PROGRAMS AND PRECEDENTS:
Future Prospects of Housing Theory and Practice in Lebanon

by
ABDUL-HALIM JABR

Bachelor of Architecture
American University of Beirut, Lebanon 1986

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

Signature of the author_____ Abdul-Halim Jabr
Department of Architecture
May 6, 1988

Certified by_____ Nabeel Hamdi
Lecturer
Thesis Supervisor

Accepted by_____ Julian Beinart
Chairman
Departmental Committee for Graduate Studies

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ABSTRACT

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The object of this study is two-fold.
The first is to critically understand the limits of a given set of housing principles within the exigencies of a specific context, that of Greater Beirut, Lebanon, a site of rapid physical and social urbanization that is literally devouring the small country.
The second is to broaden the range of housing options in that context, ones that have not yet been considered, possibly for political, institutional, economic, and/or practical reasons. Some recent changes in the war-torn country might rightly prompt the consideration of previously untapped options.
The housing options in question- formal public housing, community-based Supports, and combined squatter upgrading and Sites & Services- are brought into comparison through three relatively successful demonstration projects in other developing countries.
While realizing that models cannot be replicated across cultural boundaries, piecemeal lessons can be learnt, and ideas can be appropriated, in the context of local norms, procedures, physical constraints, and broader urbanization issues.

Thesis Supervisor: Nabeel Hamdi
Title: Lecturer

ACKNOWLEDGEMENTS

For my thesis advisor, Professor Nabeel Hamdi, for his keen guidance, sharp insight and patience; also for his humour that enlivened the weekly thesis crits and for many of the written comments that I still try to read to the day!

For Professor Ronald (Ron) Lewcock, my academic advisor, for his valuable input as my thesis reader and for making the two years at the Aga Khan Program a unique experience in many ways.

For my sponsor, The Hariri Foundation, for making a better future possible for me and so many other Lebanese students.

For Mr. Kamal Darghouth in Lebanon for his help with information.

For Shirine Hamade for making available her own research work.

For Khaled , Shahnaz, and Said at M.I.T. for their continuous friendship, help and encouragement.

For May and Marwan (courtesy of MCI Telecommunications), for their friendship and intellectual challenges.

For my Mother, Sister, Sophie, and Bushra, whose love and support helped me through the years of study.

In memory of my Father.

Cambridge, Massachusetts
May 10, 1988

CONTENTS

INTRODUCTION

This research scrutinizes various housing principles, as to the measure of their replicability in Lebanon. By analyzing examples of design and physical intervention derived from 'universal" principles, distinctions of basic approaches and related political implications become apparent. Do these represent a reasonable match between local and international ideals?

As the thesis is structured towards sounding new grounds for future guiding principles and models/prototypes of housing in Lebanon, the use of the term "model" requires qualifying.

The contemporary pattern of city growth in Lebanon offers a new problem, that of intensive urbanization and unprecedented programmatic and material requirements. These have rendered both traditional building types and modern privately-developed apartment blocks short of providing adequate and affordable houses for a great part of the population. In the face of such evergrowing demand, some new solutions are essential. One naturally looks at other countries for inspiration, informed appropriation of non-indigenous precedents, and as regretfully is often the case, direct import of foreign models. The aim as follows is to make informed judgements about potential models, in the hope that, should they be deemed fit for housing in Lebanon, they be appropriated rather than transplanted. Can these models help in establishing some appropriate modes of housing in a high density urban environment of tight geography and speculative land development?

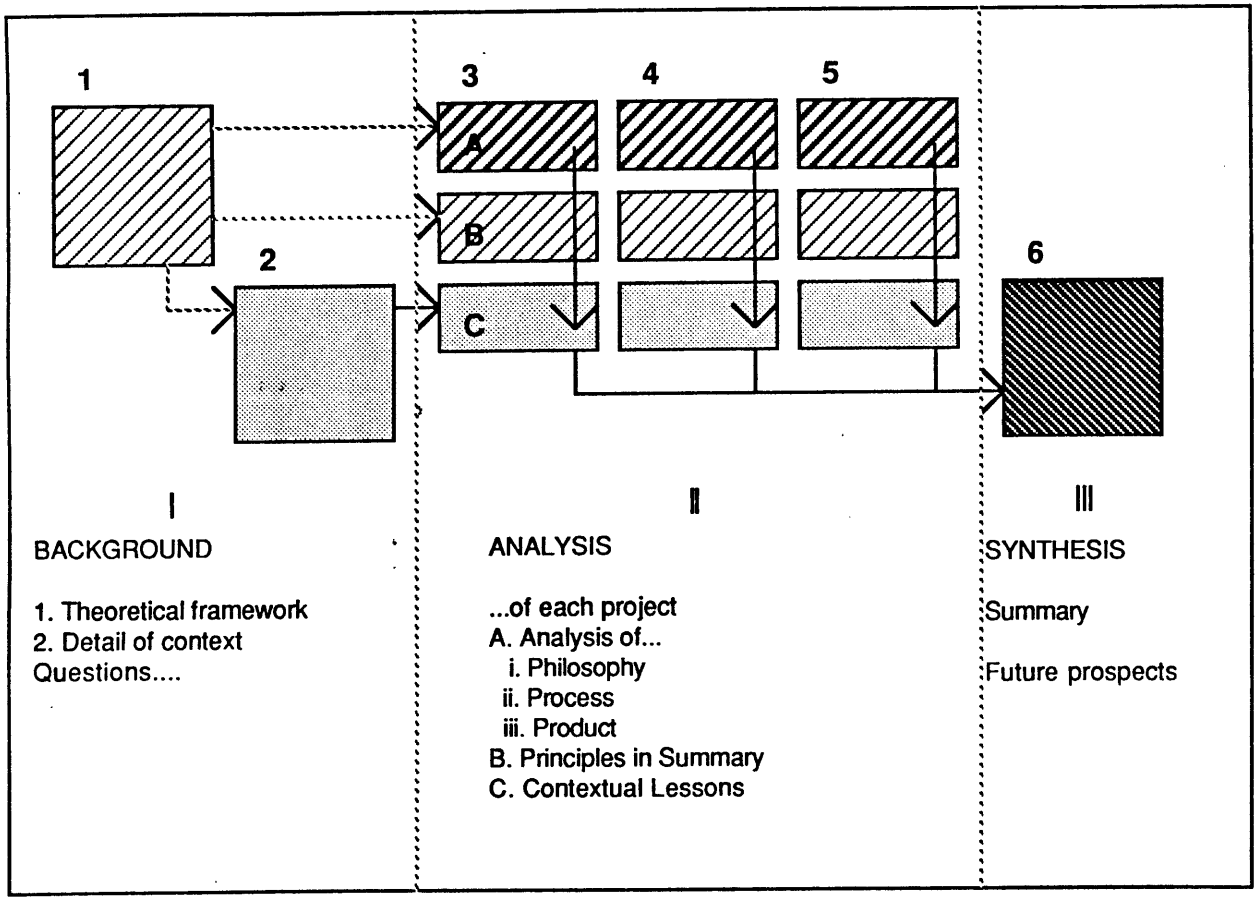
Methodology

The study cuts laterally across the problem, in trying to understand its parameters.

Part I sets the criteria of analysis. It covers the theoretical contextual aspects separately, and looks at the effects of urbanization in Lebanon on the form of development.

Part II analyses three housing theories, as represented by regional case studies, and examines them in the specific context of Lebanon. It is an exploration of options, as represented in principles derived from each case.

Part III gives a second look at the initial criteria in light of the lessons learnt in part II.



Choice of Demonstration Projects

The projects analyzed in part II are urban housing projects that represent relatively successful and concrete demonstrations of combined Sites and Services and settlement upgrading, low-tech Supports, and locally designed public housing. Several premises underlie the study, and have had a bearing on the choice of the projects that follow in the analysis.

Premise 1. Housing stock, existing and potential, comprises a significant part of physical urbanization, and is thus central to the development of a city. It important in channeling urbanization as regards the form of the city, by optimizing layout to save on space and infrastructural costs, and coordinating location to improve access to employment and reduce commuting. As this issue is important to Beirut, the study projects were selected for their relatively high density and multistory configuration.

Premise 2. It must be stated clearly that this study does not aim to criticize the housing principles in question as universal ones, nor for what they stand for in isolation, but rather relative to the contexts they serve. After all, the ultimate realization of theory is practice, somewhere! Hence the analysis focuses on what derives from the projects in their own context, rather than the original philosophy that brought their conception.

Premise 3. One housing principle is not exclusive of another, but is better suited to a certain situation more than the other. Example: In general, Sites + Services are better coupled with upgrading of existing squatter settlements than in isolation; but both are problematic in inner city sectors, as they lend themselves to horizontal expansion and limited densification.

Premise 4. Professional architects of conventional training are remarkably abundant, and hence comprise a resource that should be utilized. The majority, however, are detached from their context due to education, training, ideological preference...

Premise 5. It is inevitable in high density, rapidly urbanizing cities of limited growth options- as in the case of Beirut- not to have multi-family, multi-storey buildings. Given this, the process towards such development can include private development in the open market, public housing, including community-based and cooperatives, and partial provision such as Supports and serviced lots. Most of these are of no precedent in Lebanon, making it the aim of this study to test and stretch the options.

PART I: **B A C K G R O U N D**

1 THEORY

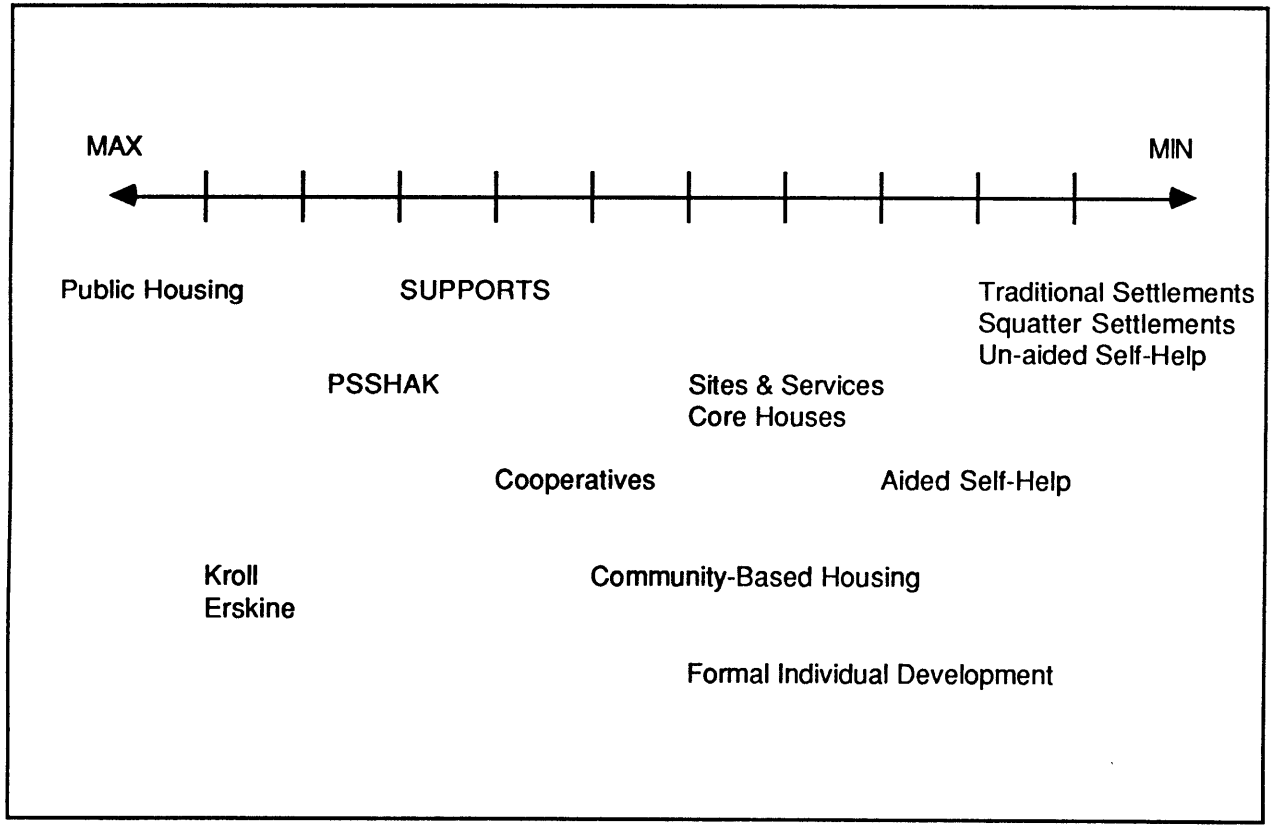
Housing, 'Noun' and 'Verb'

This chapter is a brief sketch of the evolution of housing philosophy and ideas, and it serves as a backdrop to the three demonstration projects of part II. The title alludes to John Turner's distinction that characterises the change in housing philosophy.

In the first part of the twentieth century, housing emerged as an institution of highest priority for social improvement and urban development in Europe. It represented then one of the most visible reactions against traditional, conventional and local modes of living, then considered to be growing obsolete and unable to cope with the pressures of rapid urbanization and social change. The general impetus of early Modernist housing and ideology was towards continuous flux. The modernizing forces of both institutions and professionals promised a therapy and a better future, public housing that recognizes the basic human needs of the underprivileged. Much of this was influenced by the Socialist thought and Avant-Garde housing designs based on the new social order. These ideas were modified and adapted to the welfare states of the West, and were introduced in the Third world by the emerging post-colonial governments eager to establish a new, "progressive", and equitable social order. The failure of these attempts, both in the Third world and the West, cannot be ignored. Among other things, they failed to reach the neediest, exhausted public bureaucracy and national budgets, and eroded vital, economically balanced sectors of cities.

Recent housing in Europe, such as New Towns in France and the I.B.A. in Berlin, brought a more sympathetic form of development for the city. Pre-Modernist urban types were re-appropriated for contemporary social housing; scale, identity, and relationship to the physical context have all been given due attention. Such projects, however, remain out of the means of most of the developing world, both institutionally and economically, mainly for the sophisticated administration and the enormous investments they require. The supply of housing through centralized setups necessitates a rethinking of the original ideas of public housing.

The last two decades saw a maturing of housing philosophy for the developing world. The current discussion of low-income housing spreads along a different continuum, that of formal/informal delivery of dwellings. Housing has come to be seen as a process rather than a product, an income base rather than mere shelter and accommodation that can be provided anywhere. The current concepts call for an approach that is more sympathetic to and optimizing local resources, economical, technological, and human. They recognize the urgency, the magnitude, and the burden of the problem and call for minimum formal and institutional intervention, and an incremental adjustment of needs at the individual dwelling by its users.



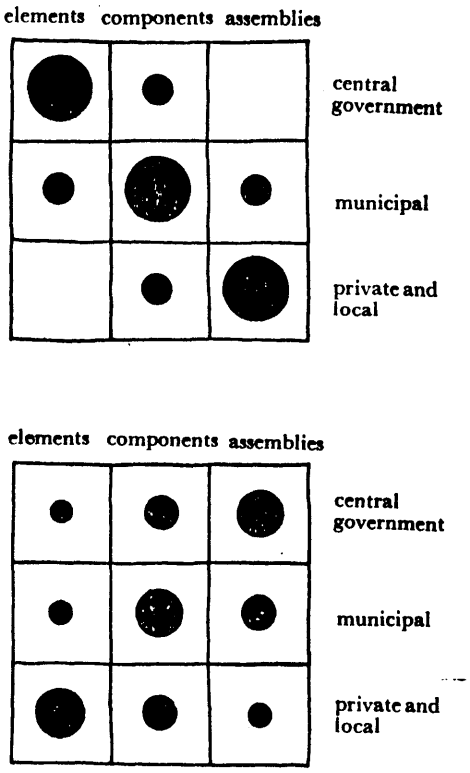
1-1 Comparison of housing principles regarding degree of public involvement in the provision of the individual dwelling

Public housing and Sites & Services projects almost mark the extremities of a continuum which represents options of maximum and minimum public intervention in the provision of the dwelling. Each of the principles among this array implies a different institutional and professional set-up, and has come to connote a certain political colour, and an agenda of socio-economic development. This happens partly due to the inherent qualities of a given principle, and partly as a result of the context and nature of its implementation. Most of the principles are in effect, for developing countries, imported products/concepts which can often be (mis)appropriated for local use by the respective governments and international expertise. For example, where Sites & Services intended to facilitate urban housing for the poorest of the population, most projects were built on urban fringes, thereby locating the poor away from the employment market of the city.

In trying to cope with the problem of decentralizing decisions, several other concepts emerged, making way for more decision-making on the part of the prospective users. Community-based housing, self-help, and Supports delegate different kinds and degrees of authority and selection to the users, and try to recognize local values and means. However, it remains for these concepts to resolve differences and difficulties with local bureaucracy, regulations and inter-departmental coordination.

Various housing philosophies, dynamic and well intending as they may originally be, tend to fall into rigid types and models, by virtue of the circumstances within which they were propagated. Many, such as Sites and Services a developed by the World Bank in the early seventies, became universal models to be flown into developing countries by Western consultants and international agencies. As maintained earlier, such prototypes cannot be transplanted into any context, and their import can be as disruptive to the context, and addictive to the government, as any foreign consumer item. Any examination of a project should extend towards understanding and extrapolating the principles that brought about its success or failure.

Squatter settlements upgrading is one housing principle that calls for optimizing available resources, and makes sense in its recognition of the natural and incremental growth of settlements



1-2 John Turner's comparison of action and authority in housing provision

towards urbanity. It operates within the premise that the growth of a settlement, once understood and legalized, and rationalized, can become a fully-developed part of its urban context. In comparing examples of settlement patterns generated by traditional and contemporary incremental developments, and multistorey housing, one finds that, up to a certain limit, low/dense configurations can be as spatially optimal as any other form of development.

The three projects that have been selected for the analytical part of the study are representative of distinct philosophies of urban housing interventions, and stand out in the manner in which the principle responds to the context. They come to use for the case of Lebanon in the piecemeal lessons that derive from understanding their social program, the process of their realization, and the resultant form of development. The following issues should be considered:

1. land acquisition: by whom? problems?
2. decisions, constraints, finance: professional and user involvement; response to institutional framework; method of operation
3. physical organization: design typology; public/private space; hierarchies (household unit, cluster or block, neighbourhood or community); land use pattern; density; infrastructure and services; flexibility and growth
4. construction or building, level of technology
5. management, maintenance; public/ private responsibility; tenure
6. initial goals and final accomplishments

2 CONTEXT

Urbanization in Lebanon

In contrast with that of the Arab Middle East, Lebanon is a fairly special case in terms of social development and physical urbanization. The country's location at the historically important node east of the Mediterranean basin, the rich history and diverse communal fabric, and the constant exposure to the West, all contributed to a phenomenal speed of change. Similarly, the geography of the country, mostly mountainous and with a mere area of 10,452 sq. km., resulted in a highly urbanized and densely developed country. Beirut, the capital, is the largest urban center, containing the majority of economic, political, and cultural faculties. For this background chapter, it serves to illustrate urbanizing Lebanon at its highest intensity.

2-1 Modern waterfront development in the prosperous pre-war Beirut

2-2 Lebanon's urban population and density is high compared to the Arab world

Country	GNP (US$)	Current population		Density (per sq.km)		Growth rate (%)		Population in year 2000 (millions)
		Total (millions)	Urban (% of total)	Total for country	Agri.land	Total for country	Urban	
Turkey	1 200	41.9	42.9	54	76	2.5	4.7	64
Jordan	1 050	2.9	52.9	30	197	3.3	4.5	6
Lebanon	–	2.9	69.8	279	806	2.5	4.9	5
Tunisia	950	5.9	48.0	36	77	2.3	3.6	9
Syrian Arab Republic	930	7.8	46.7	42	55	3.2	4.7	15
Morocco	670	18.3	37.4	41	90	2.8	4.1	34
Yemen Arab Republic	580	5.0	7.9	26	329	1.9	7.3	9
Democratic Yemen	420	1.7	34.3	5	18	1.9	3.2	3
Egypt	400	37.8	43.9	39	1 324	2.1	2.7	58
Sudan	320	16.8	20	70	54	2.6	6.9	31
Total population		141						234
Average	724	14.0	40.4	56	303	2.5	4.6	23.4

Source: World Bank: Social Indicators, August 1979.

A. NON-PHYSICAL OBSERVATIONS

Political and Social System

Lebanon is a parliamentary republic based on a written Constitution, and a verbal National Accord that seeks to reconcile democracy with the remains of a sectarian feudal system.

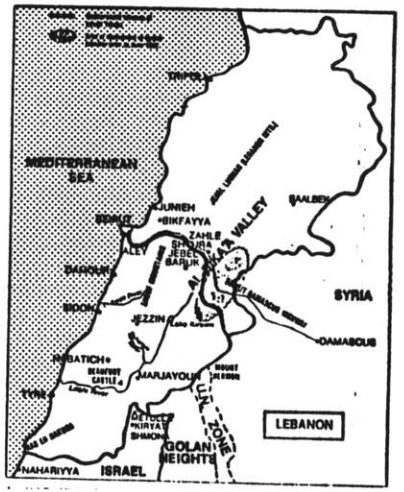
Civil conflict broke out in 1975, and has been intermittently going on complicate. This resulted in a paralysis of established political practices; communal loyalties remaining from feudal past gave way to new ones that are based on para-military groups and sectarian enclaves.

For a small country, the Lebanese society remains territory-bound. The main cities, most notably Beirut, have been growing at a phenomenal rate in the last twenty-five years, further complicated by the ongoing war. This has resulted in *overurbanization* and *underurbanism*; as Khalaf observes in "the disjunction between *urbanization* as a purely physical phenomenon- as measured by urban densities, overconcentration in primate cities, migration, etc- and *urbanism* as a qualitative and sociocultural phenomenon- as measured by the urban ethos of openness, vitality, rational interests and impersonal social networks. ...As such, "people are *in* but not *of* the city."[1] This makes Beirut a "mosaic of distinct communities" rather than "a melting pot of urban masses", and can be accountable of many problems that the country faces today.

Economy

Private initiative has always characterized the economy of Lebanon, with a public sector that earned a reputation for passivity and ineffectiveness. Traditionally, the size and location of the country helped enjoy a prosperous economy based on free market trade and extensive, but relatively cheap, foreign imports. This was balanced by a strong banking and services sector, an active real estate market, tourism, and a constant flow of expatriate money. The first three were marginallized at the outset of the war. Since then, the national economy has been taking an exponential nose-dive that was catalyzed by the final decision of major foreign banks to withdraw from the country in 1984.

2-3 Map of Lebanon



By mid 1987, the local currency had devaluated 65 times compared to 1984, and 135 times that of 1976 figures.[2] This lead to a total eradication of the economic foundation of the country, dubbed by the press as "Instant Bangladesh"

Land

In Lebanon land is owned by individual municipalities rather than the government, with no local, urban, or national land policy, of public acquisition, land banking, or taxation, even on long term holding. Property value is subject to market forces and speculation that are making it increasingly a more exclusive commodity in the small, urbanizing country.

In summary, the effects of the civil war amount to a ravaged economy, deteriorating industry, massive communal displacement and tensions, permissive development, severe housing shortage, and a staggering reconstruction bill.

2-4 Red tile houses in early 20th C Beirut

B. PHYSICAL OBSERVATIONS

Construction

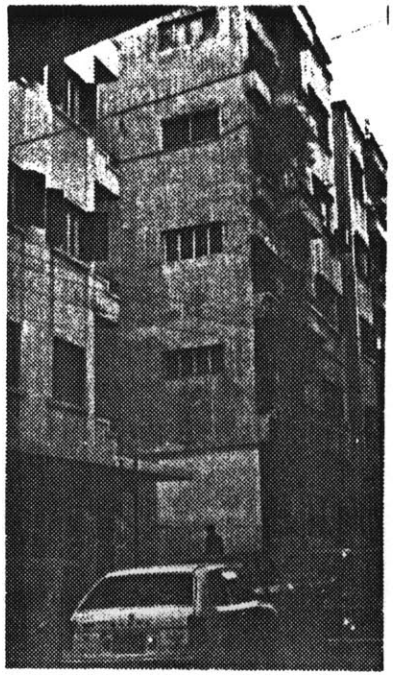
As early as the 18th century, Lebanon started importing technology and materials for building, first on a limited basis.

The original traditional building materials include stone and rubble masonry in mountainous villages and towns, cut sandstone masonry on the coastal strip, and mud-brick wall construction in few north-eastern villages close to the Syrian border. Roofing was predominantly flat, earth on uncut natural timber logs, and required ramming after every rainfall. Although the country is relatively green, timber is a precious building material, used very sparingly. "Marseille" burnt-brick trussed pitched roof became popular in the late 19th century, and were never produced

locally, but rather imported by sea from southern Europe. Red tile roofs are now regarded as a genuinely traditional feature.

Lebanon has two cement plants and a limited capacity for aluminum and steel production. The prevalent construction technology is a simplified version of concrete skeletal construction with hollow concrete block infill. This is a result of economic and practical considerations. High land utilization requirements and the densification of the city required a technology compatible with multi-storey configurations. Until the exponential devaluation of the Lebanese pound took its toll, such technology was within the reach of almost everybody, to the extent that it became widespread even in rural areas.

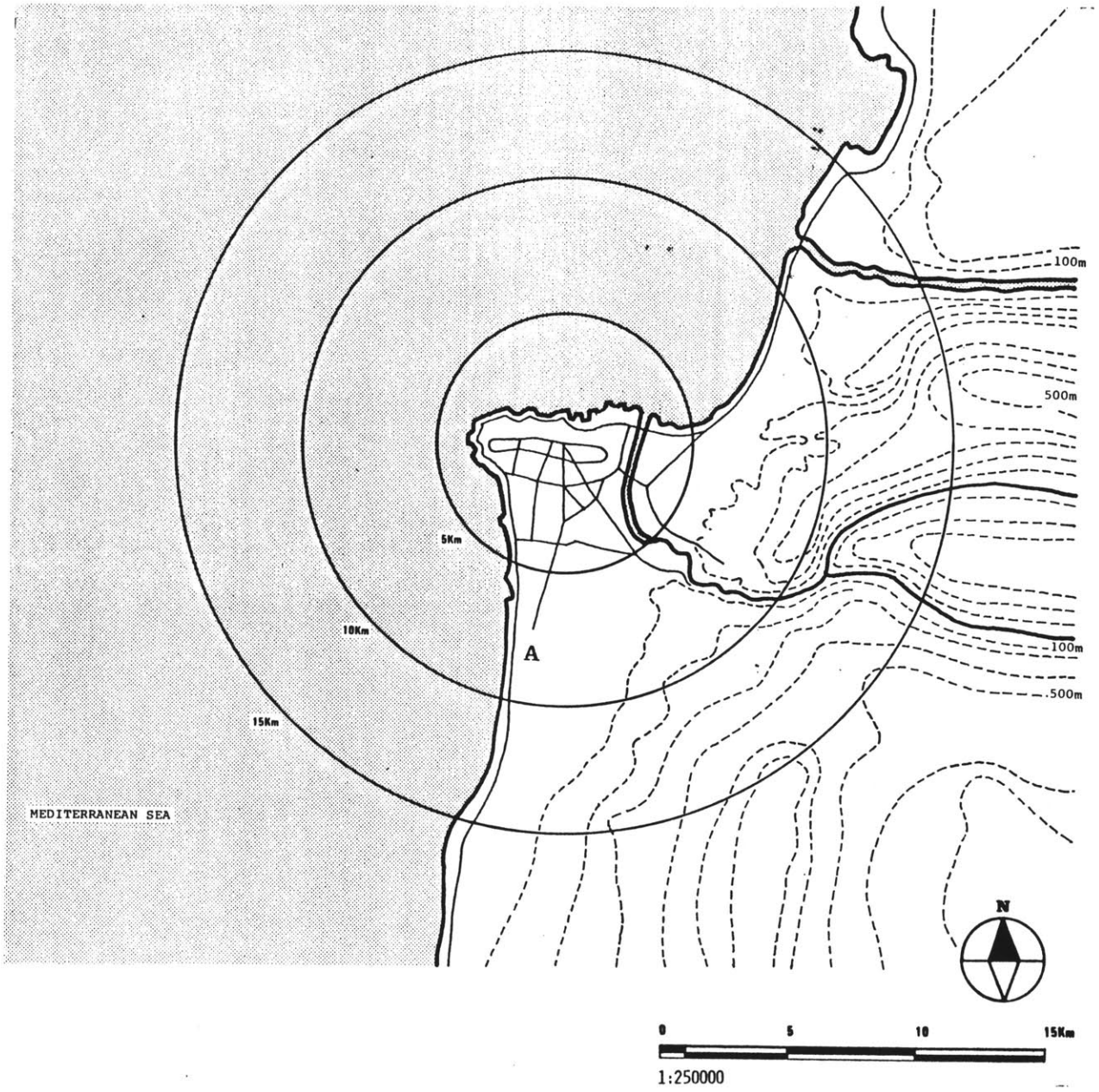
The construction market was prosperous and highly speculative well into the civil war. The sharp increase in construction wages, partially owing to labour immigration to Gulf states and mostly due to inflation, have resulted in a remarkable slowdown of building activity. Although concrete construction is becoming increasingly expensive, and gradually out of the reach of those who could afford it, no alternative technology has been devised. This can be attributed to the overriding cost economy requirement of high land utilization in Beirut; one either builds to full land exploitation at high costs, or does not build at all.



2-5 Concrete construction in contemporary Beirut

Geography, Topography, and Urban Growth

Beirut is situated on a small plateau surrounded by mountain ranges and the sea. The major cities and towns are situated on the narrow coastal strip and the agricultural Beqa'a valley. Early in the sixties, and in realizing the implications of rapid and unplanned development, architect/planner George Shiber warned of the threat of "Lebanonpolis", that the country is on its way to become a linear city-state along the eastern coast of the Mediterranean[3]. Today, more than twenty-five years after, this is very much a reality, and one that is reaching its saturation. The growth of the city can no longer go on as it has been, mainly because of space limitations and the geography of the Greater Beirut area.



2-6 Topography and circulation of Greater Beirut and surroundings. 'A' indicates the location of the airport.

The major physical elements that govern the future growth of the city can be classified into three classes.

[i] **Physical boundaries.** The mountains surrounding the city and defining a narrow coastal strip. This coastal stretch constitutes one of the country's best agricultural and touristic assets. It is systematically being devoured by continuous development north and south of the capital.

The established road networks, mainly the north-south Coastal Highway and the east-west Damascus Road.

The airport, occupying a major expanse of land on the south shoreline.

[ii] **Political/communal territories** as defined by the social and sectarian fabric, and the latest *status quo* of the civil war.

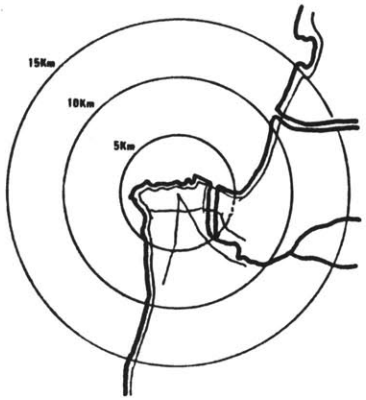
[iii] The condition of various areas in and around Beirut, of which three can be distinguished:

1. The established, consolidated city. This is highly developed and dense, and it would be unlikely that it can accommodate large scale housing in terms of available land parcels and cost effectiveness.

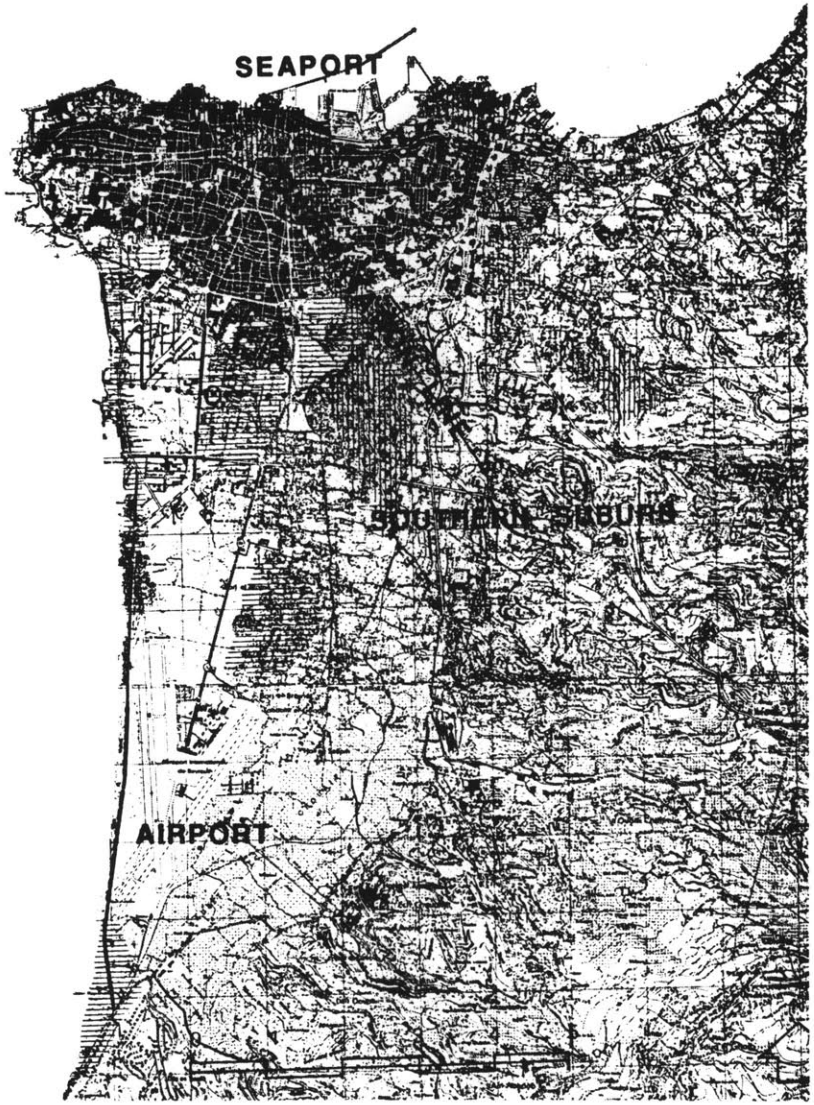
2. The Greater Beirut area, including Janah, Shatila refugee camp (now an established, viable settlement), Haret-Hreik and Southern Suburb, Hazmieh, Mkalles, Chouayfat, Ouza'i, and Khalde. These suburbs have distinct communal compositions, and have, in the last few years, seen a proliferation of construction activity at an unanticipated rate, which promises a continuous highly consolidated development in the near future. The types of development currently include a whole range, from fairly affluent villas and apartment buildings to unauthorized squatter settlements and refugee camps; overcrowding and lacking facilities are already severe unattended problems.

3. The destroyed confrontation zone comprising a substantial portion of the city, which was indistinguishable from other areas in terms of density and land use. It was originally a middle-income area of residential and small commercial development, having reached near

saturation shortly before the war. Consecutive bursts of heavy fighting over the years have forced the population out, but this zone retains its real-estate value.



2-7 Beirut and surroundings



2-8 Beirut and Southern Suburbs.

SIGNIFICANT DAMAGE

1975 - 1978

Summer 1982

Given the natural, man-made, and war-created barriers, Beirut has a limited margin for growth. The eastern sector of the city is bordered by expanses of hills and slopes that have sporadic low-rise, low-density developments. There is no reason why development could not continue in this pattern, up the hills and towards the north. In this area, the problem seems to be at the level of zoning (density; reservation of unbuilt areas) and directing growth to protect the coast from further development and highways.

In the western sector of the city, the problem is more of severe shortage of space. If the airport is to remain as it is now, the city, bounded by the sea to the west and north has little space to expand. Currently, development towards the south is already bypassing the airport, along a very narrow strip along the coastal highway, and towards the southern suburb and the agricultural land east of the runways. There have been plans to deflect the runways so that airplanes would approach over the sea; this would allow numerous areas that are kept as low-rise, low density to increase their capacity.

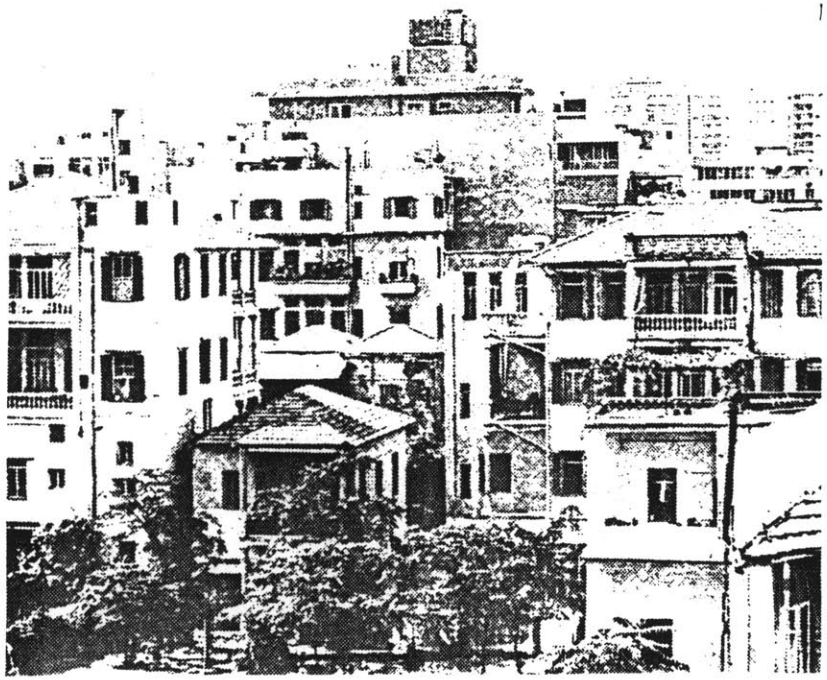
Zoning regulations and building laws

Beirut does not have a land use or zoning plan. The city is simply divided into sectors of different allowable densities, as defined by the Building Code. This code specifies the physical aspects of construction development such as building envelopes and Coefficients of Exploitation (Floor/Area). Building footprints & F.A.R. range from 100% & 6 in the C.B.D., 60% & 4.5 in most residential areas, to 30% &1.5 in suburbs. Thus high-density development is a result of both a speculative market and building laws.

The normal residential building averages 10 storeys. The building law allows up heights to 40 meters (equivalent to 13 storeys) with no special permit. For a range of units between 75 and 150 sq. m., which roughly matches a low to middle income range for Beirut, the important threshold is at 100 dwelling unit/Ha enabling a low, dense configuration of 4-5 storeys and a floor/area=1 [4].

2-9 Hamra district, a mixed use area that developed in the forties.
This shows from foreground to background the evolution of residential types, single family, walk-ups, and apartment buildings

2-10 Ras el Nabe'a, a dense residential area near the confrontation line. It was severely damaged in recent years



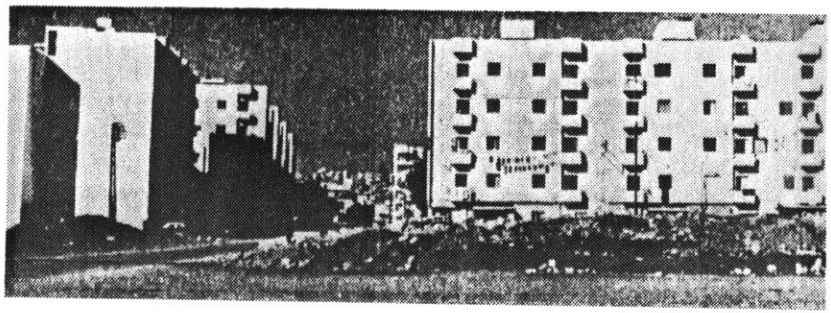
The floor/area ratios permitted by the building code range between 6 in the CBD, 4-2.5 in most residential areas, and around 2-0.75 in the suburbs. This means that most buildings, to be economical in terms of land utilization, must exceed the construction economy limit of 5 storeys. In addition, humid climate requirements of cross-ventilation and minimum distances as set in the Building Code encourage exceeding this threshold. It is highly unlikely that building densities may be reduced, as this can drive market prices further up.

C. HOUSING PRECEDENTS AND INSTITUTIONS

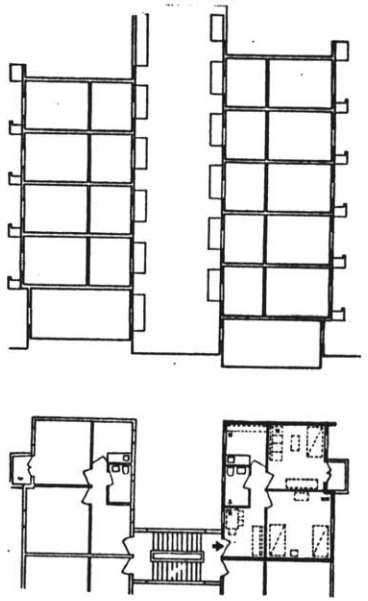
Lebanon suffers from a severe housing shortage today, a problem that has been compounding in the war years. The notion of housing as a state responsibility in Lebanon lasted a very short period; there were several unsuccessful attempts at slum clearance, urban renewal, and housing projects in the sixties.

Precedents

One housing project was built in Tripoli, in the north, and Tyre (Sour) in the South, but were not completed and were squatted in. Another was completed by the municipality of Bourj Hammoud, a poor dense semi-formal settlement east of Beirut, and it suffered the classic symptoms of public housing: neglect, anonymity, rapid deterioration and collective dissatisfaction.

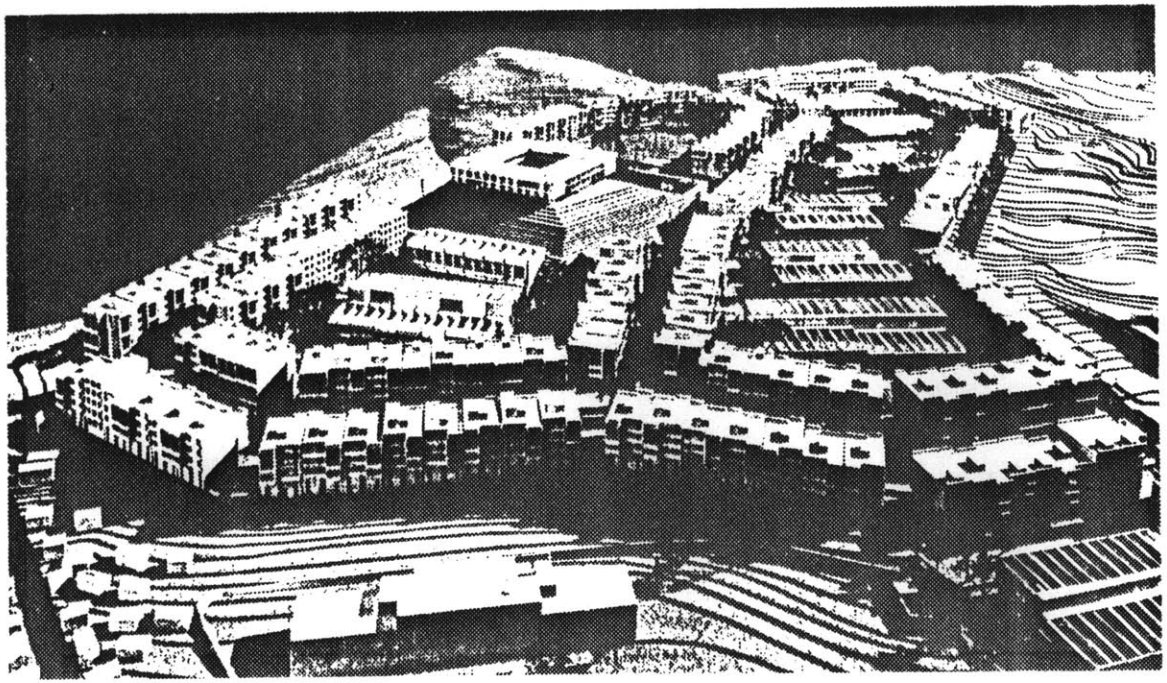


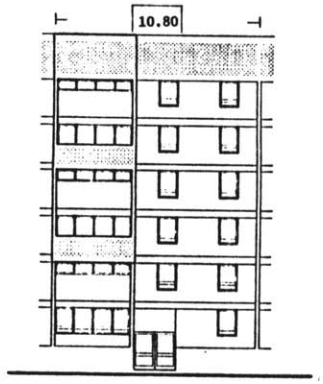
2-11 Camp Trad, public housing project in Bourj Hammoud

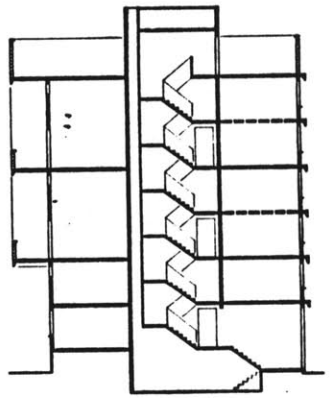


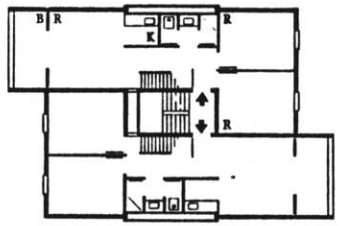
2-12 Camp Trad, section and plan of a typical block

The Mkalles project remains by far among the best offered in terms of thought and project formulation. It was commissioned by the President of the Republic in 1973, and developed at the Urban Settlement design Program at M.I.T. by Caminos, Goethert, Take and other students[5]. It was intended to serve as a model for later low income housing, and it appropriated many of the ideas of minimum services, Support structures, expandable apartment units, and incremental growth within the multistory type. It was, nevertheless, essentially a formal public housing project, initiated by the government and provided centrally. The project did not see the light before the outbreak of the civil war in 1975, and the general policy shifted against formal public housing in favour of a loan policy in 1977. The deterioration of the country's economy, the higher priorities of reconstruction, and the extremely inefficient bureaucracy make it difficult to initiate similar projects now.



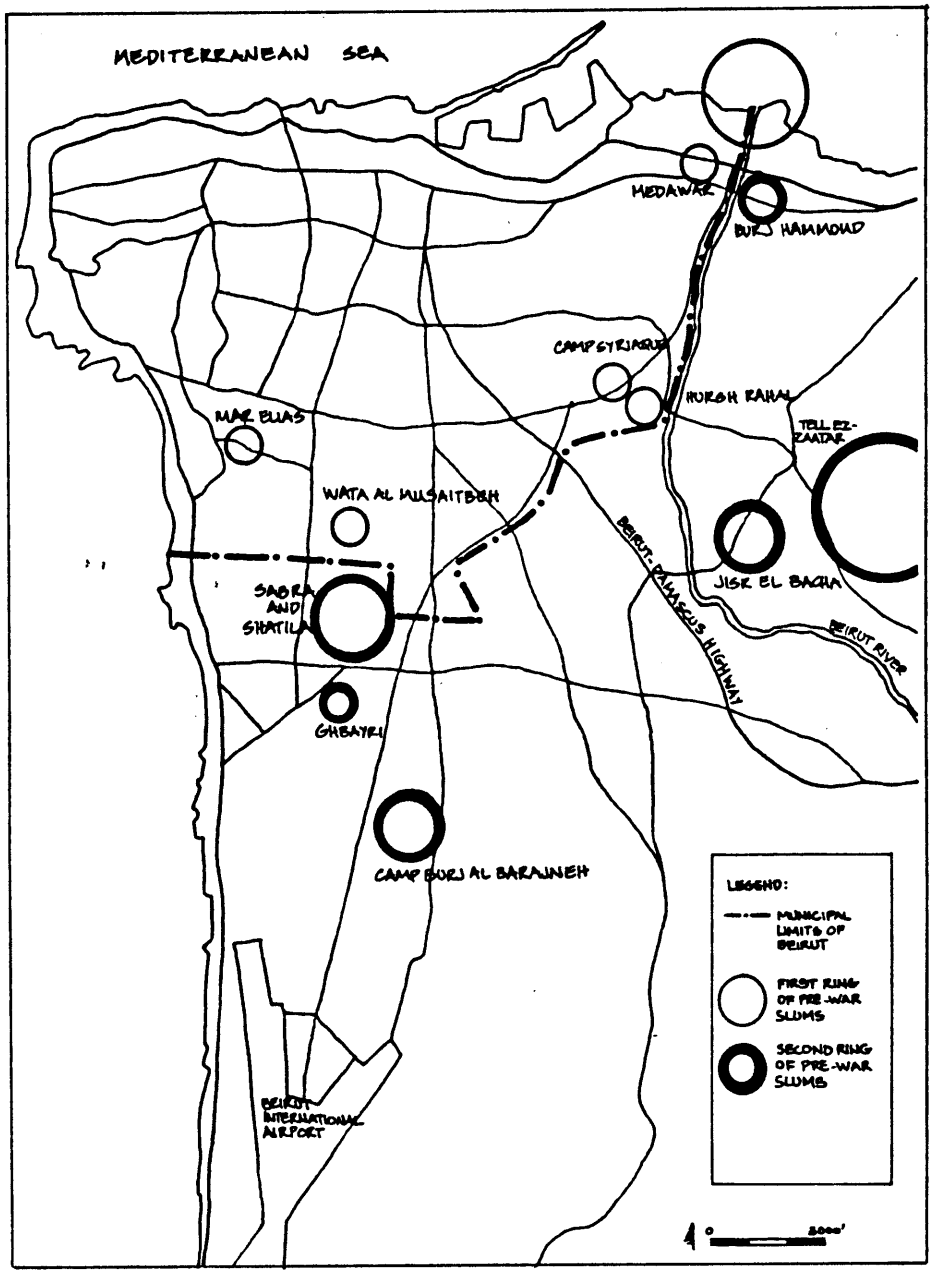






2-13 Mkalles housing project. Model

2-14 Mkalles housing project. Elevation, section and plan of one block type.



2-15 Beirut and suburbs, with location of pre-war slums. The "Belt of Misery"

The "Belt of Misery" developed in pre-war industrial suburbs, partially out of organized occupation of land and illegal "official" renting and selling. Many of these areas witnessed the worst atrocities and displacement as of the beginning of the war in 1975. There have been some attempts at subsidized and long-term loans for cooperative housing for syndicated workers in the early seventies, but were never carried out.

The "war generation" of illegal settlements breeds within communal tensions and para-military power. Masses of displaced people in the last years have been resorting to squatting in empty apartments and office space under construction. This reduced the supply of any kind of housing and discouraged further construction.

2-16 Refugee encampment near Beirut

Institutions

The Ministry of Housing and Cooperatives is technically the highest housing authority in the country, but, in the context of the market economy and the war, housing as an issue is everybody's business, but nobody's responsibility.

The Rental Law remains one of very few significant legislative interventions in the highly speculative housing scene, whereby it regulates the relationships between tenants and landlords. Successive amendments attempted to make the housing market conditions more favorable for low and middle income groups, by securing the status of existing rental contracts and resolving the problems of unreasonably low rents dating to as far back as 40 years[6]. The government's attempt to ease the pressures on the rental system beneficiaries in the late seventies made this form of tenure unprofitable for speculators and prohibitive for the low and middle income groups.

In 1977, the government approved a Legislative Decree Law 20, which established a framework for a home repair and reconstruction program. It was recognized as the major vehicle for the provision of reconstruction credit, and marks an important shift in policy, favouring financial aid for housing, rather than direct intervention by the public sector.

Accordingly, Banque de l'Habitat (The Housing Bank) was created by legislation in the same month. It is semi-private institution whose main aim is to "finance housing projects covering construction, reconstruction, and upgrading of housing units and compounds."[7] The beneficiaries of this program are low/middle income individuals and cooperative groups. Its policy encourages housing away from the city, and gives priority to those who present the least financial commitment on the part of the Bank[8]. So far, the Housing Bank has had a very modest effect.

In 1980, The Housing Fund, a semi-autonomous government agency related to the Ministry of housing and Cooperatives was created for assisting the construction and ownership of 20,000 housing units for very low income families. No deliveries have been publicly reported.

Unofficial figures indicate that over LL 17 million were issued as reconstruction loans following the severe destruction in the 1982 Israili invasion.

Special interest groups such as charitable foundations, unions, political parties, coalitions and militias, and war-displaced families are believed to have a strong influence in the politics of housing in Lebanon. The latter group- the displaced families- is political liability and a major bargaining asset by warlords.

Several militarized political groups have created "Civil Administration" authorities within their hierarchies, in order to monitor and respond to the immediate problems of their respective constituencies. Some of these administrations have achieved the semblance of local autonomy, by providing services comparable to, and often better than, those of the government, such as collective transport and food cooperatives. There have been no indication of the possible inclusion of housing-related problems in these services, except for the forced acquisition of empty private property.

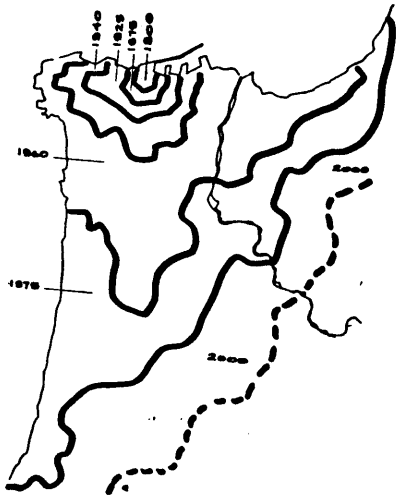
D. IMPLICATIONS ON FUTURE FORMS OF DEVELOPMENT

In seeking a certain quality of the environment, are the means compatible? Until recently, Lebenon has been considered to be one of the "relatively high-income developing countries"[9]. These countries are usually characterized by a philosophy of facilitating the market for private sector development, the challenge for the public sector being to act as a "catalyst for private initiative"[10] These governments also tend to overlook the need to legalize and improve low-quality housing, failing to realize it as one step towards an eventual transformation to acceptable standards[11].

Geoffrey Payne places a prerequisite for any comprehensive attempt to resolve urban settlements and housing shortages, that being public sector initiative and control over land use[12].

Lebanon offers a challenge to this argument, and a contradiction.

The pace of urban development, given the land situation and permissive public policies, requires fast action, as numerous informal settlements have developed in the past years. While accepting that such developments should be stabilized and recognized, there is an urgent need to



2-17 Growth pattern of Beirut

reduce the reasons for other new ones to develop, especially that the size of housing shortage and economic decline are breeding conditions for more settlements. Bearing in mind the geographical limitations of city growth, as long as these settlements are regarded as communal time-bombs, unless the current attitudes change, some faster action and more permanent alternatives need to be devised.

Lebanon has always been characterized by *laissez-passer* economy and passive policies, attitudes which cannot be maintained considering the effects of the war and reconstruction priorities. Today's urbanization problems and nature of housing demand call for strong public intervention. As in post WWII Europe, the war has the sole advantage of creating an unprecedented opportunity for large-scale planning to influence future growth.

As resources are limited, and reconstruction priorities are not worked out, the argument that the country has always thrived on private sector initiative may still hold in principle. Sociologists like S. Khalaf raise doubt on the profiteering ethos of private development in the last two decades. This calls for the state to help support private development, such as finance, building regulations, community-based institutions.

Ironically, Lebanon has been observed to be one of the few modern societies that has managed to keep on total reliance on self-housing, by virtue of its passive public policy and planning[13]. As Peterson observes in the 1983 symposium, Beirut of Tomorrow, the recurrent communal shifts, the physical destruction, and the changing financial conditions of the last decade has made self-provided housing difficult and incapable of meeting the increasing demand. He argues for a policy of aided self-help, as opposed to the prevailing attitude of *laissez-faire*. In placing housing in the context of reconstruction, Peterson stresses that housing is an essential prerequisite for the social healing of post-war Lebanon, particularly as related to war-displaced communities[14].

These are a few of the most essential aspects that the study must address

NOTES

[1] Khalaf, "Some Salient Features of Urbanization in the Arab World", p.220

[2] Middle East economic Consultants, 1985

[3] Shiber, Collected articles, "Lebanonpolis" in "Planning Lebanon: From the Press", p.367

[4] Rough calculations based on the proceedings to the fifth seminar of the series Designing in Islamic Cultures, entitled Large Housing Projects, held at M.I.T. 1984, pp.109-112

[5] Take, M.I. T. Thesis, 1974

[6] Until the late sixties, the two prevalent tenure options were individual houses on owned land, and rented apartments. In the midst of the economic and construction boom that followed, apartment ownership (without land) became acceptable, and soon the most popular.

[7] Council for Development and Reconstruction, Unpublished Report, 1984, Section IV.3

[8] Housing Bank, Loan Regulations pamphlet, Section II: Priorities

[9] Orville Grimes, Housing for Low-income Urban Families, p.12

[10] Ibid, p.29

[11] Ibid, p.13

[12] Geofrey Payne, Urban Housing in the Third World, p.215-216

[13] Peterson, "Housing and Reconstruction", p.39. The author is using the term in the generic and traditional sense, regardless of income groups.

[14] Ibid, p.43

PART II: ANALYSIS

OVERVIEW

Choice of Projects

The demonstration projects at hand are regarded as representatives of principles, and possible models, that may be applied in Beirut as fit. Although differing in scale and context, each of the following examples can be useful to Lebanon in one of several ways. The projects were chosen to broaden range of options, in terms of principles and piecemeal lessons, but they are by no means comprehensive in covering a full range. They should not be regarded as fully replicable, but rather inform on how various housing principles carrying universal concepts apply locally, and what modifies them. Emphasis is placed on qualities relevant to this context, and the premises set in the introduction.

Each of the three cases was intentionally envisioned as a contextual demonstration of one or more principle, and all are unique interpretations of their respective schools of thought.

Each is also a distinct option as regards the degree of public intervention and control, and the respective role of the professional.

Due to a lack of a comparable example in the Arab Middle East region, the Colonia Guerrero in Mexico City was selected, to demonstrate a possible option of enablement within formally-designed multi-storey housing, an alternative that also involved a strong coordination between professionals and users. Dar Lamane, in Morocco, and the Colonia Guerrero represent highly controlled form of developments as related to the growth of the city. Hai el Salam, in Egypt, offers a less formal example of monitoring growth in high densities.

Hai el Salam and Colonia Guerrero represent options of community involvement in the process of project formulation and implementation. Dar Lamane represents the role of the community in managing and enlivening a totally designed project.

Of the three, the Colonia Guerrero is the most populist as it initiates at the grassroots.

Methodology

Each of the following three chapters has three layers :

ANALYSIS: Description of each example.

COMMENTS: Critical overview

PRINCIPLES IN SUMMARY: As abstracted from the analysis of examples, viewed in context of related schools of thought.

CONTEXTUAL LESSONS: Implications of the discussed housing principles on urban housing in Lebanon, regarding the scope, form and pace of development, density, optimization of space, role of the private sector, government resources and responsibilities, etc... The main questions that arise in comparing the projects can be outlined as follows.

How did they get initiated and by whom? Can they be attributed to goodwill of distinct individuals or groups?

What are the basic intentions of each case, and where does it stand in terms of socio-politics of development?

What did each case improve in terms of philosophy, process, and product? How?

How did each case mess-up? Why?

Who benefited, how and why? Who was left out?

How were responsibilities distributed?

How does each case address housing and physical urbanization, growth of the city, optimizing layout and infrastructure, access to employment, and other urban privileges...?

3 PUBLIC HOUSING

Dar Lamane Housing Community

Built on a reclaimed industrial site in Casablanca, the scheme totals 4,022 units and houses a population of about 25,000. It was designed for efficient construction, a process which took less than thirty months. In 1986, it won the Aga Khan Award for Architecture as representing "...a successful example of housing for low-income families with great cohesion and character." A great part of the acclaim was attributed to the basic planning which consciously resembles the spatial organization of traditional Moroccan settlements.1

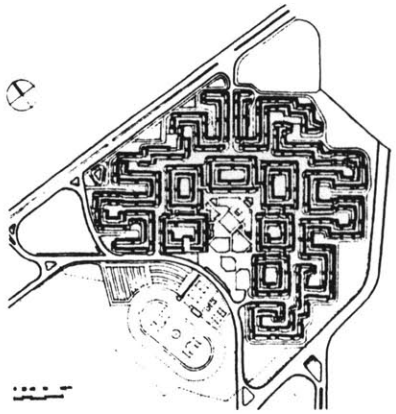
Casablanca, MOROCCO, 1979-83
Charai + Lazrak Architects

PHILOSOPHY
initiated by: Compagnie General Immobiliere
initial goals: low-income housing for rural migrants
target groups: passive in project formulation, active in management
supporting institutions: Promoconsult for technical advice and construction management
private sector involvement: contracting
the professional as... designer and construction consultant

PROCESS
duration: 3 years
origin of land: public land reclaimed from a swumped quarry
finance: public funds
implementation: fast, 30 months; major contracting

PRODUCT
dwelling units: 4022 apartments
building types and density: 2-5 storey buildings; 0.78 F/A
construction methods: concrete skeleton and infill blocks, partial in-situ prefabrication

ACCOMPLISHMENTS
Portrays public housing at its best, where the design, although centrally initiated and formulated, is efficient, remarkably economic, and responsive to the needs and norms of the community being housed.



ANALYSIS

[i] PROJECT PHILOSOPHY

Goals

The project was initiated to house low-income urban residents of rural and nomadic origin, who are recognized as constituting well-defined and traditionally structured community groups.

Precedents Explicitly Considered

The Dar Lamane Housing Community was envisaged by the Moroccan housing agency Compagnie Generale Immobiliere (the General Building Society) as a typical low-income formal project. It represented at its time the largest single public housing project ever attempted in the country, one that is famous for its experimental projects in the sixties. Consequently, the challenge was regarded from the outset as a technical one, namely that of design coordination, construction economy and scheduling.

Organization and Responsibilities

Dar Lamane is exclusively professional, in that all decisions and initiatives took place at that level. For a centrally administered public housing project two parties assumed major formative roles[2].

The client and initiator, Compagnie General Immobiliere, is the main public development and housing management body in Morocco, staffed by a multi-disciplinary team including architects, economists, and market specialists. The Chairman and the Secretary General were acknowledged as the driving force, and demonstrated a committed initiative and a relatively progressive attitude in defining the program, as to recognizing the potential to foster a community spirit[3]. They emphasized the necessity of providing the needed services and communal facilities, as well as the desire to relate the new community to the surroundings and to the general cultural characteristics of

3-1 View of apartment blocks in the center of Dar Lamane

Morocco. The second party that contributed to the project are the professionals, including the architects and technical consultants. The architects recognized the social requirements of the community as a formative source of the design, and introduced the use of computer aided design and management. Together with the technical consultants, they ensured an efficient and comparatively economic process of design and implementation.

[ii] PROCESS

1972	land acquired by Compagnie General Immobiliere
1979	the project commissioned to the architects and the technical consultants
	Promoconsult, in charge of infrastructure work and construction coordination
1980	all consulting work completed
4/1981	construction began
1982 late	2000 units were completed
1983 late	entire project of 4022 unit and communal facilities completed in less than 30 months

Land

The building site consisted of a reclaimed old quarry in the industrial suburb. It was acquired in 1972 by the C.G.I. which acted as client and developer upon commencement of the housing project in 1980.

Finance

The main source of finance was the National Saving and Insurance Fund, which is a national body that collects all savings and social security funds for investment and capital development. Total project costs were remarkably low, with unit cost reaching down to 20% that of middle-income

apartments on the market[4]. This, coupled with the efficiency of construction, helped make Dar Lamane a uniquely economic precedent of public housing in the region.

Methodology

While the problem as presented to the architects was basically that of a low-income housing brief, the limitations of scale, time, and budget necessitated procedures that depart from the conventional housing norms of Morocco. Over 4000 units were to be designed and constructed in less than 30 months[5].

The architects defined the problem as being in the technical/ management realm, also as a typological/ cultural concern. They observed that urban public space and the grouping of the housing units is more important to low-income groups than is the particular design solution for individual units. The designers also concluded that safety and security are very important for new-comers to the city, especially those of rural or nomadic origins[6]. This led to the eventual adoption of the name Dar Lamane, connoting a "secure, traditional multi-family house" that inspired the typology of the scheme at all levels.

The scheme was developed on the basis of a hierarchy of public spaces, some of which were incorporated within the housing clusters. Computers were used to maximize variety of unit types and elevation configurations[7].

Community Organization

Many informal groups got formed within the clusters and among residents, and are currently responsible for local repair and maintenance, such as security, gardening, and garbage collection. Individual repairs and signs of caring of the quality of the environment have been observed in various parts. The hierarchic organization of well-defined clusters and territories can claim to have encouraged the organized management as a result of the sense of belonging among community groups[8].

[iii] PHYSICAL SYSTEMS

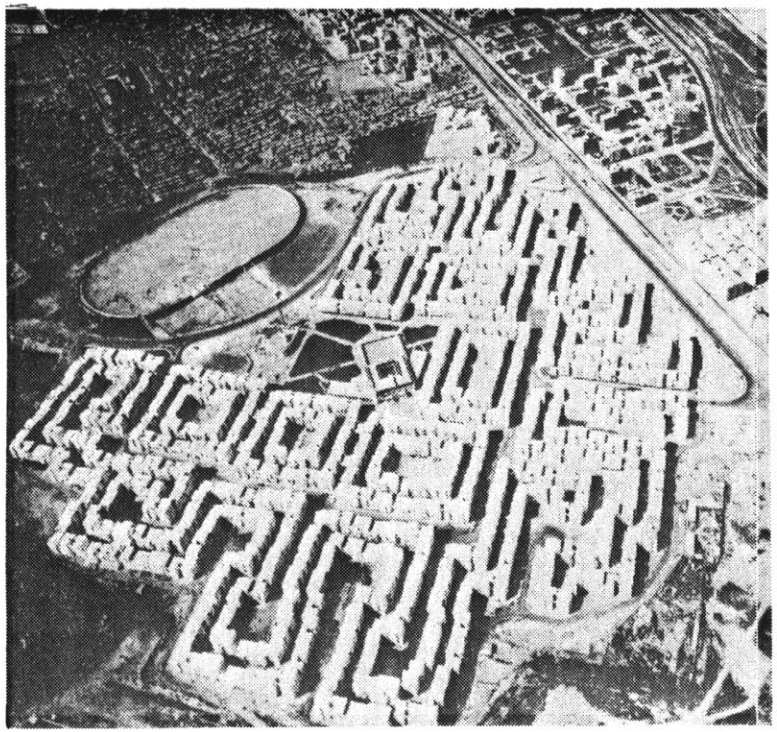
Layout and Structural Hierarchies

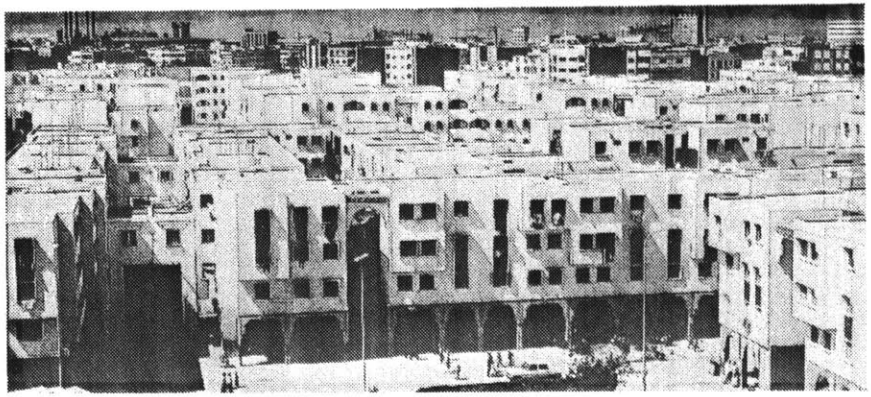
The central space has a mosque, market, and community hall, communal facilities which are grouped in close proximity to each others and in easy access to the whole community. Those are flanked on three sides by six housing clusters (referred to as *Dars*, a traditional neighbourhood unit), each consisting of two concentric rectangular strips of four storey apartment blocks surrounding a communal courtyard. The strips are separated by pedestrian streets ensuring a safe area for communal life. The *Dars* are separated by market streets *Souqs* which are lined with shops and restaurants and are made formally significant by gateways, a direct quotation from the past[9].

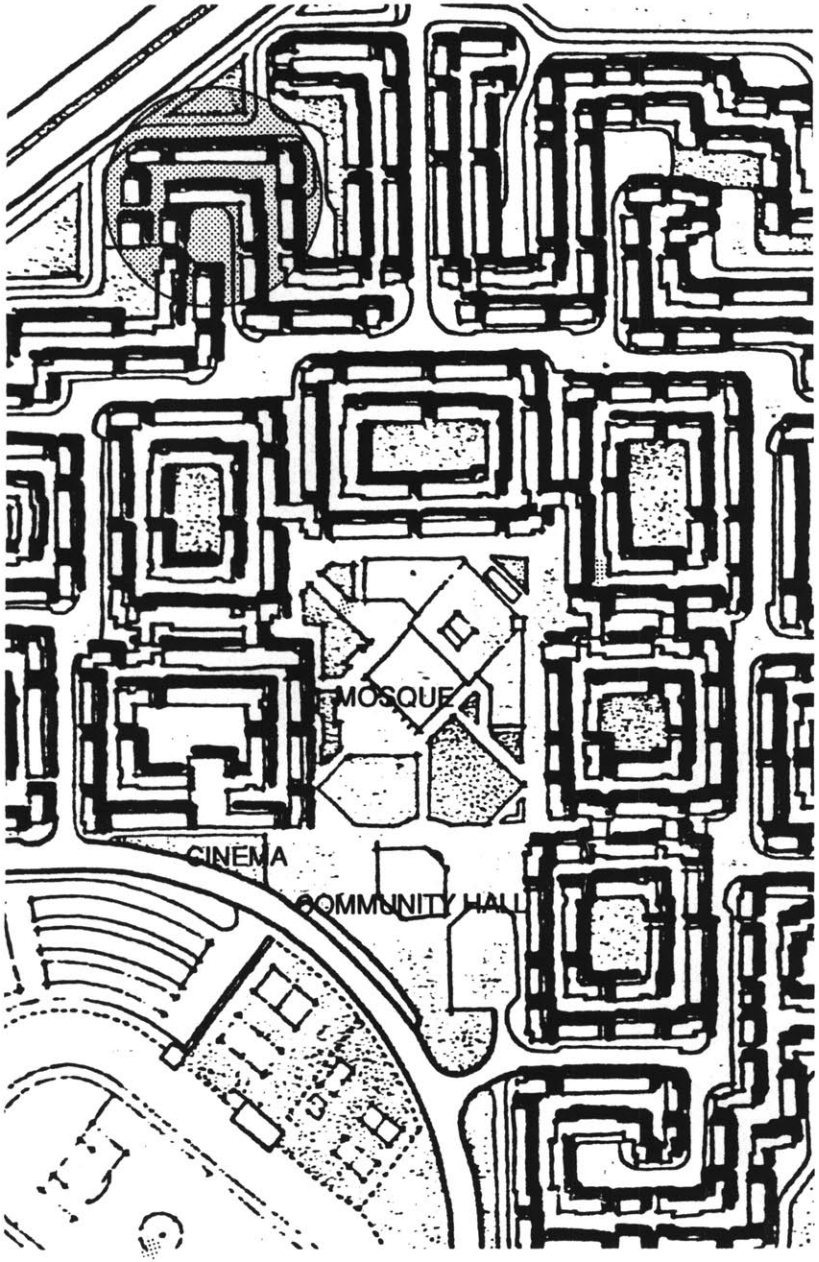
3-2 Aerial view showing the project vicinity. An informal settlement is south-east of the stadium; multistorey housing north of the highway.

3-3 Street view

3-4 East view of the central area, showing the flat roofs, major and minor gateways. The latter lead directly to a semi-private pedestrian street.

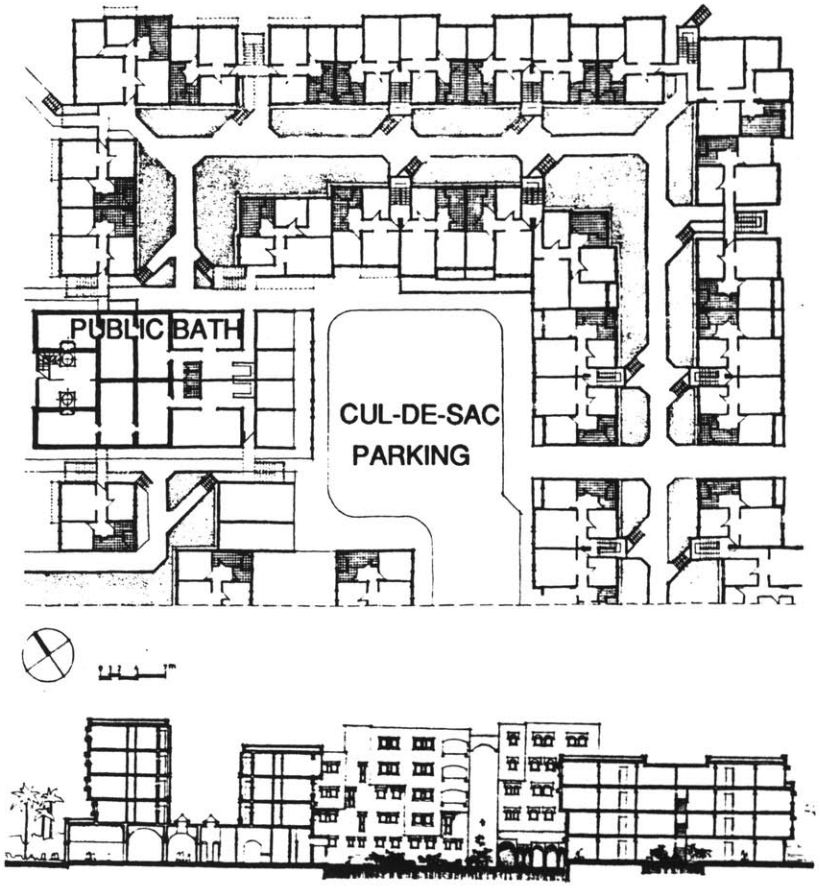






3-5 Closeup of central area.

3-6 Plan and section of a typical cul-de-sac, with communal bath-house, local shops, and parking.
The diagonal stairs were added later in the design to narrow the street perspective.



This inner core is surrounded by a meandering pattern of parallel strips of apartment blocks arranged with many of the same principles but incorporating cul de sac parkings areas approached from the peripheral roads. This represents a careful blend of a Modernist design concept, the cul de sac, and a traditional type, the dead-end, semi-private residential alley.

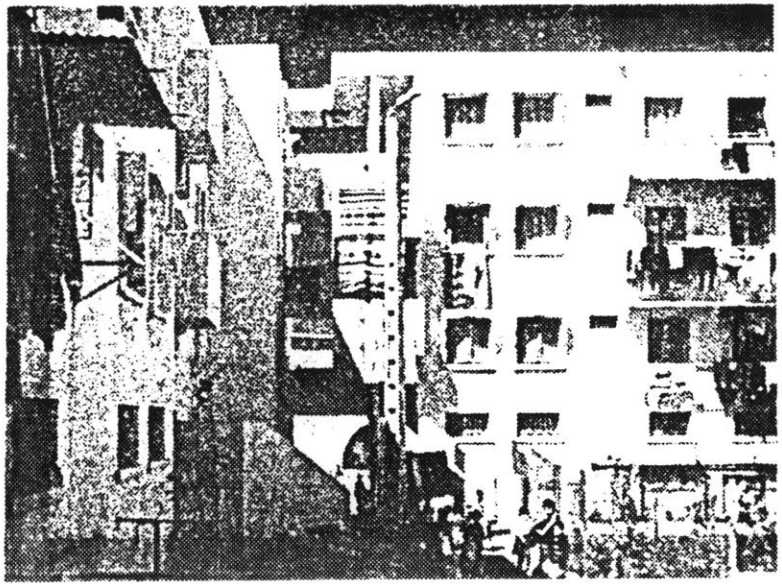
Typology

The design of this scheme tries significantly to address itself to the social and cultural context of the community it houses. Although it is a public housing project with of clearly Modernist lineage, the Dar Lamane consciously draws on the organization of pre-industrial Arab/Muslim urban quarters and departs from such traditional morphology in several ways[10].

The first is the introduction of vehicular movement which is a strong challenge to a design based on a pre-mechanization urban layout.

3-7 View inside a cluster.

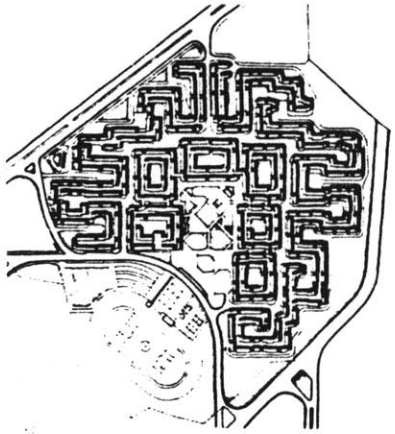
3-8 View down a pedestrian street.



With a network of highways surrounding the suburban site of the housing community, the traditional quarter is here abstracted into a diagram which is loosely interpreted and modified to incorporate the car.

Another variation is in the reading of the traditional quarter is uncomfortably accommodated. The neighbourhood unit is conceived as a block, and not part of the continuum of the fabric. Where the street was originally the spine/path around which the built form grew, in Dar Lamane the street wraps around the block.

As mentioned earlier, an important aspect of the scheme is the separation of car and pedestrian movement in the diagrammatic organization of parallel blocks that translate into both centralized clusters and continuous development. A serpentine spine in the latter provides an uninterrupted pedestrian environment, which is overlapped with another secondary network that links the whole scheme and offers a large number of alternative passages between any two points. This secondary network- a superposed Cartesian circulation pattern of excessive permeability of movement- seems to contradict with the carefully worked out transitions in scale, land use and territorial privacy. The latter qualities are essential to the design and are emphasized by the monumental gate-like bridges at the ends of main shopping streets that herald the residential territories beyond. Unlike their traditional predecessors, the gates in this scheme are more symbolic than actual controlled entry points or closable thresholds.



3-9 Site plan, showing the six central clusters and the meandering periheral blocks.

Construction

Construction technology, materials and labour were all local, employing reinforced concrete skeleton with concrete blocks and brick infill, and some in situ prefabricated elements such as beams, window frames, stairs, and bearing walls.

The technical consultants, Promoconsult, is a local firm with computerized facilities and an advanced system of construction management[11].

Image

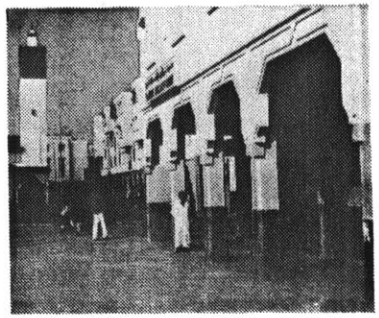
One important observation about this scheme is that the architects seem to have, wittingly or unwittingly, drawn on various images from Casablanca, including traditional residential and commercial parts of the old quarters, and more recent informal housing. Their striking resemblance to those of the scheme suggests a more than accidental relationship.

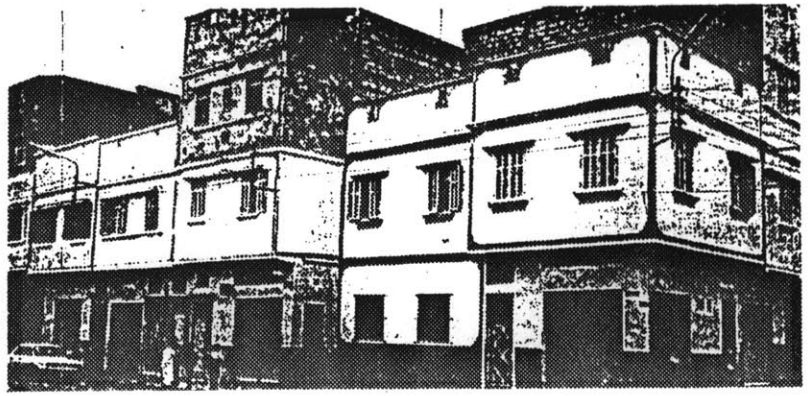
3-10 Street view in the old quarter of Casablanca.

3-11 A shopping arcade in the central area, with applied arches. Compare to figure 10.

3-12 A gateway street with shops, between two clusters.

3-13 Recent informal and low-income construction in Casablanca. Notice the mouldings and window frames. These compare in detail to the formalized elevations of the apartment buildings of Dar Lamane (11, 12 and 14)

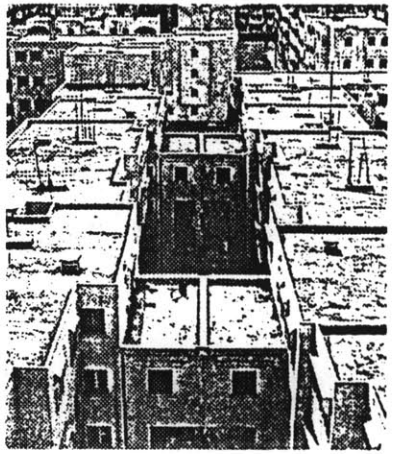




COMMENTS

As it is located in an industrial suburb, the Dar Lamane addresses the issue of housing migrants to the city in a suburban area, separate from the main body of urbanization. While recognizing their communal and regional individuality in a large cosmopolitan center like Casablanca, this tends to over-isolate the beneficiaries of such an intervention from the "melting pot" of the city. The scheme does favorably provide for sufficient local employment and income generation, in the form of the central market and the individual "local" shops in each cluster. The suburban location, however, reduces easy access to jobs of other kinds and elsewhere in the city.

Although Dar Lamane is essentially a very paternalistic and formal public housing project, two factors have made it eligible to be a rational model for public and community housing projects in the region. First, its rationalized discipline and efficient implementation that yielded a total cost less than initially projected. The second, the cultural significance of the design and its compatibility with the daily life of its users.



3-14 Bird's eye view over a gateway street. Notice the projecting steel reinforcements.

The hierarchic organization of residential clusters and communal facilities clearly favours the traditional social structure of its target population, one that is different from that of the initiators or the architects. This compares it in principle to the demonstration projects to follow in the next two chapters. While these delegate to the users the control of the time and nature of physical intervention, Dar Lamane embodies an official sympathy with, and directed effort to preserve, a tradition. In the context of Morocco, this could be interpreted in two manners. On one hand it marks a unique change in conceiving public housing, whereby it not only provides housing as shelter in quantity, but also as a scene of established social and cultural norms. The less positive way to look at such intervention is as a value-oriented authoritative sanctioning of one way of development, as opposed to another, namely the squatter settlements across the road. The architects, on the other hand, have been observant of and influenced by traditional and recent

informal housing, and their knowledge was used to render a public housing project more familiar to its users.

Dar Lamane has also succeeded in recognizing the beneficiaries, individuals and community, as a human resource. Part of the Aga Khan Award it received was allocated to help and encourage the community which demonstrated a strong involvement in management and maintenance of public spaces.

For a public housing project of this size, it proved to be relatively economic both in meeting its schedule and underutilizing the allocated budget. The production process of planning, design, scheduling, and documenting for a project of this size may be regarded as workable and replicable in countries of similar professional and technical resources. In considering the replicability of a scheme of such magnitude, however, one raises some questions as to the tolerable scale of a singular intervention, and the extent to which one team of designers can humanize a project nearing the size of a large quarter or a small town.

PRINCIPLES IN SUMMARY

The following principles are abstracted from the Dar Lamane project.

. . . Philosophy

a. Housing is not merely to provide dwelling units, but also to create a complete community environment, and consequently, a new addition to (rather than an extension of) the city.

. . . Process

b. Large-scale housing is a challenge to professional competency, whereby careful coordination of design and construction can produce economic results efficiently.

c. The involvement of the population in managing and assuming control of its public spaces and facilities are essential to secure long-term vitality and conviviality of a state project.

d. Intermediate technology construction and local contracting can produce top quality results, and generate employment in the local construction sector and unskilled labour.

. . . Product

e. Both social and visual characteristics of the target population are of formative importance to the design.

f. The physical qualities of incrementally-grown, pre-industrial quarters can help in scaling down large projects through abstracting structural relationships and modifying them to contemporary needs.

CONTEXTUAL LESSONS

The Dar Lamane portrays public housing at its best, where the design, although centrally initiated and formulated, is efficient, economic, and responsive to the needs and norms of the community being housed. Like many of its kind, it offers all the opportunities for the architects to give their best in terms of design and construction management, and for politicians to cut ceremonial ribbons and promote a benevolent image.

One positive aspect of such projects should be kept in mind, that being their potential to mobilize various sectors of the national and local construction industry. This, however, is the case with general economic recession, but may be counterproductive in times of intensive reconstruction. Accordingly in Lebanon, in the context of weak economy and imminent massive reconstruction efforts, public housing is not a short term solution.

The relevance of the initiative to Lebanon is not in the fact that it is a public housing project, but in the enlightened manner in which the client formulated the program, and the efficiency of design and the computerized construction management on the part of the architects and the consultants, both local firms. Hence, the lesson to be learnt from this initiative has to do with

professional skills, as the country contains a considerable resource of western-trained architects and engineers, who are capable of matching similar management techniques locally.

NOTES

[1] The Architectural Review 1077, p.11
[2] AKAA 1986 Technical Review Summary, pp.20 -21
[3] Ibid p.11
[4] Ibid p. 12
[5] Ibid p. 2
[6] Ibid p.3
[7] Ibid p.10
[8] Ibid, p.15 and 18
[9] The Architectural Review, p.11
[10] Traditional Muslim and medieval cities of the East have a hierarchic organization comparable to that of a tree, with the Maydan (open space inside city gate) and the Friday mosque being the most important. Each quarter has a main spine that constitutes the backbone, the most public domain of that area, containing all communal needs of worship and commerce, a juxtaposition of economic importance. Semi-private residential alleys branch of the spine and enjoy a sense of territorial protection. The size of a quarter varies, and it usually corresponds to one social group: clan, sect, trade or craftsmen guild.
[11] AKAA, p.11

4 COMMUNITY-BASED 'SUPPORTS'

Colonia Guerrero

The Coualtan project ot the Colonia Guerrero cooperative is a 64 unit multi-storey community-based Supports project, located in the central area of Mexico City. As a formally-built project, it is unique in the fact that the initiative came from within the neighbourhood, where non-profit organizations helped a local community of workers and low-income groups to team up into a cooperative and upgrade their neighbourhood in the face of potential eviction by speculative development.

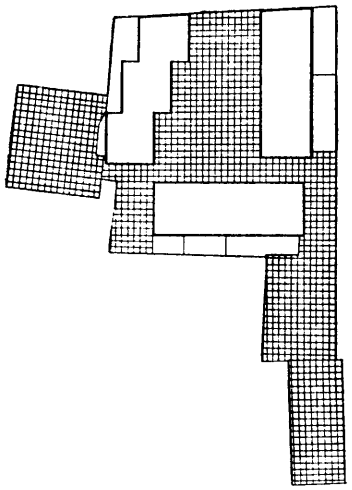
Mexico City, MEXICO, 1975-78
Andreade and Zamudio with COPEVI

PHILOSOPHY
initiated by COPEVI + social workers
initial goals: affordable rehousing of community within own area
target groups: participated in project formulation, cooperative, and dwelling modification
supporting institutions: COPEVI, social planners and technical assistance
private sector involvement: all contracting
the professional as... technical advisor and coordinator

PROCESS
duration: 4 years
finance: public loans
implementation: contractor

PRODUCT
dwelling units: 64 (32-86 sq.m.)
building type: 6 storeys, 284 u/Ha
construction method: concrete load-bearing Support

ACCOMPLISHMENTS
Demonstrates the effectiveness of popularly initiated housing, and the ability of a bottom-up initiative- aided by professionals and non-government organizations- to supersede mass housing, if and when the proper legal and institutional tools are made available.



ANALYSIS

[i] PROJECT PHILOSOPHY

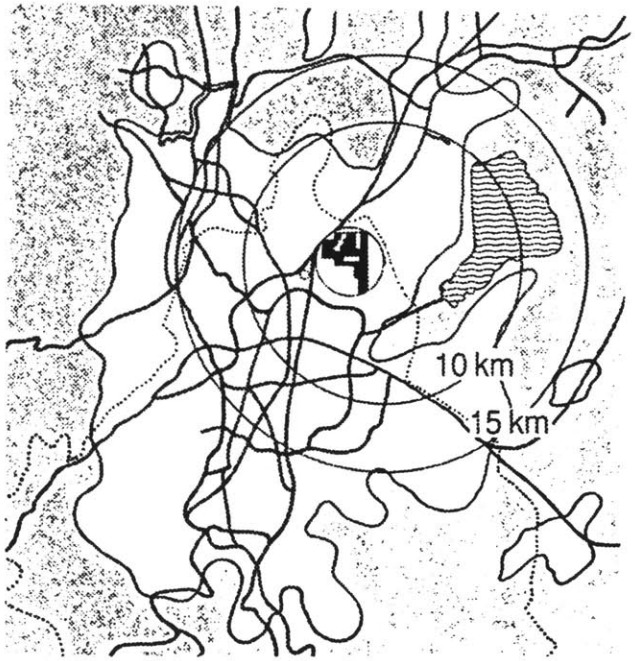
Goals

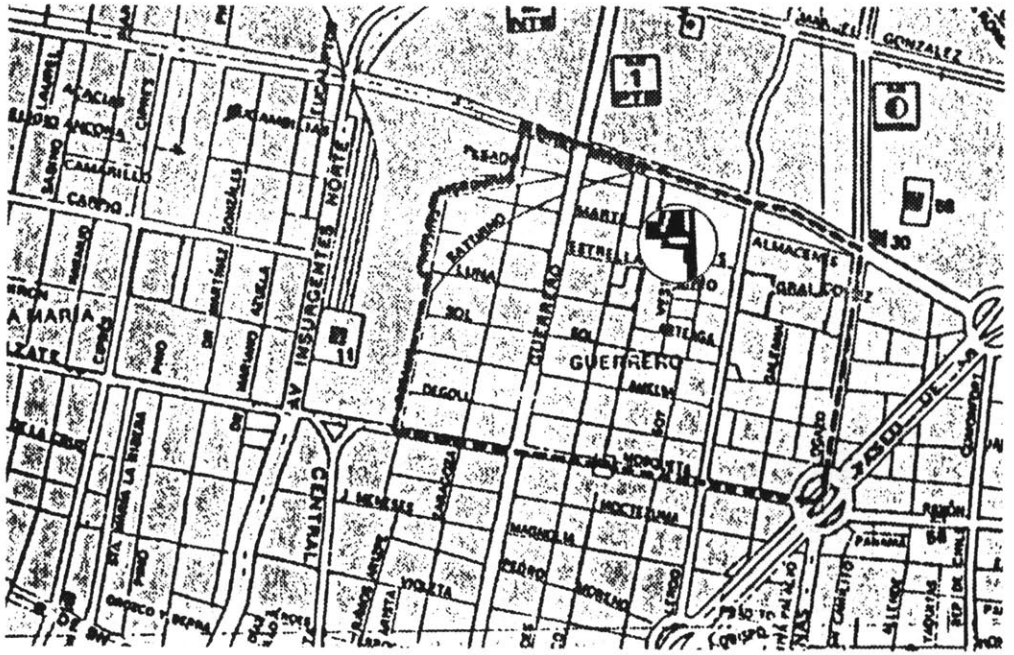
The project is basically concerned with preventing the eviction of a low-income community- by speculative development- from inner Mexico City, where employment is more accessible and human ties are established. This is a prototype of housing and efficient urban upgrading by and for people of modest resources. The goals can be broadly outlined as[1]:

first, to renovate the urban center and create new stock in the district itself, taking advantage of the existing infrastructure;

4-1 Map of Mexico City showing location of the Project

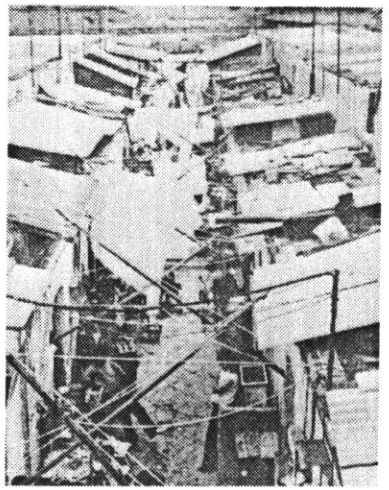
4-2 The central area and Colonia Guerrero





second, to preserve the social coherence of the groups to be evicted, in such a manner that existing communal life prevails and that those who produce the houses consume them; and ultimately,

third, to serve as an alternative to relocation (of the inhabitants) in mass housing projects.



4-3 A traditional linear Vicindad

Precedents Explicitly Considered

Professionally, the Colonia Guerrero project draws on the ideas of Supports and Detachables as developed by S.A.R., Holland.

A local traditional precedent, the *Vecindad*, is also a major determinant, as it is the prevalent urban type of dwelling accommodation for workers. It has a communal-type structure consisting of a number of dwellings, grouped around a multifunctional, collective linear patio[2]. Access to the *vecindad* is usually by means of single main entrance corridor from the street, flanked by stalls and workshops. All families in the group usually share one or two bathrooms and a running water outlet.[3]

Organization: User participation and the Cooperative

The project got off when COPEVI, planner consultants, challenged the policies of INFONAVIT, the largest public housing agency, and were subsequently delegated to initiate surveys and plans in the Guerrero area.[4]

This resulted in an interdisciplinary project based on professional team work, and seeking a new approach to the problem of participation in housing for low income groups- the working class population of the *Colonia* who live and hold jobs in it or nearby. The original community is highly structured and coherent from the level of the individual *vicindad* to that of the entire *Colonia*.

The dynamics of this project are based on a "triple alliance", between government authorities, cooperative members, and non-government organizations. In the context of a relatively conservative housing policy in Mexico, this initiative required the professionals to suggest

modifications in urban legislation towards a policy that is more encouraging of building and renovating "social priority housing"[5]. This alliance had to make initial compromises in order to take action within the existing institutional constraints.

Supports and Detachables of S.A.R., Holland, were used primarily as communication tool to facilitate cooperation between public and private institutions and the users, and to systematize and coordinate the process of design and production on the basis of decisions made in participation with the users. This permitted changes to take place in the course of design and after completion of construction.

The professional team assumed the position of general consultants to the subsequent cooperative, supplying technical information to the users and documenting relevant data. To make participatory housing a viable alternative, lawyers and specialists in the field of cooperativism were sought for advise on the financial and legal aspects of the project. Two sociologists and "social facilitators" participated in the planning and design process[6].

[ii] PROCESS

1975 COPEVI, planner consultants, were delegated to initiate surveys and plans
1976 The Guerrero cooperative was officially registered, and the project finalized.
1977 construction started
1978 the project was inaugurated.

Finance

Funding was raised by the cooperative through partial sale of land. Whereas the cooperative obtained the land and technical assistance through COPEVI. INFONAVIT was also sought for finance. This put some members of the cooperative at the disadvantage, as loans are issued only to

4-4 Graphics explaining to the community how the cooperative works.

those registered at the agency. Furthermore, the latter had a policy prohibiting loans to groups or collectives. These two factors resulted in delays and the eventual exclusion of some members[7].

New mechanisms for obtaining credit for low income families (previously considered ineligible) were eventually developed by the consultants, and became acceptable to public institutions and housing agencies. These centered on the ability of the cooperative to pool the modest resources of individuals for group security. An active cooperative savings account was established through the collective effort of the community[8].

Land

The site of the new *vecindad* was gradually acquired and taken over by the prospective inhabitants, through the cooperative savings account.

Methodology

The first task of the architects was to understand the physical structure of the area. Typological analysis of selected *vecindades* was conducted on site to determine spatial user needs and other data. Drawings, sketches and photographs were used to record information about relationships within the *vecindad*, of access, the patio, location of the dwellings, location of utility spaces, and the mixed commercial and communal uses; and, in individual units, access, transitions, light, kitchen location, sleeping areas, and intensive use of minimum space.

In parallel, the social structure was addressed by contacting members of ten *vecindades* with the aim of explaining to them the general ideas of the project, and assessing the number of people who would participate. Eventually, six *vecindades* were employed in the gathering of socio-economic data and information. Advice on social and legal processes was given by the architects and other members of the professional team to the community, on on how to self-organize into housing cooperatives, by arranging rotating assemblies of dwellers. They were helped on how to institute and take concrete action on their own behalf.

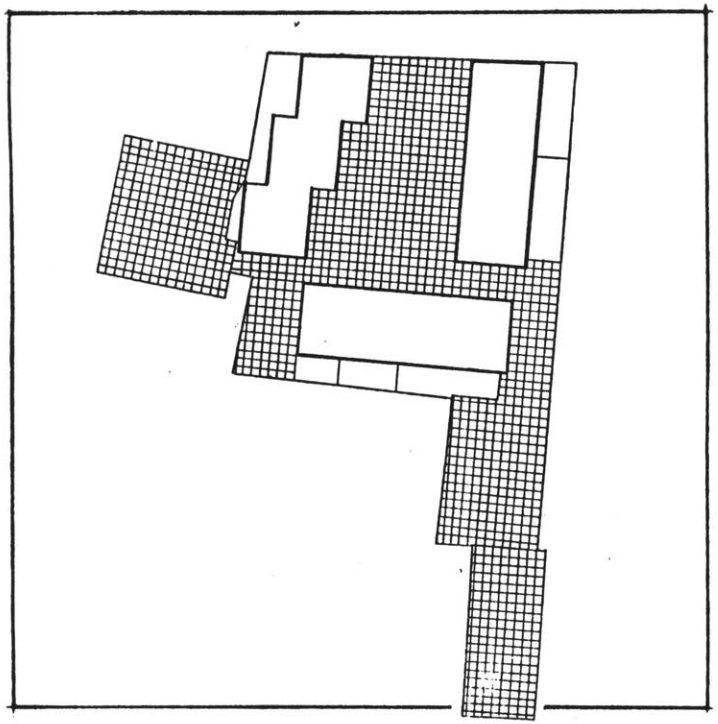
The professional team was responsible for all documentation covering physical, social, and economic characteristics of the surrounding housing, and the location and service infrastructure. This information was seen as vital for project evaluation during and after its realization. Land-use plans of the *colonia* were prepared with the help of the team, to identify and estimate the cost of the lots to be offered for sale[9].

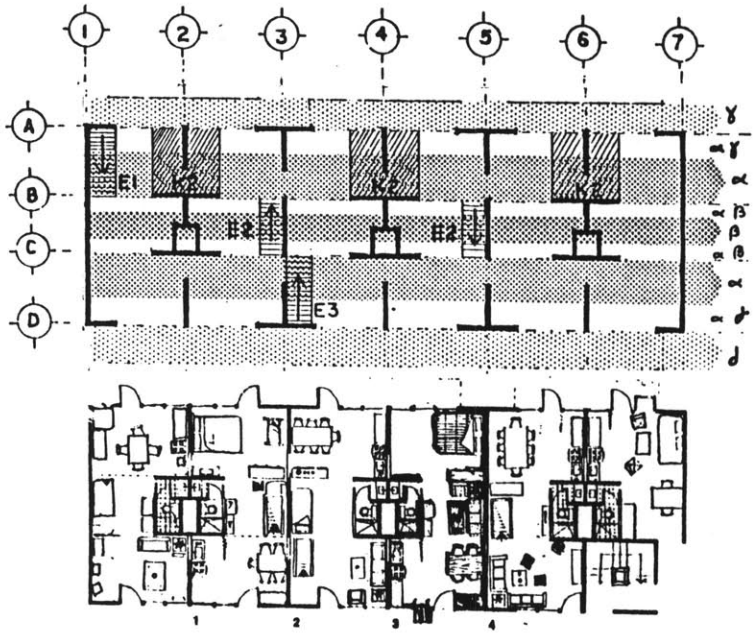
Feedback from community was essential in determining the correct interpretation of user needs and the spatial and functional analysis. Design proposals were developed in close consultation with users. In presenting the project to the housing officials of INFONAVIT, the architects emphasized the flexibility, capacity, and cost-efficiency of the design. Ultimately, finished facades had to be finalized regardless of interior configuration, in response to an official demand to maintain an image of "government housing" in such an experimental project[10].

4-5 Ground floor layout of the new Vecindad.
Access to the irregular site is through a passage from the south.

4-6 The basic zones of the Support, allowing flexibility of interior layout and subdivision.

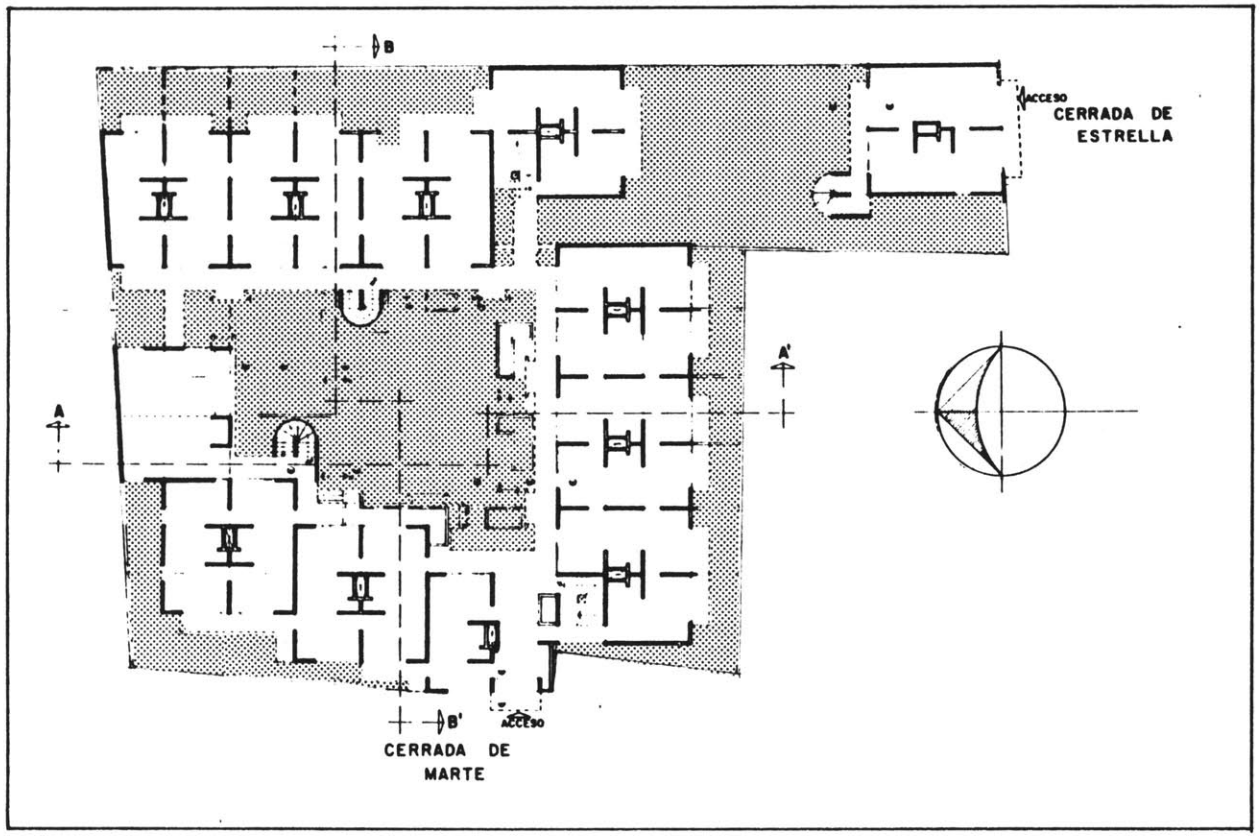
4-7 Alternative unit plans.





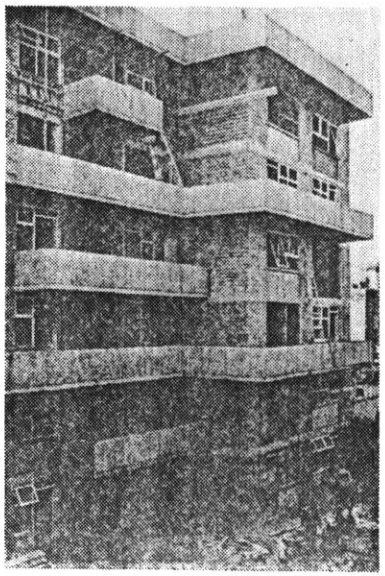
Organization

The project consists of a six-storey structure around a common courtyard. It was derived from the traditional *vecindades* (workers' dwellings which are usually arranged in a low, dense configuration around a communal patio that connects to the street through one entry point). In the new design, individual dwellings are connected by galleries that give to a courtyard, and are joined by open stairs.



4-8 The Support structure; typical floor.

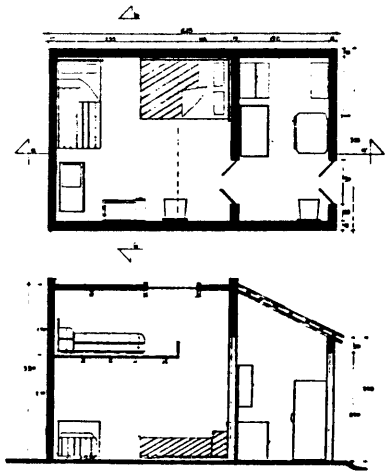
4-9 View of the completed structure from the east.



Typology

The use of the Supports concept was useful in allowing several alternative dwelling plans, all based on the abstracted traditional unit type that was derived in the study preceding the design. The original consists in its simplest form of two rooms. The main living space in the back, and a service room giving off the gallery, and containing the kitchen and washing area. Toilets are traditionally communal.

In the new Support structure, the design provided for a toilet and kitchen zone between the two main spaces. Another option that came with the flexibility is the double-deck configuration, the internal stairs of which could be located in the middle zone.



4-10 Plan and section of a traditional minimal dwelling.

Technology

Unlike most Supports projects, The Colonia Guerrero is not highly sophisticated in construction technology. Like its European counterparts, it separates what the public wants to control from that of the private domain, but choice and installation of interior components are left to individual residents, to change and add to when they need to and in accordance to means.

The construction of the building was done by a contractor, with whom the architects bargained strongly to keep the costs down. The elaborate foundation requirements were partly responsible for the narrow cost margin with other local public housing projects[11].

COMMENTS

Viewing Colonia Guerrero in total, the Supports component of the scheme highlights the qualitative rather than the quantitative aspect of housing provision, namely the relationships and options provided to the user as opposed to the usual priority of access to a dwelling.[12] This is tempered by the fact that the flexibility of interior layouts provides limited income groups with the option of an affordable minimal dwelling in the middle of the city. In addition, the flexibility and

user participation capacity of this principle proved reasonably compatible with the cooperative system and enhanced the collective spirit, by defining the relationship between public and individual decision-making.

A vital part of the initiative involved campaigning; COPEVI, who initiated the project and provided technical assistance, kept the media informed on the progress and the social significance of the project. But later, despite its success, they voiced doubt about the possibility of easily repeating such an experiment, which proved to require a highly motivated group of individuals. In terms of material cost, the project did not save much on the total cost because of its central location. Organization and construction, however, were 10% more economical, by saving on overheads and bargaining with the contractor[13].

For future replicability, the consultants emphasized the need for voluntary or paid work and training by members of each cooperative, and the essential official public sector involvement through existing or new housing organizations for technical assistance[14].

PRINCIPLES IN SUMMARY

The following represent principles as abstracted from the Colonia Guerrero.

. . . Philosophy

a. Housing as a small-scale urban upgrading and infill alternative initiated by the affected individuals, in trying to maintain their social and economic roots. The project stresses the need for growth, employment and economic development of the population within its territory.

b. The community is the client and is very active in design and implementation as a self-organized cooperative.

c. The architect plays a vital role in working out a modified multistorey version of local typology, and in promoting the project technically.

d. Other professionals, like planners, lawyers and sociologists, are essential in facilitating the process and reconciling it in official terms.

. . . Process

e. Design flexibility is complementary to community involvement and is essential in both project formulation and implementation.

f. Process is a conventional one in terms of site analysis, design and execution, the difference being the relationship of the professionals and the community, and in the subsequent formation of the cooperative.

. . . Product

g. Supports as a design and coordination tool allows a highly controlled form of development as related to the growth of the city, but one that is flexible in meeting the material means and spatial requirements of the residents.

CONTEXTUAL LESSONS

Politics

As the Colonia Guerrero involves upgrading of low-income areas, it lends itself to piecemeal densification within unauthorized settlements by organized legalization and multi-storey infill. By the same token, it might suffer from political miasma of communally-based problems, as is often the case in Lebanon. Viewed from a different angle, the project suggests an alternative for settling war-displaced communities, should a local or national political decision to keep the *status quo* materialize. For a considerable proportion of those communities, the problem is a social and political one, rather than economical. In this respect the Colonia Guerrero initiative recognizes the community as an integral body that acts and deals directly with professionals, making use of their expertise. It encourages self-reliance and organization which is helpful in the case of Lebanon, a

country of recognizable individual, but little communal, initiative, and one that totally lacks organization.

Resources and Institutions

The Colonia Guerrero suggests a collective effort for obtaining credit, and for setting up the cooperative fund for buying land from the owners. Such a finance arrangement is encouraged by the policy of the Housing Bank in Lebanon, which, unlike the case of Mexico, does issue loans to groups and cooperatives. Although the official housing policy in the country is almost entirely based on loans, the Housing Bank would have to grow with the increasing demand generated by such efforts.

Community Organization

The realization of the Mexico project was extensively dependent on the self-initiated support of community planners and social workers. The only counterpart for such non-profit groups in Lebanon are the local charitable organizations and religious foundations. These, in addition to volunteers and students, have the capacity to initiate community organizations and handle clerical and simple legal affairs. Salaried professionals will have to be employed for financial and technical assistance, and for design/building coordination.

As indicated before, cooperatives are encouraged by public policy and workers unions. Political and sectarian communities are potential cooperative groups, as they exploit the social polarization and territory definition created in the years of civil war. Many of them were successful in achieving local administrative autonomy.

The Professional

In the Colonia Guerrero initiative, the role of the professionals is instrumental in bringing around a change of attitudes. Conventional professional expertise, including that of architects, lawyers, and

sociologists, was mobilized in order to promote the whole package in the eyes of skeptical authorities. This could be very relevant for Lebanon, where a change in professional attitudes may be easier to bring around, possibly by motivation of communal belonging and good will on the part of individual architects and others. Given the prestige that architects, engineers and lawyers enjoy in Lebanon, a technocratic government (widely believed to be the transitional mode in national reconciliation and reconstruction) might be more receptive to changes on the grounds of professionalism.

Growth and Form of Development

In Support projects like Colonia Guerrero, growth is totally fixed on the outside, possible through negotiation on the inside. This presents an interesting contradiction: while making it possible to have access to an affordable minimal dwelling in the heart of the city, this eventually becomes very much a fixed reality. The assumption that it is possible to change the interior layout with changing needs is tied to a notion of a housing Support that is centrally administered in a fashion similar to public housing. The same assumption cannot hold in a market situation, assuming ownership is the desirable form of tenure. One can deduce that once a household acquires a certain floor area, it would be very unlikely to part with any of it later, being a prime property; similarly, a small household cannot grow within this arrangement, and is bound to face overcrowding and possibly having to find bigger accommodation elsewhere.

NOTES

[1] Andreade, "Participation in Mexico", p.33 and Aldrete-Hass, "'Supports' and Housing Ideology", p. 44
[2] Andreade, Viva Tepito!, 1987, p.6
[3] Ibid

[4] Aldrete-Haas, op.cit., p.43
[5] Habitat Forum Berlin
[6] Andreade, "Participation in Mexico", p.38
[7] Aldrete-Haas, op.cit., p.45
[8] Andreade, op.cit., p.38
[9] Ibid
[10] Aldrete-Haas, op.cit., p.50
[11] Ibid, p.46
[12] Ibid, p.51
[13] Ibid, p.46
[14] Ibid

5 SITES & SERVICES/ UPGRADING

Hai el Salam (El Hekr)

Located in the low-income neighbourhood of El Hekr, or as renamed, Hai el Salam, the Ismailia project includes 5661 new serviced and upgraded plots for individual low-income development. It was initiated by the Egyptian government and aided by the British office of Overseas Development and the UNDP. The Master Plan for the city was commissioned in 1974, and the Ismailia Demonstration Projects commenced in 1978. Since then, the site has slowly consolidated, and 75% of the houses were owner-occupied by 1984. Over the past years, Hai el Salam has been continuously gathering regional appreciation as a viable alternative for low-income housing. The project, however, does provide some insights as to the obstacles that await such an initiative, in terms of ultimately serving the lowest-income groups.

Ismailia, EGYPT, 1982
Clifford Culpin and Partners

PHILOSOPHY

initiated by: central government
initial goals: master plan for the city and low-income housing
target groups: low-income, active in self-help
supporting institutions: city council; Ismailia Governorate; new Project Agency; British government
private sector involvement: individual contractors and self-build
the professional as... mastermind, collaborating with authorities to facilitate for individuals

PROCESS

duration: 8 yrs
original tenure: 'Hekr' land rental from government,
finance: start-up national and international aid; self-sustaining
implementation: incremental; assistance and minimal formal intervention by Agency

PRODUCT

dwelling units delivered: 5661 serviced plots
building types: a range from single-storey to apartment blocks
construction methods: mudbrick; concrete skeleton and infill

ACCOMPLISHMENTS:

Demonstrates how a master plan for a city, governing major decisions, can translate into a programmatic scheme that lends itself to incremental realization through individual small decisions.

ANALYSIS

[i] PROJECT PHILOSOPHY

Goals

The project is conceived as part of the Ismailia Master Plan that was initiated by the Egyptian government in 1974, in a comprehensive post-war reconstruction programme for the Suez Canal Zone[1]. The provision of affordable housing was considered from the outset as a major component of the Plan, in anticipation of a population of 1.3 million in the Canal Zone, 600,000 of which were to be accommodated in Ismailia. Hai el Salam, one of the city's Demonstration Projects and the subject of this analysis, is a combined initiative of new development and upgrading within El Hekr, the largest informal low-income area in Ismailia and one that comprises 50% of the city's housing stock.

The three main goals of the Demonstration Projects were identified as[2]:

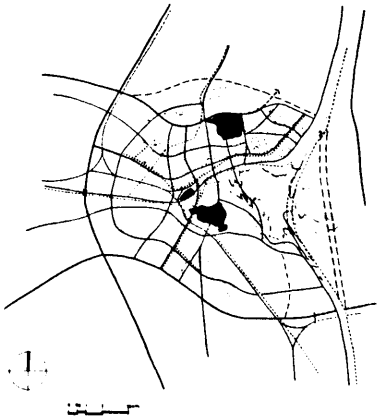
first, to maintain the momentum and principles established in the Master Plan;

second, to focus on problems requiring immediate action; and

third, to formulate proposals capable of easy implementation, with minimum public subsidy, at the earliest opportunity.

As an initiative, the project is not merely providing land title, basic services for housing, but regarded as part of a broader urban scheme contributing to the future development of the city. This kind of master plan focuses on the small-scale dynamics of growth, and directs urbanization as an incremental process. Although the proposal targeted the poorest groups, an income mix was also aimed for to allow cross-subsidy and to eliminate the usual stigma of strictly low-income neighbourhoods. For Hai el Salam to eventually become an established and integral economic and social component of the city, higher income households and business opportunities were envisaged to generate economic support in the incremental process of upgrading. For the short term, *a priori*

5-1 Ismailia Master Plan, with Hai el Salam to the north, and Abu Atwa to the south

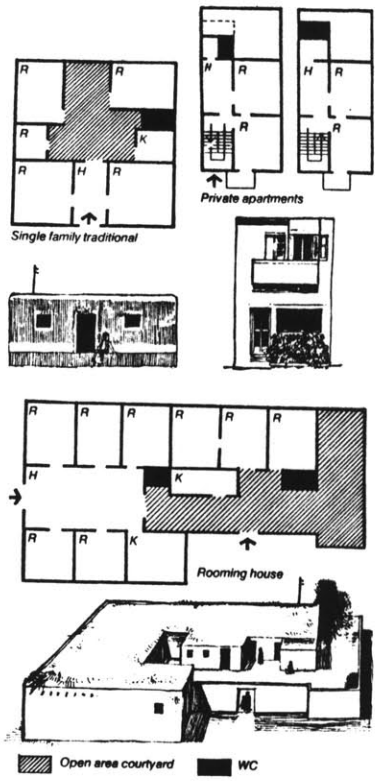


minimum standards of space and services provision were to be avoided, and the strategy called for keeping as wide a range of options as possible, thereby permitting a better match of standards and individual resources[3].

Precedents Explicitly Considered

Owing to the massive efforts involved and the wide geographical scope of the intervention, the consultants advised the government against the conventional approach of direct housing provision, and in favor of a flexible policy of aid and support to the local public and private sectors, including the informal one. The informal private housing sector, the consultants remarked, adds more units to the national housing stock than all public efforts combined, at little or no government support. In addition, informal housing costs were observed to be considerably low relative to formal housing processes, both public and private, mainly because the former allows households to match their needs and priorities with their ability to pay. It was also noted that these are more likely to use local materials, labour, and appropriate technologies than is the formal sector[4].

As a prototype, the Hai el Salam project is innovative in that it applies the low-cost principles of serviced plots in an existing informal settlement. Conventional sites and services enjoy little popularity as they restrict the users' access to employment and personal contacts by locating on urban fringes. Conversely, the Ismailia project incorporates both the existing low-income development and the new serviced plots into the city's Master Plan. New areas to be developed were planned to complement the older communities. This gives a feasible and legal option to displaced people and illegal squatters[5]. The existing patterns generated by the traditional land rental, *Hekr*[6], and the informal and privately developed apartment buildings, *Raba'as* and *'Aimaras*, were incorporated in the combined sites and services and squatter settlement upgrading strategy[7].



5-2 Existing building types: single family courtyard house, new apartment structure or 'Aimara, and collective courtyard house, a Raba'a

Organization: The Project Agency

The consultants chose to maximize the use of available institutions so as to require no legal or administrative reform, with the exception of the new semi-autonomous implementation and land development agency. It was established to manage a faster-than-normal development in the city, and was given the right to sell and buy land, pass legislation and to channel the proceeds for infrastructure layout. Its guiding principle is to monitor and facilitate the incremental home building and improvement process, including provision of reasonably priced material and credit for small loans[8].

The Project Agency was staffed from and was linked to the regional Governorate, which had delegated authority from the central government. Both formal and on-the-job training were provided, with the assistance of The Urban Projects Manual, published by the consultants[9]. Techniques and routines were kept simple, and the Agency's local staff adapted their expertise with the help of the consultants through the Technical Assistance Programme, which also gave advice to the Governorate on the implementation of the Master Plan[10].

In the long run, the involvement of the Project Agency in monitoring the implementation process was expected to build up sufficient knowledge and experience to help similar projects elsewhere in the country, independent of foreign assistance. In 1980, a similar initiative was launched in the rural suburb of Abu Atwa, south of Ismailia.

[ii] PROCESS

12/1974	Culpin and Partners appointed as Lead Consultants for the Ismailia Master Plan Study
1976	Master Plan completed
5/1977	Ismailia Demonstration Projects jointly initiated by Egyptian Ministry of Housing and Reconstruction and British Ministry of Overseas Development

5/1978	consultants complete El Hekr Community Plan, a detailed sites and services/upgrading proposal in line with Master Plan; local councils grants approval in 6/1978
10/1978	Project Agency established and work began on El Hekr and the Technical Assistance Programme
7/1979	first 500 new plots allocated
5/1980	second 500 plots

The project had an initially slow start, mainly due to its dependence on the regional and city Master Plan, the studies of which required 3 years. Following that, 2 years spanned between the start of the detailed proposal and the delivery of the first group of plots.

Finance

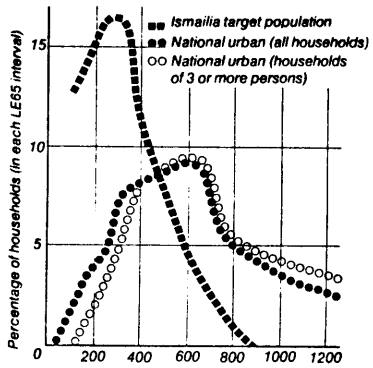
To minimize dependency on centralized procedures, the project was designed to be self-financing, mainly from selling land to owners, and from loans on secured titles. An initial start-up capital was granted from the British government (about $120,000). Joint Egyptian/British funding was later raised for the Project Agency[11].

The financial terms of the project, however, were modified towards governmental subsidies on loan interest rates, in order to facilitate credit terms and encourage higher quality construction[12]. Other subsidies affected the existing and new areas of the project, in the form of USAID sponsorship of high quality water and sewage installations[13].

Land

In Ismailia, land is predominantly government-owned, particularly the desert fringes. Low-income groups customarily sought property through *Hekr* system, the traditional form of temporary leasehold. A more rational and permanent tenure arrangement was sought, giving way to "Delayed

Freehold" (5 years) that was believed to remove uncertainties, provide incentive for investment in home improvement, and safeguard against speculation on subsidized plots. The government ownership of land and the granting of the site to the Project Agency gave the project a strong start by minimizing procedures[14].



5-3 The annual household income of El Hekr compared to that of Egypt.

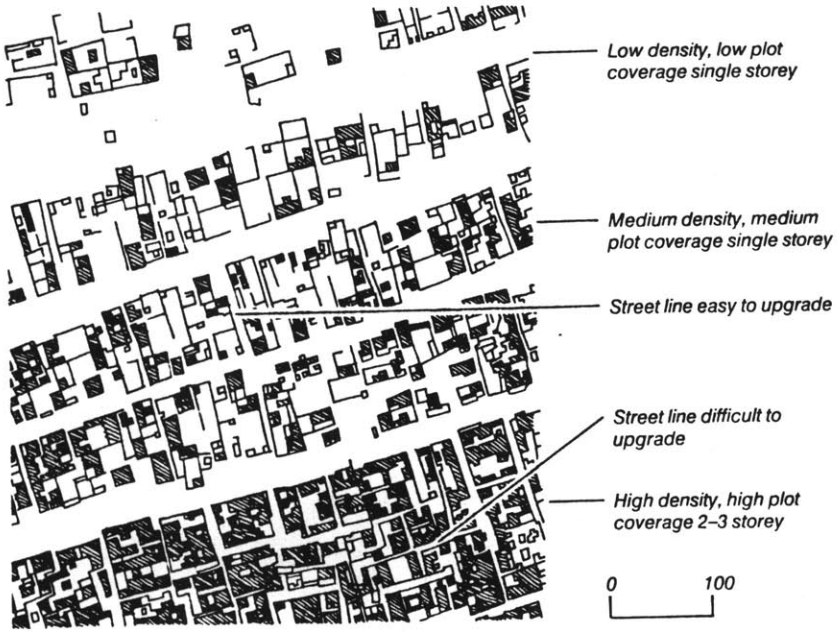
Methodology

Interviews and "scanning Surveys" were the first step in the formulation of the project, where they provided insights into the workings and requirements of the area and helped set priorities. Family sizes and income levels were assessed through selected household case studies[15].

In parallel, the Project Agency initiated a master survey of the target area, which resulted in setting out all necessary roads, housing blocks, and designated public uses of open spaces in existing and new sectors. The final outcome of the surveys was the Community Plan defining the new areas in relation to the existing ones, land use, community centers and sub-centers, and location of all public facilities[16].

In monitoring the progress of work, the Agency reported monthly on the progress of work, and handled the screening of applicants and related problems.

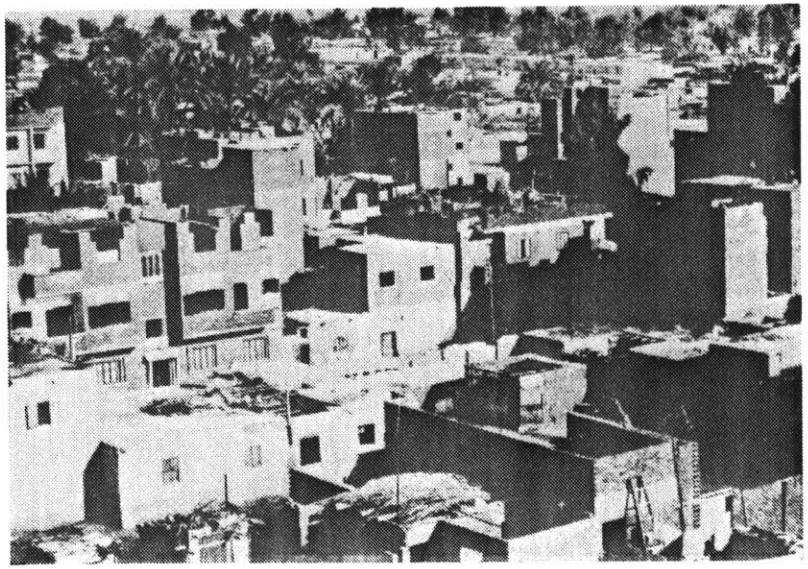
The first plots were made available for those families affected by the roadworks and the Community Centre. At the end of the first 18 months, a total of 1435 plots were delivered, 508 of which were new. The Agency provided a range of house plans for families who could not afford professional assistance[17].

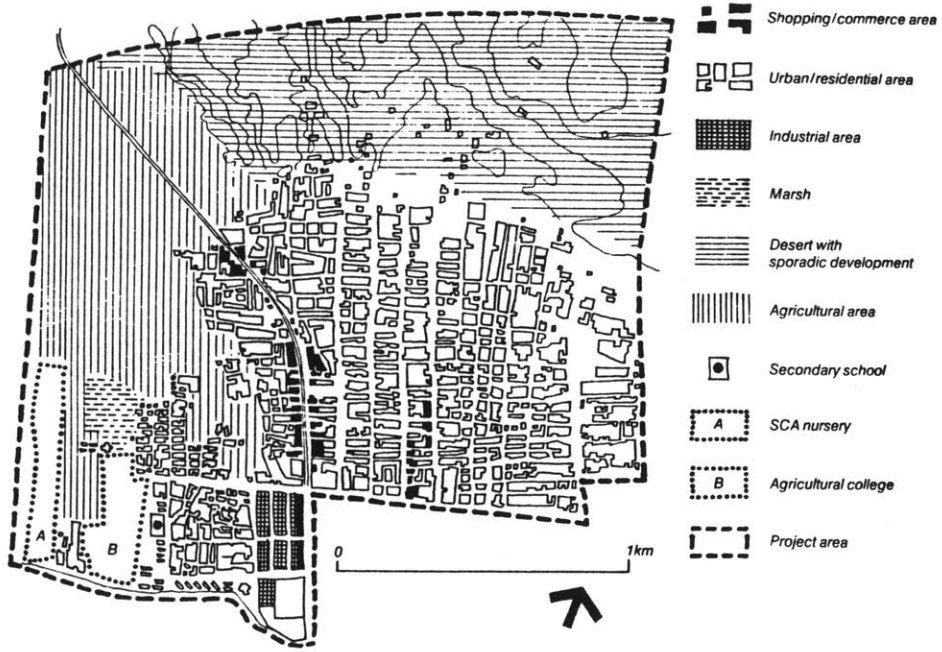


5-4 Density comparison and upgrading potential of the detailed improvement area.

5-5 View north of El Hekr, showing the earlier stages of of progressive development

5-6 'Aimaras, private apartments and high density housing south of El Hekr

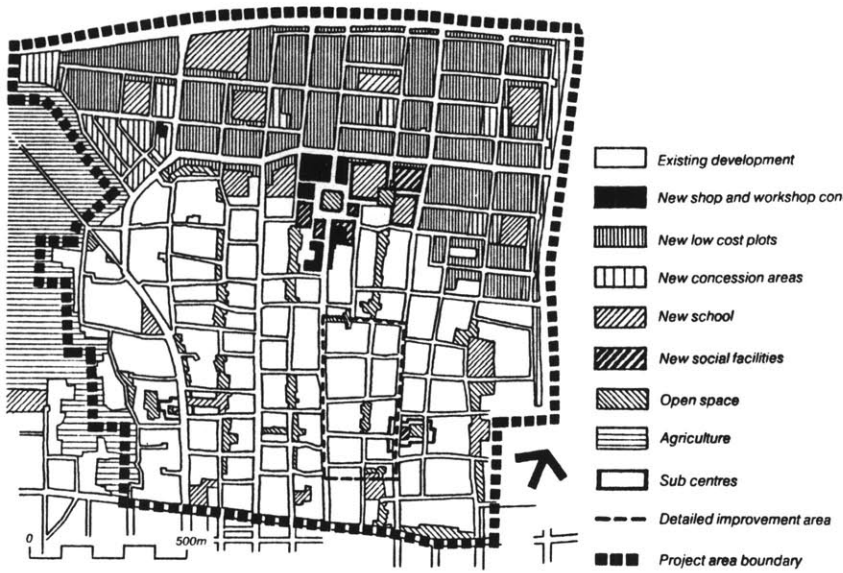


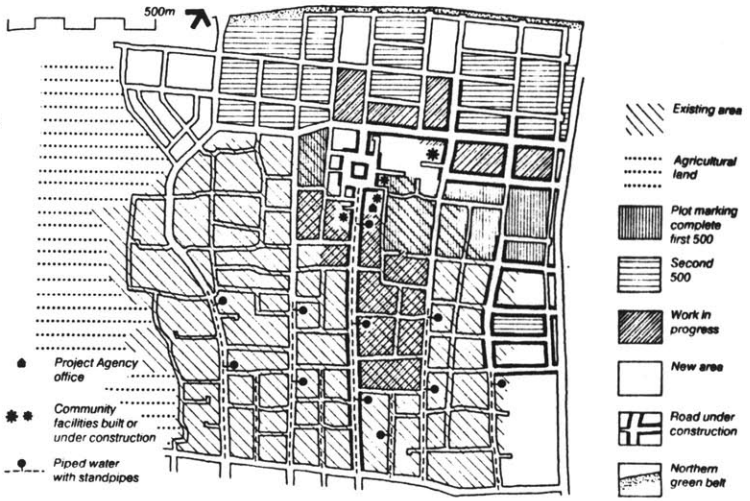


5-7 Map of El Hekr before start of project

5-8 Hai el Salam (El Hekr) Community Plan, detailing land use and new development. Existing development is in white.

5-9 Hai el Salam, progress plan, mid1980, showing plots delivered, water and road works.
Existing development is hatched; new is white

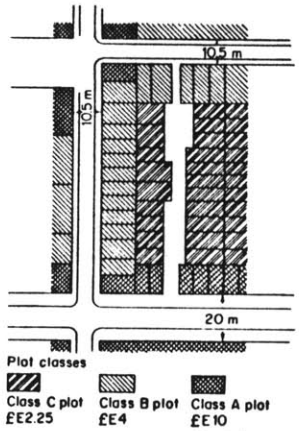




Organization and Form of Development

As a general principle, the space standards adopted for the new development of Hai el Salam were so as to allow progressive intensification of land use, such as increased density of habitation and an eventual concentration of commercial activities- as observed in other areas of urban development in Egypt.

Plot sizes were designed to accommodate existing spatial patterns, such as a one room/workshop for rent on the street. Small retail was anticipated throughout the project, but the centrally located plots were designed for heavier commercial use. The scheme provided for one-family plots classified into three income values according to location and street frontage[18]. Dense low-rise development was originally envisaged, but the latter years saw an increasing proliferation of multistory concrete frame structures and higher income apartment buildings.



5-10 Plot layout classes and pricing

5-11 Detailed improvement area showing the incorporation of existing morphology within the new subdivisions

Structural Hierarchies

The planning of the district distinguished three levels in public and private land use. This hierarchy of groupings is of double value, namely social and practical.

The clusters, blocks and neighbourhoods reflect the existing social preferences. A *Hara*, or the smallest neighborhood unit, is a cluster containing 20-30 plots around a communal space; a block of 4 or 5 clusters comprises 120-180 plots, bounded by "access" or "local" roads. A neighbourhood can be of as many as 6 blocks of 700-900 plots, and totaling 5000 people[19]. The new main community center was so provided to serve the old and new development, containing the main Friday Mosque, polyclinic, social center and market. Neighbourhoods contain sub-centers with higher-order services like health and preparatory schools. As the maintenance of public land presents a major financial burden to local administration, this was minimized by introducing semi-private land in the form of the *Hara*[20].

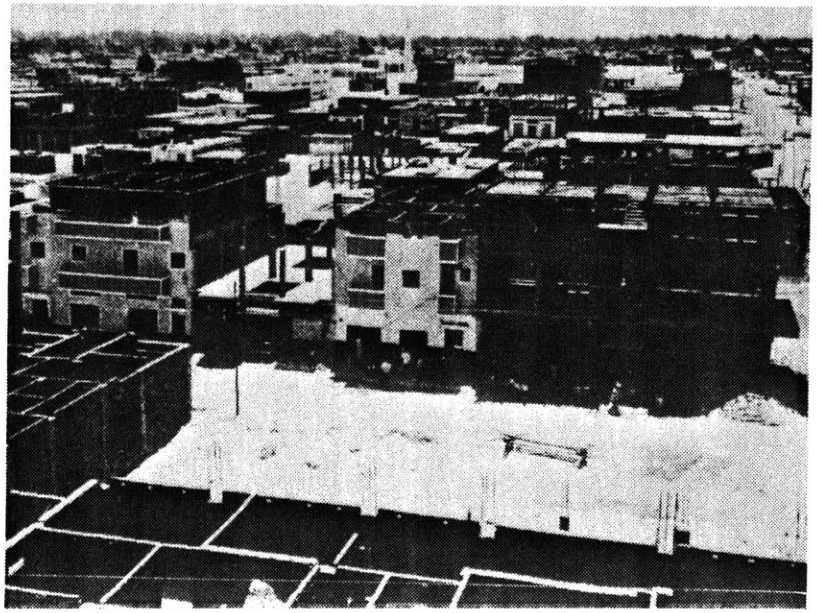
Streets follow the same hierarchic principle: the main road, 20 m; secondary, 11 m; *Hara* conceived as a pedestrian lane of projecting and receding edges. This grouping was helpful in minimizing infrastructure layout costs.

Infrastructure

The Master Plan recommended full infrastructure provision as a long term goal. Nevertheless, in considering the financial capabilities of both authorities and population, a flexible set of standards was devised, starting with the basic installations such as un-asphalted roads (for access and plot definition facilitate tenure procedures) and collective standpipes (for a minimal sanitary conditions). Option were tabulated, costs versus affordability, to establish the initial minimum. Progressive upgrading to better standards, such as individual household tapped water, were accounted for in the design of the infrastructure[21].

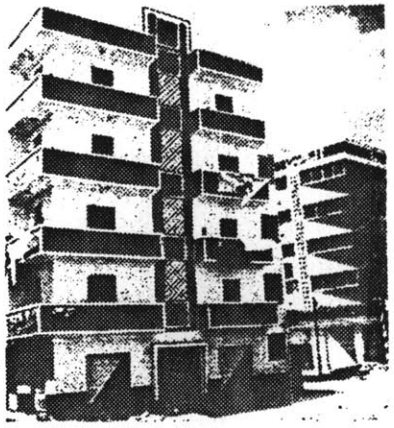
5-12 Recent construction in the new development area of Hai el Salam

5-13 Recent apartment buildings in the formerly low density northern sector. Compare to similar location in figure 5.



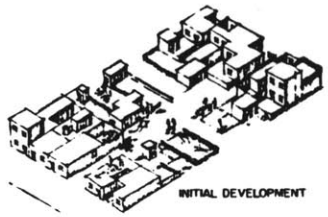
Construction and Materials

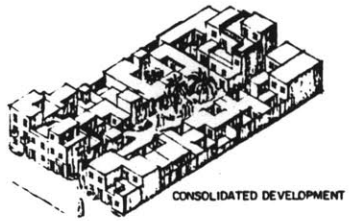
The options of construction materials were initially left open for individual users to be made according to affordability, ranging from mudbrick, to burnt brick, to concrete frame that takes later vertical expansion. The consultants advised the authorities in favour of cheap, affordable materials and for the temporary relaxation of related building regulations that can be balanced by withholding tenure until an acceptable building standards are eventually met. "Temporary materials", however, were discouraged by both politicians and users, in a context of official worry about the rate of consolidation of the project and the possibility of it looking like a slum. Construction standards were officially raised, favouring concrete and baked brick, with only 10% of the C plots (lowest income) built with mudbrick[22].



5-14 Most recent type of development

5-15 The incremental consolidation process as foreseen by the consultants





COMMENTS

The core of this project's ideology is to facilitate, within a legal framework, the individually initiated economic and social growth of the beneficiaries, alongside housing as shelter. This in line with the writings of John Turner, whereby housing is not merely a quantitative, physical phenomenon, but also a socio-economic action. In the Ismailia project, the role of the architects/planners involved the reversal of conventional centralized processes in favour of decentralized and individually-based traditional building, regarding the origin of decision-making. This attitude is positive towards individual capacities, and and is economically more realistic and resourceful than centralized procedures.

The project, however, partially fell short of its initial goals in certain respects, as high proportion of middle and high income groups were able to benefit from it eventually. Although an income mix was part of the project goals, the un-projected infiltration of affluent groups seems to have been rendered easier by several unforeseen factors. First, the external subsidies and the eventual raising of the project standards made Hai el Salam a fairly desirable area in the eye of the

public, as compared to the shabby slum it was formerly regarded to be[23]. The Project Agency later removed the income level eligibility in allocating plots to various applicants. Households with relatively high incomes were, in effect, those able to afford the altered financial and design requirements of the project. Unreported numbers of families retained a temporary title until they were able to raise sufficient funds; many others opted for unofficial sale to speculators[24].

On the positive side, Hai el Salam did fare well in substantially upgrading the area physically and economically. As a demonstration project, it was instrumental in triggering the needed changes in political attitudes and professional practices regarding housing in Egypt. The consultants were able to realize their vision with the support of the local Governorate and foreign aid.

PRINCIPLES IN SUMMARY

As follows is a brief outline of the principles that underlie the Hai el Salam project.

. . . Philosophy

a. Housing is an integral and major component of the city's development

b. Existing and new interventions are not isolated but complementary and can enjoy a symbiotic relationship. It is essential to recognize the potential reuse and upgrading of existing stock, and that new facilities and services support existing ones: displaced people are easily relocated, with social continuity maintained in the adjacent new development.

c. A Master Plan works better as a guiding strategy rather than an actual project.

d. The principles of Sites and Services can be utilized to upgrade urban contexts and initiate immediate action at a basic level and for most urgent needs, through flexible standards, low initial budgets, eventual self-sufficiency and independence of centralized budget fluctuations.

e. Indigenous and self-perpetuating types of development should be incorporated and enhanced in new interventions, rather than impose new ones.

f. An income mix is desirable in any predominantly low-income project, for social and economic considerations. This, however, can reflect negatively on the accessibility of the target population.

g. There are advantages to capitalizing on local administrative set-ups, such as greater autonomy and faster bureaucratic procedures. Other advantages of operating within existing settlements include easy access to on-site surveys for determining needs, monitoring various phases of implementation, and coordinating smooth relocation of people.

. . . Process

h. Incremental implementation of detailed projects is fast in delivering results and allows continuous revision of criteria and in-progress modifications.

i. Incremental building processes conveniently satisfy growth needs of users through self-help, mutual help or small contractors.

. . . Product

j. Initially, design specifications of space and infrastructure need to be higher than required to allow for later intensification of use. Despite this, officials may remain uneasy about the success of projecting for future densities and the possible overloading of infrastructure.

CONTEXTUAL LESSONS

The conditions that preceded the conception of Hai el Salam, Master Plan and Demonstration Project, share similarities with the current situation in Lebanon. Whereas the Ismailia regional study came after the 1974 war in the Suez region, with comparable limitations in economic and institutional resources, and long-due housing shortages, the level of destruction in Lebanon today is far greater. The combined Sites & Services/ upgrading principles should by all means be considered, both for reconstruction purposes and quantitative improvements of the housing stock.

Resources

In the situation of Hai el Salam, land was predominantly state-owned and rented out to low-income groups for temporary building, a situation that does not exist in Lebanon. In the latter, property is squatted upon or seized by para-military force that enjoys political backing. Given the value placed upon urban land in Beirut, any form of selling out land to squatters is likely to be as much of a technocratic challenge as a very volatile political issue. As pointed out earlier, land is very much a prerequisite to large housing projects.

Upgrading involves in principle the clearing of land title, which is cheaper and simpler in the case of public land ownership. In Lebanon, where property is an expensive, negotiable commodity and is predominantly private-owned, upgrading squatter settlements may be of prohibitive costs to the government, should public acquisition of land be the likely transitional mechanism. As in many other Third World countries, multiple property ownership is quite common, making it further difficult for the state to intervene in land title settlement. One alternative as proposed by the Kampung Improvement Project in Jakarta, Indonesia, is to upgrade by providing services without tenure, incurring costs on those who occupy the property rather than those who own it. While this requires an efficient and politically backed bureaucracy, it leaves the problems of clearing tenure status in the hands of the concerned individuals.[25]

As far as the start-up financing for publicly initiated efforts, Arab and international aid are the conventional options in the event of political stability and commencement of reconstruction. Private philanthropic efforts have demonstrated a great capacity to rejuvenate rebuilding, as in the case of the Hariri aid plan in the summer and fall of 1982, and the ensuing downtown restoration works and study.

Institutional

The Hai el Salam is inspiring in its aim to maximize the use of available local bureaucracy, and the principle of technical assistance on the job. This could be useful at all levels, starting from officials

and going down the institutional hierarchy. In Lebanon, such a project is better implemented at the municipal level, where public land is usually owned. (The Bourj Hammoud housing project was initiated and built by the local municipality.) The government can be helpful in coordinating between various concerned municipalities, in case of project domains.

Professional

The role of Clifford Culpin and partners as foreign consultants to the Egyptian Government offers a double-edged model. Being foreign, the consultant is most likely to be revered as the all-knowing professional in a developing country, and thus makes him more heard and capable of establishing the *modus operandi* than a local firm might be able to do. One potential area for change is in the effort to relax building regulations regarding standards, in order to facilitate incremental growth and construction among low-income groups. This however is usually complicated by questions of image, on the part of both the authorities and the individual users, as has been demonstrated in Ismailia.

On the other hand, there are two possible disadvantages. One is the possible exploitation of the identity of the consultant to legitimize local political interests, and Lebanon has a long history of filed schemes bearing world-famous signatures. The other is the high overhead costs and fees incurred by foreign consultancy.

NOTES

[1] Urban Projects Manual, p.133
[2] Ibid
[3] Ibid
[4] Ibid

[5] Davidson, "Ismailia: From Master Plan to Implementation", p.166

[6] This form of tenure gives the tenant the right for compensation if the building is removed, but not for the land surrendered to the government.

[7] Davidson, "Ismailia: Combined Upgrading and Sites and Services Projects in Egypt", p.132

[8] Urban Projects Manual, p.135

[9] Davidson, "...Combined.." p.145

[10] Ibid, p.140

[11] Ibid, p.139

[12] Payne, "Ismailia Revisited", p.23

[13] Davidson, op.cit., p.143

[14] Davidson,"...From Master Plan.." , p.165 and 175

[15] Ibid p.164 and "...Combined.." p. 134

[16] Urban Projects Manual, p. 136

[17] Ibid

[18] Davidson, "...Combined..", p.139

[19] Urban Projects Manual, p.137

[20] Ibid, p. 135

[21] Ibid, p. 136

[22] Davidson, op.cit., p.142

[23] Payne, op.cit., p.23

[24] Ibid

[25] William Doebele, lecture at Harvard G.S.D., November 17, 1987

PART III: **SYNTHESIS**

6 SUMMARY

Future Prospects in Lebanon

In part II, three cases were analyzed, each being particular and interesting in its own right, each providing a response to a certain situation. As demonstration projects they suggest different, but not necessarily exclusive, blueprints of urban development. In a nut-shell...

The Hai el Salam project in Ismailia suggests how a master plan for a city, a top-down initiative governing major decisions, can translate into a programmatic scheme that lends itself to incremental realization through individual small decisions.

The Colonia Gurrero in Mexico City demonstrates the effectiveness of popularly initiated housing, and the ability of a bottom-up initiative- aided by professionals and non-government organizations- to supersede mass housing, if and when the proper legal and institutional tools are made available.

The Dar Lamane in Casablanca portrays public housing at its best, where the design, although essentially centrally initiated and formulated, is efficient, economic, and responsive to the needs and norms of the community being housed.

This section serves to bring together the principles abstracted in Part II, and examine their bearing on the future of urban housing in Lebanon. It is an open-ended and hypothetical exercise, and it involves two layers of reading.

The first layer is essentially related to the principles in terms of what the country is at the present, and what resources it has (human, economical, institutional, physical, legislative...). As mentioned at the outset, urban Lebanon- most urgently Beirut- needs to have a wider range of housing development options, both qualitatively and quantitatively. "What could happen" has to do with what the principles and models imply in Lebanon as it stands today, and as exemplified in Beirut.

The second layer has to do with the context of the country, as to what it can become in the near future (or following a relative return to normalcy, if and when...). "What should happen" is more in line with how the discussed principles suggest changes in the housing framework of Lebanon.

The same broad categories can be used in sketching out the future.

Socio-Politics of Housing

In the context of the present total situation in Lebanon, housing stock can only be increased through piecemeal, privately initiated developments, whether owner-built or part of the speculative market. This is mainly due to the lack of land assembly for large-scale interventions. Housing is no doubt a moral issue, and subject to political will. For example, informal development should become more acceptable in principle, to both officials and professionals, first by redefining terms of reference, and eventually by concrete action. Short term prospects must include a change in attitudes, one reason of which is the opportunity costs of other alternatives involving elaborate public involvement, or none at all. If the country has always thrived on individual initiative, within an un-aided self-help situation, there is no reason why low-income groups should be denied their innate potential for self-help.

It should be mentioned that it is counterproductive to attempt any major housing effort without resolving the main and most recent cause, that of communal displacement.

Roles and Institutions

Revenue-oriented private development, being the current sole provider of housing stock but not necessarily addressing low income groups, must be complemented by other means. Architects need not expect to have less of a say in the realm of low-housing design and decisions, but perhaps more in figuring out ways of monitoring neighbourhood growth, and projecting future patterns of development. They may be instrumental in coining the kinds of environmental laws that ensure optimal layouts, foresee infrastructural costs, and enhances the city as a whole.

As demonstrated in the Mexico City project, an architect may very well need all his conventional training to serve a community-based client, and to design for criteria different from those set by public agencies. Professionals also have a central role in bringing about a change in official attitudes to housing and what it delivers. This role was highlighted in all three projects analyzed in part II.

Housing-related institutions in Lebanon must be decentralized and encouraged at the municipal level, thereby allowing quicker and localized responses to demands and constraints. The Housing Bank needs to grow and live up to its central role in local policy.

As indicated earlier, public housing projects are prohibitive and counterproductive in times of massive reconstruction. The government should adopt a facilitator role in the provision of construction materials, by encouraging small suppliers rather than assuming direct involvement in supply and transport. This has the capacity to stimulate local economy through the increased activity of the private sector.

Scope and Areas of Interventions

In part I, three types of intervention areas were identified in Beirut, namely the relatively intact consolidated city, the urbanizing suburbs, and the war-destroyed confrontation zone. The latter two have considerable potential for accommodating additional housing stock through different growth requirements.

The prospect for the confrontation zone, upon reestablishment of security, lies mainly in upgrading its roads and infrastructure, in order to encourage home owners to invest in building restoration and maintenance of existing housing stock. Few totally destroyed urban blocks may suggest the potential of urban renewal or large-scale projects; unless the government develops a will and works out a policy of land acquisition and assembly, this area will tend to remain in the hands of scattered private development. It follows that the relationship of this area to the principles outlined in part II lies mainly in services and upgrading. Various neighbourhoods can self-organize to coordinate local and citywide upgrading efforts. Low-income, Support-type housing may be possible through pooling of resources among war-afflicted families aided by local community organizations.

Owing to the expanses and relative low density of the fringe areas, the bulk of new housing stock in the Greater Beirut region will inevitably be accommodated in the growing suburbs. In

contrast to the original city, these suburbs contain large parcels of municipal and private land, some of which are agricultural. This suggests two complementary options, namely upgrading and new development. Upgrading should cover all income areas, covering infrastructure and communal facilities. New development should project for future land uses of the specific areas and the city a s a whole. The form and nature of this development will have a major effect on the future rate and pattern of growth the capital.

Lebanon boasts a substantial list of Master Plans, almost non of which was implemented save for opening of major vehicular arteries. The challenge for an overall urban proposal for the Greater Beirut area is to foresee reasonable mechanisms of implementation, in a manner similar to the Ismailia Master Plan and Demonstration Projects. At the core of the success of such an effort lies a belief in an incremental realization through discrete interventions, aided and monitored by local and central authorities.

Image

In Lebanon the question of project image may present itself different to the way it did in the contexts of the demonstration projects. For one, the presence of the State in housing imagery is almost non-existent in the mind of the people, owing to the poor history of public housing. In addition, the government exercises control of the built environment only through the process of building permits approval, a process that is devised to ensure that new structures do not exceed the areas and building envelopes specified in the Building Code. The quality of the exterior is expected to be more of a concern for professionals and users. The former group may reject an unfinished look or over-systematize design controls; the latter may wish to project a finished look out of pride.

Form of Development

In urban areas of high density and scarce developable land, some kind of appropriate multi-storey housing seems inevitable. Other examples of settlement patterns generated by traditional and

contemporary incremental developments have demonstrated that, up to a certain limit, low/dense configurations can be as spatially optimal as any other form of development.

In the case of Beirut, where land is rare and the city continues to sprawl beyond its possible capacity and due to the current pattern of growth, the question of land availability is critical. Multistorey housing can allow to project higher land utilization, provide access to the city for more people, and reduces the expanse of roads and other infrastructures. But there is a critical threshold of five storeys above which the level of technology increases disproportionately, mainly due to the necessity of mechanized construction and services, such as elevators. Oftentimes, cities are unable to provide basic amenities, as in the case of Beirut where the scarcity of water in the summer makes it difficult to reach upper-floors apartments. This is highly important in countries which are restricted in technical and economic terms, rendering multistorey housing a heavy financial burden and a source of reliance on foreign expertise.

The Building Code and the real estate market have set a pattern of high density development in Lebanon, in a manner that exceeds the optimal threshold of construction economy and land use. This presents a crucial conflict between economic feasibility of investment, which governs market-provided housing, and affordability of construction and services, which is critical for low-income units, especially owner-built. In this distinction resides the difficulty of affordable urban housing, and the challenge for Lebanon.

Future Prospects

The projects analyzed in part II hint at three possible and complementary options. Once again, it should be stressed that these do not offer a comprehensive range, but they do span wide across.

The first, and most conventional, is the public provision of low-income housing. To succeed at this, the design and construction process (as opposed to building standards) should be of high professional coordination. While public housing is not likely in Lebanon for reasons of economy and policy, formal housing projects may be possible through private and entrepreneurial initiative.

The fact that professional skills are high and industrialized methods are established can contribute to the development of appropriate solutions.

The second option, that of upgraded and new sites and services, also falls in the public sector. This option is part of large scale governmental or municipal development work, but unlike housing projects, it does not involve large capitals. As it affords flexibility in standards and eventual involvement of the beneficiaries and small contractors in building, it is worthy of consideration in Lebanon.

The third option is that of small scale, inner city communal upgrading and housing. This option does not require public initiative, but it does need link to and operate within the policy of available institutions. The Housing Bank constitutes the primary source of credit. The role of the professional, architect, planner, sociologist, should be supportive of local needs. The scale and resources required of such efforts are compatibile with those of Lebanon.

A Final note...

The nature of an impending situation such as that of Lebanon might prompt fast solutions at the cost of comprehensive strategies and long term quality. Holistic visions and equity are not and need not be at opposing ends. Our cities must grow and prosper while recognizing both qualitative and quantitative issues of urbanization.

AHJ

GLOSSARY OF NAMES AND PLACES

Aga Khan Award for Architecture	AKAA
Banque de l'Habitat	The Housing Bank in Lebanon, a semi-public agency for long-term loans
Building Code	regulations regarding envelopes, setbacks, heights, and percentage of built-up areas
Coefficient of Exploitationtotal	built-up area; floor/area ratio
COPEVI	Centro Operacional de Vivienda y Poblamiento, an organization of avocate planners for housing in Mexico City
Compagnie General Immobiliere	C.G.I., the national building agency of Morocco
Hekr	Rental-based, temporary land tenure in Egypt
INFONAVIT	Instituto del Fomento Nacional de la Vivienda de los Trabajadores, Mexico's major housing agency

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2-3	Bavly, in Hamade p. 2
2-4	Debbas, p.129
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3-1	AKAA 1986
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3-3	Space & Society 37, p.24
3-4	Mimar 22, p.65
3-5	Charai and Lzrak; AKAA Archives
3-6	AKAA 1986
3-7	The Architectural Review 1077, p.91
3-8	AKAA 1986
3-9	AKAA 1986
3-10	Rotch Visual Collection, M.I.T.
3-11	Mimar 22, p.66
3-12	AKAA 1986
3-13	Rotch Visual Collection, M.I.T.
3-14	Lignon, AKAA in Mimar 22
4-0	Habitat Forum Berlin

4-1	Habitat Forum Berlin
4-2	Habitat Forum Berlin
4-3	Andreade, 1976, p.36
4-4	Andreade, 1976, p.35
4-5, 6	Andreade, 1976, p.39
4-7	Habitat Forum Berlin
4-8	Andreade, 1976, p.39
4-9	Habitat Forum Berlin
4-10	Andreade, 1976, p.37
5-0	AKAA 1986
5-1	AKAA 1986
5-2	Davidson and Payne, 1983, p.28
5-3	Davidson and Payne, 1983, p.134
5-4	Davidson and Payne, 1983, p.29
5-5	Sudra, in Open House International 5:1, p.4
5-6	Davidson, in Payne (ed.), 1984, p.131
5-7	Davidson and Payne, 1983, p.134
5-8	Davidson and Payne, 1983, p.134
5-9	Davidson and Payne, 1983, p.137
5-10	Davidson, in Payne (ed.), 1984, p.139
5-11	Sudra, in Open House International 5:1, p.17
5-12	Davidson, in Payne (ed.), 1984, p.147
5-13	Architectural Record, 1/87
5-14	Davidson, in Payne (ed.), 1984, p.
5-15	Davidson, in Payne (ed.), 1984, p.138

SELECTED BIBLIOGRAPHY

Lebanon, Middle East, and Arab World

BROWN, L. Carl (ed.)
From Madina to Metropolis, Heritge and Change in the Near Eastern City, The Darwin Press, Princeton, New Jersey, 1973

COCKBURN, Robert
"Lebanon's Awesome Reconstruction Problem", as part of a collection of articles entitled **"Housing the Arab Population"**, in Middle East Construction, January 1983

DEBBAS, Fouad
Beirut, Our Memory, Naufal Group, Beirut, Lebanon, 1986

HAMADEH, Shirine
A Housing Proposal Against All Odds: The Case of Squatter Settlements in Beirut, M.Arch.U.D. Thesis, Rice University, 1987

HARIK, Antun
"Lebanon's Housing Problem", unreferenced, undated

KHALAF, Samir
"Some Salient Features of Urbanization in the Arab World", in Ekistics 300, May/June 1983

MIDDLE EAST ECONOMIC CONSULTANTS
Family Budget and Housing in Lebanon, Report1984

MIDDLE EAST ECONOMIC CONSULTANTS
Reconstruction and Development of the Central Commercial District, Report for Oger-Liban, 1985

PETERSON, Eric
"Housing and Reconstruction" in ***Beirut of Tomorrow: Planning for Reconstruction***, Friedrich RAGETTE (ed.), A.U.B., 1983

SHIBER, Saba George
Recent Arab City Growth, collected articles and essays, 1959-67

TAKE, Omar with Caminos, H. and Goethert, R.
Urban Dwelling Environments: Beirut, Lebanon. Case Studies-Mkalles Housing Project, M.I.T. Thesis and research project, 1974

UN/ECWA
A Study on a Housing Policy for Lebanon, 1977

GENERAL READING

THE AGA KHAN AWARD FOR ARCHITECTURE
Housing Process and Physical Form, Proceedings of Seminar Three in the series Architectural Transformations in the Islamic World, Held in Jakarta, Indonesia, March 1979

CAMINOS, H. and GOETHERT, R.
Urbanization Primer, The MIT Press, Cambridge, Massachusetts, and London, England, 1978

GRIMES, Orville
Housing for Low-Income Urban Families: Economics and Policy in the Developing World, Johns Hopkins University Press, Baltimore and London, 1976

HABRAKEN, N. J.
Supports: An Alternative to Mass Housing, Praeger Publishers, New York and Washington, 1972

LINN, Johannes
Policies for Efficient and Equitable Growth of Cities in Developing Countries, World Bank Staff Working Paper No. 342, July 1979

M.I.T. TECHNICAL ADAPTATION PROGRAM
The Housing and Construction Industry in Egypt, 1977-79

PAYNE, Geoffrey (ed.)
Low-Income Housing in the Developing World, John Wiley & Sons, 1984

PAYNE, Geoffrey
Urban Housing in the Third World, Routledge and Kegan Paul, Boston 1977

POTTER, Robert
Urbanization and Planning in the Third World: Spatial Perceptions and Public Participation, St. Martin Press, NY 1985

SHANKLAND COX PARTNERSHIP
Third World Urban Housing: Aspirations, Resources, Programmes, Projects, Overseas Division, Building Research Establishment, UK

SHERWOOD, Roger
Modern Housing Prototypes, Harvard University Press, Cambridge, Mass. and London, England, 1978

STOKES, Bruce
Global Housing Prospects: the Resource Constraints, WorldWatch Paper 46, September 1981

TURNER, John F. C.
Housing by People, Pantheon Books, New York

WARD, Peter (ed.)
Self-Help Housing: a Critique, Mansell Publishing Limited, 1982

THE PROJECTS

THE AGA KHAN AWARD FOR ARCHITECTURE
"Dar Lamane Housing Community", 1986 Official Citation

THE AGA KHAN AWARD FOR ARCHITECTURE
"Dar Lamane Housing Complex", 1986 Technical Review Summary, AKAA Archives

"The AKAA 1986 Winners" in Mimar 22, 1986

ALDRETE-HAAS, Jorge
"Supports" and Housing Ideology in Mexico: A Case Study
M.I.T. thesis 1982

ANDREADE, Jorge
"Viva Tepito!", unpublished entry to the Open House International Competition entitled Housing Futures: People and Place, 1987

ANDREADE, J. and ZAMUDIO, J.
"Participation in Mexico- the Case of the "Colonia Guerrero", in Industrialization Forum, Vol. 7, 1976, No. 1

"Dar Lamane Housing Community, Casablanca, Morocco" in the The Architectural Review 1077, November 1986

DAVIDSON, Forbes
"Ismailia: Combined Upgrading and Sites and Services Projects in Egypt" in *Low-Income Housing in the Developing World*, edited by G. K. Payne, John Wiley & Sons, 1984

DAVIDSON, Forbes
"Ismailia: From Master Plan to Implementation" in Third World Planning Review, Vol. 3, No. 2, May 1981

DAVIDSON, Forbes and PAYNE, Geoffrey (eds.)
Urban Projects Manual, Clifford Culpin and Partners, Liverpool Planning Manual 1, Gerald Dix (series ed.), Liverpool University Press and Fairstead Press, 1983

HABITAT FORUM BERLIN
"Alternative Renovation in the Centre of Mexico City", Promotionary publication; Research: P. Connolly, CENVI, Mexico; Advisor: Y. Cabannes, GRET, Paris, 1987

JABR, Abdul-Halim
"Tradition as a Source of Theories and Tools of Contemporary Design For Urban Housing", unpublished paper at M.I.T., Fall 1987

PAYNE, Geoffrey
"Ismailia Revisited: A Personal Assessment of the Hai el Salam and Abu Atwa Projects" in Open House International Vol. 10 No. 3 1985

"Regionalism in Housing", Space and Society 37, Jan-Mar 1987

SUDRA, Tomasz
"The Case of Ismailia: Can Architect and Planner Usefully Participate in the Housing Process?" in Open House International Vol. 5 No. I 1980