now a concrete jungle." ⁷⁰ In Riyadh, the Deerah area, which includes the central business district (CBD) and the remaining buildings of the old city, exemplifies the traditional fabric.

In both cities, however, most of the narrow streets were replaced by wide ones; the image of mostly blank mud walls with occasional narrow window openings was replaced with the villa built out of reinforced concrete with picture windows and large balconies and large office blocks, neither respecting the traditional city. Instead of being a part of the communal fabric sharing party walls, both new houses and commercial properties were on individual plots of land set back on all sides from either the boundary wall or the plot boundary. The traditional courtyard, which for centuries had been the prime organizer of the city fabric, was given up. The image that the planners had in mind paid little respect to the environmental and social factors of the Arabian Peninsula.

Finally, with regard to the wall, in both cities these have been demolished, except for the gates which have been preserved in isolation on symbolic pedestals, usually on either roundabouts or central reservations, in such a manner that the movement of vehicles is now around them. The gates are sometimes surrounded by metal fences, but usually, due to vehicular movement, difficult to access on foot; the memory of the wall is rapidly becoming a thing of the past.

⁷⁰ R.B. Serjeant, The Islamic City (Paris: UNESCO, 1980), p. 9.



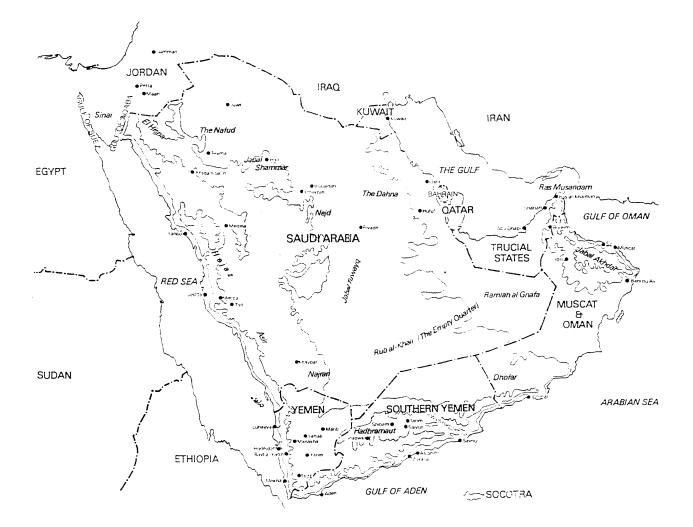
77. Progress and Tradition : sketch of the architectural evolution of Kuwait.

So it can be seen that in three decades both Kuwait and Riyadh have grown from small, compact, homogeneous towns (where constraints on the urban patterns, streetscape, fenestration, courtyards, public space, private space, gardens, water, and light, all the way to the minor details of decoration, were dictated by a combination of the harsh climate and social norms directed by Islam) to a cities planned by foreign consultants having all the trappings of the West, the freeways, glass towers, and constantly sprawling suburbs of villas, in all the architectural styles and materials known to man.

Let me end this section quoting a statement by Doxiades applicable to both cities: "human dimensions...are the values that must be preserved in the planning and design of the future city." ⁷¹

It is a question whether these 'values' or 'things of value' were preserved in either of the two cities.

⁷¹ Al-Hathloul, p. 185.



78. Map of the Arabian Peninsula and its surrounding countries.

THE DEVELOPMENT OF THE ARCHITECTURE IN THE CITIES The 1970s

In comparison to the fifties, and sixties, the seventies, and the eighties brought radical improvements in the architecture of both Kuwait and Saudi Arabia. Due to the vast difference in the oil revenues, the population, and the respective sizes of both the countries (Kuwait has a population of 1.25 million and an area of 17,656 square kilometers, and Saudi Arabia has a population of 8 million and an area of 2,149,690 square kilometers), there are correspondingly vast differences in the volumes of architectural work.

In fact, if we were to compare the population of Kuwait City with that of Saudi Arabia in addition to Riyadh, Jeddah is 1 million, Mecca is 425,000, Medina, Taif and Dammam / Al Khobar each have around 220,000 inhabitants, and the new cities, such as Jubail on the Arabian Gulf and Yanbu on the Red Sea were designed to eventually accommodate 250,000 and 150,000 respectively. Thus, instead of looking at the development in Saudi Arabia in general, I shall, in most cases, compare particular major projects or building types in both the cities of Kuwait City and Riyadh over the last fifteen years.

In the tradition of the time, and to some extent in the Gulf today, the majority of the large scale projects in both countries were designed by foreign architects. With respect to this trend, Udo Kulterman states:

"It is, however, surprising that nearly all these commissions were given to foreign architects who claim to be building on the continuation of the Arab tradition." ⁷²

⁷² Udo Kulterman, "Contemporary Arab Architecture: The architects in Saudi Arabia," Mimar 16, April - June, 1985, p. 42.

If we were to look at some of the earliest buildings constructed in the late sixties and the early seventies such as the Jeddah airport by Minoru Yamasaki in 1963, the Petromin Building and the University of Petroleum and Minerals (UPM) designed by Caudill, Rowlett and Scott (CRS), both built in Dhahran in the years 1964 to 1971, we see a common theme.

Commenting on UPM, Professor Tabbaa, an ex-student states:

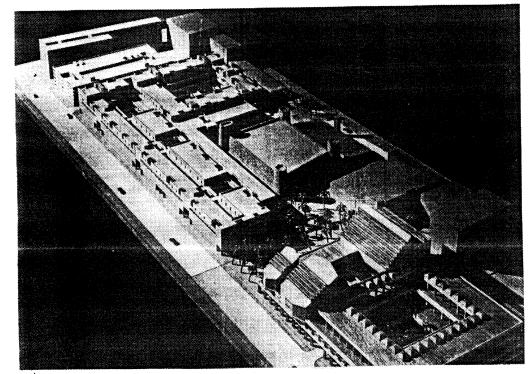
"Architecturally, UPM is the watershed in the history of modern architecture in Saudi Arabia. First and foremost, the buildings are thoroughly modern with severely plain exteriors, a durable external finish, and hardly any ornamentation. But they show remarkable adaptation to the environment and the local tradition: the buildings are rather informally arranged around a series of small gardens with fountains; and stylistically, some details, such as the arrow slits and the repetitive arches appear as abstracted evocations of a past tradition." ⁷³

A similar sentiment is expressed by Professor Kulterman when referring to Yamasaki's airport:

"The building was given an Arabian look by bending the architectural elements to resemble a Moorish arch. The wall panels' ribs, which were necessary for the stability of the construction, were designed to create a visual illusion of laciness, again, resembling old Arabian motifs, as were the tile patterns applied in the interior...[Kulterman goes on to state that this application of ornament]...accurately reflected the situation at the time in Saudi Arabia."⁷⁴

⁷³ Yasser Tabbaa, "Architecture and Urbanism in Saudi Arabia " (paper presented at the Embassy of Saudi Arabia in Washington), p. 8.

⁷⁴ I can only speculate that what he meant was that in this period the application of ornament was the style that architects chose in order to try and relate to the existing architecture.



79. Professor Franko Albini's proposal for Kasr el-Hokm.

The only other government facility proposed at the time in Riyadh that attempts to relate to an existing environment is Franko Albini's Kasr el-Hokm. In this scheme one of the earliest for the area surrounding the Masmak Fort in the old town of Riyadh Albini in contrast to some of his predessors attempts to respect both the scale and the character of the fort and the surrounding area, although he creates a contemporary fabric.⁷⁵

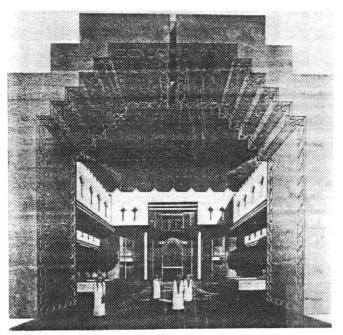
During the seventies, however, a period of intense construction, "one-quarter of all the architectural activities in the world, excepting the Communist countries, took place on the Arabian peninsula." ⁷⁶ In this period, the traditional approach was for consultants to compete for the architectural limelight in the context of Western architectural norms, with the only reference to the region being the use of geometry. However, in the very late seventies and the early eighties, there has once again been a change in social attitudes that seem to have an architectural manifestation attempting to imitate the Nejd Architecture. In part, this was due to the renewed interest in the indigenous architecture of the peninsula. Two examples in which this interest can be seen are the books, <u>An Introduction to the Urban Patterns in Saudi Arabia: The Central Region</u>, published in January, 1977, at their own expense, by a local firm, Mousalli, Shaker & Mandily, and <u>Urban Design Middle East: A Primer for Development</u>, published in September, 1978, by Skidmore, Owings, and Merrill (SOM) !

As a result of this renewed interest in vernacular architecture, to a large extent inside the Peninsula and to some extent outside, we begin to see an emergence in Saudi Arabian government projects of endeavors to recreate or literally borrow images from the local architectural heritage. Combinations of these approaches can be seen in the Ministry of Information by Gollins, Melville and Ward; the Ministry of Public Works and Housing by the German architects Kraemer, Sieverts and Partner, built in 1982-85; the Ministry of Foreign Affairs International Headquarters by Arthur Erikson, the Ministry of Foreign Affairs by Henning Larsen and the U.N. Regional Office in Riyadh (1982-83) by the Beeah Group Consultants.

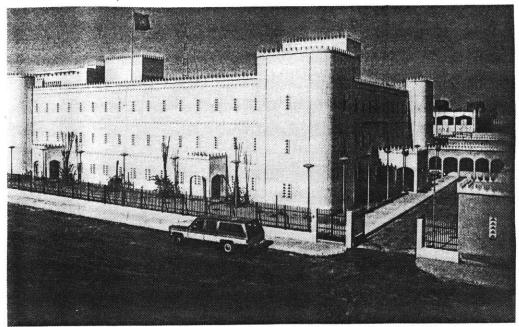
⁷⁵ This area, now known as the Justice Palace District, is presently being designed by Rasem Badran.

⁷⁶ Kulterman, p. 44.

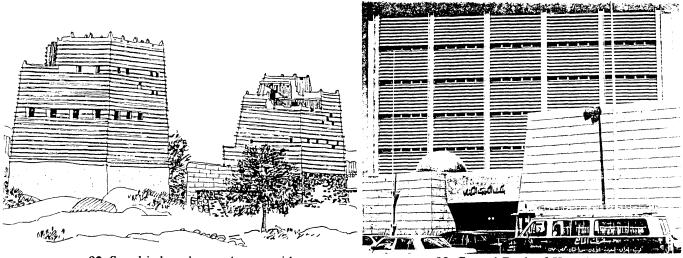
Even the most commercial Saudi architectural firm, Zuhair Fayez and Partners in the design for the Ministry of Labor and Social Affairs in Riyadh tries to capitalize on this trend.



80. Ministry of Labor and Social Affairs, Riyadh, Saudi Arabia.

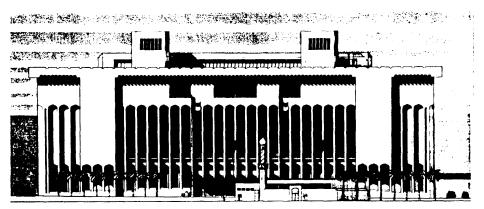


81. The U.N. Regional Office in Riyadh, Saudi Arabia (1982-83)



82. Sun dried mud tower houses with stone aprons found in Asir.

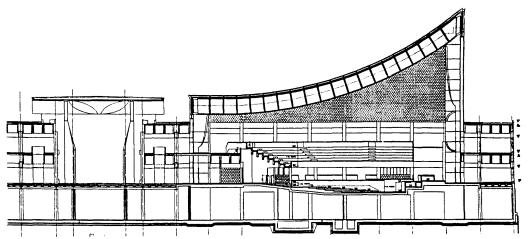
83. Central Bank of Kuwait.



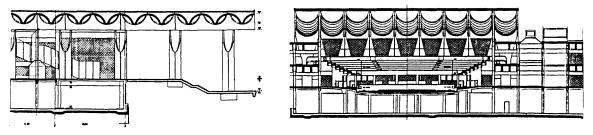
84. Kuwait Law Courts whose external skin is similar to the mashrabiyas in Jeddah.

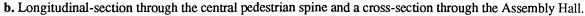
In Kuwait, too, early government buildings have attempted to refer to the existing architectural traditions. This can be seen in the National Museum by M. Ecochard in his ordering the building around courtyards; in the Central Bank of Kuwait by Dissing & Weitling, which is visually similar in its use of bands for protection against the sunlight to the external treatment of houses in Asir, however in the latter the bands are formed by slate to protect the mud against the occasionally heavy rainfall; ⁷⁷ the Law Courts, too, by Sir Basil Spence, have their precedent in the use of mashrabiya (wooden lattice screens) in the structures of Jeddah; in Utzon's prizewinning building, the National Assembly, we see multiple references to the souk, the marsh Arab structures of reeds, and the tent; ⁷⁸ and the Ministry of Foreign Affairs by R. Pietila.⁷⁹

National Assembly

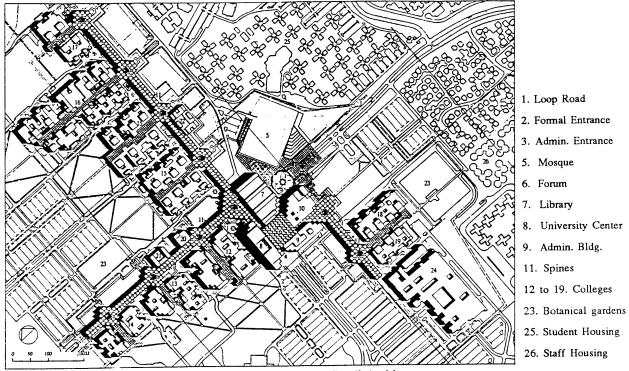




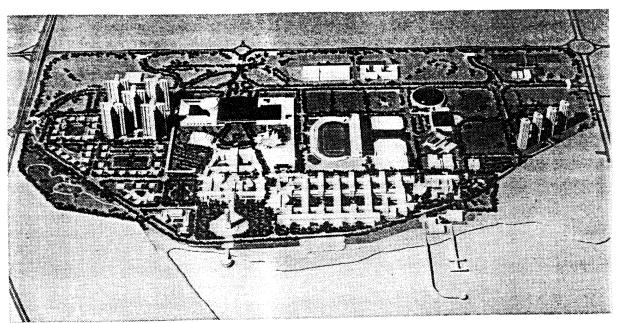




- 77 The building was originally designed by Arne Jacobsen.
- 78 Larry Vale, "Designing National Identity: Recent Capitols in the Post-Colonial World,"
 S. March. S., M.I.T. 1988, Case Study, The National Assembly, Kuwait.
- 79 Discussed later in the thesis: The building was designed in 1969-70, commissioned in 1973 and constructed in 1978-82. For further information see Malcolm Quantrill, Architecture, Context, and Modernism (New York: Rizzoli International Publications, Inc., 1985), p. 227.



86. King Saud University, Riyadh, Saudi Arabia.



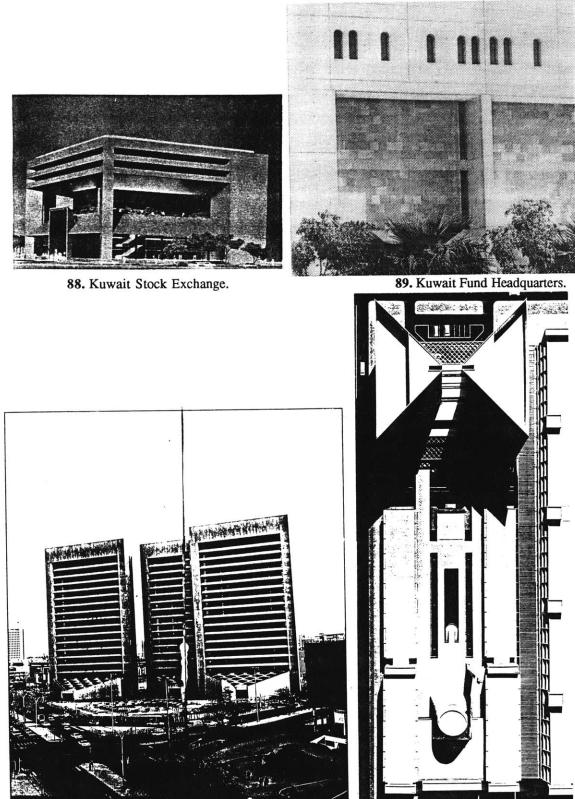
87. Photograph of the model of Kuwait University Shuwaikh Campus Master Plan.

As with the buildings for royal and governmental representation, educational structures in Saudi Arabia are also seen as the symbols for the country and are thus given strong emphasis. As in the palaces, here once again the main share of commissions were given to foreign architects with special know-how in large scale planning and management.

The most gigantic and prestigious commision in the educational field in Riyadh is the King Saud University, by Helmut, Obata and Kassebaum (H.O.K.) with Gollins, Melville, and Ward (GMW) completed in 1984--85. The site planning of the university interconnects tightly-knit clusters of buildings connected by a system of circulation spines which all meet at a cavernous glass-covered forum surrounded by the major administrative buildings.

In Kuwait, however, since the time of Shriber, plans have been made to convert the secondary school in Shuwaikh, built in the early fifties, to serve as the University of Kuwait. Since this period, the University has grown from 400 students to 13,000. Correspondingly, buildings have been added to meet these needs. In 1983, the Kuwaiti Engineers Office was commissioned to prepare the Master Plan to meet the needs of the University into the 1990s.⁸⁰

⁸⁰ Kuwaiti Engineers Office, University of Kuwait: Shuwaikh Campus Master Plan, Kuwait, Edited by S. Shastri, & S.I. Khan, (Kuwait: Al-Marzouk Printing and Publishing Co., 1984), p. 1. This plan has subsequently been changed due to a change in the hierarchy of the administration of the University.



90. The plan of the Joint Banking Center is also triangular like the King Faisal Foundation.

91. King Faisal Foundation Complex

A building type that is not completely dominated by the international consultants is the area of commercial architecture. Unlike the attempts government projects made towards some kind of direct architectural reference to the past, here there was virtually none except for the influence of climate. As far back as 1968, Sir Leslie Martin, possibly realizing the problems that foreign consultants would face if they attempted to understand the local culture and consequently tried to build in reference to it, stated:

"...[This was the starting point]--climate...Westerners can never be expected to understand the intricacies of these peoples' Moslem culture." ⁸¹

This approach can be seen in the most prestigious and extremely modern buildings in Kuwait, the Joint Banking Center by SOM (1986), in which all three triangular buildings are glazed facing north but with a virtually solid wall of the building services facing the south. In the Kuwait Fund Headquarters by The Architects Collaborative (TAC), we can also see blank elevations towards the south and sharply angular oversized vertical members facing north. Finally, in the Stock Exchange Building by J.S.Bonnington (1982), the geometrical planning is very evident. In this particular case, due to the orientation of the site, the designer has chosen to create a partially enclosed covered courtyard, once again emphasizing protection from the climate . In the case of Saudi Arabia, typical examples of this period are the twin offices of the Saudi Arabian Monetary Agency, and the King Faisal Foundation Complex in Jeddah designed by Kenzo Tange & UTREC. Here Tange developed a compact articulation for the museum, research center and offices based on geometric elements like the square and the circle where even the main forms of the mosque, dome and minaret have been abstracted beyond recognition. The buildings were begun in 1977 and completed in 1982.⁸²

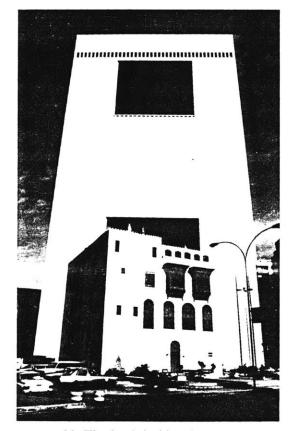
⁸¹ Gardiner, p. 31.

⁸² I was told by my advisor Professor Lewcock that the design had major faults in planning and circulation to the extent that an advisory committee, of which he was a member, was formed to rectify the problems. This was done at substantial cost and involved drastic changes in the circulation of the buildings. Payment to the advisory committee for this change were deducted from Tange's fees.

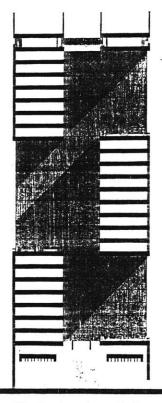
Another building of this period is the National Commercial Bank in Jeddah, designed by Gordon Bunshaft, chief designer of SOM. Completed in 1983, this is a building of great controversy. For some, it is a brilliant design, as Hasan-Uddin Khan states: "...which stands out as a sculptural statement which is both powerful and elegant in the urban landscape." For others like my thesis advisor Professor Lewcock, both the building in its present location, and the interiors, are totally out of context.

Arab firms in Saudi Arabia such as Omrania, Pierre Neema, and Z.H.Fayez have made contributions, but looking at the projects, the furniture showroom in Riyadh by Omrania, and the apartment building and offices for Sheikh Shaker Taba in Riyadh, 1980, by Pierre Neema, it is apparent in the commercial domain that they, too, use a Western architectural language.

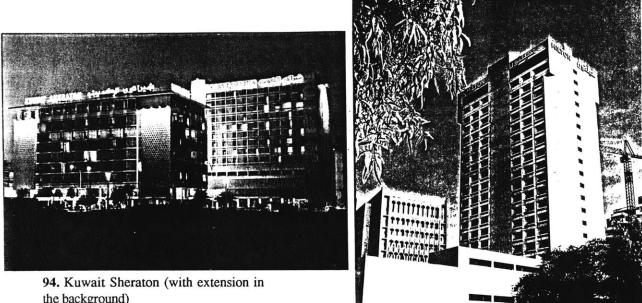
National Commercial Bank



92. The bank in it's urban . context in Jeddah



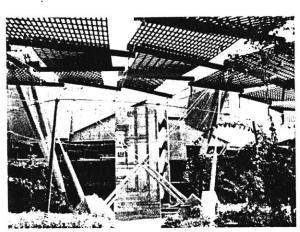
93. Section through the elevated courtyard of the bank.



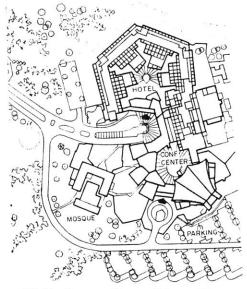
the background)

1 2'

95. New Extension to the Hilton, along similar lines to the Sheraton.



96. Conference Center, Mecca: Interior



97. Conference Center, Mecca: Plan

Another aspect of commercial architecture is hotels and conference centers. This demand for hotels was largely filled by the private sector. According to Professor Kulterman, "among the best examples are the Hilton by Warner, Burns, Toan and Lunde in 1976, the Sharaco by Hentrich and Petschnigg and the Palace Hotels in Riyadh." ⁸³ In Kuwait also, the sudden prosperity brought with it the peripatetic consultant. Suddenly, the international hoteliers, not wanting to be left out of the gold rush, opened the Hilton and the Sheraton Hotels. The Meridian, Hyatt Regency,⁸⁴ SAS, and the Marriott ⁸⁵ arrived later on. Initially, these hotels were designed completely in the Western tradition. However, lately the tendency has been to renovate the lower levels of the hotel in the Arab tradition, so as to attract local customers, but the hotel rooms themselves still adhere to Western international standards for international travellers. This trend is particularly clear in the Hilton and Sheraton, which both have been recently extended and renovated.

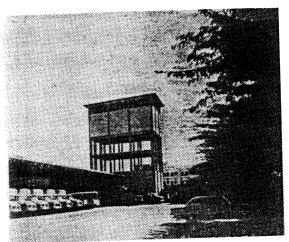
In Saudi Arabia, the only major hotel designed by an Arab is the Meredian Hotel in Jeddah, 1975, by the Lebanese architect Samir Khairallah and Rader Mileto Associates from Rome. When it comes to conference centers in both Kuwait and Riyadh, there has been greater success in attempts to blend the elements of Arab tradition and international requirements. There are three complexes, two in Saudi Arabia and one in Kuwait: the Intercontinental Hotel and Conference Center built in Riyadh in 1973 by T. Dannatt; the Conference Center built in Mecca in 1974, by Rolf Gutbrod and Frei Otto; and the Kuwait Conference Center, completed in 1987 for the Gulf Corporation Council Meeting by the Kuwaiti Engineers Office, Pan-Arab Consulting Engineers and Marzouk & Abi Hanna, three local architectural firms.

In the building types above that have loosely related precedents, there have been degrees of success. However, the question is repeatedly asked, Is it possible to use contemporary technology in such a way that it solves the problems posed by the

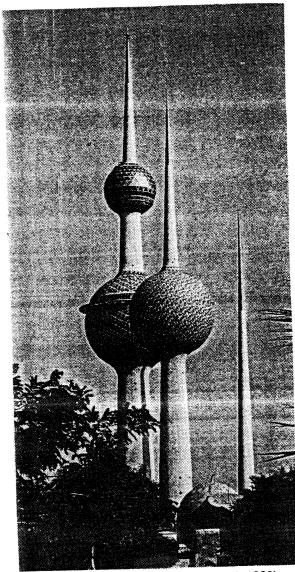
⁸³ Kulterman, p. 48.

⁸⁴ Due to differences in management strategies, the Hyatt Regency is now called the Regency Palace Hotel.

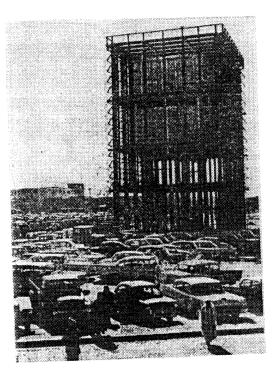
⁸⁵ The Marriott, a renovated ocean liner has been closed down, possibly due to lack of profitability.



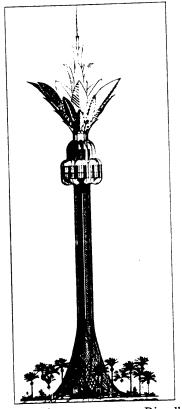
98. Typical concrete water tower.



100. Kuwait Water Towers (AKAA 1980)



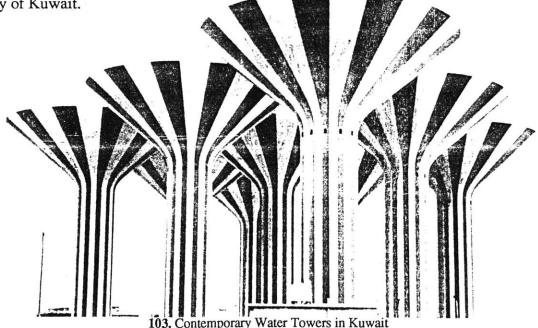
99. Typical steel water tower.

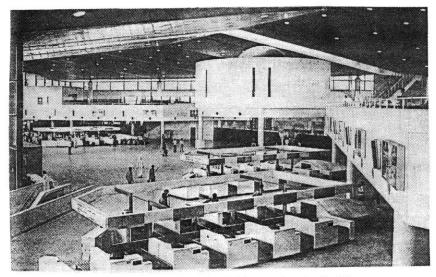


101.Tele-comm. tower, Riyadh

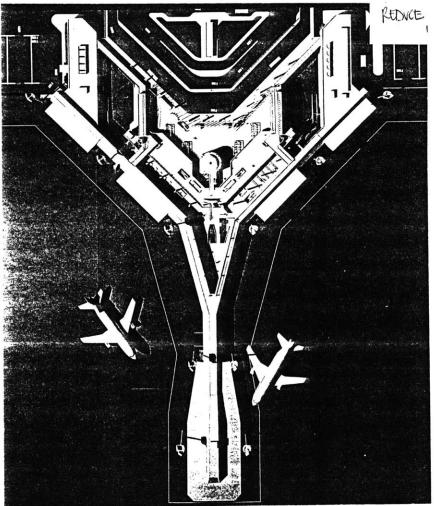
industrial age and at the same time relate it harmoniously to the environment and the tradition ?" Building types that are completely based on engineering and technology, such as water towers, airports, telecommunications towers and industrial plants, pose some of these dilemmas. If we were to look at these four examples, we would see two extremes: on the one hand, the airports and the water towers, and on the other, the telecommunications towers and the industrial plants. The greater the dependency on technology, in terms of industrialization, the less the chances of integration into the urban fabric. This realization gives rise to industrial zones like Shuaiba in Kuwait.

In the case of telecommunication towers, in both Kuwait and Riyadh the sheer height of the towers creates a landmark, similar to minarets when the overall heights of the city were lower. So to the remaining two the water towers and the airports. If we look at the containment of water resources vital for survival in the peninsula -- which even I can remember in my youth -- we would see the typical tank standing on a complicated structure of columns, beams and ties. In the contemporary city in this particular building type in both Kuwait and Riyadh, there have been outstanding successes. Of the two, perhaps the water towers by the Danish architect Malene Bjorn, built in 1977 and awarded the Aga Khan Award for architecture in 1980, have become a landmark in the city of Kuwait.





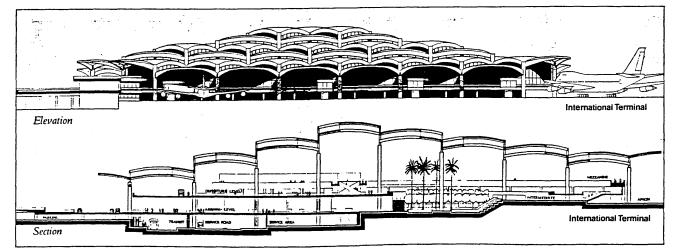
104a. Kuwait International Airport: Interior Lobby



b. Kuwait International Airport: Aerial view of model

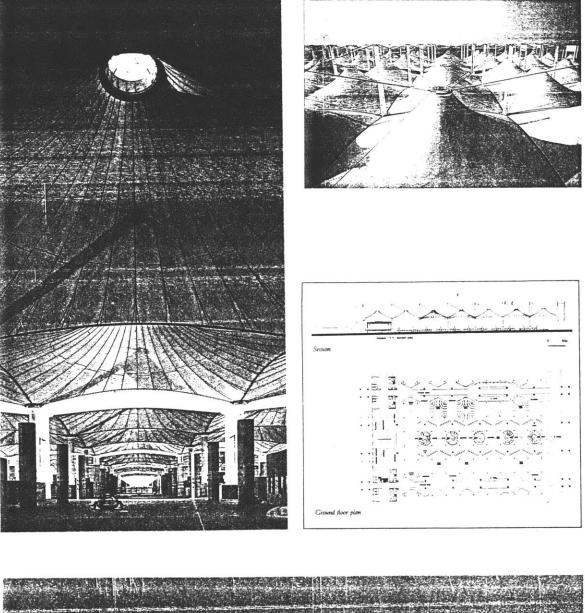
With airports too compared to those built in earlier years, there has been relatively some element of success. The concept for the Kuwait airport, designed by Kenzo Tange and built in the early '80s, relates to the idea of aircraft and flight. However, this analogy is primarily evident when viewed from an aircraft flying overhead; most external similarities -- except from a few angles--end when viewed from the ground. The interior was conceived as a combination of bold forms enclosed by the roof designed to look like wings outstretched in flight in execution; however, many of the original ideas seem to have been transformed.

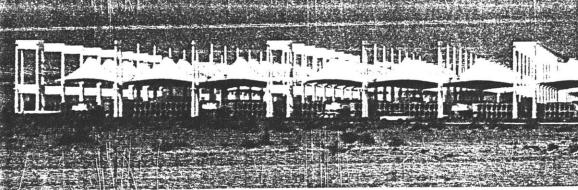
On the other hand the King Khalid airport in Riyadh, designed by H.O.K., and finished in 1984, strives to refer to a combination of the image of the tent and the dome all tied together by the triangular geometry which forms the underlying structure. In this manner, it attempts to extend the basic geometric design patterns of the indigenous architecture into a contemporary space, even though the functions scale and materials of construction are completely different.



105. King Khalid Airport, Riyadh: Elevation and Section.

The Hajj Terminal





Another project by SOM, noted for their technical innovation in modern architecture, is the design of incomparable elegance and beauty, the Hajj Terminal in Jeddah. However this opinion is not unanimous; Dr. Mohamed Makiya, an ex-member of the Steering Committee of the Aga Khan Award for Islamic Architecture, describes the project as "the most expensive shed ever built in the history of man...[he argues that]...a simple palm grove would have done the job better, without winning any award." ⁸⁶ Nevertheless, the terminal was awarded the well deserved Aga Khan Award for Architecture in 1983, and is intended exclusively for the use of the two million pilgrims who flock to the country each year. Protection from the intense sunlight, the space to be able to process the pilgrims onto the next stage of their journey, and minimal air conditioning were the major criteria. The solution, a brilliant and imaginative design of the roofing system, has succeeded in adapting known building technology beyond its norms, demonstrating that such a massive structure can still be light and airy, a contemporary echo of the <u>traditional tents that have worked so well in the desert climate.⁸⁷</u>

In projects such as the Sief Palace Complex, and the National Assembly, in Kuwait City, the Diplomatic Club, the Ministry of Foreign Affairs in Riyadh, the Hajj Terminal in Jeddah, and the Conference Center in Mecca, in a loosely linked chronological order, it is clear in all the above examples that there is an underlying trend of attempting to blend elements of Arab tradition and twentieth century technology in the search for a new direction in the creation of the contemporary urban fabric. However, what is not apparent and is as crucial to the creation of the architectural form is the involvement of the client in the process by which they are created.

⁸⁶ Neil Parkyn. " Mohamed Makiya, " Middle East Construction, November, 1983, p. 37.

⁸⁷ Commenting on the underlined statement Professor Cho Padamsee states, " tents are not necessarily climatically sound. Their advantage is in an itinerant culture is their portability -- a feature not required for Hajj pilgrims. The form but not the essential function has been borrowed."

THE PROCEDURAL BACKGROUNDS OF PROJECTS

In the last chapter we briefly sketched the evolution of some of the new prestigious buildings that have been built in the Gulf, like the Sief Palace Complex, the National Assembly in Kuwait City, the Diplomatic Club, and the Ministry of Foreign Affairs in Riyadh, the Hajj Terminal in Jeddah, and the Conference Center in Mecca. But what is the system of selection of the architects who have designed these prestigious buildings ? A typical initial stage of this, described very accurately by Moshie Safdie, is as follows:

"Here is a contemporary dilemma. Assume that a new university has been established. The administrators, being culturally aware, decide to canvas the learned members of society to discover the great architects of the time. By this method of enquiry they might identify five important architects in the world." ⁸⁸

Instead of the five architects Safdie has chosen -- Phillip Johnson, Kenzo Tange, James Stirling, Arthur Erikson, and Oscar Niemeyer -- so as to make the setting more related to the possible situation in the Gulf I have substituted some of the architects below:

Kenzo Tange: (Japan)	The Gulf University, Al-Ain, Bahrain.
H.O.K. & C.M.W.: (USA & UK)	King Saud University, Riyadh, S.A.
C.R.S.: (USA)	University of Petroleum & Minerals, Dahran, S.A.
S.O.M.: (USA)	King Abdul Aziz University, Mecca, S. A.
Y.R.M.: (UK)	Sultan Qaboos University, Muscat.

"The selection is widely approved...these men are called together and told that the university intends to build a complete campus from scratch and at once... [Once the decision has been made regarding the selection of the architects there are two ways in which the next stage usually follows. The following is the

⁸⁸ Moshie Safdie, Form and Purpose, (USA: International Design Education Foundation, 1980), p. 107.

first:]...If these five architects were commissioned [collectively] to do the campus, it is absolutely guaranteed that they would not be able to reach any consensus about what to do. They would certainly be unable to design a group of buildings that had any sense of continuity or unity, to design a complex in which the individual buildings contributed to the greater ensemble so that the whole was greater than the parts. They might choose one of their members and say, "Go ahead, you create the framework." But they probably would not let anyone take the lead to establish a framework to which the rest would have to subordinate themselves. What they would more likely to do is what architects do all the time: divide the pie, take a quadrangle or a separate area, and each go his own way." ⁸⁹

In this case, the results would certainly not be the diverse, but coherent image of Oxford or Cambridge -- which evolved over time as a response to the surrounding fabric -- but a hotch-potch of architectural styles prevalent at the present time, differing according to the architectural philosophy of the individual firm.

The second option, usually the one preferred by most government authorities, as the majority of the existing universities documented earlier prove, involves the selection of a single architectural organization and proceeds as follows. All the architects chosen in the limited international competition will be requested to submit a master plan or proposal, depending on the complexity of the scheme, which clearly explains the architectural language, the organizational principles of the project, an approximate budget, and a model of the project. Depending on the client, the submission may be in the form of documents only - a technical and financial report - or a formal presentation and documentation. Once all the documents or the presentation have been made or submitted, the client firstly assesses the technical report in order to judge the methodology of approach, the competency, the personnel and the previous projects completed by the

⁸⁹ Ibid.

firm. Once this has been done, the sealed financial proposal is examined. On the basis of both the technical and financial reports, the project is awarded. The advantage of this system is that the best combination gets the project; the disadvantage of this system is that some-times the firm with the lowest fee proposal is awarded the project, even though the firm may not be the most competent technically.

There are two other strategies that could be investigated; the first I shall label as "appointment by design stages," and the second as "appointment by selection." A good example of the former process is the Ministry of Foreign Affairs and the Diplomatic Club in Riyadh, Saudi Arabia; of the latter, both the Sief Palace Area Buildings in Kuwait and the Aga Khan Hospital in Karachi, Pakistan. In the short term, both these may be more expensive, relatively speaking, to the client, and involve greater effort on the part of the consultant before the winning project or firm is selected. However, in the long term, I believe that the final result of this extended competition and selection process can only be beneficial for the cities involved.

What normally happens in the initial stages, in the case of large and medium-scale governmental projects today, is that usually the large practices or the equivalent international firms with local affiliates are invited to participate in a competition, based on their experience in the particular scale and complexity of project. But this procedure neglects the smaller younger firms that may not have the competition budgets of large and even middle-sized architectural organizations and consequently cannot afford to participate in these competitions.⁹⁰

Is it practical to give them a chance to participate ?

⁹⁰ When I refer to the smaller younger firms, I am not referring to those that are temporarily assembled for small projects but all those that meet the following criteria. Firstly, they are owned by or employ architects who have worked in the country for five years; secondly they are registered by the equivalent of an Architectural Registration Board.

I believe that it is a feasible proposition, but that the onus must lie with the client, in this case a Ministry of Public Works or a Municipality, to investigate the probability of such a strategy working satisfactorily. The following is one practical proposal that could be adopted by the respective ministries:

In the first stages in both the "appointment by design," and the "appointment by selection." The client should have thoroughly researched the background of the project and have a definitive brief which should only be open to questions, in case at a late stage in the project or soon after its completion the building in some way does not serve all the functions planned. If it is a competition, the financial remuneration for both the stages should be made explicit in the promotion, and assurances must be given to the architectural community of a contract for the eventual winner. A realistic time-frame should be determined for the whole competition. If the strategy is a selection process, then objectivity lies in a diverse group of independent panelists who are answerable to a group of higher authority interested in the project. In either case, the supervisory jurys' identity must be concealed. The composition of this deciding body need not necessarily be from within the country, but must be of individuals of experience interested in these issues from different viewpoints.

The "appointment by design," and the "appointment by selection." should be open, and should encourage participation from all architectural practices in the Arab world that meet the architectural registration standards, regardless of the size. It could be argued that if the smaller companies with possibly a handful of employees are awarded the project, then the State will suffer: they will not be able to produce the drawings required in the specified period of time, nor will they be able to manage the project. It is not inconceivable that in some instances this may be the case; however, this is a technical problem and consequently can be solved managerially by either a joint project between the smaller and an approved larger firm or with a foreign consultant. Critics would reply that, this step, negates the purpose of involving smaller local companies. There is, however, a major difference between the present situation and its relationship to the foreign consultant and what is being proposed. The difference is that the smaller local

firms which have won the competition or been selected, due to their design ability, are the ones directing the design; the consultants are simply providing the technical expertise which, due to the nature of the profession, will be transferred to the smaller company.

In both cases, certain presentation standards should be set from which the broad outlines of the project can be easily comprehended. For example, if the site is in an urban location, then the project documentation must indicate how from a townscape viewpoint the project will relate to the surrounding environment. In addition, the standard set of plans, sections, elevations, model, and perspectives (whose external location should be stipulated by the client) should be specified. In the competition for the preparation and presentation of the above documentation as the culmination of 'Stage 1,' the Ministry must sanction a three-tier financial compensation based on merit, firstly to large companies, secondly to medium size companies, and thirdly to the smaller ones whose initial applications were accepted by the competition organizers. From all the firms which entered the competition, a minimum of two, and a maximum of four, depending on the quality of the submissions, should be selected for 'Stage 2'.⁹¹ Before work commences on the next stage in both processes, two issues need to be addressed. Firstly, the jury's criticisms should clearly indicate the aspects of the scheme that they feel need modification or clarification. Secondly, there should, as in the first stage, be a clear indication of not only the type of drawings involved but also the levels of detailing so that all the proposals can be assessed by the same standards.

At the end of an agreed period of time in either process, in the former case the single firm and in the latter the four firms which have reached the second stage will represent the proposals modified in light of the comments made at the previous stage. From this resubmission, both the general outlines and the details of the scheme will be finalized; these will be the basis on which the project will proceed. Thus instead of governmental projects being "The International Limited Competition" or even "The International Competition," it would become a competition that attempted to bring out the best talent

^{91 &#}x27;The maximum of four is a suggestion, however, if there are not four firms that meet the standard then this number could be reduced to three; but not below two.

from all sections of the architectural community. Using this procedure, the final design will have been organized from all points of view, and the likelihood that there will be no major changes in the design process will be greater.

But why should the client go so such trouble ?

In every methodology there are advantages and disadvantages. The drawbacks of the above proposal are twofold. Firstly in order for the process to work there is a prerequisite which is the presence of an individual like the mayor of Jeddah who has along with countless objects d'art scattered around Jeddah has also saved a valuable section of the old city which would have been demolished by now. Secondly the proposed system will marginly cost more to the client, but if we assess this cost in terms of the value of the project and the longterm interest of the city the higher cost can easily be accommodated.

The advantages of this approach are quite clear. Firstly, the incentive is created for participation in such competitions by local firms and their foreign counterparts of all sizes; they can quickly calculate the amount of time and effort that the project will allow for both stages. Thus the approach will attract a diversity of ideas. Secondly, architectural companies can engage in a dialogue with the immense problems which surround us of contemporary architecture in the real world with the prospect of a realization, but without the total liability of the costs of such an exercise. In the process of such a discourse, even if the competition generates some ideas about the direction of contemporary design, then a larger battle has begun to be won; some of the lessons that will inevitably be learned can be applied to other projects.

AN ANALYSIS OF THE CLIENTS' AND ARCHITECTS' STATEMENTS Sief Palace Area Buildings, Kuwait City.

Considering the framework of comparison established in the Foreword, I will now proceed to analyze the Sief Palace Area Buildings and then the Ministry of Foreign Affairs in Riyadh, from a variety of different aspects such as planning in the context of the urban setting; site planning, massing and the use of axes; vernacular images; circulation and streets; climate and natural light; courtyards; decoration, color and detailing. Finally, I will assess both buildings in light of these topics and including materials and technology.

Sief Palace Area Buildings

With respect to the theoretical direction that Pietila pursues, the following three statements clarify his intentions:

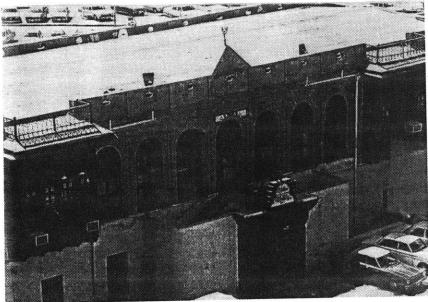
- o "We wanted to find a solution with much more local spirit, much more stamina." ⁹²
- "My aim was not to pour 'old wine into new vessels'. I have 'gone around' the problem of how to reconcile between the old and new architectural traditions...My poeticisation of Metaphoric elements is apparent." ⁹³
- o "...in the Kuwait project we try to have friendly relations with the tradition, be it modern or eclectic." ⁹⁴

⁹² Neville Clouten, "Sief Palace area buildings, "Architecture & Urbanism, no. 6, July 1983, p. 48.

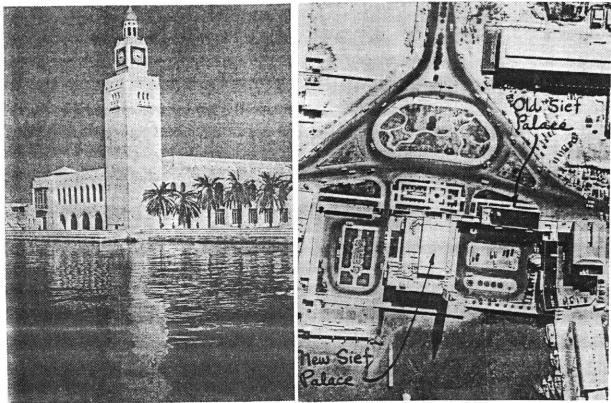
⁹³ Quantrill, p. 115.

⁹⁴ Ibid., p. 242.

The Sief Palace



106. Elevation of the original Palace facing the Gulf.



107. Clock Tower and its relationship to the water.

108. Plan of Original Palace and extension.

Planning in the Context of the Urban Setting

If we look at the aerial photographs of the area surrounding the Sief Palace buildings in Kuwait, it is immediately apparent that the traditional fabric existed literally across the road from the palace, which had been built as far back as the time of Raunkiaer's visit in 1912. He describes the palace as follows:

"The third audience hall, the Serai of the Sief Palace, which is the only survivor is...built in the Baghdad style, in burnt yellow brick, two-storeyed and having on the second floor in the middle two audience halls surrounded by airy arcades. These halls are lavishly supplied with windows, whose panes are partly in colored glass." ⁹⁵

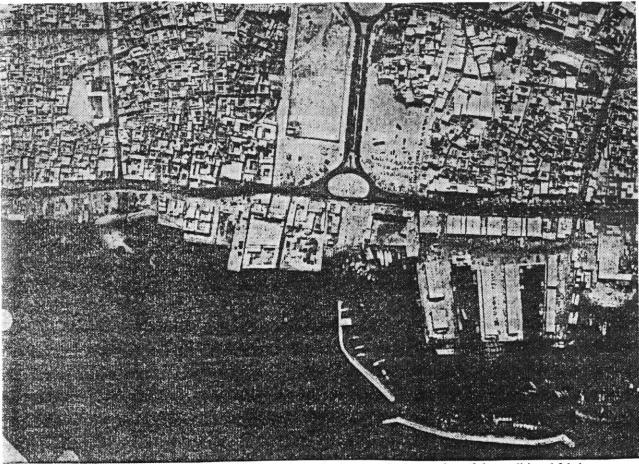
"The semi-circular arches of the palace are set in rectangular fielded panels in a style which was common to both Iraq and Iran." ⁹⁶

In 1960-63, the original Sief palace, an L-shaped building, was extended by an English firm of architects, Pierce, Hubbard, and Partners. In the design of the extension, they created two precedents that were to influence future planning. Firstly, they created a U-shape in plan, forming a courtyard that was enclosed on three sides but open towards the sea. This was to establish a dialogue between partially enclosed courtyard spaces and the waters of the Gulf, an idea which we will see repeated. Secondly, they added the clock tower, the only vertical focus of the whole complex. With these buildings and urban planning principles already determining the existing layout, it was inevitable that the Sief Palace Area Buildings west of the original two-storey buildings and the Amiri Diwan, a design for the area east of the Sief Palace by a local firm called Archicenter, would become responses to these constraints of the site.⁹⁷

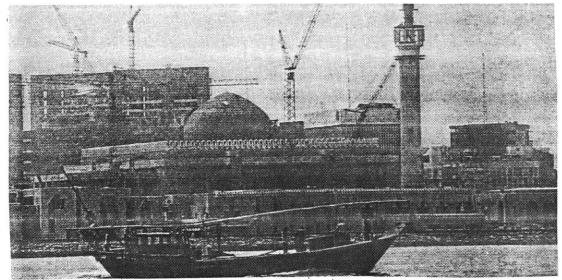
⁹⁵ Lewcock, p. 32. Author refers to B.Raunkiaer.

⁹⁶ Ibid., p. 32.

⁹⁷ Jim Antoniou, "Plan for Amiri Diwan Kuwait, "Middle East Construction, July, 1984, p. 19.



109. Aerial view of the waterfront prior to the large scale destruction of the traditional fabric.



110. Pietilas buildings can be seen as the pavilions of the Grand Mosque, behind which in the far background is the Joint Banking Center (under construction) to the left and the Commercial Bank to the right.

Site Planning, Massing, and the Use of Axes

At the commencement of the competition for the Kuwait project which consisted of the Sief Palace Extension, The Emir's new reception hall, The Council of Ministers and the Ministry of Foreign Affairs, Sir Leslie Martin and Professor Albini stated that the new buildings should demonstrate "new Arab architecture : a character tailored for the local identity." ⁹⁸ Secondly, the brief from the Ministry of Public Works "advised against monumentality." ⁹⁹ Thirdly, Pietila was aware of the history of the site--"The private merchants' 'palaces' that formerly existed on the site had only two storeys." ¹⁰⁰ Finally, the following two statements made at the very initiation of the project from a planning point of view inferred that Pietila knew precisely what he was trying to accomplish--"The aim was to compensate for this lost past with the shapes of the new buildings...We agreed that our [building] mass would not impede the sea view from the high town buildings like the National Mosque." ¹⁰¹

This approach, a combination of the clients' aspirations and the architect's creation in response to the local architectural identity, must be applauded. However, virtually all of the traditional buildings that once surrounded the Sief Palace Area Buildings have disappeared. Possibly realizing the inevitability of this happening in the future, Pietila states of his building, "Our buildings serve as the pavilions in the 'gardens' for those public monuments rising from the landside of the waterfront drive." ¹⁰²

We have seen above, and in the urban planning of Pietila's project as far as the planning was concerned, that there were definite guidelines regarding the site, a piece of land of 54,000 square meters reclaimed from the Gulf, and the massing, to the extent that he had to design three individual buildings; their eventual collective area covered 15,000 square meters on the ground floor and a total area amounting to 27,000 square meters on two floors.¹⁰³

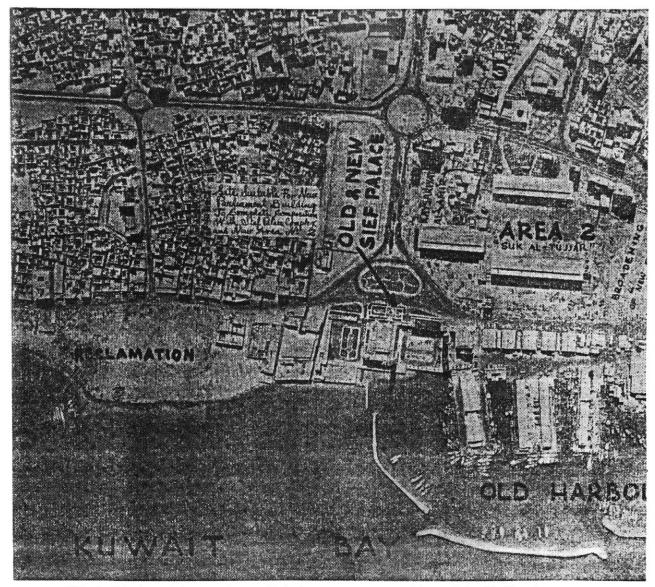
⁹⁸ Clouten, p. 48.

⁹⁹ Quantrill,.p. 118.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

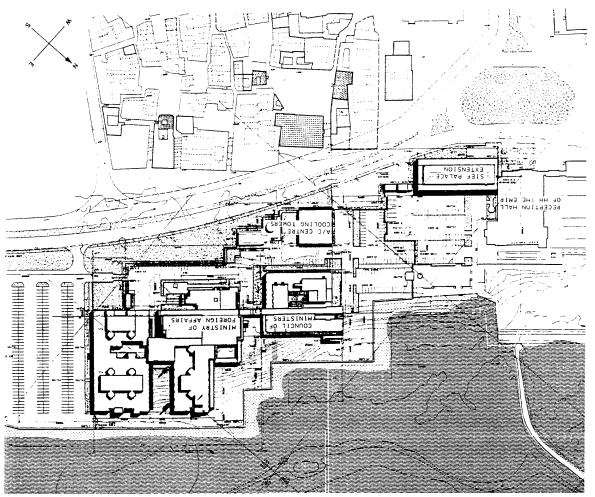
¹⁰² Ibid., p.130.



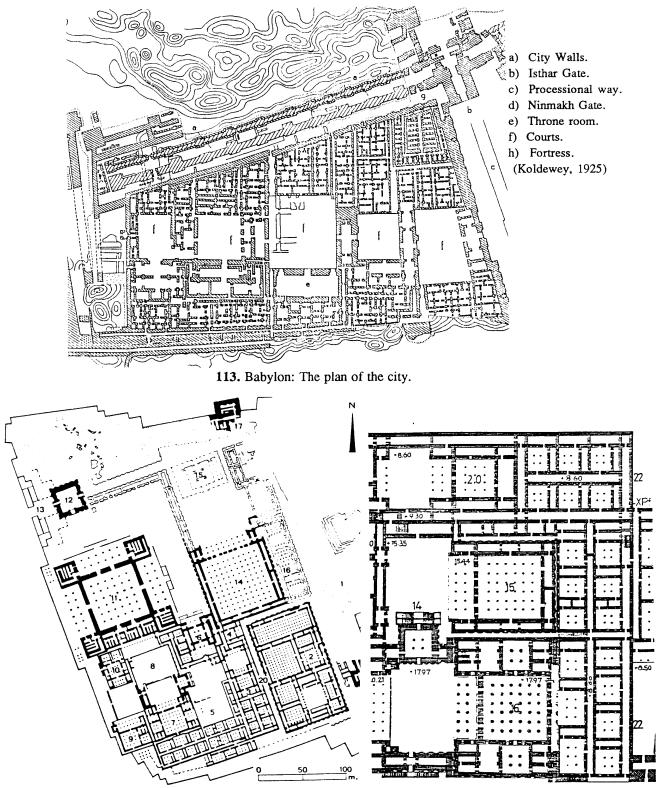
111. Aerial view of the waterfront with the 'two storey courtyard houses' that Pietila refers to as one of the sources of his inspiration of after the land east of the Sief Palace has been reclaimed.

¹⁰³ The Aga Khan Award for Architecture, 1986, Project Summary, 690. KUW.

Therefore, in terms of the planning, what he decided to do was to link these buildings. The Council of Ministers and the Ministry of Foreign Affairs buildings were tied together with a series of shaded informal walkways and courtyards, in such a way that, the pedestrian would pass along the perimeter of open spaces and in places catch glimpses of the waters of the Gulf. This was a concept similar to the traditional fabric, whose principles of organization will be discussed later in the thesis.



112. Site plan of the Sief Palace Area Buildings in relationship to the original and also showing in outline the buildings that existed across the road.



114. Persepolis: The Site Plan

115. Persepolis: Detail showing circulation fingers penetrating into the buildings

Vernacular Images

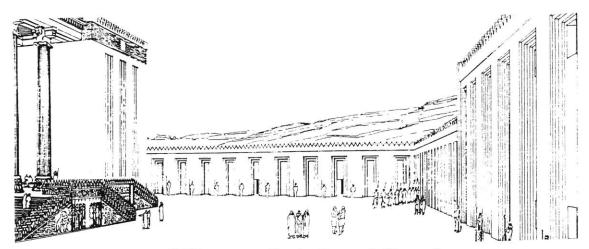
With the planning in the context of the urban setting -- site planning, massing and the use of axes -- we can see that rational strategies have been formulated as a response to the existing environments. However, in contrast to the logical approach above in adopting vernacular images, "Pietila has turned his back on the accepted forms of the twentieth century and invented a new vocabulary, which seems old and universal as well." ¹⁰⁴ In order to do this, his images of creativity are borrowed from many sources and at times seem to be oblique, in that he refers to his "recognition of the fringe imagery of Islamic, Arabic and local Kuwaiti tradition," ¹⁰⁵ which include elements that are historically or speculatively-based, sometimes outside the realms of architecture. These statements I will deconstruct below in terms of the images that are referred to in order to understand the sources and the basis for these references.

Pietila, referring to his building, states, "Gulf Archaeology influenced the floorplan design and...Uruk's city walls, some 200 kilometers north of Kuwait, are echoed by those of the Sief Palace buildings." ¹⁰⁶ This statement consists of two sections: "Gulf Archaeology influenced the floorplan design," and the latter "Uruk's city walls, some 200 kilometers north of Kuwait, are echoed by those of the Sief Palace buildings."

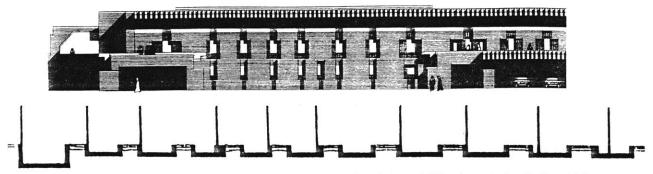
After discussing the first statement with my advisor, in light of the second part, he concluded that what Pietila was probably referring to was actually rather than 'Gulf,' Mesopotamian civilizations, and to an extent also eastern Persian architecture, for there were similarities in the treatment of planning on several levels. Analyzing, Babylon and Persepolis, the overall structures seem to be determined by axial shaded walkways that stretched the entire length of the quarter and connected with other sections forming the entire network that composed the building, or, in some cases, the buildings. Perpendicular to the main spines, these secondary routes penetrated like fingers into the

N. Norberg-Shultz, Meaning in Western Architecture (New York: Praeger Publishers, 1975), p. 420.Quantrill, p.115.

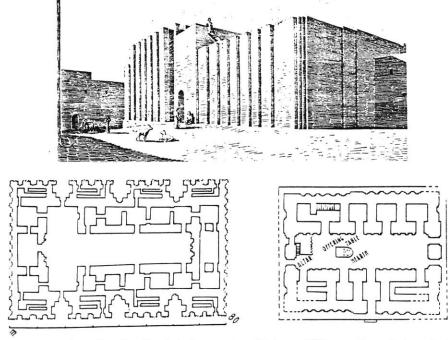
¹⁰⁶ Janice Randall, "Sief Palace Area buildings, Kuwait." Mimar, no. 16, April -- June 1984, p. 32.



116. Reconstructed Interior Courtyard of Persepolis.



Sief Palace Area Buildings: Council of Ministers elevation (above 117) enlarged plan (below 118).



Uruk: reconstruction of walls of an interior courtyard (above 119) an enlarged plans (below 120).

adjacent fabric; however, unlike traditional courtyards where the arcade protected the courtyard walls of the building, and pedestrians passed under these shaded walkways which ran around the periphery of the courtyards, in Babylon and Persepolis the visitor either passed adjacent to or through the courtyard, but the circulation routes were always part of the structure. If we were to analyse the Council of Ministers and the Ministry of Foreign Affairs in light of these organizational principles, we can see that there are several analogies. Firstly, the circulation spine runs along the entire length of the building. Secondly the relationship of this route to the courtyards resembles the treatment in the historic monuments of Mesopotamia in two ways -- firstly the visitor either passes adjacent to or through the courtyard and secondly the courtyards do not have a shaded arcade on all sides. At least two of the walls were exposed to the elements. Finally, the circulation routes are an integral part of the structure.

The second of Pietila's statements is simple to understand for, if we look at aerial photographs of Uruk some 200 kilometers north of Kuwait, "These wall foundations can be seen...imprinted on the desert sands...[due to]...water capillary action," [clearly showing] "...the staggered exterior walls...[which]...have patterns of recesses to protect the windows against the sun." ¹⁰⁷ The technique of staggering external walls in order to protect windows from direct sunlight is not an unknown technique, but it is not common in mud construction, only in sun-dried brick, the reason being that mud, due to its malleable nature and its need of constant maintenance and repair, depends on its load-bearing strength from either the thickness and, to an extent, the length of a solid unpunctured wall or a thinner wall with closely spaced piers, as can be seen in West African mosques. In contrast, brickwork can be erected as structurally independent piers to quite great heights to limits, depending on the slenderness ratio, and also survives substantially longer periods of time. This can be seen in the 5000-year-old walls of Uruk about which the writer of <u>Gilgamesh</u> states "regard the foundation terrace and examine the masonry: is it not burnt brick and good." ¹⁰⁸ Consequently it is possible -- this based

¹⁰⁷ Reima Pietila, "Sief Palace area buildings. The genius loci of the Kuwaitian waterfront." Arkitektur, vol., 80, no. 1, 1983, p. 44.

¹⁰⁸ The Epic of Gilgamesh, Translated by N.K. Saunders, (London: Penguin Classics, 1987), p. 61.

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on some facts and a hypothesis -- that Pietila had a problem in that he had to retain the historical continuity of materials to the old palace, but, in doing so, the construction techniques would create a different image closer to those in Iraq and Iran than to the old city of Kuwait, which would conflict with his desire "to find a solution with much more local spirit, much more stamina." Thus, in order to relate the project locally, he chose a historical reference -- that is a practically demolished building of which only some ruins and an imprint on the ground exist as reference without a national identity.

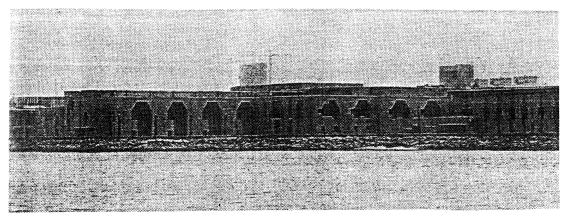
Upto this point, I have no difficulties with Pietila's approach; in fact it should be commended for he, unlike many who have worked in the peninsula, has taken the time to study the archaeology of the region and then translate his sources into a contemporary language. My difficulties begin with the statement: "But our design had only accidental synonymity with this; there is no functional or cultural link otherwise." ¹⁰⁹ Firstly, if we were to examine the structural system of the Sief Palace Area Buildings, we would find that it is a regular column, beam and slab in-situ concrete structure, thus making the entire envelope of the building independent of the actual structure. The thick brick walls are not a structural necessity as they were in Uruk, but the deliberate creation of the of the architect.

Logically, it is possible that these walls came to be designed the way they were as a result of the subconscious memory of the architecture of the region which he had studied, the climatic contrasts which he simultaneously experienced between Oulu in Finland and Kuwait City, and the search for a contemporary language.¹¹⁰ Consequently I would have to agree with Pietila that "there is no functional or cultural link;" ¹¹¹ functionally, due to the difference in eras, there can be no similarity, but I also disagree because the culture of the region includes the most important similarity, the brick technology. Secondly, I have some difficulty in understanding the purpose of the architect, in that he attempts to relate to a very specific building and then in the same statement denies the relationship.

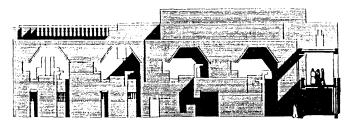
¹⁰⁹ Randall, p. 32.

¹¹⁰ Due to the lack of work, he had accepted a full-time teaching position in Oulu, seven hundred kilometers north of Helsinki, literally at the same time as the Kuwait commision materialized. This meant that he had to regularly commute between the extreme contrasts of the Nordic climate of Oulu, which at times had so much snow that it was not possible for aircraft to land, and the Arabian Peninsula, where the temperature rose to 55oC.

¹¹¹ Clouten, p. 49.



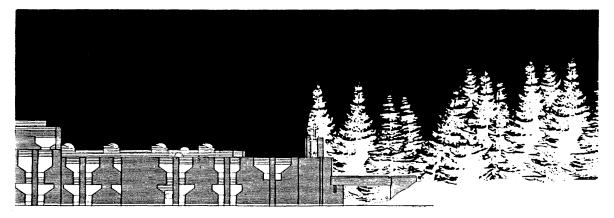
121. Ministry of Foreign Affairs: elevation facing the Gulf.



122. Detail of partial elevation of Ministry of Foreign Affairs



123. Comparison to the 'necks and heads' of camels.



124. Detail of partial elevation of Hevanta.

In his next two references below, which both concern the southeast facade, the land side of the building, Pietila assigns his source to the passing of camels and vaguely to a serai; however, Quantrill in his book on the architect specifies "heads and necks." ¹¹² On numerous occasions I have examined many aerial photographs from various vantagepoints, sketches, sections and elevations of this building with mental fantasies of abstracted, orthogonal, individual, and collective groups of camels to try and visualise what mirage Pietila was alluding to in his statement "An Arabian theme of camels passing rhythmically by...," ¹¹³ and, in my attempts in one particular place, there appears to be a single seated camel poised within "the land side...elevation galleries of the courts [which] resemble a serai; poetically, vaguely, never explicitly." ¹¹⁴ In the case of Quantrill's specification, however, the images that the cut-outs create on the elevation facing the sea are simply translatable to their origins. This methodology of creating elements that historically may have existed on or in the region of the site is not limited to Kuwait for, commenting on the Congregational and Leisure Time Center and Market Halls in Hevanta, Finland completed in 1979, Pietila states

"...We had to displace the trees with buildings. In the process the trees became disembodied. The pattern of the windows therefore serves as a metaphor for the trees. By taking the angle of the branches and making the window sills follow that angle I have tried to embody the lost trees in the architecture." ¹¹⁵

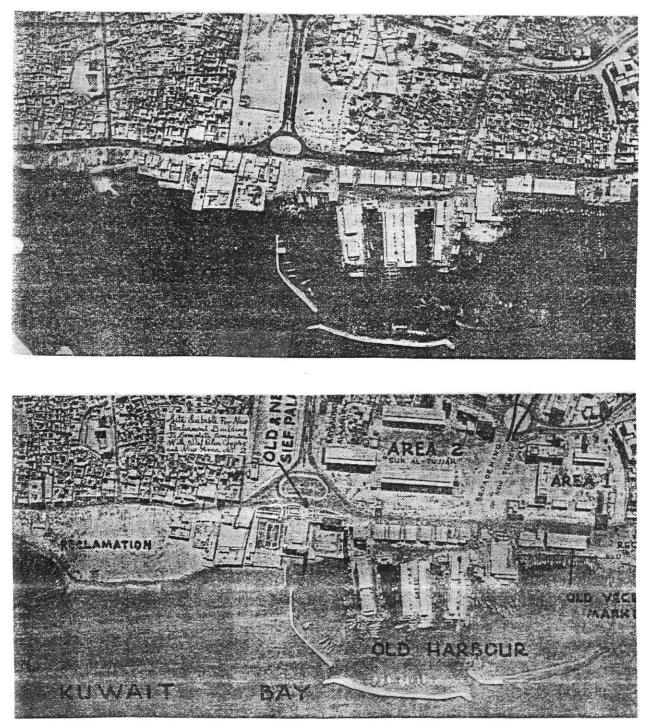
These cut-outs from the brickwork as a void rather than a solid are for Pietila both metaphors of a lost reality. I feel, however, that in comparison to the average visitor, I have two advantages -- firstly, the fact that I have been told that the illusion is one of camels and secondly, the professional development of my imagination. If I had not been told what to look for, it is virtually impossible that the connection would have been made. But, in comparison to the simple arcade of the Sief Palace extension where it is apparent

¹¹² Quantrill, p. 242.

¹¹³ Randall, p. 28.

¹¹⁴ Clouten, p. 48.

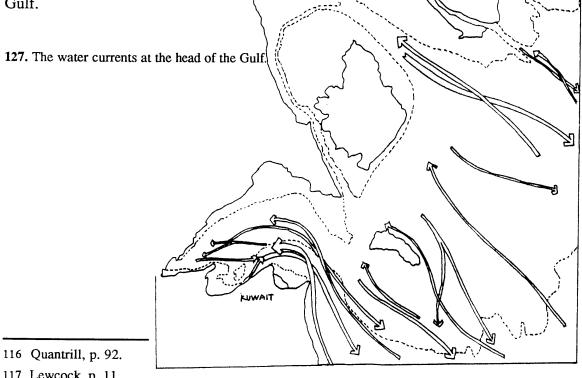
¹¹⁵ Quantrill, p. 130.



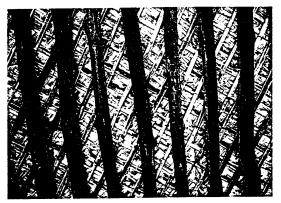
Aerial photograph at the top of the page (125) is what the site looked like before the land to its east was reclaimed and the lower photograph (126)after the reclamation of the land on which the Sief Palace Area Buildings were built. It should be noted that several houses on the site were destroyed.

that all the structure is an arched arcade, for those who wish to fantasise or are curious about these cut-outs, there are all kinds of possible meanings; for those who look for literal meanings and cannot see beyond the arch there is confusion, disorder and no regional context.

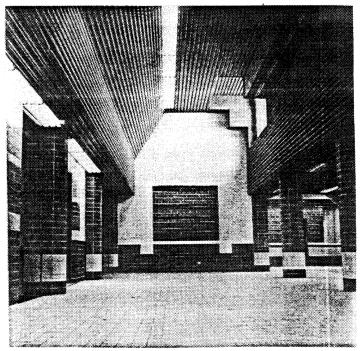
Pietila goes further in his attempt to recreate the past, for he states that buried below the site "...in Kuwait there are coral reefs on the coast in the depths of the sand beaches. Sief Palace Area Buildings stand there because they have been piled on the coral reefs. Therefore my imagination of the marine origin of the Kuwait project has its motivation: ...[thus we have in the courtyards designed]...the coral flower metaphor of the foundations." ¹¹⁶ Examining aerial photographs of the site and the natural occurances of " coral reefs and shoal banks thirty to fifty miles out to sea," 117 and the pattern of currents in the area, there appears to be a contradiction; in maps as far back as thirty years ago at low tide this particular section of the land on which the Sief Palace Area Buildings are located was an exposed stretch of beach. In order for there to have been coral reefs it would have necessitated the site being permanently submerged under the waters of the Gulf.



117 Lewcock, p. 11.



128. Dickson House: Traditional Roof Construction.



129. Fig : Pietila's transposition of the 'Soffits of Reeds'

Looking at the bands of color however, even at a glance, it is immediately apparent that both the physical properties of the tiles and the simple bands in which they are organized are not technically or historically related to the general region, an example of whose delicacy, subtlety and complexity can be found in the renowned monuments of Persia. This is confirmed by Pietila, who initially states that "...while in Kuwait I took high-tech methods...the idea of the tilling is not Islamic in a truly traditional way; even the size of the tiles is not traditional but techno-cultural." What the architect refers to as "poetic modern colors" ¹¹⁸ is beyond any logical explanation and can only be a result of an extremely personal taste in color.

Finally let us examine the "Soffits of reed" structure [that] were traditional in Kuwait Old Town. "Here their transposition is formed by the aluminum strips of the suspended ceiling [for] the actual section of the strip is similar to the type of reed growing in the marshes near Basra." ¹¹⁹ We do not question the architect's premise, but work within the framework he has established.

In the above statement, there is one undeniable fact -- that in all the houses in this part of the peninsula reeds formed an essential element of the roof construction -- but it is with the three related issues that there are difficulties: firstly, the conversion of organically based reeds into a industrial product mimicking even the profile of the reed; secondly, the imagery of Bedouin tents which were normally constructed out of a fabric and not reeds laid flat; and finally the color, green. Ignoring the first two issues, as they seem to be the result of an abstract synthesis of diverse materials and images, the third seems to be a lack of understanding on the architects' behalf; reed structures were always fabricated after they had acquired structural strength through the drying process, and by the very nature of drying they were brown.

So the dilemma crystallises in that, if there is to be populist recognition and with it a development of a regional contextuality in the minds of the ordinary citizens, then there

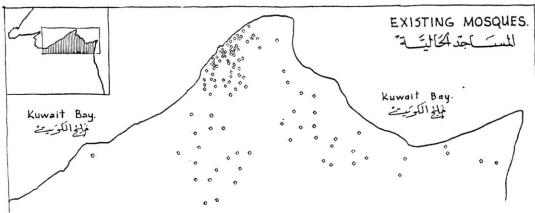
¹¹⁸ Quantrill, p. 160.

¹¹⁹ Clouten, p. 48.

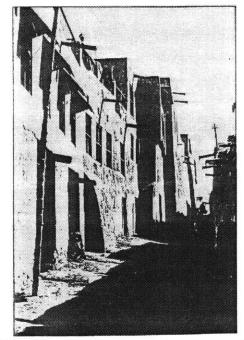
must be mass appeal in the form that is communicable to, and understandable by, the public. I will deviate from the subject to illustrate this point. Let us examine the kinds of paintings that the National Museum displays in Kuwait and compare them to the West in one particular mode -- abstract art. Although there are always exceptions to the rule, if I may make a sweeping statement about the collection in Kuwait it is that the majority of objects d' art are connected to a theme that is explicit, even though the work may be abstract. In the hollowed galleries and museums of the capitals of the West there are examples of abstractions illustrating that they have been painted all through twentieth-century history, with some as bizarre as panels of blank canvas painted plain white. Despite this seeming absurdity, we can find sections of the public gazing intently at these, maybe using the plain canvas as the backdrop for images from their memories -- with the same ardent passion as they would at a Picasso, Renoir, Monet or Manet's "A Field of Poppies."

Thus we can see that there is a discernible difference in the levels of appreciation between the populaces in the east and the West. It could be construed that the comprehension of architecture of either community is along similar lines -- pure abstractions as opposed to the abstractions of identifiable images.¹²⁰

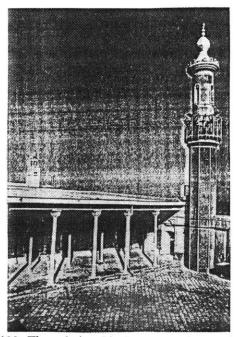
¹²⁰ The irony lies in the fact that Islam forbids the representation of human or animal form and thus developing an alternate language, that was to lead to perfecting abstract representation.



130. Location of mosques existing in the city of Kuwait in the 1960s.



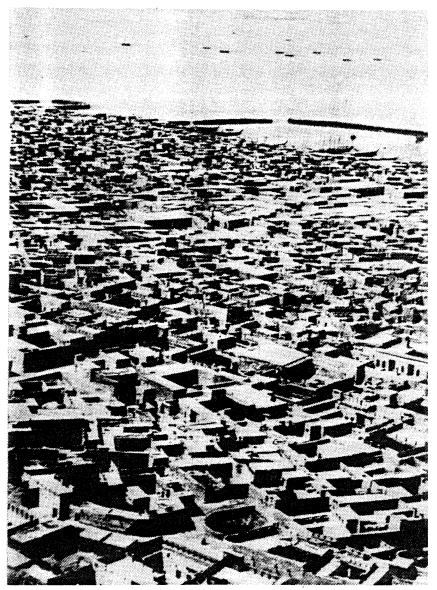
131. Typical street leading up from the waterfront



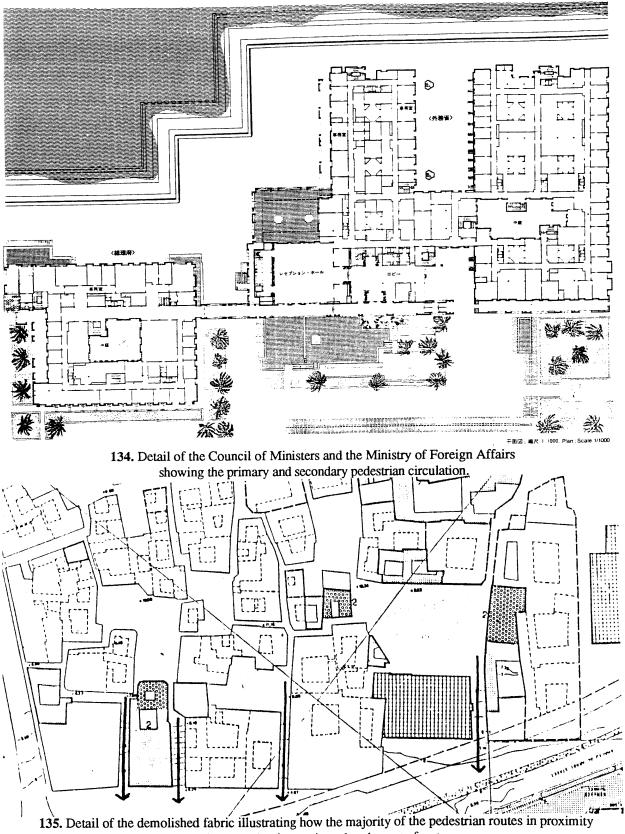
132. The relationship between minarets in the old town and the Sief Palace clock tower.

Circulation & Streets

Unfortunately, if we were to look at an aerial map of Arabia today and try to relate the old city of Kuwait to the contemporary one in terms of the images from which Pietila drew his inspiration, barring infrequent, isolated localities which have been renovated (an example of which is Jeddah), we would find that there is virtually nothing left, due to a combination of social, economic and political actions.



133. A picture of what the old waterfront might have looked like.

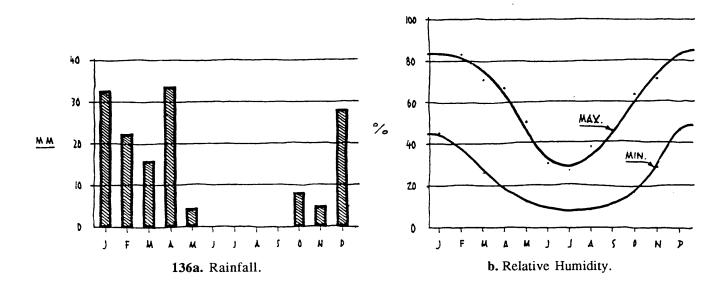


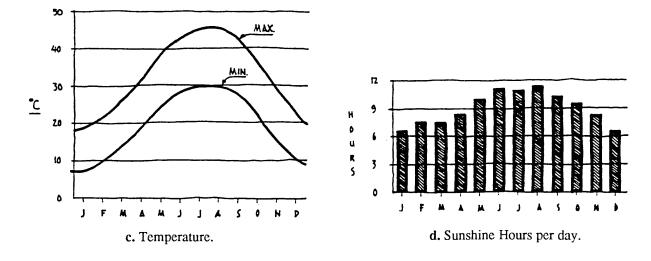
to the coastal strip terminated at the waterfront.

From, plans, documentation available in the publications on Kuwait and photographs taken in the late seventies by Professor Ronald B. Lewcock, and literary accounts of this part of the fabric, certain principles of planning are manifest. Firstly, if we look at the morphology of the fabric, it seems that most of the primary routes ran parallel to the waterfront, and the secondary routes rambled roughly perpendicular to the primary. These routes terminated at the procession of larger houses that lined the Gulf road. Due to the seaward slope along this route, pedestrians walking in reasonable proximity to the large houses that bordered the shore saw the waters of the Gulf as the termination of the focus. Secondly, looking at enlarged maps of the area, both the large cemetery and the small-and medium-size open spaces adjacent to the pathways dotted into the fabric seem to be in keeping with the general structure of a traditional town as described in the multitude of mosques that existed in the area might have played a role in the orientation of the pedestrian, as they did in traditional old towns.

If we now look at the structuring of the circulation and streets in the Sief Palace Area Buildings in light of the above, it is immediately apparent that Pietila's project, in its hierarchy of organization, is analogous in vitality to the traditional fabric.

- Firstly, all the major entrances to the buildings are directly linked or adjacent to the spine.
- Secondly, except for those sections that are internal to the buildings from the quorum of primary and secondary streets, the Clock Tower acts as a point of orientation.
- o Thirdly, this primary axis that interlocks the Council of Ministers and the Ministry of Foreign Affairs buildings is aligned parallel to the shore, with secondary pathways radiating perpendicular to the major axis, punctuated with external courts and terraces of a variety of sizes, some of which are enclosed and others visually culminating at the Gulf.





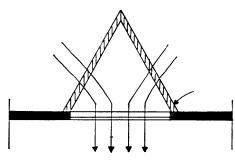
Climate and Natural Light

Climatically, the characteristics of the coastal strip are determined by its high summer temperatures, seasonal rainfall and a limited period of high humidity. However, as with most regions of this section of the peninsula, it is the quality and intensity of the sunlight that are most memorable, on average raising temperatures to between 40° and 50°C., and sometimes as high as 55°C., between the months of June and September. Rationally, throughout history, the people of this zone have by a variety of methods attempted -- to a large extent, successfully -- to filter this light into the buildings, while at the same time reducing the enormous heat gains. In this particular climatic region of the Islamic world, although there are several combinations utilized through which shading, a balance of natural light ,and reduction of heat gains have been successfully achieved, the types that that will be examined are the arcade, the lantern (air and light shaft), and the mashrabiya (wooden lattice screen).

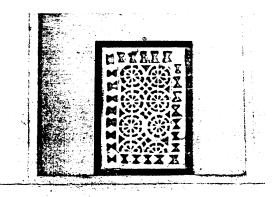
Unlike the Ottomans and the Persians, who had an abundant supply of timber and whose construction materials were primarily stone, sun-dried bricks, or fired bricks, the builders of the coastal strip towns customarily used mud; the exceptions were for extremely important building elements like minarets, and even then not until the early twentieth century was other material available. ¹²¹

There is little purpose in describing the arcade in any detail, for it is a simple flat-roofed structure to provide shade which depended on wooden columns, an imported resource. Most of the structures were built of mud. The nature of mud and its associated method of building, the wall and wooden beams, did not readily allow the construction of openings in the roof in that they would weaken the structure of the roof, stretch the quantity of already scarce and expensive wood required to provide openings, increase the possibility

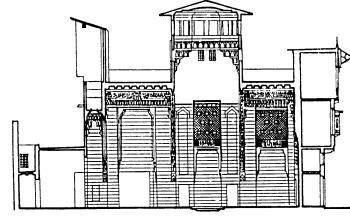
¹²¹ The first minaret to be rebuilt in brick rather than the squat mud structures, although it was not made very high, was on the mosque in the main street of the souk re-built ca. 1947. Zahra Freeth, p 17. It should be noted that she was referring to Kuwait, a town that was not religiously significant, but, due to its trading links, much more exposed to foreign influences than Riyadh.



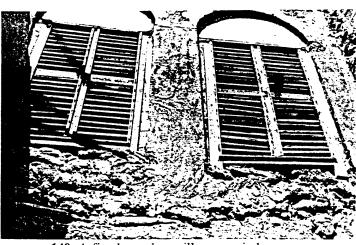
137. A typical skylight over the firehearth.



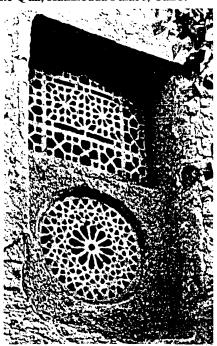
138. Bayt Al-Badr: ventilation grille.



139. Section through the wind catcher and lantern of the Q'aa, Katkhouda Palace, Cairo.



140. A fixed wooden grille on a window.



141. A highly decorative ventilation grille.

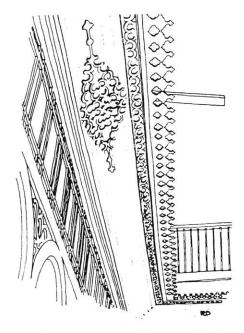
of sudden rain storms leaking into the interior, and conflict with the use of the flat roof space. However, if it was essential, a badqeer -- skylight -- was used to both let light in and as a ventilator for the smoke created from roasting coffee on the hearth.¹²² This largely forgotten method of making an opening in the roof was created by putting two farooshs -- a type of coral stone -- on it and making a triangle. Although smoke and light could get through the sides, rain could not enter; however, this was a very restrictive form of opening.

The lantern, too, was another method of getting light and air in the fabric. There were two types. The first was similar to the one that can be seen in the Katkhouda Palace, in Cairo. The second was a narrow shaft that penetrated almost to the ground level; this technique of lighting and encouraging circulation of air in the building was used more for public circulation spaces rather than for individual rooms. However, we do not know if any of these types existed in Kuwait. Under normal circumstances in climates outside the peninsula, where the sunlight is not as intense, these narrow vents would be dark, dismal shafts; however, here they work perfectly, allowing hot air to rise up through the shaft and thus inducing convection currents and allowing fresh air to be pulled into the rooms adjacent.

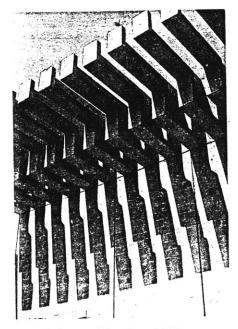
The thick stone and brick walls were also transformed, due to the change in materials, and refined into double-skin mud walls which were very flexible as a means of directly and indirectly lighting internal spaces. Here the most common form was the rowshan, a small opening in the upper half of the room. Usually it did not have permanent shutters. It either had a band of rice stems to close it or a lattice made out of gypsum. If bigger openings were required, these were usually fitted with metal grills. If the window faced an internal court, it normally had four wooden shutters, two at the top and two at the bottom. If the window overlooked the street, it was covered from the outside with a fixed wooden grill or a mashrabiya (wooden screen) that allowed air and light to penetrate but blocked the view from the outside.

¹²² If the social life of the people in relation to privacy, the intense use of the roof space for both public and private functions, the methods of expansion of the unit and the climatic conditions of the area were examined, it is highly unlikely that people would have adopted methods of lighting that would occupy valuable roof space. However, I cannot presently substantiate this with any documentation.

The sun breaking eaves; its origins and its transformations.

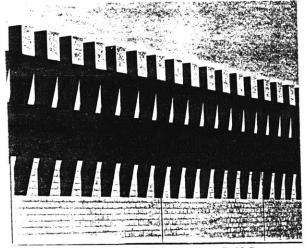


142. Eaves of a typical house in Baghdad.



143. Ministry of Foreign Affairs: parapet.

Council of Ministers and Ministry of Foreign Affairs.



144. Detail of wall facing Arabian Gulf Street.



145. Facade facing Arabian Gulf Street.

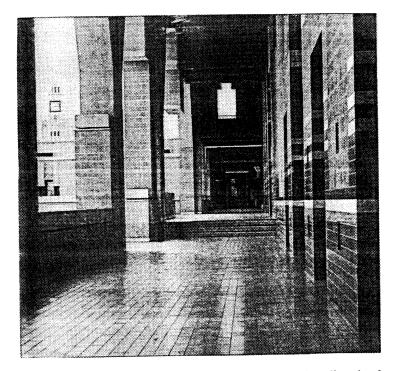
Of the methods of providing shade and of controlling natural light in internal and external spaces briefly outlined above, Pietila utilizes three -- the arcade, the lantern and the mashrabiya -- but completely ignores the other traditional devices of the region, notably the double-skin wall.

However, his approach throughout the entire building was according to the principles of layering. This can be seen in the extension to the Sief Palace itself and the Ministry of Foreign Affairs where, on the external eastern exposure, he uses an arcade approximately five meters in width which, for the majority of the day, keeps the interior elevation in shade. However, even on this plane, all the windows are recessed approximately thirty centimeters from the external surface of the wall and are covered by contemporary mashrabiyas, allowing a view through the center, where the lattice structure is larger, and screening the view around the periphery.

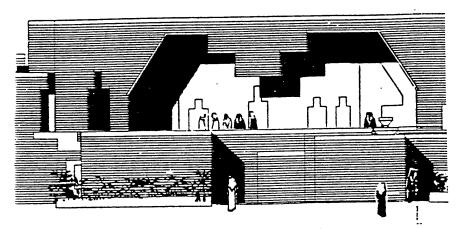
For the Council of Ministers, however, he uses a different system but similar principles. Here there is no external arcade for protection, so he utilizes the "Sun [as] the ornamental weaver, filtered through the fingers of the sun-breaking eaves. [a concrete architectural creation of his own design]...This theme...[he states]...emanates from Basra Old Town, where the eaves were of teak." ¹²³ These concrete structures project approximately three meters beyond the surface of the walls and provide shade for the windows directly below them; as described by Clouten, they "create a tapestry of light and shade on the walls and floors." ¹²⁴ As a secondary measure, the windows are recessed thirty to forty centimeters from the envelope of the building and protected by mashrabiyas, different in design to the Sief Palace extension in that they only partially cover the surface of the glass behind.

¹²³ Quantrill, p. 130.

¹²⁴ Ibid.



146. The main pedestrian spine: the outline of the opening directly above is reminiscent of a sentry overlooking the people passing below.



147. The entrance to the main lobby, flanked on either side by profiles representing guard. (actually they are the door by which you enter)

Finally, although it may require stretching the imagination a great deal, a technique not uncommon in the understanding of several aspects of the vernacular images in this building, these "sun-breaking eaves" could also be, ignoring the profile, the multitude in number, the closer spacing and the material of construction, reminiscent -- if one can be so despite so many fundamental differences -- of the wooden poles that project out of the sides of typical adobe buildings in which the upper storey or storeys are still to be added.

In addition to the arcade and the regular-shaped windows, he uses a particular window design sub-divided by mashrabiyas which he describes as having "guardian shapes... [whose]...function...is to allow friendly forces in and to hold out enemy powers, spirits." ¹²⁵ Examining the statement that Pietila has made about the windows, the "guardian shapes," and looking at photographs of several of the windows in the scheme, three questions arise. Firstly, what is a guardian shape ? Secondly, how does this particular shape "allow friendly forces in...and hold out enemy powers, spirits ?" Lastly, what has this got to do with Kuwait ? The first of these questions is the simplest to answer for, if we look at the the elevations of the sentries that are ever present and sketch their outlines, they are the abstractions we see, scattered not only around the vantage points in the building but also flanking and creating the main entrances. However, how these shapes decide which are the "friendly forces...and...[which are] ...enemy powers, spirits" is a mystery; here, once again, Pietila extends imagination to its limits. Finally, the question is what this has to do with Islam, or Kuwait.

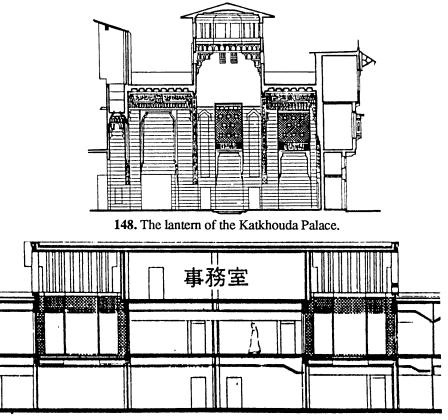
Although Islam is fundamentally against the concept of spirits, there are instances in which spirits have been referred to as a source of protection, especially in the beginning of new cities structures like the circular city of Baghdad. In structures like entrance gateways too like the entrance to Fatepur Sikri two stone rampant elephants "guard" the entrance to the city but these I believe are the exception rather than the rule and are possibly the result of local superstition or the attempts by ruling powers to mix local cultures and traditions as opposed to a universal Islamic practice.¹²⁶

¹²⁵ Ibid.

¹²⁶ I would like to thank Professor Padamsee for bringing these particular examples to my attention.

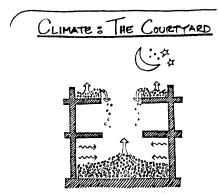
However, if this theme had been used in the West where faces, busts and even gargoyles were extensively used in elevational compositions there would be some spiritual continuity, but, still, how all this relates to the Foreign Ministry in Kuwait rather than any other country, is unanswerable.

Internally, Pietila punctuates the pedestrian routes with lanterns, which theoretically is correct since they belong to the covered internal courtyard. Traditionally these were major functional elements which, in comparison to the wind-catcher which only allowed in air, these allowed in both light and air. However, architecturally these structures played an important role in the skyline. Unfortunately in Pietila's building, as Quantrill states, "...the lantern, which were such an important part of the concept as visualised in the study model, do little to relieve the monotony of the roofline: in fact they are only visible from the upper floor...an important omission." ¹²⁷

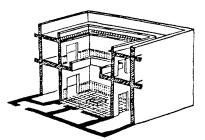


149. The Lanterns in Pietila's scheme serving the same function as the one above $\$.

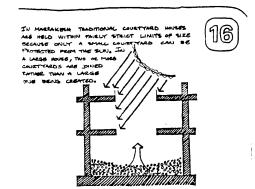
¹²⁷ Ibid., p. 118.



150a. During the night cold air formed on the roof sinks into the courtyard.



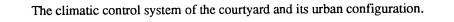
c. Cross section through a typical Moroccan house.

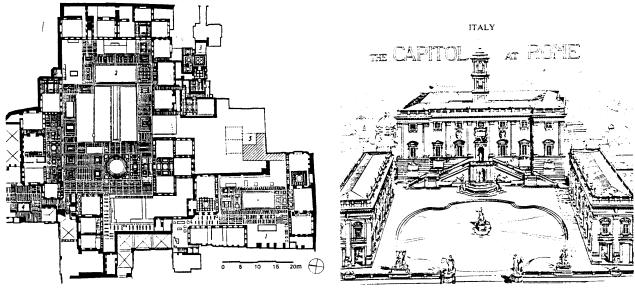


b. During the day radiation from the protected court helps cool the house.



d. Marrakesh from the air.





151. Azem Palace, Damascus, Syria (AKAA 1983).

152. The Capitol Rome.

An interesting comparison between the two spaces is the treatment of the public staircases, in the east they are inconspicuous elements whereas in the west they are elements of procession.

The Use of Courtyards

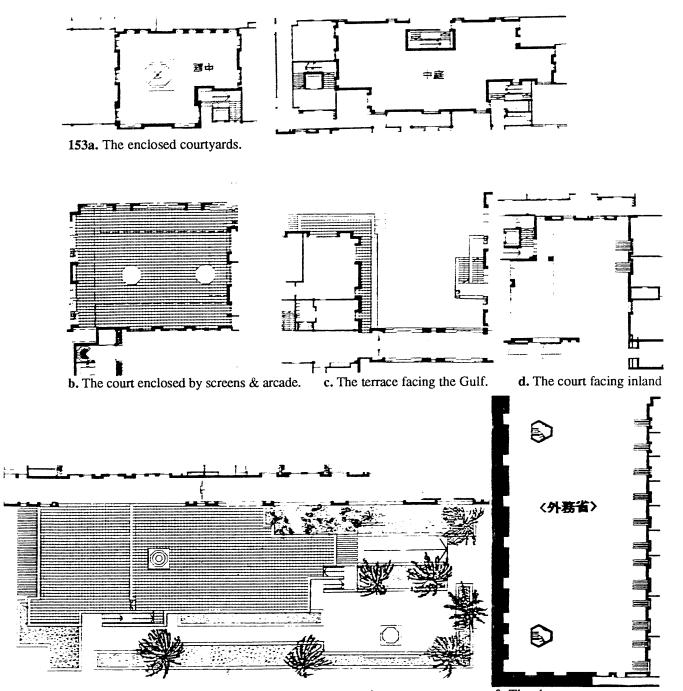
It is said that an Arab house -- unlike those in the West which, although they are built as finite products, possibly can be added to later -- is never complete when built, but grows introvertedly around a courtyard or group of courtyards interwoven to form the fabric which provides the environment for living. In such communities, houses grew from the nucleus of a small family unit into extended irregular forms over a period of time. From the initial stages of the planning, decisions were made which accommodated the future expansion. Thus, by a process of trial and error, and later accumulated experience, issues such as the location of entrances, windows, building heights and external wall treatments were decided on.¹²⁸

This introverted approach to the built form is a characteristic found everywhere in hot, arid regions. The courtyard which forms the core of the unit is utilized in two ways. First, it is an enclosed private communal space for the members of the household; secondly it is a climatic moderator. This combination historically satisfied cultural requirements and responded to the climate of the region.

As this thesis concerns the Sief Palace, an institutional building, there seems to be little purpose in presenting a sociological perspective on the use of the courtyard from the point of view of the family. However, if we look at the relationship between courtyards and the buildings that created them in the West, we find an extroverted approach in that the structures in the majority of public spaces surround but do not contain the space; secondly, the landscape whether it be hard or soft, is formally organized to be viewed from the adjacent buildings as a diamond set as a solitare.

In the East, although the setting is usually also meticulously organized, the public space is enclosed by the building and interacts as a direct pragmatic extension of the building.

¹²⁸ Abed, p. 22.



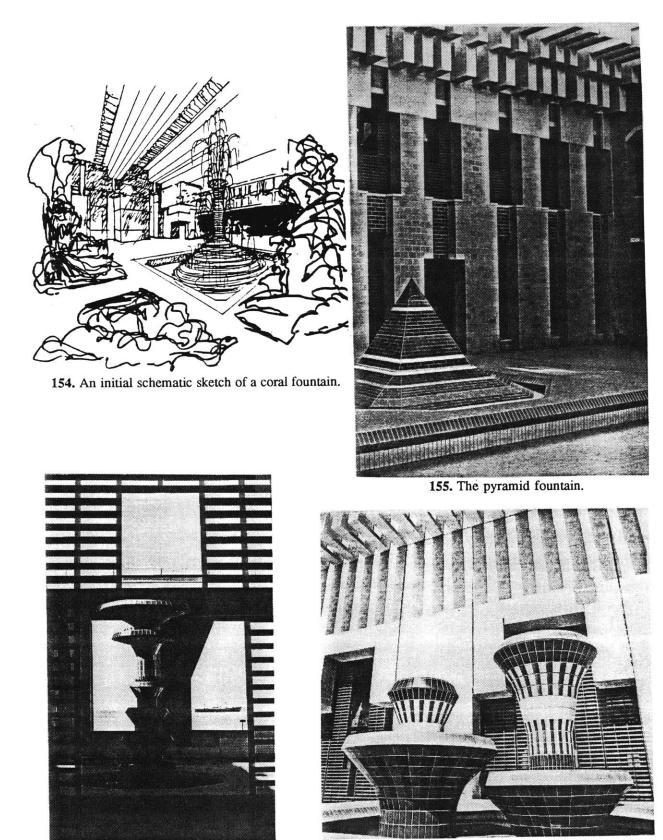
e. The split level courtyard related to each other by serving separate spaces.

f. The long narrow court facing the Gulf.

During the summer months from May to September, the temperature in Kuwait can reach 55°C., and the diurnal change between 10 and 20°C. In a fabric that is closely packed, the courtyard acts as a large shaft, bringing both daylight and air movement in cycles to the rooms around it.

In the sketch on the previous page, we can see that during the night, the first cycle, cool air, descends into the courtyard and fills the surrounding rooms; walls, floors, columns, roofs, ceilings, and furniture are cooled and remain so till the late afternoon. In the second cycle, around noon, the sun directly strikes the courtyard floor, the cool air begins to rise, setting up convection currents and making the courtyard act as a chimney. In the third cycle, most of the cool air from the rooms has spilled out from the rooms and been warmed, and, as the sun sets in the desert and the air temperature falls rapidly, the courtyard begins to radiate heat outwards, and cooler air begins to flow and descend into the courtyard. Thus a new cycle begins. In light of this brief description of the evolution, integral function in terms of its integration with the surrounding fabric and climatic moderation effect, let us look at the courtyards in the buildings.

Overlooking the fountains for a moment, the spatial qualities of the courtyards are a source of great variety and innovation. Two of these are spatially totally enclosed by the building, both are irregular in shape, but have no similarity; two are enclosed on three sides, of which one faces northwest and the other southeast. There are four terraces, of which three face the Gulf, one is enclosed by screens, and an arcade. The other two are simple terraces and the fourth a two-level terrace facing southeast, of which the upper level is an extension of the primary public spaces and the lower level an extension to the entrance courtyard.



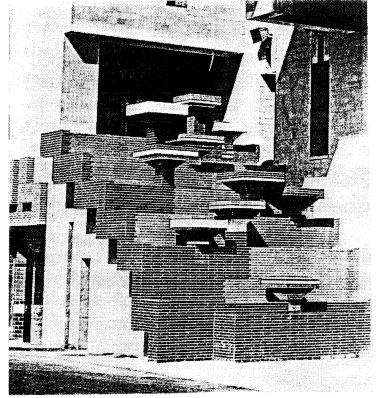
156. A muli-level flowering fountain.

157. A single-level flowering fountain.

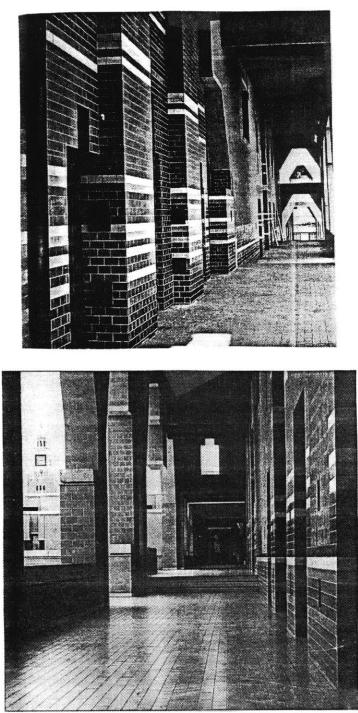
The above fountains are examples of the fountains found within the building.

In contrast to the courtyards and terraces which are visually, in terms of their configuration, material, and color, compatible to the old city that existed and thus not out of the ordinary, the seven fountains in the courtyards and the coral waterfalls of the Ministry of Foreign Affairs are of one of the major elements of the building. They give it a sense of location in that only along the coastal section of the peninsula would it be possible to find coral reefs. However, they are also one of the most visually distracting aspects of the building, for it is here, in a variety of shapes and forms, that the Pietilas decided to recreate the subterranean element of the site. They believed that "...there are coral reefs on the coast in the depths of the sand beaches." It is possible that there were coral reefs below the site and that the Sief Palace displaced them when the land was reclaimed. What we are looking at once again is the transformation by an architect of an element in a material that is fundamentally different from the original, an issue discussed further in the conclusion. However, if for the moment we simply compare the delicacy of the coral structures with the oversized fountains, neither in the given shapes that we can see in the photographs nor in the bright clashing blend of colors do they resemble the

coral reefs.



158. The coral waterfall



The above two photographs are examples in the pedestrian spine of the application of bright bands of color in the building. The upper photograph (159) is looking east and the lower (160) west.

Decoration and Color

All through the hot arid region of the Gulf, the one common denominator that could be seen externally in virtually all the towns was mud, the basic material of construction, and the color it gave the built form, brown.¹²⁹ This material gave a background of uniformity that lasted for centuries.

The interiors, however, were a marked contrast, an inseparable feature of Islamic traditions in buildings. The more prominent the structure, the finer and more opulent the degree of embellishment in the interior. This applies no less to the comparatively spartan palaces of the settlements along the coast. Occasionally there were additional exterior ornaments; however, these were customarily confined to the main entrance of the building, apertures in the facades or the doors.¹³⁰

Regarding the application of color in the interior, however, Zahra Freeth comments on a house restored in 1978 in Kuwait; " The coloring of plaster to my eyes is a misguided piece of restoration. I cannot personally remember the plaster ever being colored...It has not been possible to determine whether any evidence influenced the restorers in the use of these colors." ¹³¹

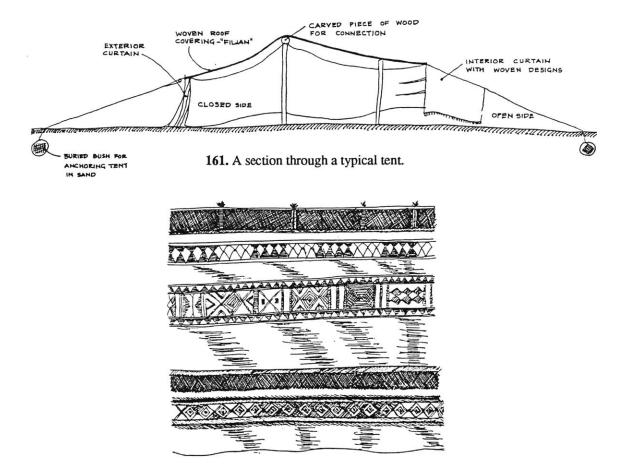
In the Sief Palace Area Buildings, however, color is one of the essential elements of the composition; in fact it can be said that in particular situations the color is cornucopian. This, however, is one of the most abstract transformations that Raili Pietila has undertaken, for Reima states referring to the tiling in the project, that "Raili's contribution in the Kuwait project [in the design of the tiling] was considerable." ¹³² He proceeds to

¹²⁹ In some places, such as are documented in the book Traditional Architecture in Kuwait and the Northern Gulf, sheets of coral stone were used on the exterior, forming a composite structure with mud. As a technique of building, this was restricted to coastal architecture.

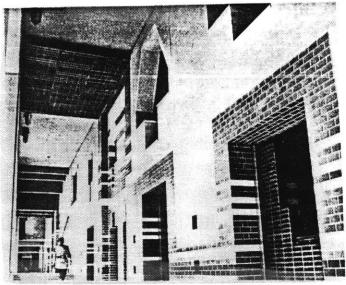
¹³⁰ Lewcock, pp. 36-39.

¹³¹ In my experience of visiting some of the houses documented in the above reference and others in Kuwait, color in the interior was usually in the form of rugs generally on the floor and in some cases draped on walls.

¹³² Quantrill, p. 164.



162. A detail through the fabric partition that divides the tent.



163. The transformation of the above fabric divider partition into tilework in the building.

make two comments as to their sources: "We have taken quite a lot from the folkloristic handicraft and also modern rugs - those striped floor rugs...the Bedouin women weave the partition carpets of long narrow bands stitched together to make a 2.5 meter high wall, dividing the Bedouin tent into masculine and feminine halves. This was also in our minds...Raili's tiling is not intentionally abstract art but meant to be related to existing traditions in textiles." ¹³³ and "...the idea of tiling is not in a truly traditional...even the size of the tiles is not traditional [while] the patterns and colors are poetic modern ! " ¹³⁴

The color of the building is a, if not the most, striking aspect of the building yet even if it were not, the question must be asked:

Is it valid to take an element from its natural context, made of fabric, and transform it from a textile-using contemporary technology into tiling which separates the exterior from the interior of a building instead of a tent and finally, rather than being its original height, now covers the building like wallpaper ?

¹³³ Ibid., p. 110.

¹³⁴ Ibid., p. 242.

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AN ANALYSIS OF THE CLIENTS' AND ARCHITECTS' STATEMENTS Ministry of Foreign Affairs, Riyadh, Saudi Arabia.

Unlike Pietila, whose comments are limited to the local architecture or the site, Larsen states:

- o "...the building is intended to reflect Islamic culture in the global cultural currents." ¹³⁵
- o "...[it] expresses its formal function to its society and a global society." ¹³⁶
- We felt that the building representing Saudi Arabia to the outside world should have elements of an Arabian or Islamic tradition in its experience. "¹³⁷
- o "The building exterior...is anonymous in the tradition of the old palaces and official buildings in Riyadh which were constructed of mud brick." ¹³⁸

In this lies the difference between the two, Pietila's approach is theoretical and metaphorical whereas Larsen's makes broad sweeping generalizations but all within or about the Arabian or Islamic architectural traditions, Islamic culture in the global cultural currents, Arabian society and a global society. ¹³⁹

¹³⁵ Larsen, "Lessons from the Orient." Diadolos, no., 10, Dec 15, 1983, p. 96.

¹³⁶ International Union of Architects, 11 Entries for the Headquarters of the Ministry of Foreign Affairs, (Paris: Editions l'Equerre - UIA, 1981), p. 112.

¹³⁷ Ibid., p. 112.

¹³⁸ Ibid.

¹³⁹ Larsen was born in Denmark in 1925. He received his architectural education at the Royal Academy of Fine Arts in Copenhagen, The Architectural Association in London, and finally at M.I.T. in Boston. In his early years he worked with Arne Jacobsen -- the designer of the Central Bank in Kuwait -- and Jorn Utzon -- the designer of the National Assembly in Kuwait. It is a interesting coincidence and shows that Larsen may have been familiar with this region long before he began the Ministry of Foreign Affairs.

Planning in the Context of the Urban Setting

The Ministry of Foreign Affairs in Riyadh is situated in Nasariya, a new suburb on the outskirts of the capital. The general locality William Curtis describes as follows:

"The project lies about 2 kms northwest of the center of what remains of old Riyadh adjacent to the Nasariyad gate.¹⁴⁰ The site abuts the government area [which lies to the northeast of it] and an area containing numerous Royal establishments [which lie to the northwest]. It is at the intersection of Nasariya Gate and the Royal Conference Center. The new diplomatic quarter lies to the northwest and the international airport lies further north." ¹⁴¹

According to Chris Abel, the site and its immediate surroundings "...is built entirely on Western lines, having grown up in the fast growth of the fifties. It is a low density district, composed of dispersed villas and a few major free standing buildings, housing other government institutions and modern businesses." ¹⁴²

The Ministry of Foreign Affairs was conceived as having three functions -- Political Affairs, Economic and Cultural Affairs, and Administrative Affairs -- and could be designed as a single entity or as three different buildings, with a total built-up area of approximately 30,300 square meters on the ground floor and 85,000 square meters, on a site of 83,000 square meters.¹⁴³

¹⁴⁰ The Nasriya Gate was originally named the Zuhayri gate in the 1918 Phillips map. For further information on this map, see Breeze and Cozens, p. 8.

¹⁴¹ William Curtis, "Ministry of Foreign Affairs, Riyadh, Saudi Arabia. SAU. 563, " The Aga Khan Award for Architecture 1986 Technical Review Summary p. 2.

¹⁴² Christopher Abel, "Larsen's Hybrid Masterpiece," Architectural Review no. 1061, July, 1985, p. 31.

¹⁴³ Ibid., p. 9.

However, if the statements by the client are taken into consideration -- "To develop a physical image that will reinforce the ministry's mandate and aspirations...[with]...the ministry as the front door to the Kingdom" ¹⁴⁴ -- it is not surprising that, rather than attempt to recreate the scale of the urban fabric as he had in his initial scheme, criticized by the Executive Summary of the jury's report [2nd Stage] for its "extensive coverage of the site," ¹⁴⁵ Larsen finally chose the more compact monumental scale and then further exaggerated this setting by siting the building on a podium, "a reflection of...[his]... desires to give the complex a certain dignity, prestige and elegance." ¹⁴⁶

Continuing this theme of monumentality, Abel asks "...then why...[did]...Larsen not follow through with his primary model, and let the building assert itself as a free-standing monument." ¹⁴⁷ This may be answered in part by looking at some of the statements that Larsen has made regarding the architecture of the region:

- "One of the most important characteristics of Islamic architecture is the focusing on a clearly defined interior as opposed to an exterior." ¹⁴⁸
- o "The anonymity of the facades is another requirement of the Islamic ideology." ¹⁴⁹
- o "The Islamic tradition of the hidden architecture with stern exteriors." ¹⁵⁰
- o "The impression of the limit, size and function of the individual building is thus blurred, and the possibility of recognition of the extent of the public functions is eliminated." ¹⁵¹

¹⁴⁴ Ibid.

¹⁴⁵ Ibid., p. 20.

¹⁴⁶ Ibid., p. 112.

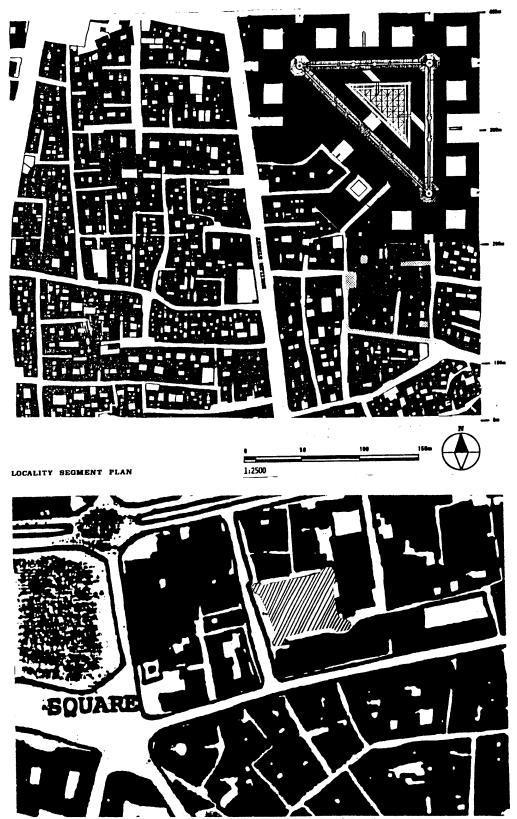
¹⁴⁷ Abel, p. 31.

¹⁴⁸ International Union of Architects, p. 112.

¹⁴⁹ Clouten, p. 20.

¹⁵⁰ Abel, p. 28.

¹⁵¹ Clouten, p. 16.



The upper collage (164) is the superimposition of the Ministry of Foreign Affairs into the fabric of Deerah, the old section of the city of Riyadh and the lower (165) the Masmak Fort in the same context.

It is possible that, like many architects before him (and many who will follow), Larsen was in a predicament, as his clients' requirements were in direct conflict with what he believed. Thus, except for the entrance to the building, the literal "front door to the [foreign affairs] of the Kingdom," he decided to downplay the exterior as much as possible, creating a facade where "the intentions seem confused," ¹⁵² and instead elevating the interior by recreating in the interior a miniaturized version of the traditional urban fabric "...rich in intentions with many levels of meaning." ¹⁵³

In order to judge the degree of success or failure of Larsen's attempt to follow this approach, let us transpose the plan of the Ministry of Foreign Affairs from Nasariya to Deerah, the traditional part of the city of Riyadh, and put it in the same context as the Masmak Fort. Let us proceed on the issues of urban planning and street patterns, assuming the above scenario as a basis of comparative evaluation between these two buildings.

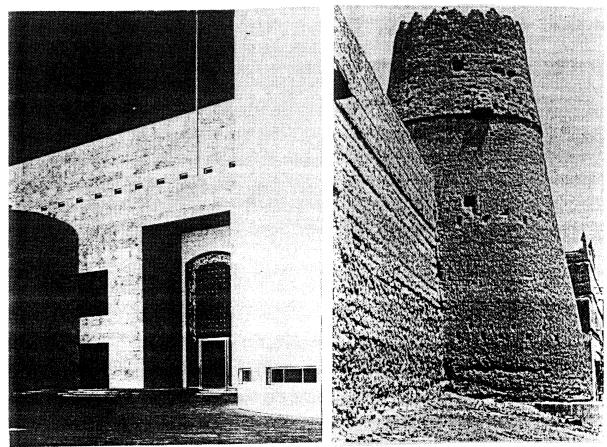
Looking at the transposed plan, the question should be asked: Comparing plans only, could the Ministry of Foreign Affairs and the Masmak Fort be a part of the same fabric ?

A critical appraisal would have to conclude negatively for several reasons. Firstly, if we are to be absolutely precise about the urban form of the building from an aerial view, there is no central courtyard like the fort which, in traditional fabrics, forms the central space of the buildings. According to Curtis, initially "the triangular space at the center of the building was an open courtyard." ¹⁵⁴ If this is the case, let us ignore the fact that the courtyard is covered, as a result of the local population having become accustomed to the comforts of a completely controlled environment, and imagine the space to be open as originally planned; of all the spaces, the triangular geometry of the central space still strikes a discordant note with the existing fabric. The only references to this form in traditional fabrics can be seen in the triangular openings that allow breezes to penetrate

¹⁵² Curtis, p. 12.

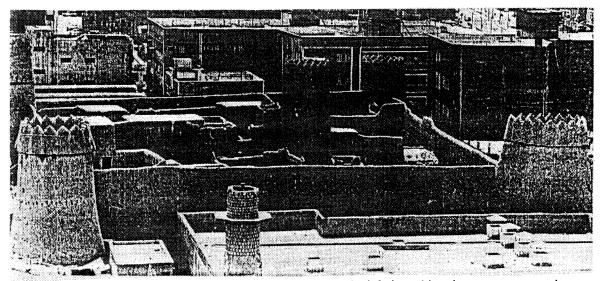
¹⁵³ Ibid. p. 12.

¹⁵⁴ Ibid., p. 7.



166. The approach to the Ministry of Foreign Affairs.

167. The approach to the Masmak Fort.



168. The Masmak Fort located in the old city of Riyadh. Despite it being a historic area we can see in the background of the photograph the encroachment of non-descript residential buildings.

through the building and in some of the motifs of decoration. Secondly, despite the similarities between the two buildings in that they are both on island sites, they both are inaccessible, except for one narrow entrance, and they both dominate the user. The fact also remains that, in comparison to the Masmak Fort, the width and size of the blocks that compose the Ministry of Foreign Affairs are too large. Finally, even if we were to ignore "the entrance to the building [which] was asymmetrical, [in which the] mosque on the left of the entrance was rectangular and the conference hall to the right curved," ¹⁵⁵ and only consider the nine courtyards in shape, size and location, their symmetrical relationship immediately makes them perceptible.

Let us pause here for a moment and re-examine Larsen's building, this time posing the question instead as a comparison between the Masmak Fort and the Ministry of Foreign Affairs from the viewpoint of the historic treatment of public buildings. In this manner we will be able firstly to contrast the two, establishing a valid comparison, and secondly see what lessons can be learned from the treatment of monuments in history. In order to do this, I will examine two similar public buildings which come under the general classification of monument / fort / palace / castle and look at their settings as free-standing monuments.

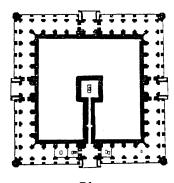
These two buildings types are firstly mausoleums; such as Hamayun's Tomb 1564-70. A.D., Akbar's Tomb at Sikandara, 1600-8. A.D., the Tomb of Mirza Ghiyas Beg -better known by his title Ittimad al-Daula or Minister of Finance¹⁵⁶ -- at Agra, 1622. A.D., and the Taj Mahal, 1640-8. A.D. The second type is the fortress standing independently in the desert; Mshatta, 744-50. A.D. and Ukhaidir 764-78. A.D.

Looking at the plans of the mausoleums, there are certain principles that seem to be common to all. Firstly, the layout of the buildings and the garden in which it stood was symmetrically planned: in the earlier examples the tomb was located in the center of the

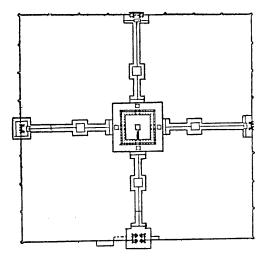
¹⁵⁵ Curtis, p. 6.

¹⁵⁶ It was his daughter, Mihr al-Nisa, that the Mughal Emperor Jahangir made Empress, with the name Nur Jahan, Light of the World, and in whose memory he built the Taj Mahal. See John D.Hoag, Islamic Architecture (New York: Harry N. Abrams, Inc., 1977), p. 377.

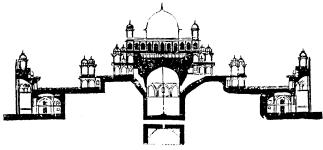
169. Akbar's tomb at Sikandara.



a. Plan.

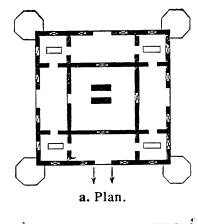


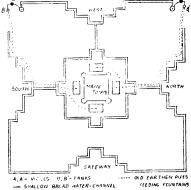
b. Plan of enclosure.



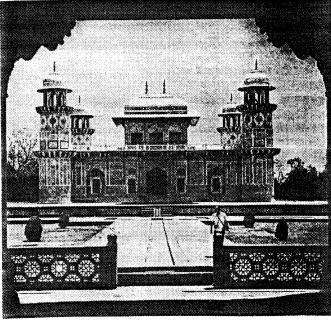
c. Elevation with conjectural dome.

170. Tomb of Mirza Ghiyas Beg at Agra.



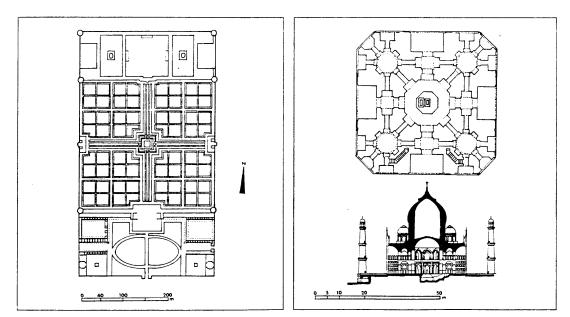


b. Plan of garden and tomb.



c. Principal elevation.

garden, but in the Taj, because the architect wanted the building to be adjacent to the river, the building is sited at the end of the garden. Although, the policy of location was altered in the last case the landscaping was still symmetrically organized around the central pool that has taken the place of the tomb. Secondly, from the exterior the facades are designed to be seen from all sides, although there is usually emphasis on a particular facade. Thirdly, in most cases, except for the Taj, the tomb is the central focus of the carefully cultivated and specifically designed landscape which serves to highlight the building. Fourthly, regarding orientation, they all depend on an axial treatment which was further emphasized by the use of both running water and still pools of water in which the reflection of the building can be seen. Fifthly, all the buildings were volumetrically composed around a combination of a central dome, chatris, minarets, and iwans with secondary iwans flanking them. Lastly, from a pedestrian position, the interior is accessible from all sides, usually by four entrances. In the interior -- although there were in some cases numerous routes around the tomb, and in particular instances more than one cenotaph -- all the primary and secondary routes gravitated the visitor to the core of the building.



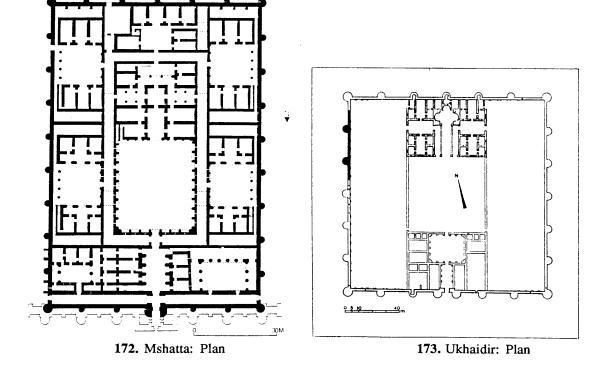
171. The Taj Mahal: a. overall landscape plan, b. detailed plan and c. section through the Tomb.

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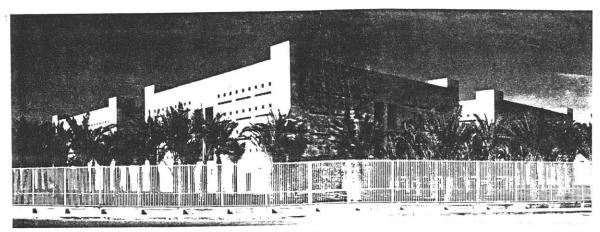
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In the case of the free-standing fortress of which Mshatta and Ukhaidir are good examples, there are also several organizational principles apparent. Firstly, both are surrounded by bland walls with small high level openings on all sides, giving no indication of the internal organization or the volumetric composition. Secondly, even though the exterior walls are bland, the main entrance is given a certain defined prominence; this is especially so in the Mshatta where there was a three-meter high band of decoration all along the primary elevation to the fort.

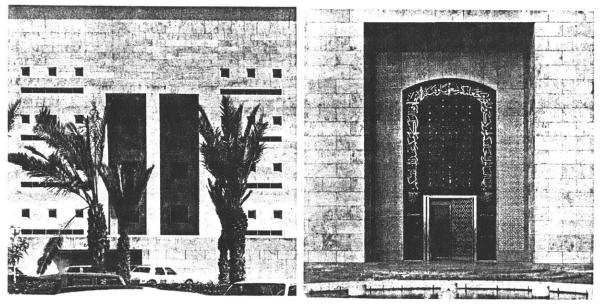
Internally, both are planned using the Roman and Byzantine principles of symmetry in that there is a single axis from the entrance to the inner core of the building which transversed a series of external and internal spaces. The spaces inside the fortress walls which were open to the sky were virtually perfectly symmetrical about the central axis.



174



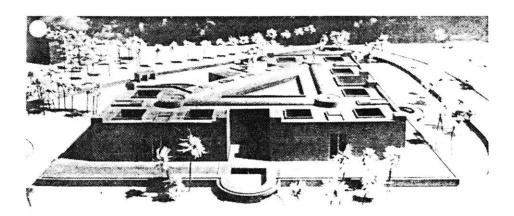
174. A typical view of the plain exterior.



175. A detail of the exterior elevation.

176. The main entrance.

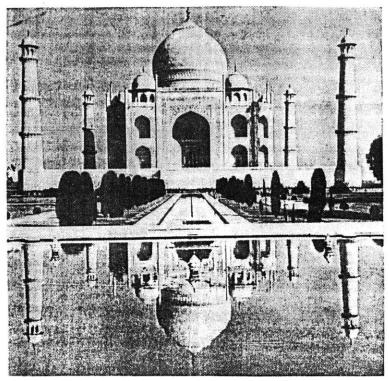
Examining Larsen's building in light of both these types, there are certain elements that are common to both; the differences will be analysed in other sections. Firstly, in relation to the mausoleum, we can see in principle a symmetrical organization about a central axis terminating in an internal central space which is the focus of the building. The treatment of the exterior, is closer to Mshatta, for we see, according to Larsen's understanding of the "Islamic tradition of the hidden architecture with stern exteriors," 157 a bland, unassuming exterior. Complementing the idea of fortification, Larsen uses three visual elements -- the towers, the narrow openings, and the giant bronze doors, beautifully ornamented but looking strong enough to hold back an army. In the case of the tower, he deliberately plays the image down by not expressing it fully as a separate entity, as in the fort, but by only extending the upper sections, which look like watch towers but are actually spaces for lift machinery.¹⁵⁸ With the fenestration, however, he has the maximum constraints; office space by and large has similar exterior requirements and the majority of the building is office space. In this instance, Larsen's ability to synthesis these two elements and still retain the essence of the unassuming exterior, should be credited.



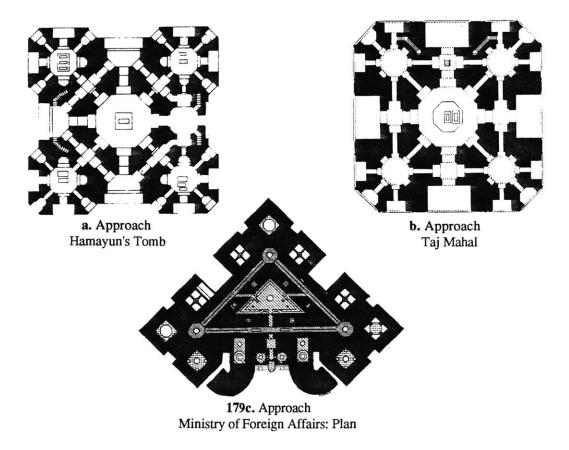
177. Birds eye view of the model of the Ministry of Foreign Affairs

¹⁵⁷ International Union of Architects, p. 112.

¹⁵⁸ These are unused, as the lifts were eventually located elsewhere.



178. A fairy vision of silverly white mirrored in quiet waters (Copyright, Archaeological Survey of India)



Site Planning, Massing, and the Use of Axes

In Larsen's approaches to urban planning, we have seen the adoption of a formal, introverted massing. But, apart from the constraints of the urban character surrounding the site, was it absolutely necessary that the design adopted was the only one that could be followed? Let us examine the project brief to see if there were any other client criteria that determined this organization. Examining the area requirements, it is evident that there were three major components of accommodation as outlined in the previous section.

However, Larsen had "to develop a physical image that will reinforce the ministry's mandate and aspirations" ¹⁵⁹ with no specific guidelines regarding the urban character of the buildings except for some notions such as "...creat[ing] a contemporary symbol of Islamic ideals which acknowledges the Islamic traditions of Riyadh." ¹⁶⁰

Considering the total built-up area that Larsen had at his disposal, 85,000 square meters, and the planning principles that he employed in the organization of courtyards and internal streets, one can only speculate, if he had been encouraged to pursue his original lower, more dissipated scheme and not to take the monumental approach, as to what he might have created.

In the case of the formal element and the massing of the Ministry of Foreign Affairs, a dramatic comparison is made by Chris Abel: "The monumental plan seems to have been suggested chiefly by the Islamic monuments of Mughal India, and by [the tomb of Mumtaz Mahal, Shah Jehan's beloved wife] the Taj Mahal, no less." ¹⁶¹ He goes on to describe the Mughal architects' most favored plan form for maousolea as "the square plan form, centered on a major domed space and divided into four quadrants to orient the structure equally in all four directions...," ¹⁶² and then explains the similarities and

¹⁵⁹ International Union of Architects, p. 9.

¹⁶⁰ Ibid., p. 10.

¹⁶¹ Abel, p. 30.

¹⁶² Ibid., p. 31.

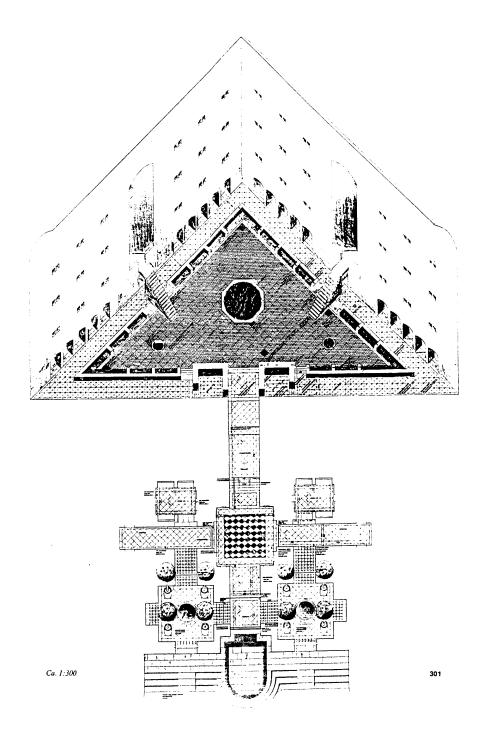
contrasts between the Taj and the Ministry of Foreign Affairs which he claims are as follows:

"Each quadrant of the Taj is pierced by an octagonal light shaft topped by a decorative pavilion, or chatri : Larsen's domed 'light towers' Each shaft is also connected to every other shaft by passages --Larsen's 'streets' which run parallel to the outside wall but also connect diagonally across the central space containing the tomb, thus triangulating the plan...other features...confirm the model...in the center of the exterior wall of each quadrant of Larsen's building is a recess, stopping short at the third floor to allow the top floor to run over uninterrupted...as with the Taj, the recesses are used here to frame a main entrance (...only one instead of four, and elsewhere to mark the position of light shafts)...and then the podium...designed to stand on their own, often in garden settings of equal grandeur, and presenting magnificent outer as well as inner aspects. Likewise out of the two stories of covered parking Larsen creates a suitably impressive platform for his own monument." ¹⁶³

The purpose of the following extensive critical examination of Chris Abel's statements claiming substantial similarities between the Taj Mahal and the Ministry of Foreign Affairs is to illustrate the viewpoint of a western critic in that, although Larsen in massing has created a building of monumental scale, if we compare the principles of monuments with Larsen's creation, virtually all the elements that Abel has referred to have been contradicted.

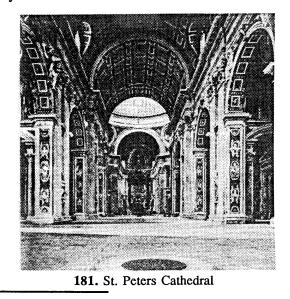
It is possible that "the square plan form, centered on a major domed space and divided into four quadrants to orient the structure equally in all four directions..." was the plan from which Larsen's building originated. However,...

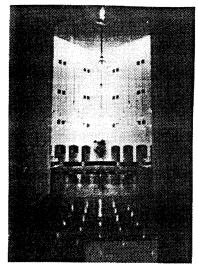
¹⁶³ Ibid., p. 31.



180. The Axial Approach: The central axis from the main entrance to the triangular courtyard.

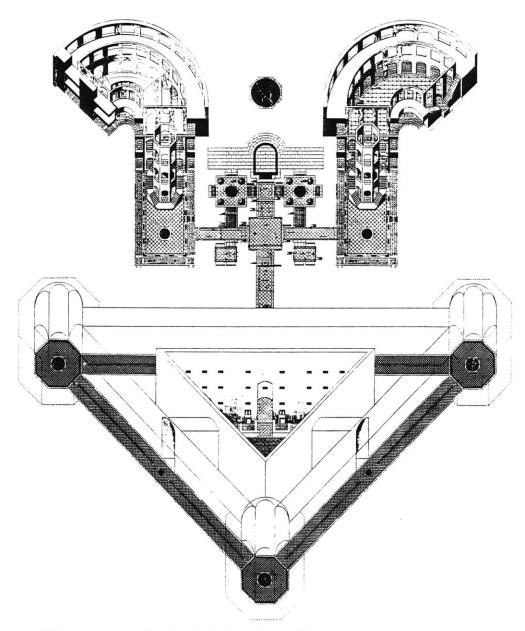
... if we look at the final transformation of the plan of Larsen's building, there are several principles that have been changed. Firstly, due to the orientation, configuration, and access conditions to the site, Larsen has taken the traditional Mughal four quadrant plan, discarded the fourth quadrant, rotated the building 45°, moved the central space inside the remaining triangle of "streets", and, in the process, changed the octagonal shape to a form somewhere between a truncated square and a triangle. Curtis states that one of the guiding ideas of the winning project was "...the triangular plan of the finished building [which] loosely recalls the Saudi Emblem of crossed swords with a central axis between them." ¹⁶⁴ Consequently, in place of the four equal axes of the original, Larsen has created a single main axis marked by the main entrance and terminating in the triangular central space. Analyzing the circulation of the two buildings due to the alterations in planning, it is clear that unlike the Mughal Mausoleums, where there is a definite hierarchy of streets in which all the primary approaches lead directly to the central space or tomb as the focus, and the secondary routes and spaces that do not directly lead to the center complement the primary routes, all of these make the pedestrian gravitate to the core of the building. Unlike the axis in the Taj, which focuses from all sides on the tomb, that in the Ministry of Foreign Affairs visually leads the pedestrian into the central space, and, instead of culminating in the object that the building is honoring, terminates abruptly in the corner.





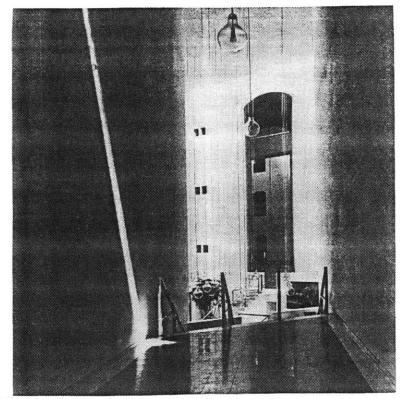
182. Ministry of Foreign Affairs

164 Curtis, p. 6.



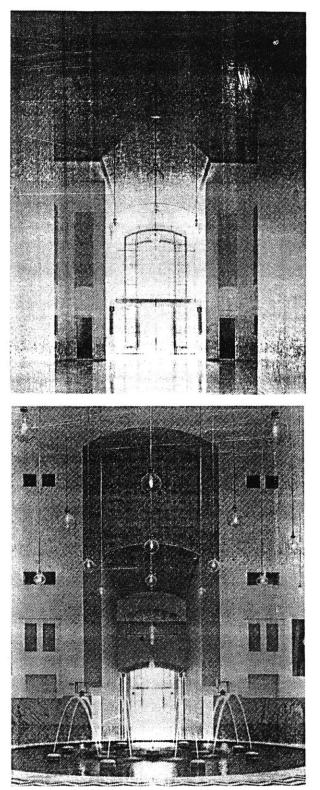
183. Axonometric showing the independence of the 'streets' from the 'central space'

In the Ministry of Foreign Affairs, the central space is no longer the focus of the axis, but operates to a large extent independently of the triangulated streets, even though, according to William Curtis, from point to point "the pedestrian glimpses into the central space, sees unfolding vistas, mysterious screens, glimpses of gardens and splashing fountains." ¹⁶⁵ However, they are not in any way dependent on the central space as a termination or the focus, so much so that both systems of circulation can work independently. This is even more evident in the view from the major portals that lead from the central space to the streets. If the visitor looks back after climbing the stairs and arriving at the junction of the street and the portal, even though he is looking directly across the central courtyard, due to the difference in height, it is not the central space which attracts the attention but the identical street opposite.



184. Looking from one 'street' across the central space to the identical street beyond.

¹⁶⁵ Ibid., p. 13.



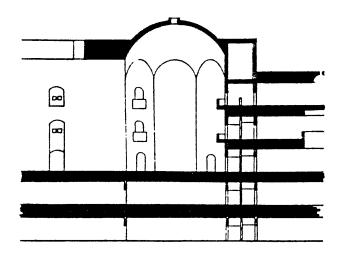
185. The reflection of the intense sunlight on the polished marble results in an intense glare.

Secondly, a similarity between the Ministry of Foreign Affairs and the Taj Mahal that has not been commented on by Abel is the issue of entry into the building. In the Islamic world, there are many examples of the way entrances to public buildings are treated.¹⁶⁶ Except for the early period, which was still dependent on previous typologies, and later only the mausoleums, rarely are the entrances axially connected to the core of the building. Although there may be axial elements, they take a circuitous route into the internal spaces. The benefit of this was that it gave the visitors an element of surprise all along, as one literally did not know what was around the corner. Thus it increased the awareness of space, acted as a climatic moderator, and, historically speaking, could be protected effectively by a smaller numbers of guards.

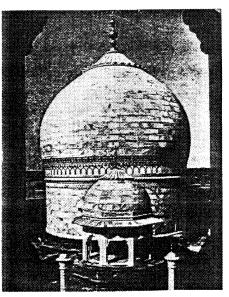
Larsen, however, follows the Persian and Ottoman approach of the linear axis from the main entrance to the entrance lobby to the central court, in which, the moment the person enters the building, the final goal -- although the visitor may not become aware of the scale -- is in sight and it is a matter of straight-forward progression until arrival. Due to the nature of the climate and the quality of the sunlight in Saudi Arabia as opposed to India, and the different functions of both the buildings, this direct approach, which is not a climatic problem in the Taj, has two negative consequences.

Firstly-even on a daily basis, but more so when the main doors need to be opened for official formalities -- due to the differences between the outside temperatures and the air-conditioned internal environment, hot air rushes into the building. Secondly, when the visitor is exiting from the central courtyard of the building, the reflection of the intense sunlight on the polished marble results in an intense glare.

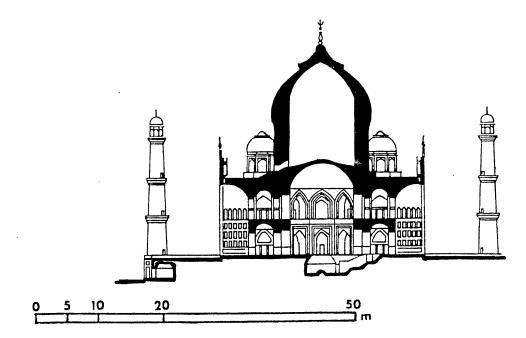
¹⁶⁶ The contrast between the entrance into buildings between the East and the West, was for me, for the first time, very clearly demonstrated by Mr. T. Payette (one of my readers) in the lecture on the Aga Khan Hospital in Karachi, Pakistan that he gave in Professor Albert Szabo's class on Indigenous Architecture (GSD 3308, Fall 1987) at Harvard.



186. Enlarged Section through the domed structure.

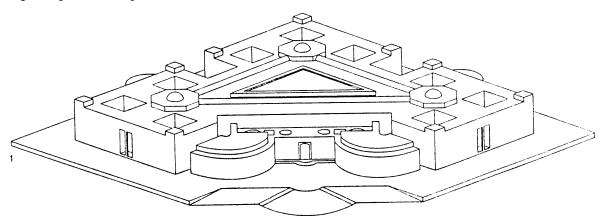


187. The 'chatri' of the Taj.

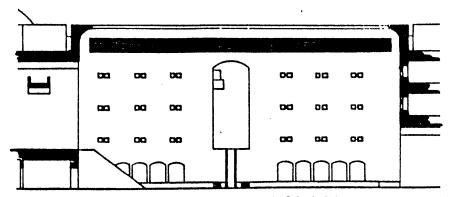


188. Enlarged Section through the central Tomb chamber of the Taj Mahal.

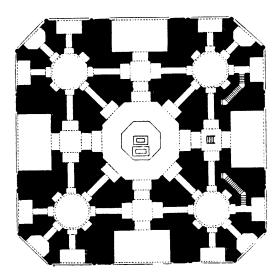
Thirdly, if we were to take the notion of expression and look at the dome of the Taj Mahal, we would see that, because of the fact that the actual dome is below the parapet level, the Mughal architect added a second dome for its visual status. In the Ministry of Foreign Affairs, Larsen avoids any external expression of the central space; unless the visitor enters the building, and even then only when he is virtually in the core of the building will he know that such a grand space exists. In addition, Abel states that "each quadrant of the Taj is pierced by an octagonal light shaft topped by a decorative pavilion, or chatri : Larsen's domed ' light towers'." Comparing the two sections, at once there are major differences. Internally, in the case of the Taj, light enters the vertical light shaft through 'mashrabiyas' in the iwans -- a vaulted niche or open porch; externally the 'chatri' -- a decorative pavilion -- of the Taj is an important element of the total composition. In contrast, in the Ministry of Foreign Affairs, there is an occulus -- an opening -- at the apex of the dome which has been concealed in the total configuration.



189. Birds eye view showing the roof structure of Larsen's central space and domed structures.



190. Enlarged Section through the central courtyard of the Ministry of Foreign Affairs.

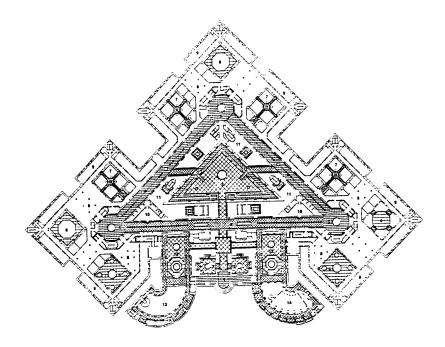


191. An enlarged plan showing the 'passageways' of the Taj.

Fourthly, on a very simplistic level it can be stated that "each shaft is also connected to every other shaft by passages -- Larsen's 'streets' which run parallel to the outside wall but also connect diagonally across the central space containing the tomb, thus triangulating the plan."

But spatially what is the character of these connecting passages ?

Looking simultaneously at plans, sections, and photographs of these links, it is clear that in the Taj these were just transitional spaces constricted in volume in comparison to the adjacent spaces so as to dramatize the exit from one node to another, or from a node into the central space. Never was it their purpose to spatially compete with the central space. In comparison, the streets in the Ministry of Foreign Affairs are as important in function and character as the central volume.

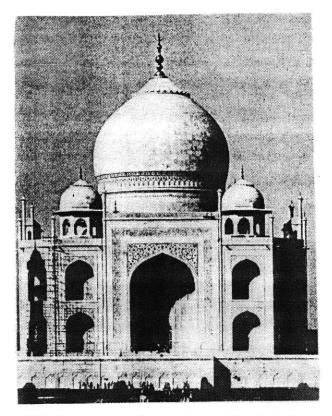


192. An enlarged plan showing the 'streets' and the 'central space' of Larsens project.

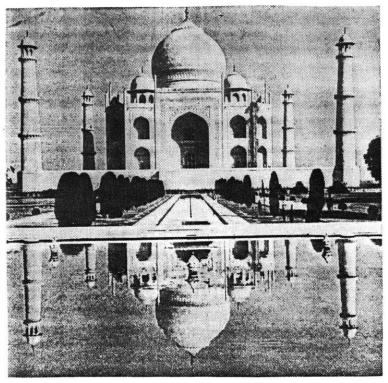


193. According to Abel: Larsens Iwan

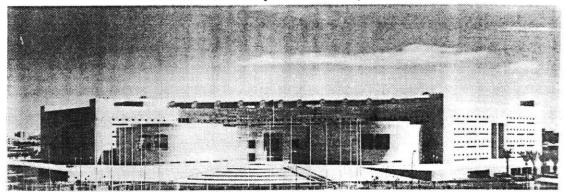
Fifthly, "in the center of the exterior wall of each quadrant of Larsen's building is a recess, stopping short at the third floor to allow the top floor to run over uninterrupted ...as with the Taj, the recesses are used here to frame a main entrance." Of all the similarities that Abel has attempted to draw between these two buildings, this is the weakest for the simple reason that if we examine the elevational composition of the Taj from a distance, the iwans modulate sunlight, creating shadows that draw in the attention of the viewer with a promise of spaces beyond. In contrast, looking at the Ministry of Foreign Affairs from a distance, the column in the middle of the interpretation of the iwan discourages the viewer from penetrating the dark space behind.



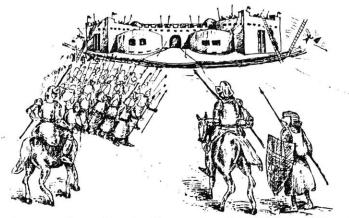
194. The central and flanking Iwans of the Taj Mahal.



195. Elevational composition of the Taj Mahal.



196. Elevational composition of the Ministry of Foreign Affairs.



197. An interpretation of the visual impression of the Ministry of Foreign Affairs.

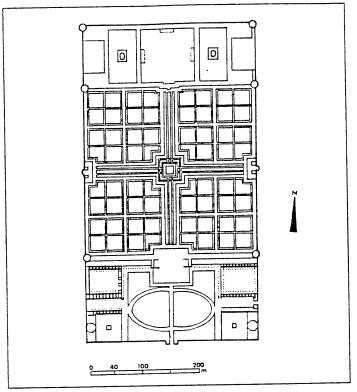
Finally, "the podium designed to stand on its own, often in garden settings of equal grandeur, and presenting magnificent outer as well as inner aspects..." is compared to Larsen's " suitably impressive platform for his own monument." There are three issues involved here: the purpose of a platform in elevating a building, the exterior presence of the building, and the relationship between the building and the landscape. In the case of the former, it is true that the Ministry of Foreign Affairs, like the Taj, sits on a podium, accessible only from one side but visible from all.

Here the similarity ends, for contemporary considerations have meant that, instead of the crypt that lies under the Taj, in the Ministry of Foreign Affairs there are two storeys of covered parking.¹⁶⁷ In addition, there is another difference, and that is in the approach to the building. If we studied pedestrian perceptions from the moment people go through the outer gate, the Taj presents a platform wall which gives the building a sense of domination due to the fact that there is no perceptible means of access to the higher level on which the mausoleum is located. Only when the pedestrian is substantially closer to the building does a small staircase, the only means of access to the upper level, reveal itself. In contrast, the ramp and staircases leading up to the entrance of the Ministry of Foreign Affairs immediately leads the eye of the viewer to the fountain and the main door; hence none of this suspense is created. It is a question of axial progression, from gate, to ramp, to plaza and finally to entrance, a Western sense of progression.

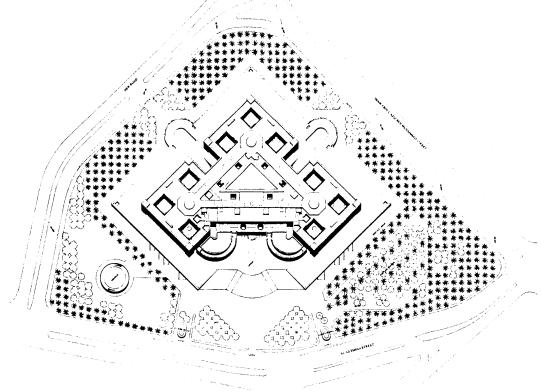
Secondly, the Taj has been paid tribute from the moment of its creation and even by contemporary local poets like Tagore who write of a quality beyond the architecture - "only let this one tear-drop, this Taj Mahal glisten spotlessly bright on the cheek of time for ever and ever." ¹⁶⁸ It would be possible to imagine the interior of the Ministry of Foreign Affairs inspiring such sentiment, but it is extremely difficult to imagine the same being said about the exterior, which has been satirized in the <u>Architectural Review</u> as a garrison.

¹⁶⁷ As a solution to the ever growing number of motor vehicles in the Gulf this approach is a far better than the seas of tarmac that normally surround buildings.

¹⁶⁸ R. Nath, The Immortal Taj Mahal: The Evolution of the Tomb in Mughal Architecture, (Bombay: D. B. Taraporevala Sons & Co., 1972), p. 82.



198. Landscape design of the Taj Mahal.



199. Landscape design of the Ministry of Foreign Affairs.

From the viewpoint of integration into the landscape, the Mughal gardens were as much a part of the total composition as were the buildings, to such an extent that the gardens were composed to orient, mold, define, and frame the perception of the viewer and in this manner elevate the grandeur of the building. In contrast, the Ministry of Foreign Affairs is "set well back on its site in groves of palm trees." ¹⁶⁹

Looking back at the building it is possible that these transformation are what Larsen refers to "A[s a] synthesis of Riyadh regional and Pan-Islamic sources at such a level allowing deep reinterpretations"! ¹⁷⁰ Finally, I wish to raise one vital point for designers to consider which I will attempt to answer in the conclusion.

At what point does the transformation of an historical prototype due to the superimposition of criteria that are specific to the particular project or place so distort the original that it no longer relates to its origins in any of its physical or spatial attributes ?

¹⁶⁹ Abel, p. 30.

¹⁷⁰ Curtis, p. 6.

Vernacular Images

In regard to planning in the context of an urban setting, site planning, massing and the use of axes in the Ministry of Foreign Affairs, it is evident that Larsen finds his inspiration from sources throughout the Islamic world regardless of the geographic region or era. However, in the selection of images like "the Islamic tradition of the hidden architecture with stern exteriors," ¹⁷¹ it seems that his references are from both the indigenous architecture of the Arabian Peninsula and the influence of Islam on the building tradition which he sees as producing an architecture in which "the anonymity of the facades is another requirement of the Islamic ideology." ¹⁷²

He then postulates that the Ministry of Foreign Affairs will respond in the following way:

"The objective of this building is to carry on the historical continuity and to create complexity and variation through deliberate architectural elaboration of the traditional Islamic elements." ¹⁷³

From these three statements it can be seen that Larsen's picture of the architecture of traditional urban fabrics in the Arab world results in the observer being confronted with a blank facade -- 'anonymity of the facades' -- pierced only by small openings, usually out of reach on upper levels, with heavy doors -- 'hidden architecture with stern exteriors' -- which lead to secluded worlds of open private courts and adjacent living spaces. But seldom, according to critics like Abel, does the architecture of the Arab world occur on its own. Let us step back from this argument for a moment and cast light on the fact that it was not Larsen who chose the site.

However, perceiving that the structure was unlikely be an integral part of the urban fabric, he has attempted, something for which he must be given due recognition, to

¹⁷¹ International Union of Architects, p. 112.

¹⁷² Clouten, p. 20.

¹⁷³ Ibid., p. 20.

simulate the internal semblance to the indigenous fabrics, albeit in an abstract manner. Looking at Larsen's building in consideration of the above statements, and excluding the entrance with its symbols of scale and icons of power, which I have discussed earlier, and the issue of monumentality, Larsen's dilemma remains apparent. Initially he states "The impression of the limit, size and function of the individual building is thus blurred, and the possibility of recognition of the extent of the public functions is eliminated." ¹⁷⁴ However, on completion of the building, we can see that Larsen's statements about the building have changed; he says, "...the three corner blocks each reflect their internal function: the section for the Foreign Minister, the section for politics and economics, and the section for administration...[and]...The circular forms contain the more public functions of the ministry." ¹⁷⁵

Finally, Larsen goes on to state that the exterior of the building "is anonymous in the tradition of the old palaces and official buildings in Riyadh which were constructed of mud brick...[rather than]...pompous in the Western architectural tradition." ¹⁷⁶ It is this latter part of the statement with which I have most difficulty. The Advanced Oxford Dictionary defines 'pompous' as: "showing self importance; making an ostentatious display of dignity or importance."

Examining the building, it is true that except for the main entrance there are no ostentatious displays. Yet architectural pomposity is not exclusively dependent on grandiose displays; it is a result of several factors, such as volumetric composition, massing, scale, material of construction, and elevational treatment. However, simply that it lacks conspicuous decoration does not make it anonymous. In fact the irony is that, by attempting to build on tradition, Larsen's project has become even more prominent. Had he used glass extensively, like three of his competitors, Robert Fairburn, Roger Tallibert, and Piano, Rice and Zbinden, or other Western models like the 'Arabian Nights Fortress' scheme of Vedat Dalokay which the jury "found completely unsatisfactory,...

¹⁷⁴ Ibid., p. 16.

¹⁷⁵ International Union of Architects, p. 112.

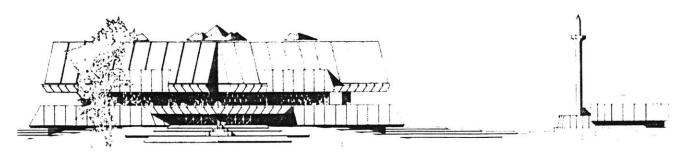
¹⁷⁶ Ibid., p. 113.

inappropriate to Riyadh," ¹⁷⁷ it is likely that he would have achieved anonymity. But let go back briefly to all the schemes to see what it was that these architects were proposing, and that the clients did not approve, in order to understand the architectural language and the associated identity that the Saudis perceived to be appropriate for the Ministry.¹⁷⁸

o Two projects, those of Fairburn (USA) and Tallibert (France), wilfully ignored all reference to traditional Islamic architecture...and called for the creation of new symbols using contemporary architectural language. [The Ministry was no longer interested in a Western model.¹⁷⁹]

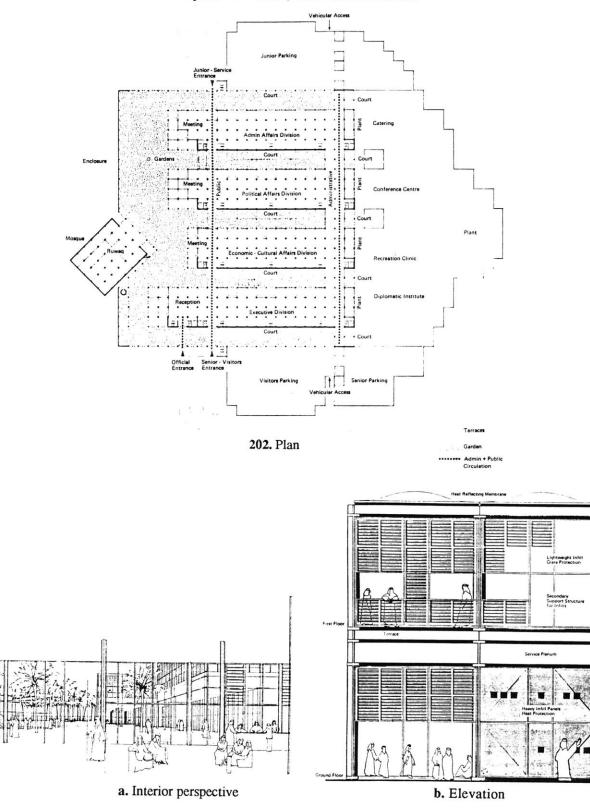


200. Perspective of Fairburn's project.



201. Elevational composition of Tallibert's scheme

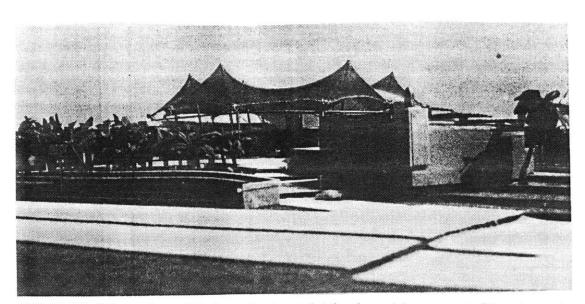
- 177 Clouten, p. 17.
- 178 In the following section, all the text except for that within the brackets which is a combination of a personal and Curtis's criticisms on the projects is from a publication on the entries by the IAU.
- 179 One would hope that, as a result of this attitude of the practice toward the architecture of the region, their inclusion in any further competitions will be thoroughly questioned.



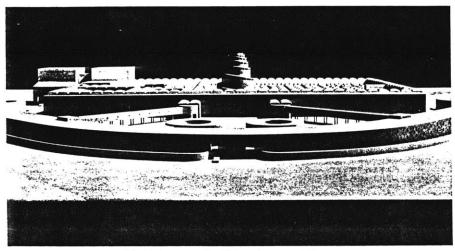
The Proposal of Piano, Rice and Zbinden.

o Piano, Rice and Zbinden (Italy) [proposed the] use of prefabricated elements ...which corresponded to the program requirements...[However this lacked a] ...global image...[and]...symbolic value. [In other words the industrial shed, regardless how technically sophisticated it was, was not what the Ministry wanted.]

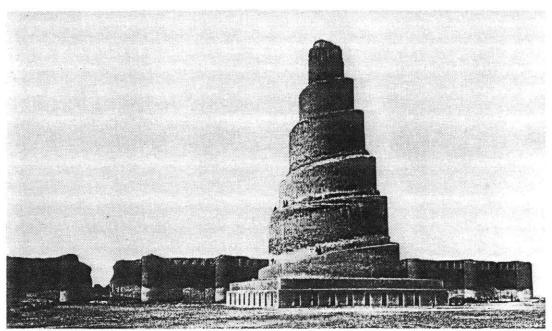
o [Unlike the Diplomatic Club and the Conference Center in Mecca where Frei Otto (W.Germany) was successful in his incorporation of tensile structures] here Otto continued his research ...[by the use]...of large hanging structures with a personal interpretation of the transition from nomadic to sedentary life...[In keeping with which]...it was the one that did not take the formalistic approach to the issue of image. [This statement seems to indicate that the project lacked the formal image the Ministry believed was an essential element of the scheme and was incoherent in planning a hierarchical structure for the accommodation.]



203. Model of Ottos scheme. (It is interesting to see that the plan and the treatment of the minaret of this project are similar in concept and organization to the Conference Center in Mecca.)



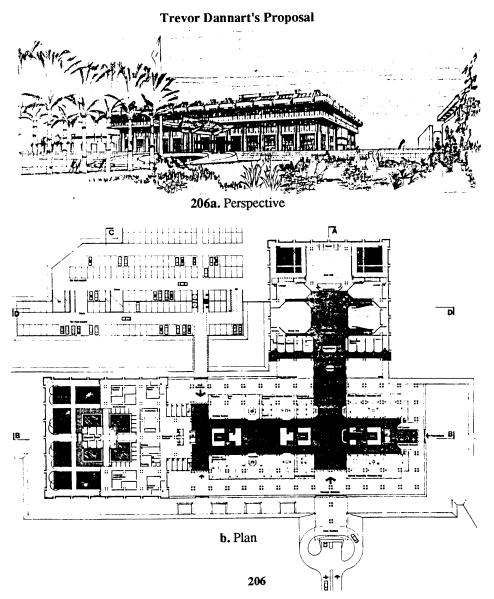
204. Photograph of Isosaki's model



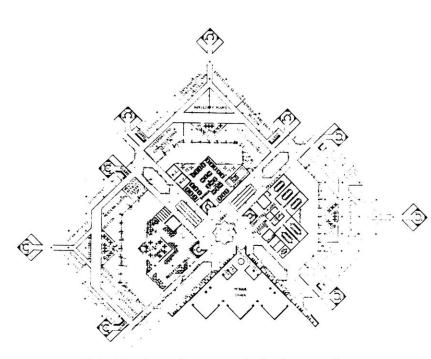
205. The Great Mosque of al-Mutawakkil, the Malwiya (minaret) 848/49 - 852 A.D.

o Isosaki's (Japan) scheme led to a surprising global misorientated general image. [The spiralling minaret in the scheme was too Iraqi in character and could not be acceptable as a Saudi identity.]

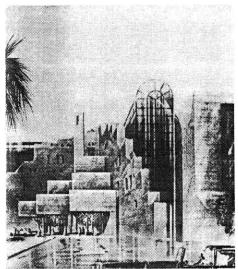
o Dannart created two interior spaces, one for the offices and the other for the common activities...[however]...it was difficult to maintain the quality of internal spaces existing in Muslim architecture within the framework of a contemporary design. [Interpreted, this means that, although the project was not as modern as the first two, nevertheless the central overscaled concourse did not have the required ambience existing in traditional fabrics.]



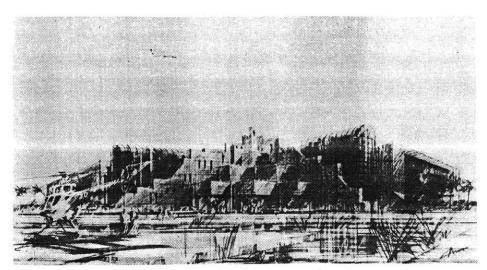
Suter and Suter's Proposal



207a. Plan (note the mosque in the foreground)



b. The slenderness of the wall on one hand supporting the stub of a minaret and on the other hand attempting to conceal the glass barrel vault.



c. Perspective clearly showing the clip on approach to the vernacular.

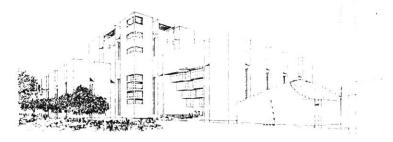
o In the case of Suter and Suter...the lively and dynamic character...[did not] ...correspond to the Ministry's image of solemnity. [Of all the schemes in the competition, in principle this, in my opinion is the worst, for the following reasons. In the case of Fairburn and Tallibert, at least we see some honesty in their work; they felt that] an Islamic architecture did not exist in Riyadh and a contemporary image and symbols were needed [thus they proceeded to design one.]

Suter and Suter, however, seem to have taken the attitude of 1% for sculpture and applied it to tradition; in the entrance courtyard to the building we see a 'wall for exhibition' (indicated on the second floor plan). In complete contrast to their statement, "The purpose of our design, then, was not to copy traditional architecture in a superficial and decorative manner," ¹⁸⁰ they proceed to do exactly the opposite down to the last detail of the triangular openings on the upper levels. To reinforce the attitude of the 1% for tradition on the ground floor, the wall is only one room deep (approximately 4 meters).

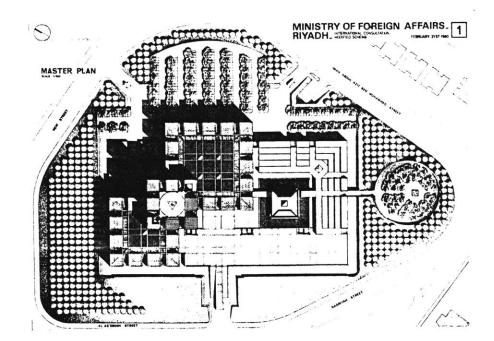
Furthermore, one would never believe that, behind the helicopter and the Rolls-Royce in the foreground of the sketches, above the glitz of the entrance, inside the cuboid boxes, is the mosque, above which is the 'Harem' -- it is possible that this Swiss firm in their ignorance did not realise that Muslims prayed in a straight line, not in a zig-zag one -- and, as if this were not enough, the stub that projects from the top of the cuboid structure is supposed to be the minaret. [I can only speculate why this scheme, from the attitude alone of the architects towards the region, was given more than a passing glance, let alone being chosen for the second stage.]

¹⁸⁰ International Union of Architects, p. 86.

Pierre el Khoury's Proposal



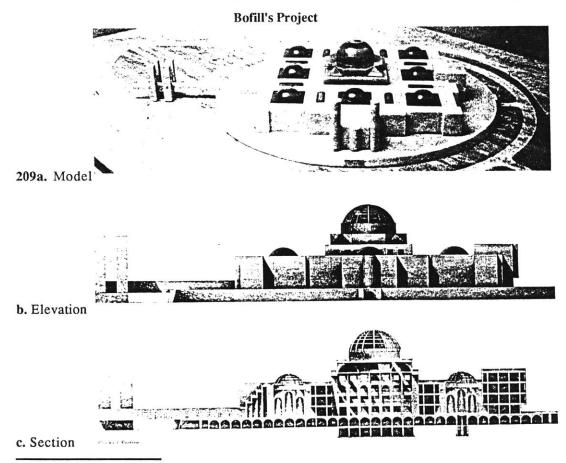
208a. Perspective



b. Master Plan

o The elements of Khoury's scheme -- the large entrance, the mosque, the lake, and the layout of the volumes -- all combined to give the ministry an image both original and welcoming in appearance, and was the one recommended -- [with good reason] -- to such an extent that at the end of the first stage the project "had shown the potential to meet the ministry's highest expectations. [However, it seems that] Khoury was unable to answer the previous concerns of the jury...and the scheme regressed from its previous promise ...they [the jury] could only assume that the rigid block system frustrated the architect from achieving the goal." ¹⁸¹

o Bofill produced a strong and impressive image. [However this was too rigid in its application of symmetry and geometry. According to Curtis, "Bofill's extravaganza with domes was turned down because [it was] too ostentatious and too like a mosque." ¹⁸²]



181 International Union of Architects, p. 20.

182 Curtis, p. 5.

Looking back at all the schemes, several issues are interesting from the point of view of understanding the clients' outlook. Firstly, they definitely did not want a Western solution either in the treatment of the exterior or in the interior. Secondly, the scheme had to be coherent in the organization of both its circulation and accommodation. Thirdly, technology was to be utilized as a tool rather than the determinant of the form. Fourthly, and no less important, the image of the vernacular must not be directly relateable to any other region outside the peninsula.

Larsen's building meets most of these criteria: the building is definitely not Western, has a clear hierarchy of circulation and accommodation, the sophisticated technology is subservient and inconspicuous, and, finally, its images attempt to either relate to the local vernacular or to generic Islamic types.

Circulation and Streets

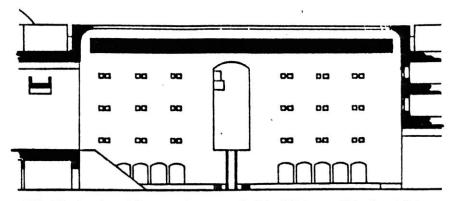
Examining a map of Saudi Arabia, and particularly Riyadh -- although the phenomenon is not exclusively applicable to the capital -- to try to relate the old city to the contemporary one in terms of the city core from where Larsen elicited his inspiration -- apart from a few isolated sections in the heart of the city which are excellently documented by Mousalli, Shaker and Mandily,¹⁸³ and whose evolution anf transformation is analyzed by Hussayen and Shuaibi ¹⁸⁴ and by Al-Hathloul ¹⁸⁵ -- the evidence indicates that there is little left, the repercussion of radically different aspirations of the recent generations in the Kingdom. Thus it is not surprising, that like the previous section on site planning, massing and axes, in his organization of this aspect of the building, too, Larsen finds inspiration outside the Arabian Peninsula.

¹⁸³ Mohammad S. Mousalli, An Introduction to the Urban Patterns in Saudi Arabia (London, Art & Archaeology Research Papers, 1977).

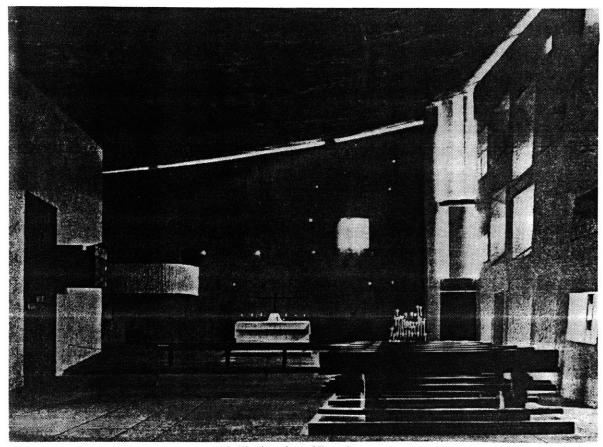
¹⁸⁴ M.A. Al-Hussayen, & A.M. Shuaibi, Urban Land Utilization Case Study: Riyadh Saudi Arabia M.I.T., S.March.S, June 1975.

¹⁸⁵ Saleh Al-Hathloul, "Tradition, Continuity, and Change in the Physical Environment: The Arab Muslim City." MIT. PhD Thesis 1981.

Visually comparing the relationship between walls and ceiling.



210. The interior of the central courtyard of the Ministry of Foreign Affairs



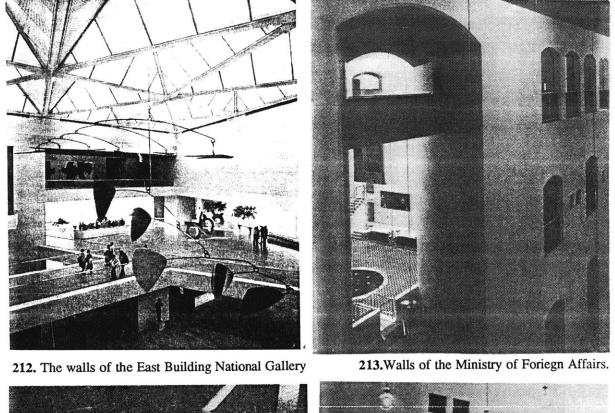
211. The interior of Ronchamp

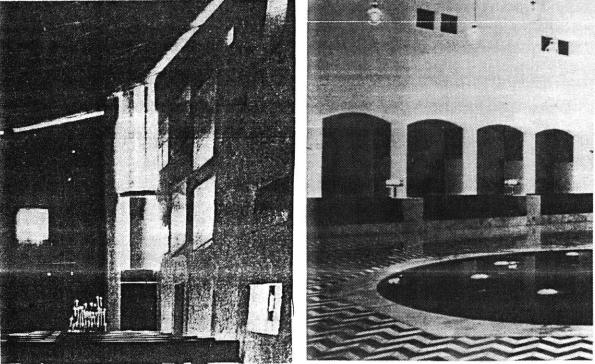
The center of this geometric ordering of the circulation and street structure in the "central space," which in section has been compared by Abel to Ronchamp and in plan to the central lobby of the East Building of the National Gallery of Art in Washington; described as wholly modernistic, a combination of intersecting planes and shifting perspectives complementary to the art displayed within.

Initially there may seem to be no affinity between Corbusier's, Ronchamp, Pei's Extension to the National Gallery of Art in Washington, and the Ministry of Foreign Affairs, a much more controlled symmetrical and stable enclosure. However, if we look carefully at the treatment of these planes and perspectives in Larsen's scheme, we can discern areas of subtle resemblance.

The first area of this likeness is in the treatment of the roof over the central space. Comparing a section of Ronchamp and the Ministry of Foreign Affairs, the relationship between wall and roof in the former allows a thin shaft of light to penetrate at various angles, depending on the altitude of the sun. In the latter, this effect is reversed; rather than the thin strip of glazing joining the walls and the ceiling, they overlap at such an angle that the glazing is not visible and sunlight can never penetrate into the central space. Bearing in mind the climate of both these regions, it is apparent that Corbusier's design is tailored for a climate where sunlight is at a premium, and Larsen's solution is a response to the intense sunlight of the Arabian Peninsula.

The resemblance between these two methods of connecting walls and roofs lies not in the particular system of detailing, but in the principle that in both projects the vertical and horizontal planes are connected by light. They have reduced to an absolute minimum the structural connection between wall and roof, thus creating the concept of a floating roof in which the architect creates a large horizontal white plane, dramatically increasing the visual mass, then immediately negates it, expressing a feeling of weightlessness but clearly defining primary structural elements.





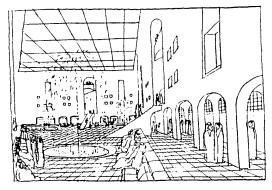
214. The walls of Ronchamp

215. Walls of the Ministry of Foreign Affairs.

The juxtaposition of vertical planes to create illusions of depth.

This exercise in the juxtaposition of planes to create illusions is further carried out in the relationship of vertical planes. In Ronchamp, we can see Corbusier exaggerating the depth of the interior facades, and, in the atrium of the East Building of the National Gallery, Pei seems to be positioning planes to overstate the depths of entrances and thicknesses of walls. Larsen, too, plays the game of perspectives, but, like Pei, only in the central space, in that he implies the thickness of the walls by the depth of the alcoves at the base of the walls and by angling the planes of the portal in the center of each wall the axis to the streets, creating the illusion of being sliced through massive thick walls of either stone, brick, or mud.

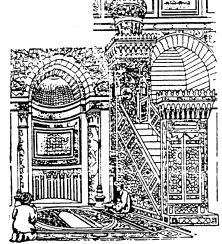
Transition from this space to the streets is by way of two staircases of triangular form, but with visually distracting gold plated handrails focused towards the main axis. Looking at these triangular sculptural elements positioned virtually independently immediately evokes images of a mimbar -- a rostrum, to the right of the 'mihrab' in all Friday mosques -- transformed and abstracted into staircases. These interlock the courtyard with the "streets" in the building whose genesis according to Larsen lies in "the traditional Islamic bazaar streets...which structures and determines the layout" ¹⁸⁶ and whose internal ambience is a result of "a sequence of top light spaces within, modelled on the character of a traditional city of streets, squares and bazaars." ¹⁸⁷



216. Sketch of the central space.

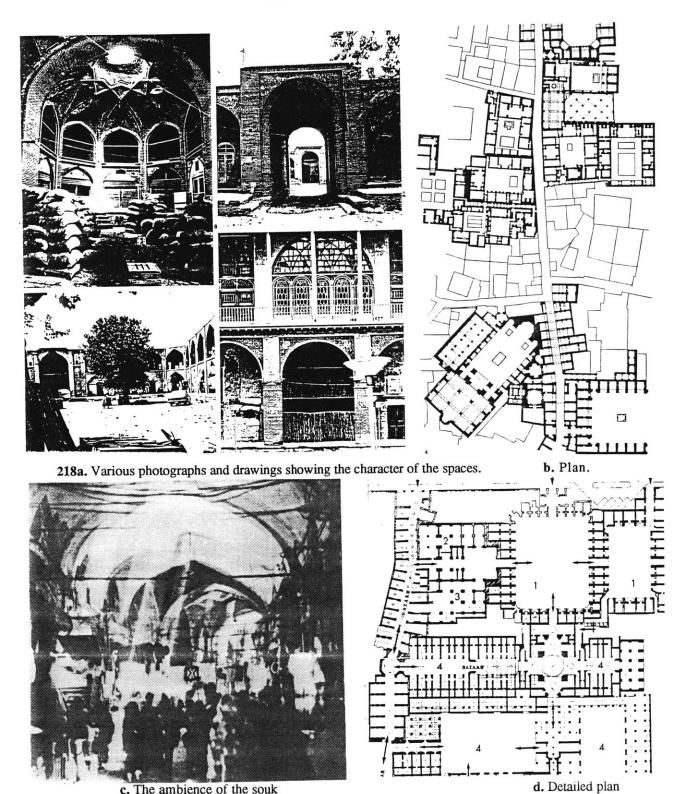
186 International Union of Architects, p. 112.

187 Curtis, p. 6.



217. A mihrab

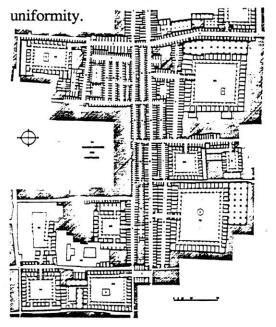
The Bazaar in Isfahan



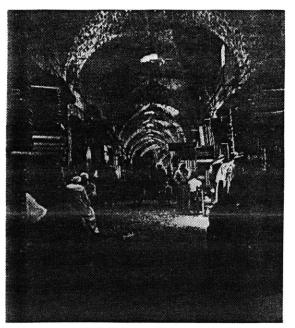
c. The ambience of the souk

Investigating the "Islamic bazaar which structures the layout" that connects the office blocks, there appears to be either a misconception or a liberal romanticism about the role, function, and ambience of a bazaar. If the traditional structure of a bazaar (like that in Istanbul with which most architects in the Arab world are familiar) were to be analyzed, we would find that in terms of activity not only were there shops on either side but in addition there were hawkers in the middle making the width much wider than normal streets. In light of this, if we compare the streets in the complex both in the functional and physical relationship of the spaces adjacent to the street, several major differences would be found.

It would be closer to actuality if it were stated that the "sequence of top light spaces modelled on tradition" was the roofing system of the bazaar in Isfahan, which has been transported into that covering the internal street, but this is also not absolutely correct, for, if the bazaar in Isfahan is dissected, one of its most distinctive facets is the expressed structural system. This, to a significant extent, is the factor that designated the order of the individual shops and the residential fabric directly juxtaposed behind it. One can imagine that over a period of time an explicit order was established which molded a



219. Bazaar in Aleppo: Plan



220. The ambience of the bazaar

In choosing the architectural expression of the vault and the occulus, Larsen has synthesized two bazaars, those of Isfahan and Istanbul, but in an enclosed conditioned environment in an "...attempt to interpret, theoretically and practically the relations within the scope of the local culture." ¹⁸⁸ In Istanbul, the vault is plastered, minimally articulating the structural system, and the method of lighting is from a series of lattice-screen windows between the vertical members that support the roof structure, whereas in Isfahan the structure is exposed and defines the space. At the apex of each vault based on a bay is an occulus, which, on a sunny day, sends beams of light piercing the shaded spaces. In the Ministry of Foreign Affairs, Larsen has chosen deliberately to express the plastered vaulted structure of Istanbul, with the occuli positioned like those in Isfahan but denying the structural system which is "built up from cast concrete, to steel frame in the regular offices." ¹⁸⁹ In choosing not to express the structure but conceal it behind acres of gypsum board, the architect attempts to recreate the planes of walls in mud comparable to the streets of the old town.

In theory, this endeavor to orchestrate similar yet unrelated architectural characteristics should be commended. But how close to or different from the essence of the traditional, organic streets are these transformations ?

Firstly, comparing the morphology of the old town to the planning of the Ministry of Foreign Affairs, the former is organic and the latter is a combination of the orthogonal and the acutely angular. Secondly, the massing of the former is the culmination of, in some cases, generations of adding and infilling and therefore extremely irregular in its skyline. In the latter, however, if we consider the skyline as the junction of the walls and the barrel vault, it is all of an identical height at all locations in the street.

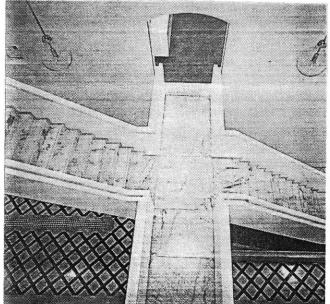
¹⁸⁸ Clouten, p. 20.

¹⁸⁹ Abel, p. 31.

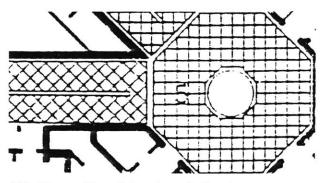


e, f, g Three examples of typical sabats.

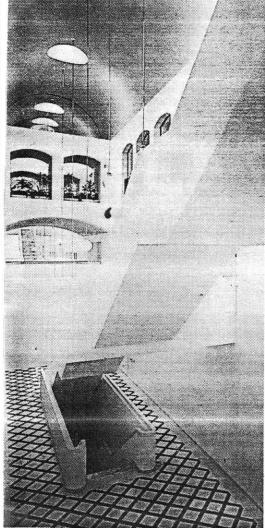
Comparatively speaking if we were to simultaneously progress along the 'street' in the old city and the project, we would see sabats -- enclosed bridges. In the case of the Ministry of Foreign Affairs, there are also cantilevered staircases, fountains and, in the original scheme, a channel of water that ran down the center of Larsen's street connecting the fountains. In traditional fabrics, sabats were architectural manifestations of the increased requirements of a family. In massing, they were a solid element that provided shade, limited the view of the pedestrian, contributed to spatial definition, and occasionally acted as the point of entry into the inner realms of the fabric.



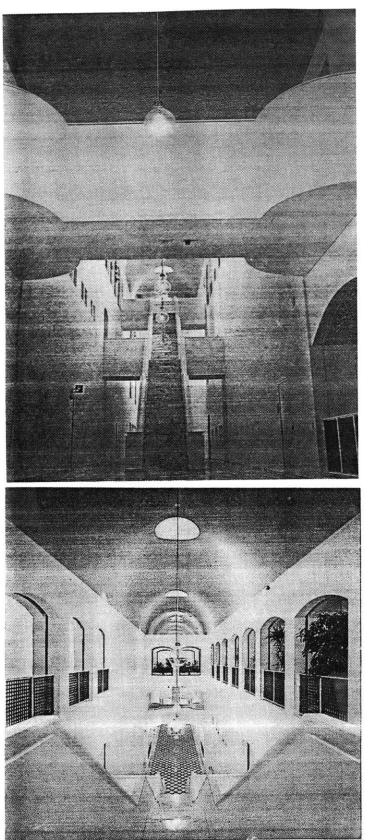
222. The cantilevered staircase from above.



223. The position of the channel of water and the fountain in the original scheme.



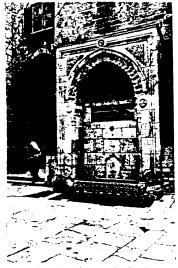
224. Looking up at the cantilevered stair.



The top photograph (225) shows the visual disruption along the street due to the location of the staircases and that below (226) the transparency of the sabats, the junction between the walls & the roof.

In the Foreign Ministry, if we ignore the element of shade, the primary visual effect of the sabat has been reversed, as the sabat is a perforated connecting bridge, therefore no longer limiting the view of the pedestrian or providing spatial definition, although at points these bridges provide a definition for entrances into the office spaces. Furthermore, in streets and bazaars, staircases are never constructed in the manner that we see in the building, simply because in the bazaar and the street such a staircase would obstruct the pedestrian passage, disrupt visual continuity, and the techniques of construction were not practiced. The only reason that it is possible in the Ministry of Foreign Affairs is Western technology in the form of steel and concrete. The channel of water in the scheme that won the competition has been omitted probably for pragmatic reasons but in their place Larsen has designed the floor pattern as an abstract interpretation of a Chadar -- a sloping surface, often textured over which water is made to flow -- that symbolically connects the fountains in the scheme. The actual practice of connecting pools of water by channels of moving water was usually only utilized in either palaces or mughal gardens. Finally the provision of fountains in the urban fabric were usually for drinking water like we can see in cities like Fez, Istanbul, and Jerusalem, where water was readily available, not like old city of Riyadh, where water was an

extremely precious commodity.



225. A drinking fountain in Jerusalem

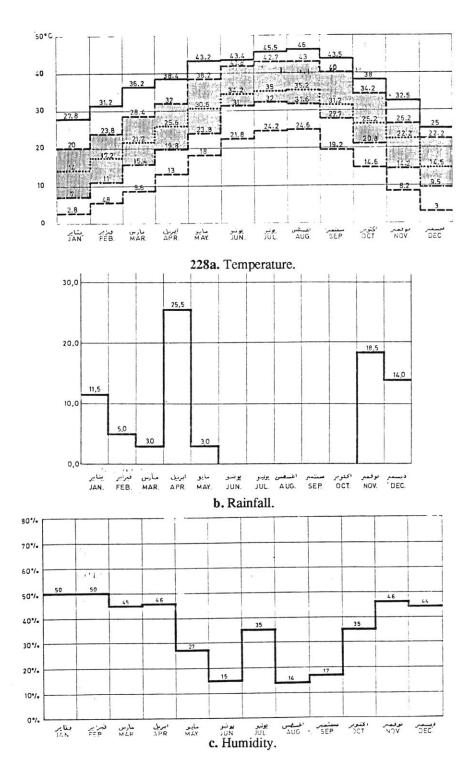


226. A lithograph of a fountain in Cairo

Examining the building in more detail, let us look at the handling of the fenestration in Larsen's 'streets'. In traditional fabrics, it can be seen that, due to the nature of mud, stone, or even brick, by and large all the openings which were regularly used were surrounded by either a band of plaster, finished stonework, special brick detailing, or other such material for reinforcement. In certain instances, these were either painted white, decorated, and in some cases highlighted by a different material. In contrast, the windows in Larsen's building are abstract elements, holes punched through a thick bulwark similar in character to secondary, not primary openings.

So what we see is an attempt to blend two architectural languages, to a large extent, dependent on the materials of construction, mud and brick, by using disparate materials of construction like steel, concrete, stone, marble and gypsum plasterboard to create a new vocabulary which, on the one hand, at times is the closest parallel that contemporary architecture has reached to a new vernacular in Saudi Arabia and, on the other, at times seems to lose the essence of its inspiration.

The climatic factors.



Climate and Natural Light

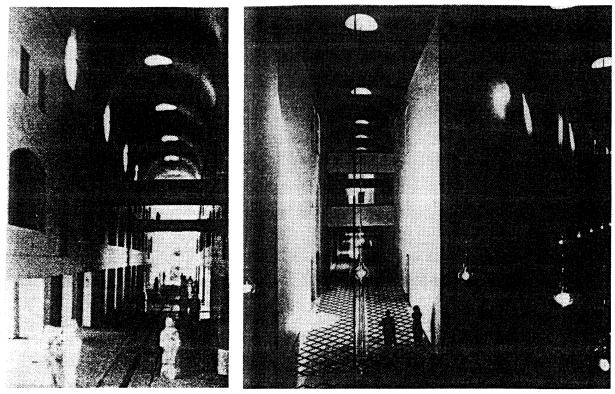
The particular climatic characteristics of the central plateau as seen in the graphs are the high temperatures, cyclic rainfall, and low humidity. However it is the quality and intensity of the sunlight in this region that sets it apart from the others on average, raising the temperatures to between 30° and 45°C for five months a year and sometimes between the months of May and October as high as 50°C. From Larsen's statements about his building, it is clear that he understood that if the Ministry of Foreign Affairs was to function efficiently in this particular climatic region of the Islamic world it would depend firstly on "a building based on traditional wisdom for dealing with the harsh climate ...courtyards...circulation of air...mashrabias, [Secondly,]...climatic conditions are the chief reasons for the strictly enclosed exterior appearance." ¹⁹⁰; "The external walls are heavy and well insulated to augment the thermal storage of the building." ¹⁹¹

In the case of the Ministry of Foreign Affairs, Larsen has incorporated the occulus, the double-skin wall, the mashrabiya, and the mashrabiyas. The occulus is from outside the Arabian Peninsula, the double-skin wall is derived from local sources, and the mashrabiya is from areas of the peninsula where the levels of humidity are high, like Jeddah and require spaces to be cross-ventilated.

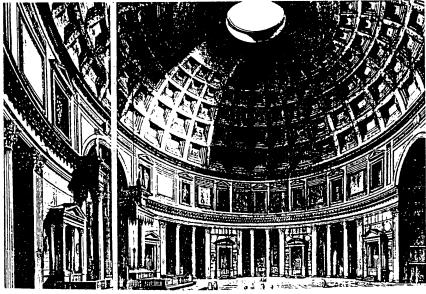
In the case of natural lighting, we have numerous examples of the use of the occuli and thick walls of masonry, brick, or a combination of both throughout the Roman and Byzantine periods. However, with the rapid spread of Islam in the 7th and 8th Centuries, many architectural elements in the regions that were conquered were literally adopted by the Muslims. Once the type was adopted, it seldom remained in its original form, but was developed and refined into an Islamic architectural vocabulary of the particular region. In this manner, similar elements could develop independently, depending on the constraints that the particular region imposed. So we see, for example,

¹⁹⁰ Larsen, p. 94.

¹⁹¹ International Union of Architects, p. 112.



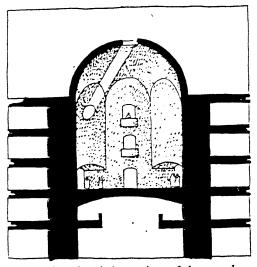
The model photograph (229 left) and the project (230 right) show the ambience that the occuli create in the streets. (The two photographs also show several major changes between the original scheme and the final building. Firstly, the location of the channel of water in the middle of the street on the left and how it has been symbolically realised in the detailing of the floor pattern. Secondly, in the model, the location of the bridges and staircases do not obstruct the visual continuity and thirdly in contrast to the final project the street appears to have a clearly defined structure and be much more permeable to the accommodation that defines it, much closer in essence to the bazaar.)



231. Piranesi: Interior View of he Pantheon. (18th century print)

not as in the Roman era where the occulus was used in the singular and usually in grand public spaces, throughout the Ottoman period, variations of the occulus, both in number, design, and location, in the palaces and hammams of the time developed a particular typology unique to this period. In Persia, and in particular in the Grand Bazaar of Isfahan, the occulus was the central component of the structural bay. This unit multiplied formed the main spine of the bazaar, creating a particular ambience.

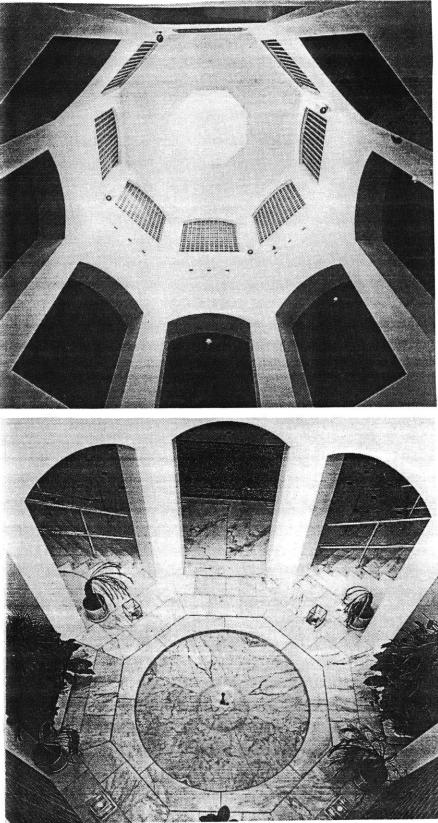
This "sequence of top light spaces modelled on tradition" and the smaller versions, the pierced octagonal light shafts, are one of the most elegant aspects of this building from an abstract viewpoint. This interplay of light, space, and planes (not exclusive to this project -- for Larsen states that "in all my buildings...space and light are paramount" ¹⁹²) -- can be seen in many instances, but especially in the central courtyard, the internal streets, and the ground floor of the lobbies on the floor below the levels of the banqueting hall and the library. The treatment of light in the central space has been discussed in the section on circulation and streets, as have been the occuli.



232. The visual dynamism.of the occulus.

However, it must be stated that, in addition to the spatial quality that parallel shafts of bright sunlight piercing into the inner space from the regularly spaced occuli create, the passage of the sun has been monitored by the occupants, thus creating a sundial. According to Mr. Abel, who visited the building several times while teaching in Riyadh, the clock effect is used by the inhabitants of the Ministry of Foreign Affairs who know the precise position of the ray of sunlight on a particular part of the wall in relation to the times for prayer.

192 Maria Celani, " Space and Light: Interview with H. Larsen." Spazio e Societa, vol. 9, no. 34, June, 1986, p. 8.

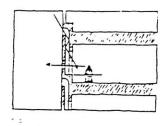


233. From the mid-point looking up and down the octagonal light shaft.

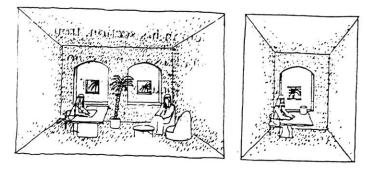
The free-standing octagonal light shafts are an entity in themselves for here Larsen has, in a special way, captured light within the form, using a combination of an occulus and upper level sidelighting situated directly above a pool. On normal days, the interior of the form is lit by indirect natural light which filters through the mashrabiyas on the upper level, but, at a special time, when the sun is directly overhead, a beam of sunlight penetrates directly through, reflecting on the pool below, and, for a moment the reflection of this ray transforms a geometrical form into decoration. At night, artificial lighting systems once again repeat the former special spatial effect.



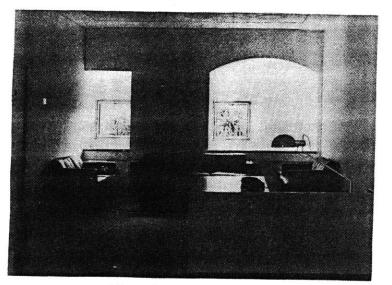
234. The free-standing octagonal light shaft.



235a. A section through the lighting concept.



b. Two interior treatments of the lighting concept.



c. The realization of the concept.

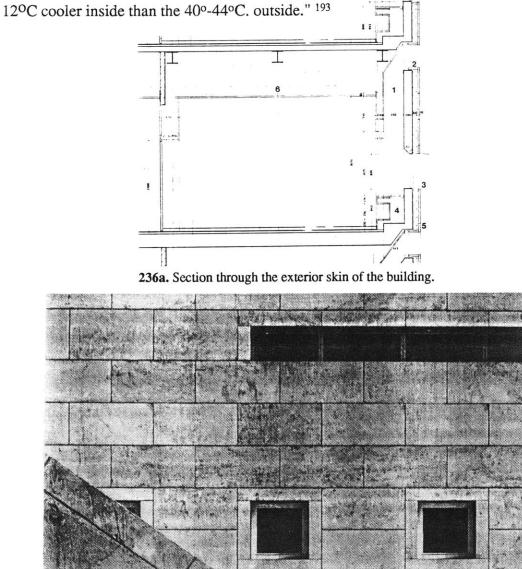
In the case of the windows in the outer walls which are directly subjected to the harsh climate, Larsen has not only made a successful variation of, but taken one step further, a lighting technique that has been used by the Arabs for centuries to protect themselves from the direct sunlight. In traditional fabrics, the view out to the streets was not always desirable in all cases, and thus was to a large extent, avoided. If, however, it was essential to have an opening to the outside, then, as we have seen in the climate and natural light section of Pietila's building, a fixed screen was used. In a modern office, the view out is essential, so the dilemma becomes the way to get a view, avoid glare, but at the same time filter the intense sunlight.

Larsen has very ingeniously solved the problem in his section, from the interior giving the impression of the window being carved out of a solid mass; however, with respect to the size of the opening he uses a different proportional system. If we examine the existing traditional fabric of Riyadh, we would find there are several types of windows both in their typical proportions of width to height and in their use. By and large, the normal size in the residential areas for openable windows is rectangular, of proportions 3 to 5. Then there are other smaller openings of varied size depending on the location for either the admittance of air, light, or both and finally the triangular openings to encourage the circulation of air. In the fortified structures, however, the openings are either constructed with a protective covering, or tall and narrow slits, or squares punched through the walls, or once again small triangular openings to allow cross-ventilation.

The particular type from this whole collection that Larsen uses is the square windows. Examining photographs of the traditional fabric, I did, however, come across an example of horizontal slit that Larsen utilizes; however, probably due to structural reasons, it sat in isolation rather than in the proliferation we see in the elevation. In the more sheltered openings that look into the courtyard which do not require extensive protection, a simple mashrabiya is installed.

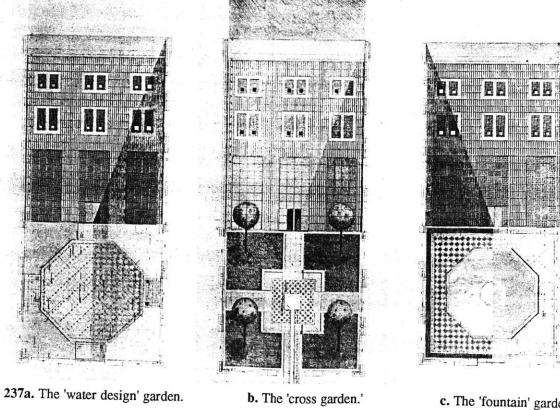
.

Finally, despite the fact that several techniques of climate control were eliminated from the final project credit must be given to Larsen for the effective strategy of combining modern materials in the form of insulation and reducing the size of the openings of the fenestration, the success of which in regulating the internal temperature of the building was related to Curtis by an engineer who described an occasion when the electrical power was turned off.during Ramadan "...even a full week later, the building remained a good



b. Exterior cladding of the building.

¹⁹³ Curtis, p. 10.



c. The 'fountain' garden

The Use of Courtyards

The following statements of approach that Larsen makes about the Ministry of Foreign Affairs with respect to the courtyards in the scheme can be divided into two sections -firstly his inspiration in which he states that "following the pattern of using the best of local traditions, the landscaping reflects the very rich traditions of Islamic gardens." ¹⁹⁴ He then describes the direction that he has taken in the Ministry of Foreign Affairs: "Inside these introverted structures, the austerity opens into courtyards and patios where delicate gardens reflect the Islamic dream of paradise," ¹⁹⁵ the consequence of "A building based on traditional wisdom for dealing with the harsh climate...courtyards, water-gardens, double layer outer wall for circulation of air and baffling of glare... mashrabias," ¹⁹⁶ designed "In order to meet very hot climatic conditions...according to traditional principles." ¹⁹⁷

In contrast to the pragmatic basis outlined above, the nine open courts within the scheme are a source of great beauty in the way a diamond is set as a solitaire, to be admired. Two of the major blocks have a similar combination of courts, while the third is similar in principle but different in detail. One of these modules has been designed on a variation of the 'cross garden' plan, with a trellised structure casting a square pattern shadow and enclosing a seating area within. At present, it provides an extremely relaxing atmosphere in the late afternoons when the court is in shade, and, in the years to come, when the plants have grown and provided additional protection against the intense sunlight, it will create a cool and shaded retreat regardless of the altitude of the sun. The second, the 'fountain garden,' is featured with the entire walls covered with trellises which, in time, Chris Abel believes,"will eventually be covered with foliage" so that it will appear as "an opening in a thicket," ¹⁹⁸ (in Saudi Arabia !) and the third the 'water design garden' with

¹⁹⁴ International Union of Architects, p. 112.

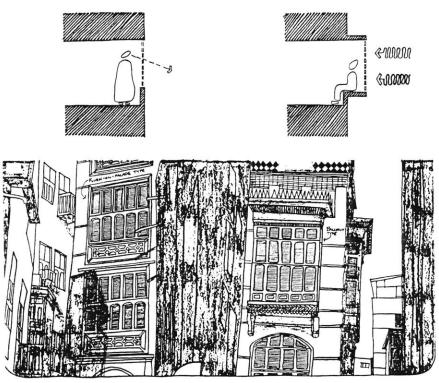
¹⁹⁵ Abel, p. 36.

¹⁹⁶ Larsen, p. 94.

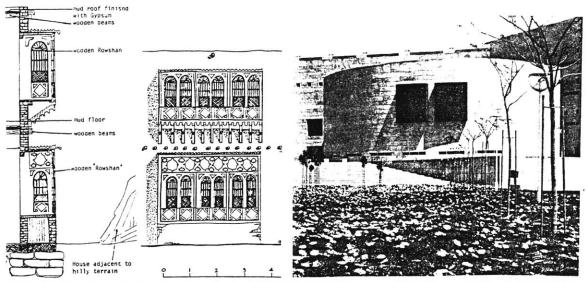
¹⁹⁷ International Union of Architects, p. 112.

¹⁹⁸ Abel, p. 39.

The Mashrabiya



238. Two basic types of Mashrabiya and their visual character.



239. Section through, b. elevation of a traditional mashrabiya. 240. The modernized mashrabiya.

All of the windows of the air-conditioned offices opening into the court are covered with a"mashrabiya," affording privacy across the narrow spaces.¹⁹⁹ This is all very well from an abstract viewpoint, but there are two issues of concern. What about the principle of the courtyard as (i) an integral part of the fabric and (ii) a climatic moderator ? On the first issue, only one of the courtyard types, (four of the total of nine) incorporate any seating area. Although there seems to be an effort to integrate the circulation so that people can view the space while moving through the building, the courts are primarily for the people in the offices surrounding the courtyard; those on the upper floors do not really see the beauty of the landscape designs. In defence of Larsen's design, Petersen states that "One does not wander around these gardens as one does in the West. Here one sits in the coolness of the house and looks out upon their richness...here the mind rests." 200 Larsen, however, contradicts this statement by saying that "...the courtyard ...forms the frame of the building's social life." Secondly, it is not being suggested that there be no air-conditioning, as at the present time this is an unrealistic proposition, but currently the majority of the courtyards are scarcely utilized and, according to Curtis, "are little more that a heat sink" 201 in which the traditional cooling system remains unexploited. However, Curtis goes on to say that "the internal gardens were disconnected from Larsen's original idea of a vertical circulatory system of air." 202

If we were to analyze the basic components of traditional mashrabiyas, there are three basic sections -- the impervious roof to keep out the seasonal rainfall, the decorated wooden rowshan -- through which people could look out and which had openable sections -- and finally the support structure. In the Ministry's modernized mashrabiya, all the above components have been treated in a manner similar to a screen literally hung on the wall which, however its form, implies that people can utilize the space. In reality visitors to the building cannot sit in the space, only see through it. The question then

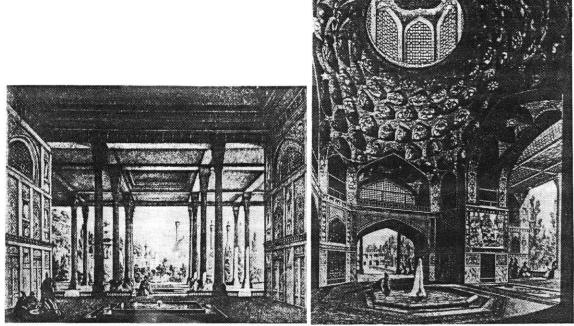
¹⁹⁹ The descriptive names are taken from Larsen, Diadolos, p.101.

²⁰⁰ E. P.Peterson, "Ministry of Foreign Affairs, Saudi Arabia." Living Architecture, #4, 1984, p.

²⁰¹ W. Curtis, "Ministry of Foreign Affairs, Riyadh, Saudi Arabia. "The Aga Khan Award for Architecture 1986 Technical Review Summary SAU. 563 p. 10.

²⁰² Ibid. p. 7.

must be asked is why did Larsen not use the wooden screen that is flush with the surface of the wall serving the pure function that it performs. The answer could possibly be that this is another instances of Larsen, when it suits his purpose using a clearly identifiable vernacular element -- even though it serves no function -- in order to give the project a regional context. Whereas courtyards have always depended on a combination of decorative patterns, water, and foliage as both a source of life and a focus for the buildings to a greater extent than their interior water has always played an important part internally. Here once again, Larsen must be given credit for virtually from the moment that the pedestrian enters the entrance lobby of the building the role of water is integrated with the form. According to the available documentation and Chris Abel's article, there are "at least 30 pools and fountains, large and small, dotted throughout the building," ²⁰³ but when it comes to integrating greenery it seems that at best plants have been added on at a later stage, not as part of the original concept. This is especially so in the central space, which seems excessively stark but for a few plants tucked away in the corners. But to what extent, if ever, from a historical point of view was greenery incooperated inside buildings or are indoor plants a result of recent developments in the technology of horticulture.



241. Isfahan: Chehel Situn, interior of the east talar (19th century print.)

242. Isfahan: Hasht Behisht, central chamber (19th century print.)

²⁰³ C. Abel, "Larsen's Hybrid Masterpiece" Architectural Review no. 1061, July 1985, p. 32.

Decoration and Color

One of the common denominators of the Islamic world that can be seen all the way from the Alhambra Palace to the Mughal monuments is the integration of decorative patterns. The more prestigious the building, the more lavish and extensive the decoration. This goes no less for the relatively austere palaces of the Nejd region of Saudi Arabia, where the favored ornament for the principal room is a variety of indigenous patterns based on triangular motifs. This is not to say that in the Islamic world the only technique for applying decoration was limited to surfaces for "already within the Isfahan area in the tenth century there are two tendencies in patterns, one looking back to earlier trends which link Iran with Iraq and Afghanistan all following the Sassanian imperial style, the other stress[ing] that surface relates directly to structure itself." ²⁰⁴

Looking at Larsen's building, however, the approach to embellishment seems to be confused for unlike the buildings like the Jami Mosque, Kirman 1349, [where] color has been used sparingly to highlight specific architectural points." ²⁰⁵ The application in Larsens building although in particular points, are not all of architectural importance, implying a lack of an overall philosophy. Consequently, decoration can be found in calligraphic form around the great bronze doors of the main entrance, in carved stucco in the main lobby, both in providing a majestic frame around the main opening leading to the entry vestibule and also on the soffits of the recessed niches, on the walls and ceiling of the entrance lobby, above and below the balconies in the pedestrian nodes, under the soffits of the connecting bridges in the streets, and lastly on the floor patterns throughout the public spaces in the building.

The only embellishment in all the above by Larsen is the design of the floor patterns; the rest are the creation of an Iraqi, Waddad Faris, and his team of Morrocan craftsmen who were brought in at a much later date by the client to add what they thought was missing from the building, "ornamentation." This decoration has been at times far too severely

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²⁰⁵ A. Hutt & L.Harrow Islamic Architecture of Iran vol. 1 & 2.(London: Scorpion Publications,). I would like to thank Professor Cho for highlighting this point.

criticized by Curtis who states that "the Morrocan ornaments are sometimes stuck on like pictures on a wall" and the "muqarnas -- stalactites or honeycomb vaults -- in the banqueting hall would not be out of place in an overpriced Moroccan restaurant in New York." ²⁰⁶ From a technical viewpoint, looking at the photographs of the building, what Curtis states in places appears to be true. Some of the stucco work does appear to be tacked on, but, Inshallah, in the next attempt if craftsmen are included in the team at the inception rather than the conclusion of the scheme this superficial application may not be the case. However, what Curtis fails to realise is the underlying notion that what he is looking at is not simply decoration but a combination of a change in attitude towards decoration in the peninsula and a dissatisfaction with the architect's approach in this particular issue.

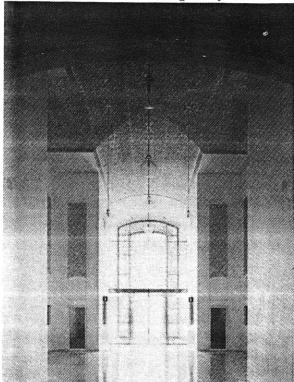
More important to the understanding of Larsen's attitudes are the following two statements "...richly detailed interiors have been our direct inspiration for the project" ²⁰⁷ and "He did try and evolve his own language of ornament for key places and apertures, but this was an area of mutual misunderstanding between the architect and client." ²⁰⁸

It is evident from these statements that Larsen clearly understood the difference between his approach and the traditions of the Islamic world. For he clearly differentiates between the "richly detailed interiors," which are a fundamental part of Scandinavian architecture and can be seen in the works of Aalto, Utzon, Pietila and Larsen, and the "richly decorated interiors" as applied decoration which, rather than being the detailing of the interfaces between materials, consists of the superimposition of one material on another, a major difference in attitude. In one, there is simply the articulation of materials, and in the other the application of finishes. From this understanding, he tried to "evolve his own language of ornament for key places and apertures," which, I believe, would have been a derivation of one of the principles of the modernist approach, the purity of materials and the traditional application of finishes being the Islamic methodology. However, it is possible, and to an extent the building is proof to the fact, that the work was finally done by Waddad Faris, that Larsen's evolution of "his own language" was not really the

²⁰⁶ Curtis p. 12.

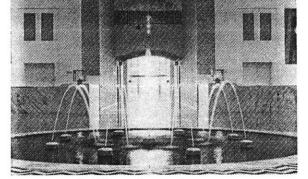
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²⁰⁸ Curtis, p. 12.



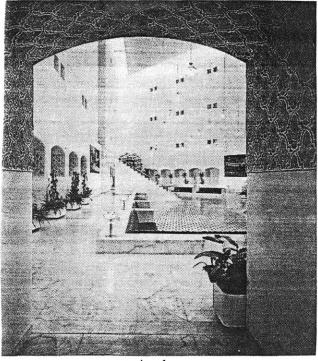
Decoration designed by Waddad Faris and executed by Moroccan craftsmen.

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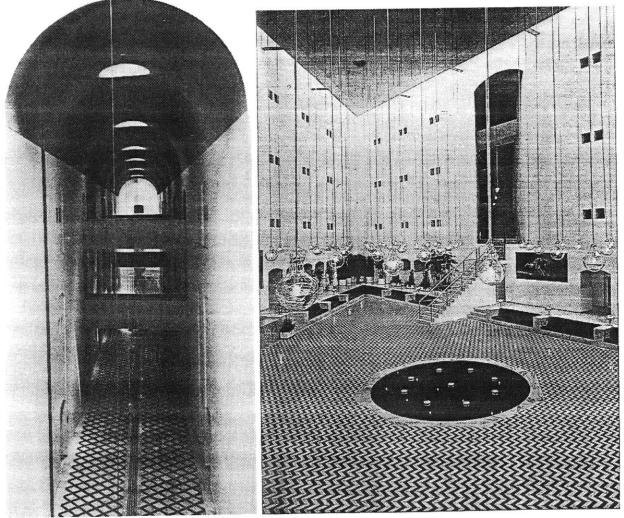
243a. The entrance hall.

b. The main portal.



c. An alcove

language of the client and turned out to be an "area of mutual misunderstanding between the architect and client." Even though Faris was brought in at a later stage at the request of the client to decorate the building, Larsen did exactly what he said; not only is virtually the whole interior is painted white with "no bright colors or decorations," ²⁰⁹ but, in addition, it is composed out of a series of planes. In keeping with his criticism of Faris's work, which he thought was "too elaborate for me [him]" ²¹⁰ all the detailing is superbly executed. From the above, it is evident that Larsen is a proponent of the purist approach to modern architecture, and, regardless of how much he may attempt to overcome this psychological barrier, it is one he cannot transcend.



244. Floor patterns designed by Henning Larsen

209 Ibid.

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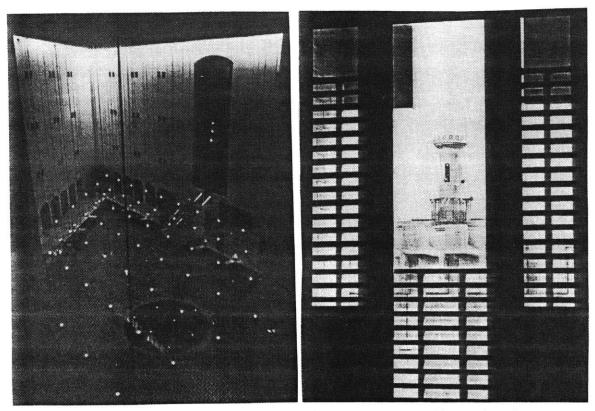
COMPARISON BETWEEN THE TWO BUILDING

We have seen from an historical point of view (in the introduction), and from the standpoint of climate in the sections on the particular buildings that there were only minor differences in both the urban scale and the architectural vocabulary of the old towns which has been translated into the presence of some wind towers in Kuwait.²¹¹ In the statements made by Pietila and by Larsen in their respective sections -- which for the sake of clarity I have collectively grouped in Appendix 11 -- it can be seen that they both refer to the local traditions as the inspiration for the projects. If this is the case then why is there such a difference between the concept of the buildings in relation to the urban fabric of the two projects

Planning in the Context of the Urban Setting

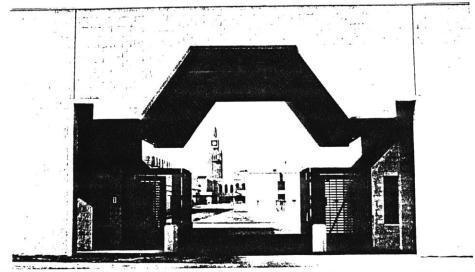
The major criteria that determined the urban planning of the Sief Public Area Buildings and the Ministry of Foreign Affairs were the responses to the immediate surroundings. Unlike the analysis of Larsen's building, where several comparisons are necessary in order to elucidate the planning transformations, in the case of the former there is no need to go through all the gymnastics of transposing sites to comparatively evaluate the building, as it is situated adjacent to the densely developed section of the old town, and lies at the bottom of a ridge that runs parallel to the shore. Due to the location of the project in relation to the ridge on which the the traditional fabric is located, the old town overlooked the site and visually pressed against its boundaries. On the other hand, in the Riyadh project, the building sits on essentially a flat site, virtually in isolation, surrounded by dual carrigeways. So we see that there are two radically different scenarios in the Sief Palace Area Buildings in Kuwait and the Ministry of Foreign Affairs in Riyadh.

²¹¹ Lewcock, p. 40-41.



245. The central space of the Ministry of Foreign Affair.

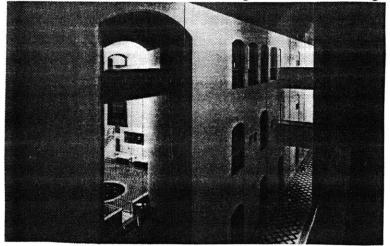
246. Looking at the minaret.



247. The moment a visitor enters the Sief Palace Area Buildings they are aware of the clock tower.

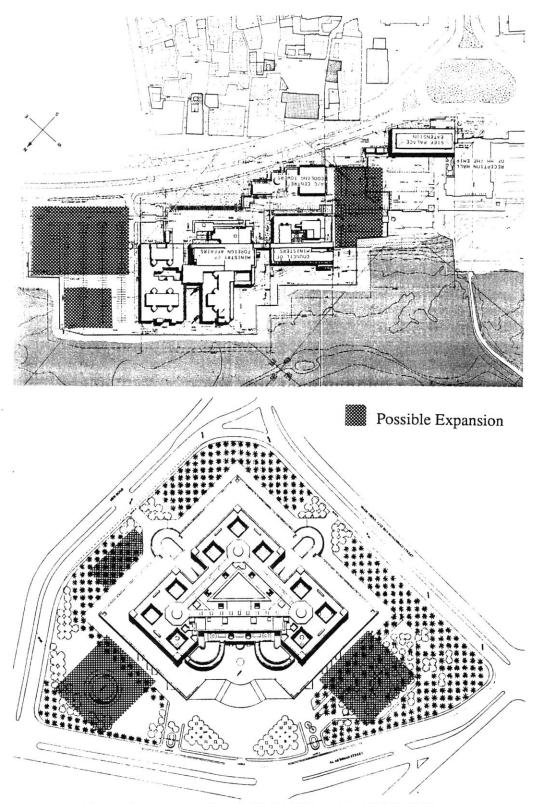
An interesting comparison that substantiates my hypothesis about 'Pietila building referring to context' and 'Larsen as self-referring' is that in all my research I have not come across a single photograph looking out from the Ministry of Foreign Affairs looking into the adjacent fabric, whereas with Pietila there are a substantial number.

The relationship between the site and the surroundings is treated in the two projects in differing ways. In Pietila's building there are two external focal points, the clock tower, which is the primary focus of the existing palace, and the minaret of the mosque encased by the new 'L'-shaped Ministry of Planning (the Grand Mosque was completed in 1984, both symbolically and in reality the minaret now overshadows both the above but was not part of the initial relationship). ²¹² This relationship between the project and the clock tower, which is visually linked to all the minarets in this section of the old City, reinforces the sense of integration of the building into the fabric. Thus the above minarets share a relationship to the majority of public spaces and buildings in a way parallel to the vertical elements that are visual focuses in the composition of the traditional fabrics. In Larsen's case, as both Curtis and Abel have previously pointed out, there are no references to the traditional fabric available in close proximity. Therefore the triangular courtyard, whose position Larsen refers to "as the central square in the urban structure (which) affords overall information about the identity of the town" ²¹³ serves the same purpose of orientation as does the minaret in Pietila's scheme. This sense of orientation, however, only applies to the accommodation in the inner triangle or the second ring of offices that encloses the street. In other locations, it is the courtyards that are the focus of the office space. Thus we can see that Pietila has created a building that attempts to refer to the context, and Larsen a building that is self-referring.



248. Looking into the central space of the Ministry of Foreign Affairs

²¹² Neil Parkyn. "Kuwait Revisited "Middle East Construction, September 1983, p. 41.213 Larsen, Diadolos, p. 97.



The problems of extending the SPAB (249) and the MOFA (250).

Another test of the analogous relationship between contemporary and traditional is the issue of urban expansion. We have seen that vernacular fabrics over generations were incrementally increased, resulting in varied massing and skylines. In the light of this principle, if we were to enlarge the total built-up area of both the buildings in the Sief Palace Area Buildings, this would involve the problem of the pedestrian spines being extended and buildings being appended. In Larsens case the nature of this self referring triangulation and the symmetry of the plan form would make the connection to an extension extremely difficult to achieve satisfactorily.

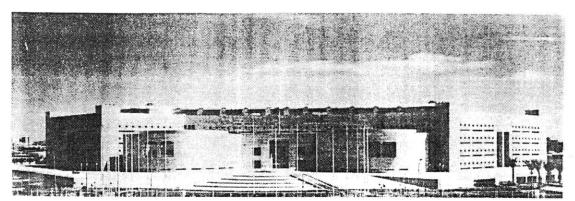
According to Curtis the need for this additional space may soon become a reality for despite the extensive research into the requirements of foreign ministries by Arthur Erikson and his sub-consultant Peat, Marwick, and Partners of Canada, the personnel area requirements, one of the fundamental aspects of any building is already starting to put stresses on the floor space available apparently due to "the architect's idea of giving the clerks open plan office space...(which)...collided with rising Saudi expectations ...(of)...individual space." ²¹⁴

The result of this attitude is that "the building planned for 1350 people" ²¹⁵ "may not be able to accommodate its full quota of workers." ²¹⁶ However, in defence of Larsen, it must be stated that looking at the section on 'Design Objectives and Concepts' in the Publication <u>11 Entries for the Headquarters of the Ministry of Foreign Affairs</u>, by the International Union of Architects on the competition on page ten, the eighth concept states "Department typing and clerical pools." It is possible, but this is only speculation based on the statement "Saudi expectations of individual space" that the organizational structure that was previously anticipated may have changed for economic reasons and a larger numbers of citizens, looking for a secure job, are now employed by the Ministries in general than was anticipated at the inception of the project. As a repercussion of the fact that all nationals require private enclosed offices, a shortage of space could soon result.

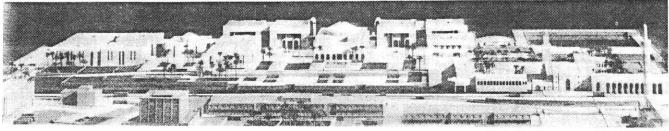
²¹⁴ Curtis, p. 9.

²¹⁵ International Union of Architects, p. 11.

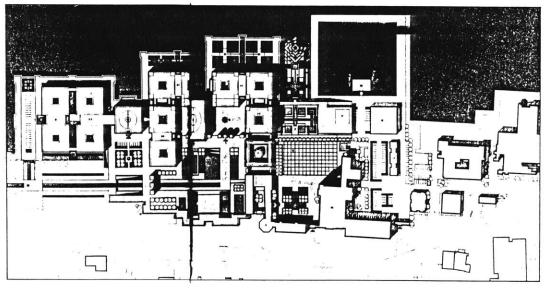
²¹⁶ Curtis, p. 9.



251. The Ministry of Foreign Affairs



252. The Amiri Diwan Complex: Model photograph



253. The Amiri Diwan Complex: Plan

Strangely, however, in a building that may not be able to accommodate all its full quotaof workers, according to Curtis," it is possible that basement parking may soon prove to be inadequate! "²¹⁷

Site Planning, Massing, and the Use of Axes

We have seen that in their approaches to urban planning, both schemes adopt completely different strategies. In the case of the Kuwait project, it is informal integration into the urban fabric, whereas Larsen's scheme in contrast has a much more formal massing. Despite the fact that in each case there were three major components of accommodation, these approaches seem to be the result of two factors. Firstly, in the Sief Public Area Buildings the Ministry of Public Works clearly set guidelines regarding the spatial configuration of the brief. Secondly Pietila was familiar with the historical context of the site.

In contrast firstly, Larsen's brief, entitled "The Ministry of Foreign Affairs: The Organization Development Plan" was a collection of areas and, organizational requirements, and notions of Saudi identity and there were flexible directives regarding spatial massing. Secondly, there is no pre-existing urban context, as the site according to Curtis "not long ago...[was]...still on the fringes of the city contained [the] barracks of the Royal Guard...[and]...more recently, there was a gas station on the corner." ²¹⁸ Thirdly, there were no geographic features from which to draw inspiration as the total slope across the site was four meters and fourthly the clients' notions of identity were very general.

An interesting comparison however can be made with the Amiri Diwan, the area east of the Sief Palace on which a project is being designed as a result of an international competition in 1983 by a local firm called Archicenter. The design has taken into account the total approach to the area, coordinating the new elements, pedestrianising the road leading to the the Grand Mosque and at the same time integrating the historic Amiri

²¹⁷ Curtis, p. 11.

²¹⁸ Curtis, p. 3.

Diwan within the framework of the stepped landscape design. The project is designed to be approached through two gates at either extremity of the scheme, through a long formal drive lined with trees on the axis of the Sief Palace clock tower then circuitously rising through external plazas and courtyards to the level of the main square and then to the gate of the Amiri Diwan itself.

The scheme is to become the center of government and will, accommodate the Amiri Diwan, the Crown Princes' offices, the Council of Ministers, the National Council of Culture, Arts and Letters and the Central Committee for Tenders, with a built-up area of 80,000 square meters, 3,000 square meters less than the Ministry of Foreign Affairs. We can see that the result of clear directives of spatial organization has resulted in a series of buildings rather than a single mass. In the former, the creation of the new fabric communicates with the existing buildings and in the latter there was, by contrast, the creation of a considerably more formidable building. Corresponding to the differences in the planning, there are similar variations in the treatment of axes. As we have perceived, Pietila's scheme applies lessons that were deduced from the old city whereas Larsen utilizes techniques that are a variation of the Mughal mausoleums of India.

Vernacular Images

With the handling of the planning in the context of the urban setting, site planning, massing and axes in both the schemes, we have discerned that completely different strategies have been formulated, either as a response to the existing environment, or because of the inadequacy of an associable external environment, or as an outcome of pragmatic considerations. However, what both projects share in common is a rational, logical, problem-solving approach to their particular problems of circulation, the divisions of the program, security, vertical and lateral movement, basic hierarchies and many other problems. In adopting the vernacular images that each architect has alluded to, we see, however, two approaches similar in principle but fundamentally different in realization. The similarity lies in the fact that both are a product of the utilization of vernacular images and the imagination of the architect. The difference is in what is being

referred to. In Pietila's project, he refers to the "fringe imagery of Islamic, Arabic and local Kuwaiti tradition" which include Gulf Archaeology, the themes of camels, coral flower metaphors and even Soffits of 'reeds.' The realizations of these abstracted notions of place, however, are sometimes out of place, for their identity and relevance lie in the fantasy of the creator but not necessarily in the perception of the viewer. In contrast, Larsen refers to "the characteristics of Islamic architecture...a clearly defined interior as opposed to an exterior" and the "tradition of the old palaces and official buildings in Rivadh," definitive elements of the architecture of the peninsula. It cannot be stated categorically that an answer lies in the general relativity and mass recognition of the images that the architect selects to refer to, but the consensus of opinion of the critics is that, due to the contrast in the sources that each architect has alluded to, the former a manipulation of minimal reality and unrestrained fantasy and the latter of existing architectural characteristics, perceptively Larsen's creation seem to be closer to the essence of the architecture of the region. In essence, the difference between the two buildings is that in order to understand Pietila's project the viewer must have knowledge of the process of creation and must be willing to read into the images presented. In Larsen's case the references to particular architectural elements are explicit.

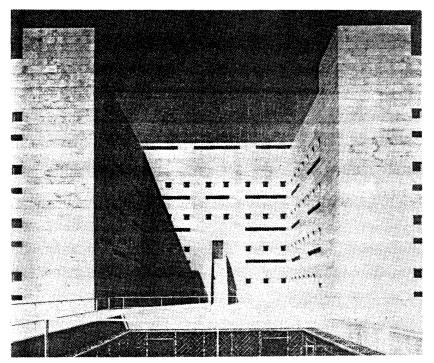
Circulation and Streets

Both Pietila and Larsen, in their attempts to create interpretations of their images of the traditional fabrics in their buildings, refer to different aspects of similar sources, the former is, as we have seen in the patterns of the once existing but now largely demolished section of the city that bounded the site, and the latter, by contrast, a much more formally composed, geometrically-ordered structure than the traditional. The former is conceived as a linear, multi-level street that connects a series of buildings in sections, transversing the two buildings in an air-conditioned environment, and at other points it is simply bounded on one side by the building and protected by the shade of the arcade overhead. At the same time, the possibility is provided for the ends of the streets to be continued in the future. The latter is in an entirely enclosed air-conditioned environment, in addition to which the pedestrian route is a triangulated entity.



A comparison between the treatment of the external walls

254. The Articulated walls.



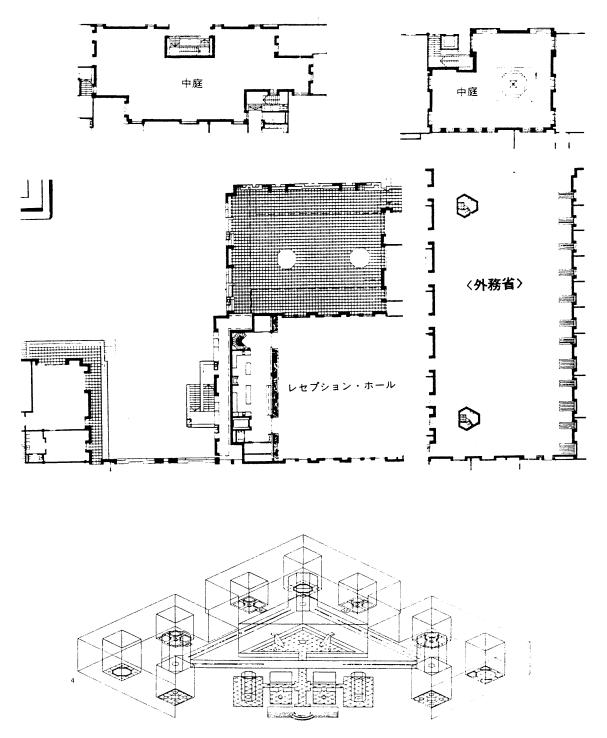
255. The heavy, plain and well insulated walls.

Natural Lighting

In previous sections, we have seen that climatically the characteristics of the central plateau and the coastal strip of the peninsula are similar in the quality and intensity of the sunlight and temperature, but not the humidity levels. Even though this is the case, both the architects utilize different methods of controlling natural light. Pietila's statement "Sun is the ornamental weaver, filtered through the fingers of the sun-breaking eaves" and his use of lanterns are indicators of the practical way in which he manipulates the sun to create on the exterior changing patterns throughout the day to relieve the sun-bleached walls.

In contrast Larsen's three statements ("The climatic conditions are the chief reasons for the strictly enclosed exterior appearance", "The external walls are heavy and well insulated to augment the thermal storage of the building" and " On the exterior walls are only rather small windows giving direct light and smaller openings giving indirect light to the interior.") These statements show that Larsen's intentions, in the majority of instances, were to keep direct sunlight out of the building, as we have seen in the central courtyard, and allow in diffused light, except in exceptional instances like the streets, where there were other priorities.

In the interiors of both buildings, there are different manipulations of similar ideas. We see both Pietila and Larsen punctuating the pedestrian routes of the building volumes with vertical light shafts. In their Sief Palace Area Buildings, however, the fins on these shafts at the clearstory level are designed to prevent sunlight most of the time from directly penetrating into the space. In direct contrast, in the Ministry of Foreign Affairs, Larsen not only allows sunlight to enter but has designed the apertures of the occuli so that defined rays of sunshine penetrate into the streets.



A comparison between the spatial composition of the courtyards

Pietila's courtyards are above (256) and Larsen's below (257)

The Use of Courtyards

Comparing the courtyards of both schemes, there are several fundamental distinctions between those in the Sief Palace Area Buildings and those of the Ministry of Foreign Affairs. Firstly, in terms of planning, all the courtyards of the Sief Palace Area Buildings are diverse in profile, whereas those in the Ministry of Foreign Affairs are essentially three sets of a single type, identical and determined in dimensions. Secondly, if we examine the composition of the enclosure of the Kuwait project, virtually all the courtyards have different enclosures, some are totally enclosed with solid walls, others are enclosed on three sides with solid walls framing the outlook towards the Gulf, others are enclosed on two sides with wooden screens and shaded arcades framing the view facing the Gulf, others are enclosed on three sides and are facing south-east, and yet others are terraces of the primary pedestrian spine.

In Larsen's building, each major group of courtyards is identical in character and the circulation only passes along the ground floor, on the upper levels the spaces are bounded by office space. In this they apparently conflict with Larsen's statement "A number of public courtyards of varying dimensions and with different social and functional purposes are attached to the bazaar." ²¹⁹ However it is probable that the architect was referring to the entire building in the above comment which would include all the internal open spaces. Thirdly, the colored tiles, textures and outdoor furniture that are integrated in the courtyards have been arranged in such a fashion that in each the Pietilas formulate individual characteristics. In Larsen's building, however, as in the pragmatic pattern of planning, each module of the set of three is composed individually and multiplied by three. Fourthly, the courtyards of the Sief Palace Area Buildings are an essential component of the total adventure, as the major vertical circulation is incorporated at the periphery of the space and the pedestrian cannot circumvent either passing through or adjacent to them.

²¹⁹ International Union of Architects, p. 112.

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In the Ministry of Foreign Affairs in Riyadh there are two kinds of internal spaces, the primary courtyards and the secondary open spaces, which are not all exposed to the sky. With the primary spaces, only the four cross-garden plan courtyards are straightforwardly linked to the street about which Curtis make the comment that "the visitor glimpses into the courtyards as they pass along the street." The other five are more complicated to reach and are not directly visible from the street. The secondary spaces, however, are dotted all around the building and the visitor may unexpectedly chance upon a small opening. With regard to the vertical circulation, this has been totally segregated from the courtyards, but two of the inner staircases open onto narrow vertical light shafts.

Decoration, Color & Detailing

We have seen in the preceding two chapters that in the external envelope and the interiors both projects integrate decoration in substantially different materials, but it so happens that they do so in completely reversed conventions. In the case of the Sief Palace Area Buildings, the decoration on the walls is primarily in the form of stripes of colored bands applied directly, which contrast with the plain white tiles and, in some instances, with the marble of the neutral floors. In Larsen's project, in contrast to the Pietilas' scheme, the decoration is on the floors, where Larsen extensively uses black and white combinations of marble to create motifs based on Islamic geometric patterns whereas the walls are "painted in a plain white nautical paint." ²²⁰ This contrast extends to the treatment of the roofs, where externally Pietila uses banks of teak lattice structures in an attempt to relate to the traditional teak dhows and internally on the ceilings a combination of colored bands in profiles that resemble the interiors of tents and " Soffits of 'reed' transposed into the aluminum strips of the suspended ceiling."

If we were to exclude the designs of Waddad Faris, who has added Morrocan plaster stucco work to the soffits of the entrance lobby and the bridges, as being beyond the

²²⁰ Quantrill, p. 242.

scope of the original project, Larsen uses simple plain vaults painted off-white in the streets, and flat ceilings in the offices painted white, on which the only elaboration is the detail of the connections or the outlets of the mechanical fittings. Although, when it comes to detailing, both share the same level of excellence, the standards of execution in some instances, are outside the control of the architects and do not match the intent.

Examining the manipulation of materials in both the buildings from the exterior and the interior, we can see a comparable concern and attention in the treatment of junctions between materials of diverse and comparable nature. In the Kuwait project, this is best illustrated in the fenestration, the concrete eaves, the parapets, the teak woodwork, the tiling, the internal ceiling sections and the relationship between all the above. In Larsen's scheme, this external attention to detailing is particularly apparent in the treatment of openings, in the Italian marble, the woodwork of the mashrabiyas and of the pavilions in the courtyards. In the interior, this concern is perceived in the decorative floor patterns and in the integration of the fountains, the creation of perfect planes in the streets, and even in the design of the light fittings.

Both buildings in general seem from their photographs to have stood up well to the rigors of the climate. This can be attributed to the choice of materials and the detailing of the respective exterior skins. The external envelope of the Pietila buildings have utilized a twopronged strategy that deals very effectively with the elements in general, and in particular the sudden rain storms in the winter. Firstly the pigment of the sand-lime brickwork is such that dust settled on the vertical surface will not be apparent; it will not lose a great deal of its natural color which blends very effectively with the local hue. Secondly the parapet is detailed to break the continuity of the edge so that water falling on the horizontal surface does not run directly down the surface of the walls, which is complemented by the horizontal joints of the brickwork. In the Ministry of Foreign Affairs, however, the joints of the marble on the exterior act to some extent in the same role as the brickwork does.

However, the walls of the internal courts are flush and Curtis notes that "the patio walls have insufficient moulding to handle water streaking." ²²¹ As the materials of construction are concrete, this only results in some unsightly patches on the walls which last for minor durations of time after the rains. However, if the material of construction were mud, this omission would be classified as a major flaw in the building as the external surfaces would quickly erode.

Materials and Technology

Throughout the history of the Arabian peninsula, where stone was not available -especially in the inner desert and maritime regions -- the singular prevalent material of construction that practically all the communities utilized was mud. In the maritime towns however, like old Kuwait and Bahrain that were located along the coast of the Gulf, in addition to mud sheets of coral were used as an exterior cladding material. These materials of construction, despite the differences of their origins, gave the built form a background of visual continuity that lasted for centuries. Instead of restricting people, it permitted builders to perpetually demonstrate their ingenuity and resourcefulness, pursuing continually superior solutions of building. This can be encountered in the multi-storey towers of Najran and Asir, the six and eight storey houses and apartments of Jeddah, the two storey houses in the old town of Kuwait, and the single storey villages in the interior of the Nejd region.

Circumstances have radically changed, however, for if we examine the construction contracts of the majority of prestigious schemes in the Arabian peninsula over the last thirty years we would find that in most projects nearly all the technology, labor, materials, and, to a large extent, the construction management expertise in the form of consultants from abroad. In some of the countries of the Gulf, however, as a result of this foreign domination, laws have been passed to ensure that a fixed percentage of the contract is allocated to local companies unless there are no local companies that have the

²²¹ Curtis, p. 11.

expertise. Both the Sief Palace Area Buildings and the Ministry of Foreign Affairs, however, were built before these laws were passed, and to a large extent they are no exceptions to the earlier state of affairs.²²² In the case of the Pietila's building the contract was awarded to the Fujita Corporation, a Japanese contractor, in collaboration with the Engineering Projects of India (EPI), the main contractors, whilst in Riyadh the main contract was secured by the Mi Rung Construction Company of Seoul, Korea, with the composition being 90% Korean unskilled, some local, and the rest Danish. If we were to investigate the associated employment structure of foreign consultants doing most of the work in both countries, clear patterns emerge that to some extent can be generalized in most of the Gulf. Although there are exceptions to the rule, it would be fair to say that most of the senior personnel are either from the West or are Western-educated. The labor force, on the other hand is a temporary workforce, usually from the Third World or from Arab states with lower per capita incomes looking to the Gulf states as a source of income. Consequently they are dedicated, competitive, relatively cheap and, most important of all, due to the abundance of labor available and their temporary status, they are, like the Orientals, not liable to become involved in politics or labor disputes.

This foreign dependency does not stop at personnel, for, looking at the materials of construction in both projects, we can find a similar occurrence, possibly due to the historical structure of the global relationship between the industrialized and non-industrialized countries. In the case of materials, however, there are alternatives available in the diverse regions of the peninsula. However, unless the construction industry in Kuwait and Saudi Arabia attempts research into this, like their counterparts in the Emirates who are presently testing and experimenting with materials at their building research center, the present tendency to import whatever materials that are required will continue.

²²² Curtis cites two examples, one of the telecommunications executed in collaboration with Haji Abdullah Ali Reza (the author does not disclose the personnel structure of the company) and the other the project manager from the Ministry, Kamal Shukri. Having worked in the Middle East myself, I know that the above former situation is normal in that the owners', if not the management positions are preferred by the nationals, but the technical work is still carried out by the expatriates.

Even if the capital were made available to set up a comparable industrialized base to counterbalance the present situation, it is unlikely that, all things considered, the investment could be made into a financially feasible proposition. Nevertheless, externally, in contrast to the Ministry of Foreign Affairs which uses brown Pietra Mora from Italy ²²³ to cover the entire building, the Sief Palace Area Buildings attempts to utilize a greater proportion of indigenous material in the form of local yellow sand-lime bricks -- although the facing tiles are German.²²⁴ Regarding the rest of the construction materials of the Pietila's project, I have not been able to ascertain their origins, although it is virtually guaranteed that the bulk are from abroad. In the case of the Riyadh scheme, the steel structure is Japanese, as are the concrete mixes; mechanical systems are a combination of English, German and Swiss, and the hand-blown electric lights are Danish.

²²³ It should be stated that the architect wanted a material that in color was much closer to the local architecture, but the client insisted on the Italian Pietra Mora. See Abel, p. 39.

²²⁴ Quantrill, p. 242.

ACHIEVEMENT OF OBJECTIVES

Summing up this comparison between the two projects on a conventional level on the basis of the transformation of the Pan-Islamic architectural vocabulary it would be easy to castigate both Pietila and Larsen. The former has in the building, used the breadth of his imagination, at times abstracted beyond recognition elements that are historically or speculatively based, sometimes outside the realms of architecture. The latter has not only eclectically borrowed from far flung sources both East, West and from all times in Islamic history, but has not always respected the traditions and processes that created the originals.

However, let us pause and go back in time to that of Al Walid. Professor O.Grabar, referring to the reign of Caliph Al-Walid, states:

"The Islamic world was secure in its conquests and without major internal trouble -- there were always minor troubles -- this was a period of great expansion to East and West and a consolidation within the empire."

Now let us look at the situation in the Gulf, the incredibly rapid expansion funded exclusively by the petro-dollars of the seventies and eighties; in all spheres like infrastructure, urban fabric, public service facilities, and international finance has to a large extent been achieved and the governments are looking to the future. Thus parallels can be drawn between these two civilizations twelve hundred years apart, both at the peak of their development after a rapid period of expansion.

To sum up the approach that the Umayyads took in this situation. Once again I refer to Professor O. Grabar who states:

"It was said many years ago, and has often been repeated, that Umayyad art is an art of juxtaposition and adaptation. This has been confirmed by recent work: the Umayyads indeed took their forms -- architectural or decorative -- and many of their iconographic ideas from the world that they conquered. The only recent major discovery is that they drew much more on the East than has hitherto been supposed, so that their art reflected the full scope of their empire, and not simply its Syrian provinces, where most of the known Umayyad works are found. But we should add the further characteristic of creativity, for the period laid down the traditions that were to shape Islamic art and architecture throughout the ages: mosque forms and parts, secular iconography, the use of wall surfaces for decoration, conscious abandonment of religious imagery, new patterns, a tendency towards stylization and non-naturalistic treatment of vegetal forms. The Umayyad world borrowed according to its own tastes and aims. It was a feverish and at times clumsy workshop from which classic Islamic art emerged. Though often unsuccessful or tasteless in its fresco paintings and human sculpture, nevertheless in the Dome of the Rock, Khirbat al-Mafjar, the mosaics of Damascus, and the Mshatta facade it created some of the most significant monuments of the Middle Ages." 225

So here we see the architects and artists of the Islamic world borrowing techniques, materials and methods of construction directly from their predecessors within the so called catchment area of that region, but composing the elements differently. Thus the Great Mosque of Damascus, the Dome of the Rock, Khirbat al-Mafjar, the mosaics of Damascus, and the Mshatta facade strike a new combination of notes in relation to what surrounded them. With twelve centuries of hindsight, we look at these monuments as a starting of the architecture of the Islamic World that led in its moments of glory to the creation of a unique style.

²²⁵ In his book, co-authored with the late Richard Ettinghauser The Art and Architecture of Islam 650-1250 he refers to Ernst Herzfeld, "Die Genises der Islamischen Kunst," Der Islam, I (1910), esp. p. 32.

Today times have radically changed; with the advent of advanced transportation systems, sophisticated communications, and literary documentation, the Islamic world has become much more accessible. Correspondingly, the catchment area too has dramatically increased. If we continue this thread and examine not just Larsen's building but the Ministry of Foreign Affairs in Kuwait City, the Embassy of France in Bahrain, the New Souk and the National Library in the Emirates, and the Diplomatic Club in Riyadh and all those that in some manner attempt to capture the essence of architecture in that region ²²⁶ what we are looking at is initial attempts at an approach which is a combination of the Arab past, present, and a Western education eclectically borrowing principles and images of the past and abstractly attempting to transform the essence into a contemporary idiom.

What is required here is not critical rejection based on a puritanical evaluation, but an awakening to the realization that an attempt has been made to move away from the exportation from the West of a tatty tide of crude commercial kitch, trivializing, and pastiche that has been going on for the last two decades in search of the future architectural language of the Arab city, and an attempt to draw attention as to the validity of such an approach.

²²⁶ Ministry of Foreign Affairs. R. & R. Pietila. (Finnish) Kuwait City, Kuwait 1983 Embassy of France. Francois Dubuisson. (French) Manama, Bahrain. 1983 New Souk. White & Young. (English) Sharjah, U.A.E 1978 National Assembly (Assembly Hall Only). Utzon. (Danish) Kuwait City, Kuwait 1986

CONCLUSION

We have seen in the introduction to this thesis that in the majority of Islamic countries, of which Kuwait and Saudi Arabia are prominent examples, a sizable core of the vernacular in the capitals has been dismantled, and its cultural and economic infrastructure overridden by contemporary, principally Western notions of zoning and city planning which establish their own concepts of locale and technology. These old towns that once matured to the resonance of an internal pulse, Islam, which focused their forms, are presently caricatures of the urban fabric of the once relatively tranquil compact towns. They are now disturbed, unwieldy urban matrices, an outcome of their surrender to the road engineer, whose kingdom is determined by a turning radius which has little esteem for human scale and urban environment. The notions of oneness, congruence, and perpetuity are suppressed in this process, and the urban framework and architecture of the city are regarded exclusively in technical terminologies.

This seems to have been following a strategy which we have seen extensively practiced in the fifties, sixties, and seventies: to entirely disregard the past and to superimpose an international style of architecture more appropriate to other environments in an endeavor to mimic the technological symbols of achievement, prosperity, and progress. The outcome, as we have seen in most of the cities of the Arabian Peninsula, has generated an architecture and environment quintessentially sterile, that is, measured, aligned, and segregated in the character of a industrialized Western society; this not only debilitates the traditional culture, but quickly imports all of the social disorders and complications built into Western society's own transforming urban environment.

Approaches to the problems of the search for the distinctiveness of an Islamic environment have been numerous and all utilize modern technology, but unfortunately, to date, they have merely helped to elucidate the confusion in the synthesis of traditional culture into a contemporary one. The paradox is how to create a new environment in a ethical and expressive mode. The antithesis of the approach taken in Kuwait, which has numerous examples, has been the withdrawal into history and the replication of forms that are indicative of the impressive heritage of the Islamic architecture of bygone eras. It appears, in some quarters, to be respectable for certain architects and their clients to repeat the outer forms, in terms of the instantly conspicuous elements such as the dome or arch so as to instill an Islamic identity. Using this approach, a peculiar, diverse breed of structures has been constructed ranging from multi-story carparks to self-contained complexes, and buildings as high as twenty storeys which have elevations of arches and domes grafted onto them, in a crude effort to relate edifices that owe their actuality more to the international style and contemporary technology than to the inspiration of Islamic community. This will perpetually be the case if the nucleus of an Islamic architecture is not analyzed, and the patterns as well as identifiable historic buildings are simply imitated.

A third approach is one which endeavors to synthesize the above two in an attempt to find a right balance between the local, national, and international. In this group there are projects such as the Sief Palace Complex, in Kuwait City, and the Ministry of Foreign Affairs in Riyadh. These are manifestations of a mood gathering momentum which reflects the glib reproduction of international formulae and which seeks out continuity with local tradition, seeking to understand the essence of Islamic architecture, as distinct from the forms presented in the previous two approaches. This strategy is contingent on Western technology, which, in the Arabian Peninsula, is an entrenched reality from which there is no withdrawal; it has irrevocably transformed the patterns of living. However, this synthesis is not determined by a solitary approach but rather a duality between technology as a tool and the forms of buildings that are a culmination of an intrinsic assessment of the spirit and essence of Islamic architecture and also responding to the exigencies of contemporary living and working patterns.

Let us reflect for a moment and try to extract the lessons from the three approaches. The first, which I shall label 'decimating vernacular,' is a absolute superimposition of the Western contemporary style on the traditional, utilizing technology as the mechanism.

The second, which I shall designate as 'masquerading vernacular,' involves camouflaging the contemporary in abstracted traditional envelopes, and the third, which I will describe as 'contemporary vernacular,' acknowledges, among other things, the critical role that technology has in the current environment, but it particularly recognizes the parallel role of the spirit and essence of Islamic architecture. If one looks at all three modes of expression we would find in the latter two -- 'masquerading vernacular', which, in the early seventies, was a crude replication of the traditional, and 'contemporary vernacular', a reflection of the transition from the seventies to be a shift towards drawing inspiration from the vernacular. In light of this the question needs to be asked:

Is it possible to have an architecture that is wholly appropriate to the region ?

There is no extraordinary all-inclusive answer, but if we were to deconstruct the question, the answer might lie in a combination of various tangible and intangible aspects. The former encompasses, but is not limited to, the analysis of the history of architecture and town planning of the traditional cities in order to extract the essence of the techniques of structuring spatial planning, the importance of a progression of open and closed spaces as opposed to elevational design, the utilization of enclosure and water, a brilliance of abstract adornment, geometrical configurations, and the concern for human scale. In addition, there should be a positive reaction to the opportunities offered by the industrial age and recently developed materials in the form of large-scale production and advanced technology, but not excluding the extraordinary talent that the craftsmen of the Islamic world have to offer. The latter is the intangible, however, cradled in the designers' creative imagination "must begin with the unmeasurable, must go through measurable means when it is being designed, and in the end must be unmeasurable." ²²⁷

²²⁷ Louis Kahn, Process in Architecture: Six Contemporary Case Studies (Cambridge, M.I.T. Press, 1979), p. 54.

Based on intuition and a personal perception of 'place,' it frustrates all logical attempts to categorize or define it, for definitions belong in the world of finiteness. Another example of this position can be seen in Pietila's statement regarding the Sief Palace design:

"...I am related very much to Aalto's wandering way of approaching problems, letting it all rest at the bottom of the mind, appearing to meditate over something else instead of the actual problem itself." ²²⁸ This attitude is taken by many like A. Coomaraswamy who states that " in a normal society, the artist is not a special kind of man, but every man is a special kind of artist." However, it is unfortunate that in today's society "...art and imagination are often taken as the 'frosting' to life rather than the food. " ²²⁹

Finding the right balance between the data bank of traditional values and modern technology has always been the hallmark of good architecture anywhere in the world, but what is this balance and how can it be achieved ? Let us, in point form, unravel the question. First there are the tangible aspects:

- Research and analysis of historical examples:

Architecture Town planning of traditional cities Techniques of structuring spatial planning Progression of open and closed spaces Use of enclosure and water The character of building facades Abstract adornment Geometrical configurations Human scale

²²⁸ Quantrill, p. 116.

²²⁹ Safdie, p. 74.

- Opportunities offered by the industrial age:

New materials

Balance between mass production and the crafts

Then there are the intangibles: Creative imagination

Perception of place

In order to illustrate the tangibles, I shall once again refer to one of Larsen's statements:

"The objective of this building is to carry on the historical continuity and to create complexity and variation through deliberate architectural elaboration of the traditional Islamic elements." ²³⁰ Let us deconstruct the above statement into its components:

"building...to carry on the historical continuity" "create complexity and variation" "deliberate architectural elaboration of the traditional Islamic elements"

Reading Larsen's statements, it is apparent that the continuity that is being referred to lies in the 'vernacular images.' But how is it possible to "carry on the continuity" in contemporary structures if the morphology of the present town is radically altered, the present building typologies are substantially more complicated, the process of construction is dependent on technologies that didn't exist previously, and even the materials of construction are all imported ? If this is the case then

What is possible for us to continue ?

²³⁰ Clouten, p. 20.

Does this mean that all that is possible is the "architectural elaboration of the traditional Islamic elements " which I will paraphrase as "the architectural abstraction of vernacular images." Or are we possibly alluding to capturing the essence of the indigenous architecture in its particular context.

But what is the essence of the indigenous environment?

The Advanced Oxford English Dictionary defines essence as:

"...the inner nature or most important quality of a thing; extract obtained from a substance by taking out as much of the mass as possible, leaving all its important qualities in concentrated form; "

But what are these "most important qualities in concentrated form" from an architectural viewpoint, and how are they cross-regionally applicable, even within the peninsula that, has such varied architectural typologies ? I shall answer the latter part of the question first by suggesting that, in order to have a larger relevance, it is essential to take out the specificity of place; only in this manner can we extract the concentrated concepts. However, before we can proceed, it is necessary to take a larger perspective -- the city form.

There has been a great deal of research carried out on the Islamic city from which it has been concluded that some of the answers to the problems of the city lie in the 'formation of space,' the interface with architecture that orders and constitutes tangible experiences that are appreciable by the community, with which they can associate. However, although this thesis is only dealing with the direction of the architecture of the region, it is not possible to examine the architecture in isolation; it must be done within the framework of the city as a whole. Thus I shall very briefly attempt to illustrate the larger picture, suggest some avenues that could be explored, and then deal with the architecture within this context. .

In a typical old city, public space could be classified into two general types. The first is the open public space that appears in the forms of Maidans, or urban courtyards, in front of monumental buildings like the mosques and Madrassas. The second type is the circulation space represented in the traditional fabrics by the narrow labyrinth patterns of thoroughfares and alleyways.

If we were to examine aerial photographs of Western cities, in general, there are large open spaces for public gathering that are an integral part of the Western urban matrix are seldom observed in Muslim cities. It was the sahn, the open courtyard of the Friday mosque, that provided the space needed where the unity of the community was maintained. Externally, the variety of shapes and sizes of maidans or public open spaces located in front of and between buildings depended on their location and served a different set of purposes. Firstly, they functioned as as a distributing node, serving the masses moving in and out of the major buildings to and from the neighboring paths. Secondly, they provided the visual spatial treatment required to accommodate the large monumental structures within the compact bulk of the old cities; thirdly, they also allowed the buildings to be seen from different angles, generating a variety of views and visual sensations.

The inward orientation which has been described in the introduction, as exemplified by the use of internal courtyards, the house, and the mosque, facilitated the evolution of the irregular pattern of the exterior narrow spaces acting as streets. To modern observers, who do not understand the patterns, they appear cumbersome, confusing, and inefficient. But the measure of the hierarchy of efficiency was different in those days than it is now. The narrow streets were in themselves a sort of built-in system of traffic control which sustained an effective zoning plan and an arrangement pattern for the different urban functions and climatic modulation.

Looking at contemporary Muslim cities, one finds a different story. Developed on Western planning models, planned squares acquire shapes that are more universal in

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character. The fate of the unplanned squares and urban gardens, growing incrementally, depends to a great extent on the uncoordinated private building activity taking place around them. Those shapes, mainly squares, rectangles, and circles, are easily adaptable, but were none the less developed ignoring the cultural context and correspondingly many of the traditional building techniques, which resulted in the loss of identity in its transition to the contemporary Muslim city.

Comparing traditional streets with their modern counterparts, one is also confronted with a different situation. Modern streets are designed to allow accessibility and ease circulation. The form of the grid pattern of streets and sidewalks for vehicular and pedestrian movement is primarily a by-product of land use designations and traffic flow equations. The buildings defining the space of the street are accordingly shaped by a set of building codes, uniformly applied in all parts of the city.

So it can be seen that the old Muslim environment that possessed special spatial attributes has been mostly lost now. On the other hand, we cannot pretend that people in Islamic cities today are the same as those who declared "jihad" and, in a period of two centuries, spread Islam to territories as far-flung as Spain in the west, Indonesia in the east, Anatolia in the north, and Yemen in the south.

So what can or should be done to capture the essence of "place" ?

For a moment let us ignore the complications of reality and go one step further than Makiya who states " from all these wrong things there is now a better beginning " ²³¹ and dream of a utopian environment. For those who wonder how practical these speculations can be, I answer in the words of Phaidrus in Paul Valery's Eupalinos,

"The extreme of the speculation sometimes gives weapons for realization." ²³²

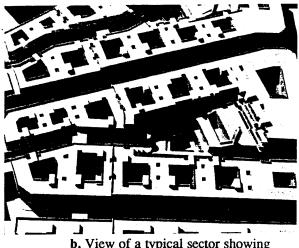
²³¹ Parkyn, " Mohamed Makiya, " p. 36.

²³² Get original quote

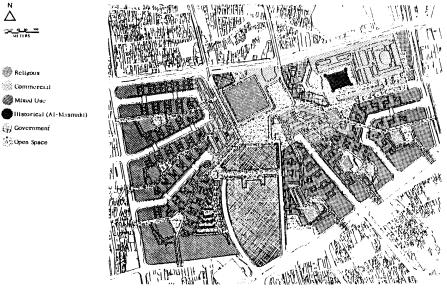
A planning proposal presented by Saleh al-Hathloul and Mohammad Shuaibi for the area surrounding the Justice Palace



258a. Aerial view of the proposed development showing pedestrian walkways radially linking the shopping, offices, and housing sectors.



b. View of a typical sector showing possible interpretational development plans and urban-design regulations.



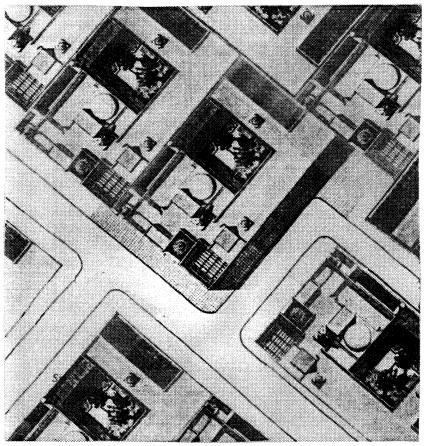
c. Justice Palace: Landuse

It is true that sometimes speculation also creates architectural monstrosities, but let us take the positive approach in which the great majority would join Anatole France in stating that

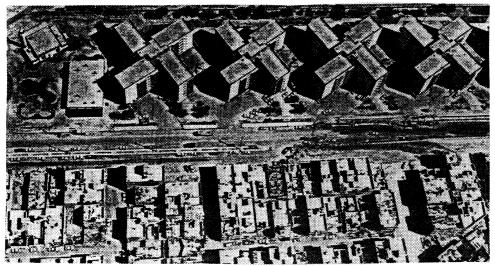
"...without the Utopias of other times, men would still live in caves, miserable and naked. It was Utopia who traced the lines of the first city....Out of generous dreams come beneficial realities. Utopias is the principle of all progress, and the essay into a better future."

Taking this adventure one step further, if we were in a position to precipitate change, the most fundamental aspect would be the codes that were subscribed to when the traditional cities were transformed. In the case of Kuwait we would start with the "Kuwait Statutory Building Regulations" Here, from the viewpoint of the city, there are two changes necessary. Firstly, except for the present buildings which will become a reminder of the past, the ever-spiralling building height needs to be reduced. ²³³ The consequence of this will be that rather than the city becoming a smaller version of its American counterpart whose identity is the multi-storyed towers of the business districts, surrounded by mid-rise blocks and finally by single-storey acres of suburbia, the Arab city will become a compactly built low- to medium-rise structure emphasizing the singular factor that has always differentiated the Islamic city from its Western equivalent; the minarets and domes.

²³³ An interesting point raised by Prof. Padamsee in reading the thesis was "what do you imagine would be the effect on the land values ? " I believe that the effect would vary according to the city. Take the case of Bombay (used just as a principle of reference). Here if we were to reduce the height of the buildings the probability is that price of land would immediately increase due to a combination of geographical factors, the number of people living in the city and the shortage of ACTUAL LAND available. However, in Kuwait (and in most of the Gulf countries) this is not the case, there may be a slight congestion of land available adjacent to the very heart but within 'sour street' the boundary of the city there is no shortage. The reason for the twenty storey office towers is probably related to height and prestige.



259. A collage of a possible housing layout in terms of principles of planning.



260. An example of the glaring contrast between traditional and present housing patterns. The relationship of the mosque, now simply attached at the end of the housing, rather than an integral part.

But how do we promote a skyline from one which is generally dominated by watertanks, television aerials, and twenty storey buildings which are all an undeniable part of today's city to one in which the emphasis is on the minarets or at least their presence is acknowledged rather than being overshadowed by the above ? ²³⁴ Because of the current state of the development of the city in certain places, what is being recommended may prove to be impossible. Nevertheless, for the greater part there are two major strategies.

Firstly, the survey and documentation begun by Peter and Alison Smithson in the sixties need to be updated, not simply in terms of the location of the mosque as an equation of travel distances for the adjacent community, but in terms of its position and its sphere of visual and vocal influence on the surrounding fabric. ²³⁵ The purpose of this would be the implementation of the second stage which is the establishment of planning guidelines that would determine the volumes of buildings and the visual relationships between them, so that sites adjacent to existing mosques which have not been developed can be focused towards these urban pivots, creating localized orientations. Finally, what is needed is the integration of these vital elements into the fabric by building housing in much closer proximity. In this way, the mosques will not simply be sited on islands or surrounded by waist-high walls but will be connected to the rest of the environment.

The second major strategy is the reorganization of the individual blocks within this larger framework. Here two important changes are necessary. Firstly, all the regulations that involve the set-back need to be abolished and an active effort be made to promote the benefits of building on a combination of traditional principles of courtyards and modern technology. Secondly, instead of Article 96, a sub-heading of Chapter 8, that outlines the code for "Private and commercial buildings in the Arab style," it would be an interesting exercise if this so called style were to become the norm not only for residential buildings but also for commercial buildings.

²³⁴ Professor Padamsee commented on this point was that there is still a thesis to be written on "The value of the minaret in the contemporary city."

²³⁵ P. & A. Smithson "The kuwait city center" Lotus International, n. 18, p. 126-135, March 1978.



261. A view in Kuwait depicting a roundabout with one of Kuwait's major local mosques in it

It could be argued by some that this approach would destroy the present variety and the freedom of choice in the city. The antithesis to this argument is twofold; firstly, the present regulations are the result of legislation that was created at a time when speed was of the essence, and the only models that were available were the Western ones. Secondly, we have seen in traditional cities that, regardless of their miniscule palette of materials, no two houses were identical, emphasizing the fact that it is not only technology or materials that can create a great deal of freedom of choice and variety but also the manipulation of similar elements. Nevertheless, let us examine these two issues: variety in the city and freedom of choice. If we examine the city statistically it cannot be denied that there is a great deal of variety in the architecture; people have built Palladian and Greek revival villas, Japanese pagodas, Swiss chalets, some contemporary Arab houses and a range of other combinations of architectural styles out of most construction materials known to man.

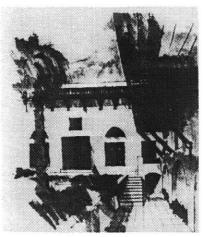
But where has this variety in the architecture of the city come from ?

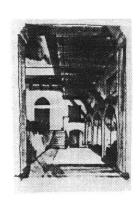
The answer to this is that there are are three variables organized within a framework: firstly, the materials and technology, secondly, certain architectural notions from the West, and thirdly, the building codes. Let us once again compare the traditional cities to the modern ones. As has been stated above, in the former there was a very limited range of materials compared to the latter, where a dazzling array of materials and technology are imported from all parts of the world. This comparison is not suggesting that it is the result of an excess of materials that is the cause for the present plight of the city, nor is it proposed that we apply import limitations on the type of materials. But we should promote regional and local building research and testing centers that would encourage the use of local materials and give architects a greater range of alternatives, as Pietila has attempted by the use of brickwork in the Sief Palace Area Buildings.

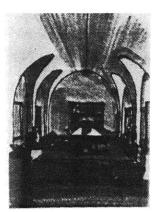
We cannot change the will of societies, and history has shown the folly of attempting to do so; however, there seems to be a positive change of attitude towards recapturing the best values in the old way of life which was ultimately based on Islamic codes of behavior and beliefs. This leaves the third factor, the building codes, the framework within which in terms of the architecture the first two factors are organized. If we examine the history of the planning regulations in Riyadh, they were established when Doxiades rolled out the grid plan; however, these were created by a legislative process in response to a particular society and very specific requirements. Maybe at this point in the eighties, we can still learn something from the traditional cities; due to the fact that the codes were not in the form of a handbook, they were constantly evolving in response to the demands placed on the fabric. However, times have changed from the fifties, and, although there have been several revisions of the codes, what is needed if we are to create a city closer to its predecessor than its Western equivalent is not simply some fine-tuning but a total change to another system. Proponents of the Western models would respond by claiming that this would prove to be either very difficult to implement, impractical, simply too expensive or even that this what is the people want.

Whenever these kind of arguments emerge, and they often do when change is being resisted, I think of the city of Istanbul and the destruction of the Golden Horn and then reflect on the incredible change, to a large extent for the better -- although one has to see what is being created in its place -- that the actions brought about by one elected official, Mayor Dalan, who has the ability to foresee the route in the future that the present direction was taking. He felt that "people thought it was an unsolvable problem. It became in the eyes of the citizens a hopeless situation" ²³⁶ and implemented radical remedial action.

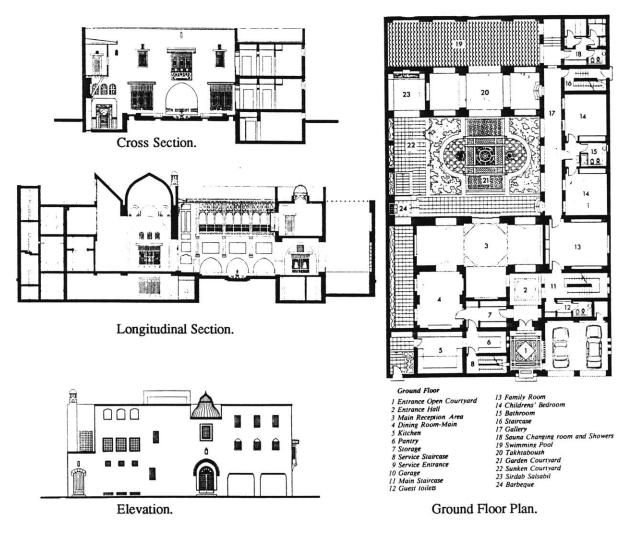
²³⁶ Hana S. Alamuddin, "Waterfront Development in the Middle East, The Golden Horn Project Istanbul" M.I.T., S. March. S. June 1987.

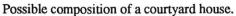






262a & b; interior courtyard c, family area.





In response, I put forward a possible example of the impact in the architectural context that this change could have which can be seen in the plans, sections, and elevations of a house designed for Farouk Sultan in Shuwaikh, Kuwait, by Wahid El-Wakil: ²³⁷

"The design concept is based upon providing a functional dwelling for the Client's needs, to be appropriate to the environment and climatic considerations and to establish a cultural identity through the continuity of traditional forms with respect to aesthetic values and modern scientific requirements." ²³⁸

Here we can see a radical change in the approach to site planning, orientation and urban form. The beauty of the scheme lies in the fact that it does not imitate traditional planning, but acknowledges the progress of technology, the permanence and role of the motor vehicle and synthesise all together without mimicking the past.

This, I believe on an architectural level, should be the approach that we need to capture the essence of the problem by identifying and precipitating forms that are innovative but still familiar, thus transferring familiar local characteristics, synthesizing them with contemporary technology and finally creating an architectural experience which I believe is a combination of place and memory.

Although the experience of place has always involved several senses one of the fundamental weaknesses of architecture today is its exclusively visual quality, which puts it outside our emotions. The intensity and tranquility of our experiences of a natural setting -- for instance, the courtyard garden of the Azem Palace in Damascus --. stem from the fact that we are using all our senses. Thus, through his various sensory stimuli, man receives messages that reinforce each other, and there is an unconscious bodily identification with the object, to at least the extent that every real place can be remembered, partly because it has affected all our senses and generated enough

²³⁷ International Union of Architects, UIA Congress - Cairo 1985 Edited by Ahmed Gulgonen. pp. 33-45.238 Ibid. p. 37.

associations to hold it in our personal worlds. What is missing from our dwellings today are the potential interactions between body, imagination, and environment. In emotionally moving architectural experiences, space, material and time seem to unite into one dimension which penetrates our awareness. Space takes on more gravity; the character of light becomes more tangible. We identify with this place, the space, the moment, and they all become part of our body and consciousness. Here we see the importance of the environment for our personalities and psyches. A properly organized environment, full of significance, related to the human scale and our memories in, not only expresses our relationship with the world, but at the same time reinforces our self respect. But one could go further: the world we build makes us understand and remember who we are, ourselves.

One of the keystones of experiencing place is memory, for towns are the collective memory of its community and its individuals. People are born into a village which existed before they did; gradually they explore the alleyways, then the street, and the quarter, and finally the entire village forms their territory and becomes filled with memories, as well as containing large amounts of knowledge that guides them without them knowing it. In contrast, the menace presented by the contemporary world lies in its lack of concrete quality and its abstraction of elements.

But what is abstraction ?

Abstraction is not a synonym for lack of meaning, but its opposite. Abstraction is the condensation of meaning or imagery. A pregnant symbol, a real abstraction differs from a meaningless ornament, just as a meaningful scientific formula differs from an empty generalization. Unfortunately, the teaching of architecture in many schools in the West treats abstraction simply as the visual play of form, "a skillful, true and magnificent play of building masses in the light," to borrow Corbusier's famous creed. But if this is all that building is today, it is not surprising that our industrial age lacks feeling, because it no longer provides images for our minds or nourishment for our dreams. However, arousing images and dreams does not mean architectural kitch or the copying of "the

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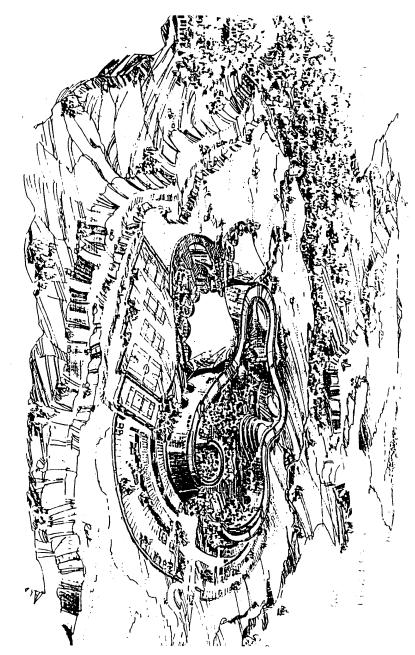
-

good old days," but something operating as an external continuation of the human mind. Architecture should be literally a biological and mental extension of man. Being integrated with tradition bears no resemblance to the nostalgia for history as a collection of motifs. However, at what point does the transformation of an historical prototype or motif due to the superimposition of criteria that are specific to the particular project or place so distort the original that it no longer relates in any of its physical or spatial attributes to its origins ? In many instances, in both the Sief Palace Area Buildings and the Ministry of Foreign Affairs, we have posed the question in the context of the use of identifiable images or of architectural forms from the past, but

Is it valid to make this kind of transformation?

The question is probably one of the most crucial to the present debate in the search for an architecture appropriate to not only the Arabian peninsula but to all developing countries looking for a language of expression particular to that region, and consequently is one of the most difficult to answer in an abstract manner, for it is a matter of sensing beneath the surface of the memories, myths, and aspirations that give a society coherence and energy, and then providing these with an authentic expression in architectural arrangement.

The hope is to produce buildings with a certain timeless character which fuse old and new, regional and universal. So what I will attempt to do is present two architectural solutions and the associated process that created these buildings, and let the readers decide for themselves.



261. Diplomatic Club Aerial View

The first building I shall briefly illustrate is the Diplomatic Club in Riyadh. ²³⁹

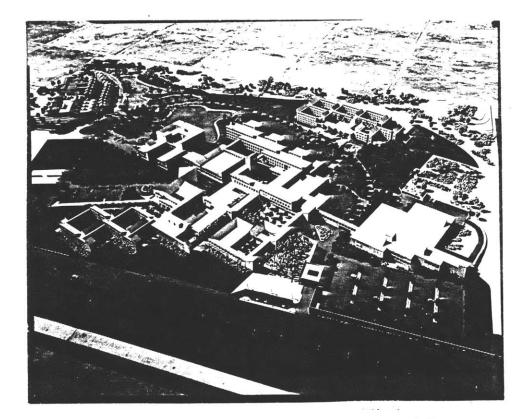
"In the spring of 1980 a competition was held for the planning and design of the Riyadh Diplomatic Club within the new Diplomatic Quarter. The Otto partnership and Omrania submitted individual entries in accordance with the competition terms of reference. At the suggestion of the High Executive Committee Bureau for the Ministry of Foreign Affairs and the Diplomatic Club, a joint venture was formed of the two partnerships consisting of Atelier Frei Otto, Buro Happold and Omrania." ²⁴⁰

The second building is the Aga Khan hospital in Karachi, Pakistan. Although this project was not a competition in the traditional sense of the word, there was a great deal of competition, for right from the first day, client participation was both extensive and directional in its input. This was accomplished in the following manner. Firstly, a master committee was appointed, overseen by His Highness, the Aga Khan, composed of members who were French, English, and American. This committee guided a smaller committee which were responsible for the actual selection process. Thus a chain of commitment was established from the smaller committee to the master committee to the authority of His Highness, the Aga Khan.

It was the responsibility of the smaller group, composed of two economists from the Economist Intelligence Unit in London, an M.D. who was also a hospital administrator, an architect from the Ministry of Health in London, and Michael Curtis, the client's representative, to compile an extensive list of potential architects and then, after initial scrutiny, shortlist them.²⁴¹

²³⁹ This was the first building that I worked on in London immediately after graduation from the University of Dundee in June, 1982. Initially I was employed as a model maker, however, as my involvement increased in the project I was allowed to examine and propose design solutions for two elements the relationships between the large openings in the walls and the glazing sections, and the circular ventilation exhausts shafts that are directly below the structural support at apex of the tents.

²⁴⁰ Omrania Conceptual Design Report, December 1981, introduction.



262. The Aga Khan Hospital.

²⁴¹ It was interesting to learn that the firm of Payette Associates was added virtually at the last minute as a result of a breakfast meeting between Morgan Wheelock and a member of Payettes firm.

In the evolution of this shortlisting, the committee applied two prerequisites -- the first that the selected firm would work with a consultant named Mozhan Khadem, whom they had met in Perkins and Wills offices in Chicago -- who was to later play an important role in the organizing and design of the hospital -- and secondly, that the engineering was to be carried out by a pre-selected British firm. The attitude of the committee in the entire process of the selection of consultant, engineer, or architect was that they wanted to "mix their own salad." ²⁴²

The majority of these firms from which the final selection was made were from America, and they included world-wide practices like CRS, Perkins and Will, and TAC, for in the late sixties, there were not many architectural practices in the developing world, if any, that had the experience required, to build a hospital of the complexity and standards required and virtually none in the Western world who could see beyond applying their own models. Included was the relatively new firm of Payettes Associates, also from America.

Once the selection of the firms was in its penultimate stage, as part of the final selection process but largely due to his personal interest in all his projects, His Highness met the principal, discussed the architectural philosophy of the firm, and visited a selected work of the company, in the case of Payette Associates, it was the Leonard Morse Hospital in Natick, Massachusetts.

²⁴² It was perhaps part of the committees strategy, in the inclusion of the package of Mr. Khadem that he would plan long journey through North Africa, Egypt, Iran and Pakistan in order that the chosen firm could learn about the cultural history and the architecture in these parts of the Islamic world. The buildings looked at in particular were the Alhambra Palace Complex, Granada, Spain; the Qarawiyin mosque, Fez; Mausoleum Sultan Hassan in Cairo; Masjed and Meydan-i-Shah Complex and Masjed-i-Jami in Isfahan; Akbar's Fort, and Vazir Khan Mosque & Shahlimar Gardens in Lahore, Pakistan.It is possible that many of the principals of architectural firms have visited these countries but the difference lies in the selection of an organization that would be responsive to these issues and tailor their building to avoid mimicking this history of a particular region but understanding the principles and designing accordingly.

Three weeks after this visit, at the end of a selection process that took over a year, the project was awarded, not to the huge architectural corporations like CRS, Perkins & Will and TAC, but to Payette Associates, a firm of only 35 people. A description of the project alone could be the subject of a thesis so I will present a statements that I believe illustrates the success of the "appointment by selection". In the words of Brian Brace Taylor:

"This University Hospital has many lessons to teach in terms of organization, setting the highest building standards, using primarily local labor and materials, reviving crafts, incorporating traditional art form for contemporary use and hopefully teaching the management techniques and the building process of a large and complex project." ²⁴³

In agreement, Jim Antoniou states that "the whole project clearly demonstrates, that a combination of a well-prepared brief, developed over a period...together with a sensitive approach to design can result in innovative form, while still applying the principles of Islamic architecture in the twentieth century. [He does, however, in his conclusion pose two questions,] "...How adequate is the space allocation; "how flexible is the growth for future expansion, not only for the hospital but for the individual departments?" ²⁴⁴

The reply to the first question is that the hospital, the most advanced in the region, has proved to be much more successful that originally anticipated. It was expected that expansion would be required at some point in time. However, this need has arrived earlier than expected and a revised master plan is being prepared for future expansion.

²⁴³ B.B. Taylor, "The Aga Khan Hospital, Karachi," Mimar no., 14, April - June 1984, pp. 33 - 36.

J. Antoniou. "Exemplar in the Third World." Middle East Construction, vol. 11, no. 2, 1986.Feb., p. 24.

Due to the foresight in the initial planning, this can take place without affecting the original project.

A third question asked by Antoniou is "can students that will be trained over a number of years in serene and pleasant environment adapt to working in the slums of Karachi, or in the poor rural areas of the countryside ? " ²⁴⁵

The answer to this question is twofold. Firstly, this dichotomy between the privileged and the masses is one that has existed for centuries in the sub-continent and is not a problem that a single hospital can solve or has ever attempted to address. However, it must be noted that the Aga Khan provides an extensive health service network in the country which even includes a center in Gilgit, located in the remote northern region of Pakistan in the mountainous foothills of the Himalayas. Secondly, as part of the medical education in the first and second years, students are required to work in the "katchi abadis" -- a local terminology for squatter settlements -- on projects related to the health issues of the inhabitants. Finally, what the hospital can offer, and actively does so, is similar levels of patient care for both sections of the community, differing only in the accommodation provided, which patients chose according to their own budgets.

> Finally, Mildred Schmertz states "most of the award winning buildings -- [referring to the Aga Khan Award for Architecture] -which draw from tradition are much smaller structures closer in scale to the older prototypes from which their forms and ornaments are derived. The Hospital and Medical College, when complete, will be comparable in size to other major projects under long-term development in the Muslim world. Few of these structures appear to make any but the most superficial use of traditional language. By building what may be the first that does, the Aga Khan once more sets a standard." ²⁴⁶

²⁴⁵ Ibid.

The Aga Khan Hospital in Karachi and the Ministry of Foreign Affairs and the Diplomatic Club, in Riyadh shared one vital element in common and that was the continual guidance of the clients or policy-makers, so much so that in the latter two projects the buildings final form was due to the intervention of the client. In the Ministry of Foreign Affairs, His Royal Highness, Prince Saud Al Faisal, minister of Foreign Affairs, recommended that the jury "decided against deciding immediately upon a winner," and asked the four chosen architects to resubmit their schemes after a further three months of design development.²⁴⁷ In the Diplomatic Club, the High Executive Committee requested the three competitors to join forces. Thus, in the search for models appropriate to particular contexts, we have seen that in the selection process, active sensitive client participation is as crucial to the success of the project as is design.

From an academic viewpoint, outside the pressures of the commercial world, it is easy to make sweeping statements about how and why the city and its architecture should develop and what the policy makers should or should not do to promote an idea in order to bring it to a fruitful realization.

However, it has been the sincere effort of this conclusion to avoid this purely theoretical position but rather to take an approach based on the fact that I am a practicing architect, aware of both the idealistic directions and the practical issues and compromises made in the translation of an idea into a built form, and can point out possible pitfalls of other strategies.

These ideas, which I have discussed in parts throughout the thesis, I believe are within the bounds of realization of the policy-makers. For the sake of clarity, I will state them collectively below:

o Careful reexamination of the process that leads to the awarding of major commissions.

²⁴⁶ M. F. Schmertz. " Setting a standard for architecture in Islam. " Architectural Record, vol., 169. no. 13, 1981. Oct., pp. 81 - 89.

²⁴⁷ International Union of Architects, p. 19.

- o Changing the building codes to facilitate environmental solutions that are more appropriate.
- o Study and promotion of appropriate building types
- o The allocation of greater funding for testing of and research into alternate building materials.
- o Establishment of a "Royal Commission for Architecture" that would have the final word on all major projects in the country.

Finally let me end with the statement by Dr. Mahbub ul Haq in the form of a poem:

"I believe we are all on a journey of discovery, a voyage of the spirit. We have a proud culture, a glorious heritage. Let us follow its spirit, not merely its form. Let us distill the very best out of it, not the worst.

> And let us do it with candor, with honesty, with humility, for the task is immense and the process has just begun." ²⁴⁸

²⁴⁸ Yasmeen Lari, Challenges of Transformation Built Environments in Islamic Countries, (Karachi, Pakistan Council of Architects and Town Planners, 1985), p. 26. It must be stated here that although Dr. Haq the Federal Minister for Planning and development of Pakistan was referring to the people of Pakistan in terms of their housing problems of the impoverished masses, I believe that the sentiment must apply to all types of the built form for they all make a contribution to the city fabric in the whole Islamic world.

APPENDIX 1 Glossary

- badqeer = skylight
- bedouin = desert dweller, nomad
- Chadar = a sloping surface, often textured over which water is made to flow. The term comes from the Persian word for veil.See also SABIL and SHADIRVAN.
- Chatri = a decorative pavilion in Mughal India, from the Persian word for umbrella

Faroush = a type of coral stone used in traditional construction

- Hajj = the pilgrimage to Mecca required by all muslims if certain conditions are firstly met.
- Hammam = a public or private bath
- Iwan = a vaulted niche or open porch sometimes framing a portal or used to emphasize the importance of something within or infront of it
- mashrabiya = a perforated stone or wooden screen. The word may derive from the Arabic 'jali,' meaning transparent
- Madrasa = an endowed theological school providing student lodgings, a prayer hall, and sometimes a classroom.
- Maidan = large open space
- Mihrab = a niche in the QIBLA wall of a mosque indicating the direction of Mecca
- Minaret = tower from which the call to prayer is made
- Mimbar = a seat, first used in Medina by The Prophet 'Muhammad' Himself, which came to be installed to the right of the 'mihrab' in all friday mosques. It has gradually become universal in all the mosques

- Maqarnas = Arabic term, derived from the Greek word for scales used in roof tiles, applied to what are called stalactites or honeycombe vaults.
- Mashrabiya = interlaced wooden screen that projects out from the exterior plane of the building to allow primarily to women to view the streets, retain their privacy and not to impede the flow of air
- Rowshan = non projecting screened windows
- Sabat = an enclosed bridge covering part of the street often at a dead-end in a traditional Arab settlement, overpass
- Sabil = a public drinking fountain
- Sahn = interior central court of a mosque
- Serai = a palace
- Shaykh = religious leader

APPENDIX 11

ARCHITECTS AND CLIENTS STATEMENTS ON THE BUILDINGS

Statements by the Kuwaiti Client's

" New Arab Architecture: a character tailored for the local identity." 249

Statements by the Saudi Client's

"To create a contemporary symbol of Islamic ideals which acknowledges the Islamic traditions of Riyadh." ²⁵⁰

"To develop a physical image that will reinforce the ministry's mandate and aspirations."²⁵¹

"The ministry as the front door to the Kingdom." ²⁵²

Henning Larsen: Culture & Tradition

"We felt that the building representing Saudi Arabia to the outside world should have elements of an Arabian or Islamic tradition in it's experience." ²⁵³

"...the building is intended to reflect Islamic culture in the global cultural currents." ²⁵⁴

"A synthesis of Riyadh regional and Pan-Islamic sources at such a level allowing deep reinterpretations.".²⁵⁵

"...the building expresses it's formal function to it's society and a global society." ²⁵⁶

²⁴⁹ Clouten, p. 48.

²⁵⁰ International Union of Architects, p. 10.

²⁵¹ Ibid., p. 9.

²⁵² Ibid., p. 10.

²⁵³ Ibid., p.112.

²⁵⁴ Larsen, Diadolos, p. 96.

²⁵⁵ Curtis, p. .

²⁵⁶ International Union of Architects, p.112.

"We attempt to interpret, theoretically and practically the relations within the scope of the local culture." ²⁵⁷

Reima Pietila: Culture & Tradition

"My aim was not to pour 'old wine into new vessels'. I have 'gone around' the problem of how to reconcile between the old and new architectural traditions...My poetication of Metaphoric elements is apparent." ²⁵⁸

"...in the Kuwait project we try to have friendly relations with the tradition, be it modern or eclectic." ²⁵⁹

Henning Larsen: Urban Planning

"The annonimity of the facades is another requirement of the Islamic ideology " 260

"The Islamic tradition of of the hidden architecture with stern exteriors " ²⁶¹

Reima Pietila: Urban Planning

"Gulf Archaeology influenced by the floorplan design and that Uruk's city walls, some 200 kilometers north of kuwait, are echoed by those of the Sief Palace buildings." ²⁶²

Henning Larsen: Architecture

"The objective of this building is to carry on the historical continuity and to create complexity and variation through deliberate architectural elaboration of the traditional Islamic elements." ²⁶³

"One of the most characteristics of Islamic architecture is the focusing on a clearly defined interior as opposed to an exterior "²⁶⁴

- 259 Ibid. p. 242.
- 260 Clouten, p. 20.
- 261 International Union of Architects, p. 112.
- 262 Randall, p. 32.
- 263 Clouten, p. 20.

²⁵⁷ Clouten, p. 20.

²⁵⁸ Quantrill, p. 115.

Henning Larsen: Massing & Vernacular Images

"The impression of the limit, size and function of the individual building is thus blurred, and the possibility of recognition of the extent of the public functions is eliminated" ²⁶⁵

The building exterior is not pompous in the Western architectural tradition, rather it is anonymous in the tradition of the old palaces and official buildings in Riyadh which were constructed of mud brick." ²⁶⁶

"The traditional Islamic bazaar streets inspired this covered street which structures and determines the layout." ²⁶⁷

"A sequence of top light spaces within, modelled on the character of a traditional city of streets, squares and bazaars." ²⁶⁸

Reima Pietila: Massing & Vernacular Images

"Soffits of 'reed' structure were traditional in Kuwait Old Town. Here their transposition is formed by the aluminum strips of the suspended ceiling. The actual section of the strip is similar to the type of reed growing in the marshes near Basra." ²⁶⁹

"An Arabian theme of camels passing rhythmically by..." 270

"From the land side the galleries in the elevation facing the courts resemble a serai, but only poetically, and vaguely, never explicitly." ²⁷¹

"In Kuwait the windows are guardian shapes and, as traditions in many cultures reveal the shape of the windows and its subdivisions are important. The function of these wall openings is to allow friendly forces in and to hold out enemy powers, spirits." ²⁷²

²⁶⁴ Ibid., p.20.

²⁶⁵ Ibid., p.16.

²⁶⁶ International Union of Architects, p. 112.

²⁶⁷ Ibid., p. 112.

²⁶⁸ Curtis, p. 6.

²⁶⁹ Clouten, p. 48.

²⁷⁰ Randall, p. 28.

²⁷¹ Clouten, p. 48.

²⁷² Quantrill, p. 130.

Henning Larsen: Climate

"The climatic conditions are the chief reasons for the strictly enclosed exterior appearance." ²⁷³

"The external walls are heavy and well insulated to augment the thermal storage of the building."²⁷⁴

"On the exterior walls are only rather small windows giving direct light and smaller openings giving indirect light to the interior." ²⁷⁵

Reima Pietila: Climate

"Sun is the ornamental weaver, filtered through the fingers of the sun-breaking eaves. This theme emanates from Basra Old Town, where the eaves were of teak." ²⁷⁶

Henning Larsen: Courtyards & Gardens

"Inside these introverted structures, the austerity opens into courtyards & patios where delicate gardens reflect the Islamic dream of paradise." ²⁷⁷

"A building based on traditional wisdom for dealing with the harsh climate, ie thick walls, small apertures, courtyards, water-gardens, double layer outer wall for circulation of air and baffling of glare, top lighting, mashrabias." ²⁷⁸

"In order to meet very hot climatic conditions the building is designed and characterized according to traditional principles." ²⁷⁹

"Following the pattern of using the best of local traditions, the landscaping reflects the very rich traditions of Islamic gardens." ²⁸⁰

²⁷³ Larsen, Diadolos, p. 94.

²⁷⁴ International Union of Architects, p. 112.

²⁷⁵ Ibid. 112.

²⁷⁶ Quantrill, p. 130.

²⁷⁷ Abel, p. 36.

²⁷⁸ Larsen, Diadolos, p. 94.

²⁷⁹ International Union of Architects, p. 112.

²⁸⁰ Ibid., p.112.

"A number of public courtyards of varying dimensions and with different social and functional purposes are attached to the bazaar." ²⁸¹

Reima Pietila: Courtyards & Gardens

"...in Kuwait there are coral reefs on the coast in the depths of the sand beaches. Sief Palace Area Buildings stand there because they have been piled on the coral reefs. Therefore my imagination of the marine origin of the Kuwait project has its motivation, the coral flower metaphor of the foundations." ²⁸²

Henning Larsen: Decoration

"...no bright colors or decoration" commenting on the exterior ²⁸³

"...too elaborate for me" 284

Reima Pietila: Decoration

"We have taken quite alot from the folkloristic handicraft and also modern rugs - those striped floor rugs... The Bedouin women weave the partition carpets of long narrow bands stitched together to make a 2.5 meter high wall, dividing the Bedouin tent into masculine and feminine halves. This was also in our minds. Raili's tiling is not intentionally abstract art but meant to be related to existing traditional in textiles." ²⁸⁵

"...while in Kuwait I took high-tec methods...the idea of tiling is not in a truly traditional way...even the size of the tiles is not traditional but techno-cultural...(while) the patterns and colors are poetic modern ! " ²⁸⁶

"Referring to the tiling in the project Reima states : Railis' contribution in the Kuwait project was considerable." ²⁸⁷

²⁸¹ Ibid., p.112.

²⁸² Ibid., p. 92.

²⁸³ Abel, p. 36.

²⁸⁴ Commenting on the designs by the Syrian Waddad Faris of the intricate wood carvings and stucco work added to the project at the request of the client. The execution was done by morrocan craftsmen. Ref

²⁸⁵ Quantrill, p. 110.

²⁸⁶ Ibid., p.242.

APPENDIX 111

- 1. S.O.M., p. 7.
- 2. Chisholm., dedication.
- 3. Lacey, unumbered photographs in the middle of the book.
- 4. Ibid.
- 5. Nawwab, p. 136.
- 6. Ibid., p. 188.
- 7. sim. cit. 3.
- 8. Ibid.
- 9. Manoharan, p. 41.
- 10. Nawwab, p. 200.
- 11. Ibid.
- **12.** Manoharan, p. 11.
- 13. Eden, p. 101.
- 14. Ibid., p. 15.
- **15.** Talib, p. 40.
- 16. Ibid.
- 17. Ibid.
- 18. Ibid.
- 19. Benevolo, p. 17.
- 20. Shriber, Fig: 73.
- 21. Bidwell, p. 32.
- 22. Gardiner, p. 40.
- 23. Ibid.
- 24. Warren & Freethi, p. 35.
- 25. Heinz, p. 19.
- 26. Nawwab, p. 127.
- 27. Ibid., p. 121.
- 28. Shriber, p. 125.
- 29. Gardiner, p. 32.

- **30.** sim. cit. 3.
- 31. AKPIA, no. 5, "Large Scale Housing Projects", p. 3.
- 32. Nawwab, p. 125.
- **33.** Ibid., p. 133.
- **34.** sim. cit. 3.
- 35. Birdwell, p. 74.
- **36.** Breese, C. & Cozens, p. 8.
- 37. Lewcock, R.B. & Freeth. Z., p. 86.
- **38.** Ibid., p. 145.
- **39.** Ibid., p. 87.
- **40.** Ibid., p. 40.
- 41. Shriber, p. 25.
- 42. Ibid., p. 27.
- 43. Ibid., p. 132.
- 44. Al Hathloul, p. 28.
- 45. AKPIA, no. 3, "Adaptive Reuse ", p. 53.
- 46.
- **47.** S.O.M., p. 15.
- **48.** Mousalli, p. 48.
- 49. AKPIA, no. 3, "Adaptive Reuse ", p. 13.
- 50. Shriber, p. 32.
- 51. Ibid., p. 30.
- 52. Seherr, p. 91.
- **53.** Shriber, p. 133.
- 54. Ibid., p. 132.
- 55. Gardiner, p. 30.
- 56. Ibid., p. 33.
- 57. Ajtony, (preface, no fig number, no plate number.)
- 58. Shriber, p. 101.
- **59.** Gardiner, p. 30.

- 60. Shriber, p. 104.
- **61.** Ibid.
- 62. sim. cit. 53.
- **63.** Gardiner, p. 63.
- **64.** Ibid., p. 72 73.
- **65.** Breese, C. & Cozens, p. 15.
- **66.** Heinz, p. 36.
- **67.** Al Hathloul, p. 178.
- **68.** Ibid., p. 153.
- **69.** Shriber, p. 33.
- **70.** Al Hathloul, p. 149.
- 71. sim. cit. 67.
- 72. sim. cit. 66.
- **73.** Shriber, p. 72.
- 74. Ibid.
- 75. Ibid., p. PXIX.
- 77. Shastri, S & Khan, p. 10.
- 78. Bidwell, inside cover.
- **79.** Kulterman, Mimar 16, p. 44.
- 80. Ibid., p. 45.
- 81. Arab Urban Development Institute, p. 32.
- 82. Talib, p. 103.
- 83. Gardiner, p. 115.
- 84. Parkyn, B. D., no. 501. p. 23.
- 85a. Gardiner, p. 158.
- 85b. Ibid..
- 86. sim. cit. 79.
- 87. Shastri, S & Khan, master plan chapter divider.
- **88.** Center for Middle Eastern & Islamic Studies, p. 60.
- 89. Parkyn, Middle East Construction, Sept. '83, p. 42.
- **90.** sim. cit. 79.

- 91. AKPIA, no. 3, "High Density Living", p. 13.
- 92. AKAA, Regionalism in Architecture, p. 13.
- **93.** Kulterman, Mimar 16, p. 46.
- 94. sim. cit. 88.
- **95.** sim. cit. 88.
- 96. AKAA 1980. <u>AR</u>. reprint, Nov. 1980, p. 107.
- 97. Ibid.
- **98.** Shriber, p. 107.
- **99.** Ibid., p. 111.
- 100. sim. cit. 95., p. 109.
- 101. sim. cit. 92.
- 102. sim. cit. 95., p. 108.
- 104a. Gardiner, p. 128.
- 104b. Ibid., p. 129.
- 105. Kulterman, Mimar 16, p. 47.
- **106.** Gardiner, p. 143.
- 107. sim. cit. 57.
- 108. Shriber, p. LII.
- 109. Ibid., p. 444.
- 110. Gardiner, p. 145.
- 111. Shriber, p. 445.
- 112. Randall, p. 31.
- 113.
- 114. Lloyd, p. 72.
- 115. Krefter, (drawings enclosed at the end of the book)
- 116. Ibid.
- 117. Randall, p. 31.
- 118. Ibid.
- 119. Benevolo, p. 23.
- 120. Badawy, p. 60.
- 121. Gardiner, p. 145.

- 122. Connah, p. 128.
- 123. Birkwell, p. 58.
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