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IAHS- FIU WORLD CONGRESS ON HOUSING
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EMPHASIZING DEVELOPING COUNTRIES
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THE DESIGNER IN THE DEVELOPMENT LABYRINTH
DR. SAYED ETTOUNEY
THE DESIGNER IN THE DEVELOPMENT LABYRINTH -

AN INVESTIGATION INTO THE ARCHITECTS' AND PLANNERS' ROLES
IN THE PHYSICAL DEVELOPMENT PROCESS, IN DEVELOPING COUNTRIES,
WITH EMPHASIS ON HOUSING.

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ABSTRACT

Comprehensive Development is synonymous to survival in
Third World Countries, the South or less developed na-
tions.

It is the process and means through which changes in:
the socio-cultural, political, economic and physical
structures of societies, can be achieved; i.e. to force
what is desirable to replace the existing, without sa-
crificing local identity and values or clashing with
nature.

The physical aspects of comprehensive development are
of crucial importance to the success or otherwise of
development strategies. It presents the setting for the
nonphysical aspects of development and includes: urban-
ization, community facilities provision, housing and
the man-made (built) environment. Hence is the impor-
tance of the role of the designers (architects, urban
designers and physical planners) being the master
manipulators of mans' habitat and physical environment,
in the development process.

This paper closely looks into the role of the architects
and planners in the development process and re-examines
the complex interrelation between them and the society.
Together with an introduction and conclusions, it com-
prises three consecutive notes; namely: On Comprehen-
sive Development, the Physical Aspects of Development &
Rephrasing the Designer's Role, with reference to
Housing.
1- Introduction

The designers' role in the development process in developing countries, is a heavily loaded issue, multi-faceted and controversial. It's complexity suggests an obvious course for its investigation, centered on definitions of the various aspects and highlighting conflicts and interrelations, e.g. who are the designers in question?, What development is?, Which developing nations? and so on. The simplicity of such an approach is only skin deep as each of the components is critical and rather difficult to define.

It is convenient however with the limitations of the present context to loosely follow this course, to pinpoint the nature of the main components, to highlight inherent complexities and to allow the central theme to emerge, discussed and developed (but not completed as this is likely to be among the major concerns of academics and professionals involved in development, housing and shelter provision for 3rd world countries, in the following decades) namely: the role of the architects and their relation to community in 3rd world countries.

Third world countries are invariably adopting comprehensive development both as means and an end to achieve various goals; basic and complex. Closely related to the attainment of those goals are physical plans, policies and actions to achieve specific aspects of development, e.g. settlement developments, housing & community facilities provision etc.

The master manipulator of the physical aspects of development are architects, architect-planners, physical planners etc.

The failure of developing nations to achieve development goals and to secure the basic needs, including housing and shelter provision, emphasized the need for evaluation of the roles of the professionals; architects (et al) and their relation to the community and the frame work affecting both.

2- On Comprehensive Development, In Developing Countries.

Comprehensive development is a controversial issue; a major concern and a serious challenge to developing countries. It is both a means and an end, a process and an ultimate objective. It is rather difficult to define, inspite of the proliferation of related literature; a fact supported and accentuated by the poor record of development experiments and unfulfilled ambitions of 3rd World Countries during the past three decades.

Comprehensive Development may be loosely defined as: "the balanced development of the various aspects of life of a community namely: social, economic, political, cultural and physical-a process that should lead into the regeneration of societal abilities and potentials and transforms the structures, the value systems and administrative and technical mechanisms", Abdallah (1).

Development as a concept and process combines qualitative and quantitative, physical and nonphysical, materialistic & intellectual dimensions - the continuous interactions of which characterizes the process and provides the context for change and transfor-
mation. Development cannot be borrowed, copied or eclectic; it's a unique, creative and private process, the success of which very much depends on the its congruence and appropriateness to the society, the locale and the context in hand, Abdallah (1), (2).

Development is categorically different from economic growth and related processes, which aims at the steady increase and maintenance of the rates of growth of gross national products or the per capita shares of it. Economic growth is an integrated part of comprehensive development, being the wilful societal process aiming at the creation of structural changes resulting in the establishment of autonomous basis for production and regeneration, which in turn improves the well being, satisfies basic needs, enhances participation, secures continuity and independence for the community, Kawari (6).

The comprehensive development process depends on the interactions of three closely related factors:

- Development Goals: definition, acceptance, appropriateness.
- Available Resources, physical and otherwise.
- Determinants, tools and actions affecting the use of resources and potentialities to attain development goals, Firjani (17)

It may be looked at as a three sided process of goals, potentialities and actions.

To reiterate development in essence is a comprehensive endeavour to reach a balanced & efficient societal framework, capable of self generation and maintenance of positive progress. It stems from a societal collective will supported by a political committed will to cause and attain change and to replace what is existing with what is required.

Development is characterized by an array of closely related features, including:

- It is a dynamic and directional process rather than a static condition.
- It is planned and rational drive comprising goals, objectives, programmes, policies and actions.
- A societal process, stemming from the society at large.
- It aims at changes in society's structures and related systems.
- It aims at the establishment of a production base, self generating and independent.
- It should be continuous, maintaining a progressive rate reflecting the cumulative potentials and society's improving performance rates.
- It should enhance socio-political framework to secure transformation will and to guarantee continuation, Kawari (6), Abdallah (1), (2), Firjani (17).

A cornerstone of the development process is the mobilization and release of collective will which is a key factor in benefiting from human resources, the important—most of communities potentialities.
The development of human resources is a two-fold action, one oriented to the quality of human resources and the second into the administrative and institutional mechanisms to manipulate and guide people (See for example Friedman (18) & the Ecologist (11)). It is generally accepted that the emergence of society’s will is a precondition for development process initiation, a state manifested by a number of conditions topmost among which is the acceptance and belief in public participation.

The failure of development ambitions of developing nations during the past three decades may thus be attributed to two basic facts, Kawari (6).

- The lack of understanding of the wholistic nature of the process and the emphasis put on the economic growth dimension and
- the absence of societal will and effective participation. (See also Seers (23) & Donaldson (10)).

It should be emphasized that development is not synonymous to Westernization or growth. It is an inward oriented, private process reflecting the potentialities and features of the development context. It’s success depends on self reliance and optimum use of own resources, especially human. It needs not be closed to the outside world, eg. regional linkages and integration between developing countries is likely to enhance the self help development drive.

3- The Physical Aspects Of Development

There is an unmistakable similarity between development and planning; they share concepts, features and general characteristics though they differ in scale.

Planning is arguably the optimum use and manipulation of resources in a given locale to achieve a certain end within a defined period. Furthermore it may be regarded as a rationale to define potentialities, limitations and determinants on one hand and means of synthesizing them to attain goals and objectives on the other.

The planning process comprises most of the characteristics of the development process namely: the complexity, logical structure, directionality, temporal nature and concern with the future, continuity and openendedness... etc.

Planning is a tool or means to achieve development goals, objectives or policies. It may be directed to and applied on an aspect, sector or a geographical level (ranging from the local to the national and beyond). There is a close link in conception and contents between sectorial development and the plans to attain it.

A planning process is a chain of integrated actions in a sequence of stages comprising goals definition, programmes and resources, determinants, potentialities and limitations definitions, generation of scenarios and strategies, evaluation and evolution. Implementation and feedback, Ettooney (15).

The physical aspects of comprehensive development are the concern of physical planning. Physical planning is regarded as a distorted conception of comprehensive planning suggesting the bias
and misconception of the architects when entrusted with new realms of man made environments and habitats; offered by planning. The term development planning was forced to replace it, to reflect the restored balance between the physical and nonphysical aspects of the process. Physical planning is arguably clearer and correctly refers to and deals with a defined locale; an environment dominated by man made objects, systems and activities. A process aiming at the upgrading and development of such environment or setting to enhance and support human activities & behaviour and to attain certain goals. See also Ettouney (12), (13).

Physical planning as such is an integral part of the comprehensive development process; its achievements are vital and easier to discern, eg. environmental quality, housing and community facilities provision, accessibility etc. It is the process that deals with the physical aspects of development and aims at the provision of setting for development actions and human activities the elements of which are spaces, structures, networks, infrastructures etc. It overlaps with other planning processes including: structural and general planning. They all deal with man made contexts and aim at the optimization of physical settings, though they differ in emphasis and scale in spite of their structural and sequential nature.

General planning is more oriented towards the details, it attempts to translate the policies and directives of development and structural plans into more defined actions and quantitative components covering land uses, networks and related components: housing, community facilities, industry,...(13), (14).

At this level the role of architects, urban designers and physical planners and their interactive relation with the community emerges and their influence on the development drive emanates.

4- Rephrasing The Designer's Role

4.1 An Introductory Note

Architecture, settlements and man made environments are (arguably) expressions and manifestations of communities cultures and values and more appropriately a live registration of societal endeavours to develop, satisfy basic and complex needs and to achieve their goals and aspirations.

The architects and physical planners are trained to provide optimum forms to answer given requirements and fit their contexts (physical & otherwise). In the wake of industrial and technological revolutions, architects extended their influence to encompass site planning and landscaping, urban design and townscape, physical planning & environmental design etc. The basic role continued to be the same, albeit with added difficulties and challenges of scale, complexity and magnitude, namely: to provide forms and settings. In development contexts however, the architect-planner is faced with a major problem, i.e. the relation with the users and the community (who are rarely his clients).

Traditionally the designer was the master builder with no barriers between him and the act of building nor the community. The relation changed with the emergence of architects who worked
for (and were attached to) patrons, hence divorced from building and the community.

Their roles diminished to the expression of the whims and views of the patron. A further decline was the abandonment of structural and technical aspects to the engineers with architecture becoming "the additions to a building of unnecessary features (Ruskin) and " the art of ornamental and ornamented construction (Fergusson)". Samy (22). The situation was partly improved with the emergence of modern movements, puritanical values and functional doctrine and the related design criteria; functional, economic and aesthetic. But the real problems architects and planners had to face, emerged in the wake of the industrial and technical revolutions in the west (most evident in the inter world-war years and beyond) namely: rapid urbanization, housing demand and the array of related problems of work, movement, accessibility, amenities and community facilities.

The situation in poor nations, is far worse with the added complications of population explosion, scarce resources and decadent socio-economic and political structures. The architects and planners of the poor nations were to face and alleviate the dehumanizing conditions of the urban poor. They were entrusted with manipulation of resources to solve the problems of housing and environments. (See also Correa (8)).

The scale and nature of the problem on one hand and the relation between the designer and the community on the other, proved not only a challenge to the professionals but also a real threat to their status and continuity.

4.2 Restoring Traditional Relations

Among the views forwarded to address and answer the problem of the professionals (architects & planners) role in the development process is that, emphasizing the relations between the parties involved in the form generation and implementation process: the client, users, architect, builder and others.

Hassan Fathy (16), points out referring to his internationally acclaimed experiment of housing the poor in "Gourna" Egypt, "In Gourna we were our own designers, supervisors and contractors... the masons were as conservant with all the processes of architecture as the architect himself... this is one of the great advantages of using traditional building methods and bringing the craftsman back into the team..., the unit of design is the room which may be left to the master mason..."

This is one of the corner stones of Fathy's conceptions to solving the problem of shelter provision to the poor, and though it is generally referred to as "let the people build" it practically amounts to "the re-establishment of the trinity: owner architect and craftsman relationship, Fathy (16). A sad fact is that, Fathy's architecture for the poor was not embraced by them. The "trio" worked more successfully in his designs for the rich, (See also Afshar (3)).

This conception agrees with Allsop's (5) view that "Architects can't produce architecture all on their own... and the main burden of blame for inhumane architecture rest upon clients who
failed to educate themselves for the great responsibility they undertake". Allsop stresses the importance of restoring the productive safeguards of the old Patron - Architect relationship.

The real value of this view, if loosely interpreted, is perhaps that, in such a relation, the architect is subservient to the patron. The new patron should really be the community, the lay persons and users.

The main reservation on this line of thoughts is the fact that in housing the poor or community development processes, there are other parties besides the traditional trio, their absence is likely to seriously affect the theoretical balance suggested by Fathy or Allsop.

The parties beyond the trio includes: the client (who is usually not the user), contractors, the society (external users), planning control agencies and political institutions.

4.3 Redefinition of Roles

Contrary to the romanticism of the calls for restoring trios and patronage, there is a strong stream of thoughts questioning the roles of architect (et al) and doubting the validity of their contributions to the development process and housing the poor.

Extreme views call for the elimination of the need for architects; on the ground of minimizing development costs and saving limited resources. Bender (7) points out the fact that, the vast majority of building projects do not require the services of an architect directly "The adoption of good custom and traditions of buildings can result from a small number of prototypes".

Charles Correa (8) reiterates the essence of this view indicating that "the only thing the poor can afford are simple single storey structures, they so skillfully and beautifully build for themselves using local or recycled materials..."

Furthermore there are growing doubts about professionalism and designers attitudes towards communities and participation, and specifically their ability to positively enrol in the development drive.

Banham (9.2) pointed out, in the early seventies, that the problem is inherent in the concept of professionalism, "a professional is trained to solve a particular problem in a particular way" he also stated that "we can't trust the professional because he has a vested interest in his own type of problem continuing to exist".

Another reservation on the roles of designers is that, unlike the politicians they are really answerable to none, they are shut from the real world, working according to their own perceptions of the needs and interpretations of the rules of the development contexts, See for example Page (9.3).

The essence of any meaningful change or redefinition of the architect's role is simply "to demystify the profession, destroying the former dependency relationship between the community and the architect", Goodman (10).
In redefining the relationship it should be remembered that "what is in short supply is the appropriate context & process and not the buildings themselves" See also Correa (8).

4.4 An Enabler not a Producer

The core of the suggested changes in the roles of the designers of the built environment is the firm belief in the collective will of Societies as the valuable-most resource in development drive and process. This is the corner stone of the current wave of development thoughts namely; independent inward oriented and self relied development, Abdallah (2). It should be remembered that, to many, the major contribution of Hassan Fathy to the Third World are not his beautiful buildings but rather his message about development, i.e. inspiration and the material means for 3rd world must primarily comes from its own resources - a fact ignored by generations of designers" Afshar (3), See also Larsson (21).

Effective community participation is the true manifestation of collective societal will. It, in real sense, is giving the community access to the tools, resources and power.

"Real participation is "do it yourself" when resources are in the hands of the people and they invent the rules of the game", Banham (9.2), See also Cross (9.1).

The shift towards new rules of the game, and hence new roles for both the designer and the community marks the third stage in physical development and housing provision. The earlier two stages saw the attempts of governments to play the role of the sole developer and supplier for low and moderate income housing; followed by the realization of the limitations and inadequacy of central provision and the emergence of sites and services and emphasis on participation. (See for example Alexander (4), Ettonney & Abdel Kader (12)).

The third wave is characterized by a shift from service programmes to other interventions to increase local access to resources, maximize users participation and rephrase designers roles (20).

The architecture and planning for enablement of the communities to play positive and effective role in shaping their habitat is still a conception in the making. Its realization simply means the end of professional practice in its traditional sense, as it is likely to affect every aspect of the process, e.g. the brief formulation, the communications media, the relation between the involved parties etc.

In contrast to normative planning process where the participation of the community only takes place in the public hearing at the Master Plan presentation stage, the community is likely to participate in most of the planning stages including brief and community identification, survey and analysis, policies and plans and implementation, Lambert (20.1).

The architect as an enabler, means: a professional participant in local development. His role is not to design structures and completed packages but to design processes, to formulate means of gaining access to and utilizing land, to stage and to
implement development according to users preference. The architect or the planner involvement spans the whole process from conception via realization and through extensions by users after development, Turner (20.2), Das (20.3).

5- Conclusions

For the architects and planners to continue to play a positive role in Comprehensive Development of developing nations and to effectively participate in shaping man’s habitat and physical environments, within contextual constraints – the nature and essence of comprehensive development has to be understood and respected. Topmost among these is its dependence on: the societal collective will, the optimum use of human resources and participation of the society at large in the development drive.

The inward looking nature of the process of development, self reliance and the creative use of local resources should be adhered to in the related levels & aspects of development planning and housing.

In such a context a change in the roles of planners and architects from sole producers of completed packages (building and plans) into enablers of people to design, plan and shape their living environments is conceivable.

The extents and repercussions of the role changes on the learning and educational processes on one hand and professional practice on the other has to be fully understood. This calls for investigation and experimentation on both fronts.

Architects and planners to be will have to be taught how to work with people, new communication media to be developed and criteria for design & curricula, should be carefully rethought.

As for the practice, the essence of change is simply to demystify the profession to allow people access to decision making to the tools and resources. In other words to transform the profession into a committed organization, truly presenting the society at large, answerable to and acceptable by, people.

References


   1- Nigel Cross Here Comes Every Man, p.11
   2- Reynar Banham Alternative Networks for the Alternative Culture, p.15
   3- John Page  Planning & Protest, p.113-119


   1- Irina Lambert  Methods for the Turning Point p.8-9.


PART 3  PAPER 13

INTERNATIONAL CONGRESS ON HOUSING  LOW INCOME FAMILY HOUSING -
LOW COST HOUSING FOR DEVELOPING COUNTRIES  NOTES ON EGYPT'S EXPERIENCE

ROORKEE, INDIA, NOVEMBER 1984  DR. SAYED ETTOUNEY
SYNOPSIS
This paper briefly reviews the Egyptian urban housing context, it highlights endeavours, promising conceptions and actions, seeking solutions to the problem of housing low income families. The paper falls into five (almost independent) passages and an appendix, each separately lights a facet of the complex image. Collectively, the sequence of glimpses into the problem, outlines its boundaries and contextually aware solutions & strategies to face it. The loosely knitted sequence comprises:
- On Housing & Development,
- The Problem/The setting,
- Housing as a political issue,
- Selected recent housing projects - A profile,
- Towards solutions - An Epilogue.

The appendix outlines a contextually aware approach to low income families housing in Egypt.

1. PRELIM: ON HOUSING AND DEVELOPMENT
Development is the collective will and endeavours to bring change, to replace what is existing with what is desired. In development the process is as important as the ends (Goals). The ultimate objective of development is man and the fulfillment of his birth rights: food, shelter and well being. Development is a shared agony (in most cases synonymous to survival) of developing nations.

HOUSING: The existing stock of shelter and the intensive efforts to maintain, replace and provide shelter is a key issue in development and development processes (plans). Housing is synonymous to development, a clear manifestation of its stages (or underdevelopment) and shares the nature, complexities and features of development. Housing is the conditions and actions, it comprises objectives, needs, stress, resources, strategies, evaluation, choice/decision making, implementation, feedback... etc, in an open ended sequence, (Wakely, 1975).

The housing process with its multi-faceted and complex nature, extends beyond the realms of local contexts - hence the need and importance of sharing experience, synthesizing findings and views and consolidating efforts of the family of man (especially those who are hardest hit; third world nations) in facing the challenge of housing the poor.

2. HOUSING LOW INCOME FAMILIES - EGYPT. THE PROBLEM: THE SETTING.
Egypt, a million squared kilometres of arid desert and barren land, if it has not been for the Nile: the life axis and the fulcrum of activities for the old country. Egypt's population is predominantly concentrated in the Nile valley and its Delta in an area of approximately 40,000 sq.km (a mere 4% of the country's total). The result is an overcrowded area where rural and urban settlements mix and clash with limited (invaluable) agricultural land (population density reaches 1250 person/km² - among the highest in the world). (Waterbury, 1978), (M.O.H., 1982) (Benhaba, 1981). Egypt is also, highly urbanized with nearly half its population (44 millions 1984) living in urban areas. Rapid urbanization is coupled with two other, typical development huddles, namely:
- High rates of population growth - around 2.8% per annum (gross) and 3.5% for urban areas,
- Regional imbalance and distorted urban structure (rank - size distribution), (eg. 40% of the urban population is concentrated in two prime cities: Cairo & Alexandria). (G.O.P.P., 1979).

Population explosion, rapid urbanization, regional imbalance, limited resources, burdens of war together with questionable housing policies and legislations collectively resulted in an acute housing problem characterized by two main features:

1. An enormous housing deficit: The number of household units that should be built between 1981 and the year 2000 is 3.6 million units (M.O.H, 1980) distributed as follows:
   - Current housing deficit (till 1981) 931000 units
   - Replacements 589000
   - New units to meet fresh demand (1981 - 2000) 2,180,000

2. Affordability crisis: the enormous gap between the cost of housing supply and the ability of the majority of housing demand groups to pay (more than 70% of the households cannot afford to rent or buy a house unit) typical incomes and distribution of income groups are as indicated in Table 1, (Al Gayar 1983), (Abdel Rader 1983).

These two features are coupled with low standards of housing, proliferation of peripheral (informal) developments around urban centres, the gap between what is available and what is needed, soaring prices of development and labour and construction materials (10 fold increase in less than a decade), deteriorating relation between owners and users... etc., (Hanna, 1976), (Hillemann, 1963).
TABLE I

Yearly Income, Housing Groups, Egypt

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Income, Egyptian Pounds / Year *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>320 - 500</td>
</tr>
<tr>
<td>Middle</td>
<td>500 - 1300</td>
</tr>
<tr>
<td>High</td>
<td>1300 + 2400</td>
</tr>
</tbody>
</table>


J. INTERLUDE 1: HOUSING AS A POLITICAL ISSUE.

The immensity and magnitude of the housing problem forced it among topmost (key) issues to be addressed by the Egyptian government and a debating subject between the government and opposition (reaching climax during the last general elections (1984)). The government stands versus the opposition's proposals to remedy the housing problem, cast more light on the extents of the problem and means of solving it.

The government approach to the problem was outlined in an extended report, outlining the problem and presenting some general policies for implementing a proposed housing plan. The plan concentrates on extensive provision of house hold, units, to close the gap between demand and supply, (M.O.H., 1989). Tables II and III highlight the essence of the government plan - Table II presents the national housing plan (1981 - 1985) which aims at the completion of 675,000 housing units at an average cost/unit of 4098 L.E. and a total cost of 2.343 million L.E. Table III shows the details of the housing plan for the year 1981 (the 1st year of the plan). The plan indicates the core of the approach, the government as a producer and people as receivers in a basically quantitative process.

The burdens on the economy and limited resources is obvious together with exaggerated standards (area/person ranges from 9 - 24 sq.m) and costs, hence affordability is questionable.

The policies for implementing the plan are rather general in nature, stressing population control, redistribution of population, developing new self contained settlements in the desert, modularity and standardization of housing units, developing construction industry, maintenance and efficient use of housing stock, encouraging private sector and cooperatives ... etc.

The opposition parties on the other hand stressed the qualitative aspects of the problem, pointing out the following actions:

- Strict control of development land, and peripheral developments (to combat speculation/inefficient land use).
- Stopping luxury developments for 5 years (to save building materials & labour to support economic developments).
- The bulk of government investments in housing (90%) should be directed to low income families.
- Developing of fair criteria for distribution and allocation of land and housing units.

- Establishing a national/local housing register to ensure fair distribution and allocation of units.
- Expansion of training centres for construction workers.
- Cross subsidies and taxation to support a low income families housing fund.
- Critical evaluation of the cost effectiveness of new towns policy, (Talea, 1984).

TABLE II

Egypt's National Housing plan (1981 - 1985)

| Year | No of houses x 1000 | Average Unit Cost | Total Cost Million L.E.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>110</td>
<td>4130</td>
<td>530</td>
</tr>
<tr>
<td>1982</td>
<td>125</td>
<td>4269</td>
<td>602</td>
</tr>
<tr>
<td>1983</td>
<td>135</td>
<td>4387</td>
<td>650</td>
</tr>
<tr>
<td>1984</td>
<td>145</td>
<td>4468</td>
<td>690</td>
</tr>
<tr>
<td>1985</td>
<td>160</td>
<td>4538</td>
<td>770</td>
</tr>
</tbody>
</table>

TABLE III

Housing Plan 1981, Egypt

<table>
<thead>
<tr>
<th>Housing Types (socio/economic groups)</th>
<th>% No of Units</th>
<th>Average Area m²</th>
<th>Average Unit cost L.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>45 30500</td>
<td>45 - 50</td>
<td>2356</td>
</tr>
<tr>
<td>Middle</td>
<td>37 40700</td>
<td>70 - 80</td>
<td>4645</td>
</tr>
<tr>
<td>Upper Middle</td>
<td>8 8800</td>
<td>100 - 120</td>
<td>8000</td>
</tr>
<tr>
<td></td>
<td>110000</td>
<td></td>
<td>4130</td>
</tr>
</tbody>
</table>

4. INTERLUDE 2: SELECTED RECENT HOUSING PROJECTS.

Table IV provides a reasonably representative picture of current housing developments in Egypt. It reviews eleven major projects covering a variety of development contexts:

1. New Cities (1st stage developments)
   - 10th Ramadan
   - Suddat new city
   - 6th October
   - 15th May

2. New communities
   - Helwan new community
   - Cibamon (Suez)

3. Public housing
   - El Berkah (Cairo)
   - El Heer and Awa Atwa (ismailia)

4. Cooperative housing
5. Assuit: site and service
6. World Bank, upgrading (Cairo).

Target population of each project together with other key data for housing demand socio-economic groups (low = middle = high), are also presented (N.P.U.S, 1983).
<table>
<thead>
<tr>
<th>Project</th>
<th>Population</th>
<th>Average Dwelling Area m²</th>
<th>Average Dwelling Price L.E.</th>
<th>Minimum Income Current Policies L.E.</th>
<th>Minimum Income Full Cost Recovery L.E.</th>
<th>Percentage Total Number Of Units %</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 10th of Ramadan</td>
<td>150000</td>
<td>21.5</td>
<td>2500</td>
<td>375</td>
<td>2191</td>
<td>37</td>
<td>core housing</td>
</tr>
<tr>
<td>Low</td>
<td>98</td>
<td>6789</td>
<td>1875</td>
<td>4592</td>
<td>100</td>
<td>20</td>
<td>Flats</td>
</tr>
<tr>
<td>Middle</td>
<td>117.5</td>
<td>9997</td>
<td>1928</td>
<td>6543</td>
<td>100</td>
<td>43</td>
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<tr>
<td>2. Sadat City</td>
<td>49000</td>
<td>34.5</td>
<td>2984</td>
<td>685</td>
<td>1426</td>
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<td></td>
<td></td>
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<td>5. Helwan New Community</td>
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<td>High</td>
<td>--</td>
<td>729</td>
<td>504</td>
<td>516</td>
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<td>6. Public Housing</td>
<td>280000</td>
<td>45</td>
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<td>--</td>
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<td>504</td>
<td>516</td>
<td></td>
<td>100</td>
<td></td>
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<td>8. Famillia (Hekry/Atwa)</td>
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<td>--</td>
<td>3900</td>
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<td>core houses</td>
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<td>6048</td>
<td>1930</td>
<td>3114</td>
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<td>High</td>
<td>--</td>
<td>729</td>
<td>504</td>
<td>516</td>
<td></td>
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<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Sues (Cabanon)</td>
<td>40000</td>
<td>24</td>
<td>1726</td>
<td>840</td>
<td>1086</td>
<td>--</td>
<td>Serviced plots &amp; Core housing</td>
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<td>1620</td>
<td>878</td>
<td>1033</td>
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<td>100</td>
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<tr>
<td>10. Assist Site &amp; Service</td>
<td>14000</td>
<td>9</td>
<td>856</td>
<td>426</td>
<td>684</td>
<td>100</td>
<td>Serviced plots only</td>
</tr>
<tr>
<td>Low</td>
<td>--</td>
<td>856</td>
<td>426</td>
<td>684</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>11. World Bank Cairo Upgrading</td>
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<td>555</td>
<td>426</td>
<td>684</td>
<td>100</td>
<td>Upgrading &amp; Infill plots</td>
</tr>
</tbody>
</table>

TABLE IV

Selected Housing Projects - Egypt (M.U.P.S., 1983)
The key data includes:

1. Dwelling unit area range in square metres.
2. Selling price of dwelling unit in Egyptian pounds.
3. Minimum required annual income per household to amortize a housing loan at the terms defined by the housing suppliers of these projects (low income households would be able to spend 15% of their income on housing — middle income and upper middle would be able to spend 20% of their income).
4. The minimum annual income required for full cost recovery to afford a housing unit at current central bank rates (no government subsidy).
5. Share of each demand group from the total housing supply in each project.
6. Notes on the type of the housing units.

Further analysis of the given income figures (required under current policies and full cost recovery) and the formal income figures (see Table 1) indicated that "the majority of households cannot afford the housing provided if all costs of development and finance were charged to them — only 0.1% of urban house holds can afford most house options without paying more than 20% of their income" (N.U.P.S. 1983).

5. EPILOGUE: TOWARDS SOLUTIONS

Inspite of the gloomy snaps of the Egyptian housing context presented earlier, recent corrective measures and contextually aware plans leave more room for optimism, which may also be justified on the following grounds,

- The growing understanding among the parties involved (speciality politicians and decision makers) of the complexities and nature of the housing process.
- Realization of the importance of the non physical dimensions of the users, the communities, the informal sector etc... and the evolution of the balanced relations: The government facilities and people self-help.

A successful example of this contextually aware sensible approach is briefly presented in the appendix A.1. It highlights the approach to low income families housing in one of Egypt's New Cities: El Obour (1982).

To conclude, solving the housing problem in Egypt is feasible as long as suggested housing strategies:

- Seek solutions from within the context,
- Regard people as the greatest resource there is, and
- Understand the simple but overlooked fact, that housing is an expression of a total social order and the inherent dangers of partial seeing and partial planning.

APPENDIX A.1. EL OBOUR NEW CITY — EGYPT
LOW INCOME FAMILIES HOUSING.

El Obour is one of the third generation of Egyptian new towns, a self contained city providing jobs for most of its working force, target population 350000 persons, with industry as the major economic base. El Obour is located some 30 km to the N.E. of Cairo. Master planning was completed in 1982, (G.O.P.P., 1982). In El Obour study the approach to housing benefited from earlier cities experience, it recognized the drawbacks of public sector housing namely:

- Heavy subsidies
- Exaggerated standards
- Limited role of the user.

Furthermore the study pointed out the merits of the informal sector housing (which was the supplier of some 70 — 80% of the new housing stock in Egypt during the last decade), including:

- Flexibility and adaptability
- Minimum over head costs and bureaucratic delays
- Maximization of communities dynamics & skills
- Incremental construction according to need
- Mobilization of families funds & savings.

Within this framework the Obour study group organized a competition for selected consulting teams to study and prepare designs for low income housing areas in the city, with minimum government subsidy and stressing the following criteria:

- Importance of owners participation in the housing process.
- Economic viability, minimal cost of infrastructure & buildings, stage development and incremental growth of the house units.
- Importance of character, inspire of cost limitations.

The competition called for formulating proposals for the development of the initial growth stage: a residential area for low income families with yearly incomes of the order of 1050 — 2750 Egyptian pounds.

The enlightened approach, of the Master plan study group, to low income family housing was further elaborated by the competitors proposals. Figs 1, 2 & 3 highlight some of the organizational & economic aspects of one of the winner's proposals. (Abdel Kader, Eltouney, 1982).

The organizational aspects covers land subdivision, distribution and allocation, incremental provision of the infrastructure, production of designs and alternatives, financing, training and provision of labour, construction and implementation etc.

The economics of proposed housing took into consideration

- Families income (1050 — 2750 L.E./annum)
- Affordable rent/installments (presenting 20% of yearly income).
- Interest rates, current policies (3 — 5%)

The total capital cost of house units in terms of families income was then worked out (approximately 4 times). From an extensive list of various possibilities of designs, stages, plot areas, finishers; affordable plot area and house type (completed stage) were also worked out for each household income, (Figs. 2 & 3).

(See also Abdel Kader, 1984).
## ACTIONS / INSTITUTIONS MATRIX

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Demarcation</td>
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<tr>
<td>Publicity &amp; Marketing</td>
<td></td>
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<tr>
<td>Receptive &amp; Analysis of Real Demand</td>
<td></td>
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<tr>
<td>Land Subdivision</td>
<td></td>
</tr>
<tr>
<td>Provision of Infrastructure</td>
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<td>Land Release</td>
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<td>Erection of Demonstration Projects on Plots</td>
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<td>Provision of Architectural Designs</td>
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<td>Licences Releas</td>
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<td>Financing</td>
<td></td>
</tr>
<tr>
<td>Provision of Building Material</td>
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</tr>
<tr>
<td>Provision of Building Equipment</td>
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<td>Creating Skilled Labourers</td>
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<td>Construction of Buildings</td>
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<td>Finishing of Buildings</td>
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<tr>
<td>Monitoring Various Phases of Development</td>
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<td>Provision of Services &amp; Infrastructure</td>
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<tr>
<td>Supplying Flats to Owners</td>
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<tr>
<td>Supplying Flats to Renters</td>
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</tr>
<tr>
<td>Provision of Job Opportunities</td>
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**Fig. 1** Low Income Families Housing, El Ghour New City, Egypt: Organizational Aspects.

149
### Cost of Housing Type (Phases)

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<th>3</th>
<th>4</th>
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<td>2500</td>
<td>2160</td>
<td>1728</td>
<td>1620</td>
<td>1620</td>
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<tr>
<td>Land + unfinished ground floor</td>
<td>8298</td>
<td>7990</td>
<td>7098</td>
<td>6117</td>
<td>5162</td>
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<tr>
<td>Land + unfinished ground floor</td>
<td>10348</td>
<td>10090</td>
<td>9008</td>
<td>7827</td>
<td>6527</td>
<td>5927</td>
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<tr>
<td>Land G.F. + unfinished 3rd floor</td>
<td>4440</td>
<td>13400</td>
<td>12400</td>
<td>10880</td>
<td>8980</td>
<td>8980</td>
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<tr>
<td>Land finished + G.F.</td>
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<td>15300</td>
<td>14320</td>
<td>12558</td>
<td>10360</td>
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*Income category 1050 - 1350 (E.E.)*

### Annual Residence

- Duration of Loan = 30 years
- Annual Rec. = 1000 E.E.
- Capital Cost as a Multiple of Annual H/H Income

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<td>11600</td>
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<td>5800</td>
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<tr>
<td>4800</td>
<td>2000</td>
<td>6800</td>
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</tr>
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</table>

### Finishing Status

- Totally finished: 8000
- Unfinished: 5500

### Type of Flats

- A
- B
- C
- D

---

**Fig. 2** Income Category 1050 - 1350 L.E./Year - Affordability & Appropriate Housing Unit.
Fig. 1 Income Category 1350 - 1970 L.E./Year - Affordability & Appropriateness to Housing Unit.
REFERENCES:

- MINISTRY OF DEVELOPMENT (Egypt), (1981), Statement of Accomplishments and Summary of Work in Progress, Egypt, pp. 1 - 249.
- (1984), Egyptian political parties Manifestos, Al Taleea Cairo, Egypt, pp. 119 - 111, 131, 134, 145, 159.
PART 3  PAPER 14

IAHS - FIU WORLD CONGRESS ON HOUSING
NEW TRENDS IN HOUSING PROJECTS
EMPHASIZING DEVELOPING COUNTRIES
MIAMI, FLORIDA, DECEMBER, 1986

URBAN CONSERVATION OF OLDER
HOUSING AREAS - APPROPRIATING
THE PROCESS
DR. SAYED ETTOUNEY
ABSTRACT

Urban Conservation; the two streamed process aiming at the preservation of architectural and urban heritage on one hand and the inspiration, guidance and control of changes in the built environment of the historic and older districts on the other - provides an important tool in the physical development of existing cities.

This paper critically reviews the concept, context and features of urban conservation. It outlines problem areas and pinpoints limitations on the process application and implementation of conservation policies with special reference to older housing areas.

It briefly looks into the case of Cairo, Egypt and illustrates further limitations presented by the context of historic areas in 3rd World cities.


1. On Urban Conservation : An Introduction
1.1 A Reserved Definition

Urban Conservation is a conception and an approach to the development of existing urban areas. The essence of conservation is rooted in the belief in "continuity" and its importance to cultural identity and societal well-being on one hand and the
positive concern about the preservation of environmental resources, natural and man made, on the other.

Urban Conservation aims at the preservation of the architectural heritage and the visual (and townscape) character of urban areas; together with the protection of socio cultural identity of the community inhabiting it. Though preservation, protection and revitalization of the existing physical environment is the major concern of conservation. It also comprises the guidance, inspiration and control of change and additions to the built environment, Ettouny (5).

In other words urban conservation is preservation and development control combined; see also Worskett (10), Appleyard (3).

The nature, context, objectives and media of urban conservation necessitated and justified its close links to urban planning. Though many regard conservation and preservation as synonymous to "no planning", anti planning, or "reverse planning" (8), the overlapping of urban planning and urban conservation is inevitable; their integration is a must for the success of both.

1.2 The Context

The concern of urban conservation is existing urban settlements and environments where development and change is likely to (or will) clash with the old. It differs from other rationales and approaches dealing with existing and decaying fabric of urban areas (eg. renewal, upgrading and rehabilitation) in the context. Conservation is directed towards the areas characterized by concentration of old buildings of architectural and historic merits distinct visual character and local identity.

The context of urban conservation is the older parts of towns where excellence and quality dominate, (7) & (10).

Designation of conservation areas is a crucial aspect of conservation, and is likely to greatly affect the success or otherwise of conservation objectives & policies.

Conservation areas vary dramatically in size, it may comprise a limited number of buildings and their setting, an alley way, a district or extends to cover a whole town.

The setting of a building may propagates to hundreds of metres and similarly the setting of a conservation area is likely to extend far beyond its formal borders.

Conservation areas should always encompass buildings; connective tissue and settings. Their area and extents should however not be exaggerated. They should be regarded as active parts of the larger contexts and not frozen museum pieces, hence integrated into the city systems, (10).

Conservation areas predominantly coincide with the central cores of settlements characterized by mixed uses and variety of ingredients (i.e. development over a relatively long period); alternatively it may encompass a uniform use (e.g. residential areas) or simply a group of historic buildings, (3) & (10).

1.3 The Process

In spite of the complexities of the urban conservation process
the core of its interest is physical; i.e. the architectural and urban stock (of value); its protection and enhancement.

As a process it is characterized by its complexity (which is a result of the overlapping of sets of complex systems: economic, cultural, political, physical), its logical and rational structure (sequential and cumulative, evaluative and evolutionary, cyclic and continuous nature) and an inherent concern with time values (the present and the future).

Similar to physical planning urban conservation is a process that comprises a sequence of stages: objectives and goals definition, context definition (comprising in turn surveys and data compilation), analysis of setting and determinants, policy formulation, plans and actions, evaluation and implementation, monitoring and feedback, (4), (7) & (10).

Urban Conservation operates from within urban planning, as conservation areas are parts of large urban settings, this is likely to accentuate the inherent difference in essence between the two processes. Preservation which is the main concern of urban conservation is in a way "non plan" while urban planning is future oriented which creates a sensitive framework for urban conservation to operate within.

Furthermore the traditional emphasis in the planning process on economic criteria and cost effectiveness directly clashes with the loose material nature of urban conservation; see also Kuban (8).

The paradox of the urban conservation process is a result of its dialectic nature, as it is the synthesis and simultaneous interaction of two sub processes, one directed to preservation and the other to control of change (the latter is very much similar to physical planning).

2. On The Limitations Of The Process - With Special Reference To Older Housing Areas

The conception and practice of urban conservation as a comprehensive process, inspired of earlier associations and proceeding outcries is a new phenomenon in physical & development planning that dates back to the late 1960's. The conservation movement coincided with and immediately followed the opposition to the practice and outcome of planning and architecture in European cities in the Post 2nd World War period, and the resulting erosion of character & identity (Social and physical) together with the waste of resources and potentialities of existing fabric, Apple-yard (3).

The concept, format and principles of urban conservation were formulated in the West and benefited from two main streams of thoughts and experience: civic design, urban design and townscape analysis & criteria together with planning practice in renewal and upgrading of existing urban environments. Urban Conservation was further established through: the introduction of regulations & acts (together with related guidelines and development briefs), the collective national & International efforts to enhance the conservation drive and the pioneering comprehensive studies and projects on conservation, (3),(4) & (7).
By the midseventies urban conservation (process, practice and related principles) was well established and its influence extended to developing nations.

The major principles affecting its applications were summarized in the authoritative work of Worskett (10) and acclaimed conservation studies by C. Buchanan, see for example (4). Those principles have a direct effect on the practicality and feasibility of application, hence they may be regarded as limitations on the process effectiveness.

The three major aspects directly affecting the process are: Selection and Balance, Finance & Economic Effectiveness & the Role of the Public.

Selection and Balance are two closely related factors characterized by openended nature and a "relativity" dimension, (e.g. the extents of preservation, the limits of antiquity or how old is old?, the size of conservation areas). Selection should be based on cultural & economic criteria, which invariably clash. Similarly Balance refers to the clash between the two sides of conservation, i.e. preservation versus development and the related dialectics and interactions between the old and the new & restriction versus expansion, (10).

Economic Aspects is two folds one directed to the costs of implementation and the related issues of investment shares (public & private), the other is the principle and criteria of economic viability.

The Western approach to conservation stressed the importance of economic viability, or the potentiality of a historic or old building and its setting for adaptive reuse (i.e. location, accessibility, conditions, costs of repair, running and maintenance etc) or the "convenience, suitability and efficiency of use at reasonable cost" (10).

With the exception of national monuments and special cases, the costs of preservation of buildings & adaptive reuse should be generally undertaken by the private sector, institutions and individuals, supported by incentives from the government and local authority. The costs of environmental improvement, infrastructure and preservation of outstanding monuments present the share of the local and national governments.

Public Participation is another key factor in the success of conservation policies. The community and the general public should understand and support the case for conservation and hence be involved in the various stages of the process (goals formulation, context definition, alternative policies etc). This is likely to ensure passive and active public support including environmental protection and sharing the costs of implementation.

Another major inherent limitation on urban conservation is that it applies to an area within a living city with its pressures, values and standards which are likely to clash with the constraints of conservation policies. This makes the designation of conservation areas a critical limitation on the process as it defines an area with different rules, criteria & restrictions on development.
Conservation areas predominantly exist in central and inner city areas and it is convenient to classify them into two types: mixed core areas and housing areas.

Urban conservation of older housing areas accentuates many of the limitations of the process, some of which are already highlighted.

In housing areas, the subject of conservation is not only the monuments and master pieces but also the collective character (vernacular, local, connective tissues etc).

Related problems include: the size of the area, land and building uses, external environment & infra structure, lack of services & community facilities, the structural and general conditions of buildings, the external appearance, the internal design and suitability, internal installations and socio-economic structure & population profiles, ownership and tenure patterns, etc.

3. The Case Of Cairo - Urban Conservation
   In A Third World Metropolis

3.1 On The City & The Historic Core

Many Third World countries adopted the concept and practice of urban conservation and applied it in the historic parts of their older cities and though the contexts were categorically different from those in the West, the process, principles and techniques were very much the same - albeit with more limitations on its effectiveness and ease of implementation.

A brief look into the case of Cairo may help in illustrating some of the limitations and problems presented by the context in which urban conservation operates in 3rd World countries and enables guidelines for appropriating the process to be formulated.

Cairo, the one thousand years old capital of Egypt, faces most of the problems - typical of 3rd world primate cities, including: rapid and uncontrolled urbanization, population explosion inadequate infra structure, housing shortage, decadent social facilities & poor environmental quality (see for example Abu Lughod (1) & Antonio (2)).

Cairo also possesses an unparalleled wealth of architectural and civic heritage, monuments, urban fabric & connective tissue which is hardly matched in number, variety and quality. The monuments punctuate the older parts of Cairo and are concentrated in the historic centre of Cairo comprising; primarily the site of the mediaeval city and its surroundings together with the Eastern cemetery & Saladin Citadel together with the site of the first settlement built by the Arabs (in Egypt and the Region), Fustat (641 AD) and the area loosely joining it to the mediaeval city. Fig. 2, Antonio (2). The historic area of Cairo is one of the richest in art & architecture in the whole Islamic world and one of the best preserved, Meinecke (9.2), Antonio (2).

The mediaeval Cairo (Al Kahirah) was founded by the Fatimides in 969 AD, it reached its apex during the Mamluk period (1250-1517) and retained its architectural and urban qualities till the arrival of Napoleon in 1798.
FIG. 1
Cairo urban mass growth; 970 AD., 1850, 1968, 1982 (11).

FIG. 2
Historic core and potential conservation areas, Cairo, Egypt, (2).

FIG. 3
Fatimide Cairo, Al Jamalyiah section; listed buildings & connective tissue, (9.3).
The number of listed buildings is of the order of 560, they date back from the foundation of the city till the middle of the 19th century, giving Cairo the highest concentration of Mediaeval monuments in the Islamic World (6), (9).

The survival and preservation of the historic area of Cairo is the result of three factors:

1- The stagnation period between falling into the Ottoman Empire and the French conquest (1517-1798), during which the city hardly changed in terms of area and population.

2- The active growth of Cairo in the second half of the 19th Century and the Western style development under Khedive Ismail was directed to the west away from the historic core, and left it almost unaffected, Berg (9.1).

3- The impressive and comprehensive preservation endeavours of the Committee for the preservation of Arab monuments, Meinecke (9.2).

From the mid 19th century onwards, Cairo experienced an unprecedented urbanization explosion, manifested in the dramatic increase of its population from some 200000 at 1800 to ten millions in the early 1980's (a 50 folds increase) and in the parallel growth of its urban mass. The area of Cairo at the time of the French conquest, the turn of the 19th century (which accurately presents the area of the present day historic area of the city) amounted to nine sq.km. Between 1850 & 1950 the bulk of the present metropolis was developed to reach some 100 sq.km. During the past three decades the land mass of Cairo doubled to a total of more than 220 sq.km, with gross residential densities of the order of 30-250 thousands per sq.km. (among the world highest), (1), (2) (6).

There is no formally designated conservation areas in Cairo, though the Fatimide section of the historic area was recognized in an annex to the building regulations, aiming at the control of development in the area, (9.4).

The designation of conservation areas in Cairo should not prove problematic if the two fold criteria of: the concentration of historic monuments & connective tissue together with the authentic pre 1800 urban fabric & urban mass is applied. Fig 1 (2), loosely shows the extents of historic & potential conservation areas. These comprise:

1- The old city, including the Fatimide Cairo and its extensions together with the site and setting of Saladin Citadel. This area is predominantly residential and characterized by mixed uses, commercial, hand crafts industry, services and administrative landuses.

2- The Eastern cemetery which extends at the foot of the Mukattam hills to the east of the old city, it contains some of the most valuable islamic monuments, dated back to the Mamluk period. Though the area is still used as burial places, there lives some half a million of the over population spill and the migrants.

3- The two old ports of Cairo: Fustat & Bulak, the former is characterized by the overlapping and integration of old
Islamic and Coptic (Christian) monuments, the latter dates back to the 14th century and includes a number of Mamluk and Ottoman monuments many of which are not listed or studied (2) (6), (9).

Some of the transition areas linking and surroundings these areas may be regarded as settings for the historic areas and hence deserve special attention, which may also be justified by the numbers of monuments punctuating them.

Figure 3 shows a section of the Fatimide Cairo, the quarter "Al Jamaliyah", which contains two important paths the Northern part of the central fulcrum " Kasabah", "Al Muizz" and "Al Jamaliyah" they together with the surrounding area accommodate a wealth of monuments, fabric and visual components. The area comprises some 102 monuments - 33 of which are not listed; these represent 20% of the built area, (1150 x 400m). The area was the subject of a joint survey conducted by the UNESCO to define the surviving historic fabric & to indicate measures for future preservation, Berg & Meinecke (9.3).

Figure 4 shows another segment of the historic city, the southern wall of Cairo (the southern-most part of the Kasabah); namely the Bab zuwailah gate and urban space. Fig 5 shows the configuration of the space and, figures 6 & 7 illustrate the visual character of the area adjacent to the southern wall.

The set of maps and sketches briefly highlights the features and wealth of the context for preservation and conservation in Historic Cairo.

3.2 The Context Deficiencies

The historic core of Cairo suffers from a multitude of problems which threaten the survival of the architectural monuments and the connective tissue, and seriously impede the effective implementation of urban conservation.

The deficiencies are the result of national and local contexts' characteristics (with limited resources top most), the clashing relation between the historic area and the surrounding urban mass, together with typical problems of inner city areas. The problems may be classified into two sets, physical and non-physical (though such articulation is rather academic). The deficiencies of the Cairene context may be summarized as follows:

3.2.1 Physical Deficiencies
- Historic area - surroundings inter-relations.
- Poor environmental quality: (e.g. noise, rising water table, solid waste accumulation, surface and air pollution etc).
- Decadent infra structure (especially sewage disposal network).
- The intrusion of the motor car, lack of facilities and serious planning.
- The clashing buildings and land uses and adhoc mix.
- The poor conditions of buildings & lack of maintenance (connective tissue).
- The number of monuments and the escalating need for massive restoration, repair and structural remedies.
- The proliferation of informal and substandard developments.
FIG. 4
Fatimide Cairo, the southern gate & wall; Bab Zuwailah
urban space-listed buildings, tissue & key to sketches
and serial views Nos. 1-7, Figures 5, 6 & 7.

FIG. 5
Bab Zuwailah urban space, view down No. 1
FIG. 7
Bab Zuwailah urban space, Fatimide
Cairo, serial views Nos. 5, 6 & 7.
- The misuse and defacing of monuments and their settings.
- Lack of community facilities.
- The negative and damaging effect of building regulations.
- The size of the historic areas, its visual and functional complexity.
- Escalating pressures for development and change.

3.2.2 Non Physical Deficiencies

- Population related problems (over crowding, environment misuse etc).
- Distorted socio-economic structure (outflow of the middle and upper middle groups and inflow of low income groups, the relatively high ratio of rural migrants among new settlers, with no social ties or association with the context).
- The absence of community ties, sense of belonging and territorial pride.
- Lack of private investment in development.
- Deterioration of local economic base.
- Inflated land values.
- Central decision making and bureaucratic clash of responsible institutions.
- Lack of comprehensive planning policies with urban conservation, integrated.
- Lack of community participation and effective representation. (see also (1), (2), (6) & (11)).

4. Towards Effective Urban Conservation
In the Cities Of Developing Nations

The conception of urban conservation and preservation and the inherent attitudes towards natural and man made environments including: the careful handling of resources, the reserved and doubting outlook as regard industrial efficiency, the adoption of minimal standards, the rejection of fashion and change for its own sake, the respect paid to the locale and its products and the dependence on peoples' will, endeavours, participation and resources - make urban conservation the true expression of appropriate development planning for Developing nations.

Urban conservation should be adopted as a national development goal expressing the societal will to protect and safeguard local identity and heritage (architectural and otherwise). It should be an integral part of development planning and physical plans (regional & urban).

Though the essence of the process of urban conservation as developed in the west is suitable for application in the cities of developing nations, many of the underlying principles and particularly the dialectic interaction (if not the clash) between the old and the new characterizing its structure should be carefully addressed, expanded and monitored during the various phases of policy formulation and implementation.

The following issues are thought to be of crucial importance to the success of urban conservation process and its application in developing countries, they may also be regarded as guidelines for policy formulation. They are listed as a brief check list (because of the limitations of the present context).
The guidelines for process enhancement are classified into three sets: Physical, Social & Economic.

Guidelines For Appropriating The Urban Conservation Process

Physical Aspects

- Conservation areas should be carefully designated, care should be given to the connective tissue and circulation network linking it to the surrounding areas.
- The setting of conservation areas, the transition zone between it and the larger context is critical to its appearance and performance, it may thus require a special development control criteria.
- During the policy formulation stage, and/or if implementation faces problems of finance, control, or other causes that may impede effective action. Development should be frozen for a period, i.e. a non planning phase.
- Environmental quality and infrastructural problems in the area should be controlled from the outset as they adversely reflect on the visual quality, economic viability and building safety. Special care should be given to problems of solid waste collection, sewage & underground water.
- Substandard and poor quality (informal) buildings, alien to the spirit & character of the area should be cleared, their sites should not be developed till infill guidelines are formulated.
- Connective tissue and urban fabric should be registered and documented, development guidelines and briefs should respect its form and character.
- Industrial standards and building regulations are inadequate means of controlling development in conservation areas - detailed design briefs and guidelines for local identity areas together with general directives for the whole area should provide the bases for control.
- Circulation and accessibility should be based on car exclusion whenever possible, e.g. through the use of public transport, peripherial parking and limited access, pedestrianization etc.
- Systems of package maintenance and repair should be provided.

Social And Administrative Aspects

- Immediate social stress should be relieved through direct intervention of the local authority or control agency.
- Restore balance to socio-economic and cultural profiles of the inhabitants of the area: resettlement of rural migrants who recently moved to the area, encourage citizens working in & associated with the area to stay and move in(e.g. shop keepers, professionals & civil servants), encourage the settlement of the lacking socio economic groups.
- Encourage government and other institutions, activities in the areas (headquarters, housing, offices etc).
Organization and administration should be decentralized and trusted to an urban conservation agency or more, related to the areas in question.

Public participation should be incorporated into all levels of policy making, implementation, control and finance.

Economic & Financial Aspects

- Improve local economy of conservation areas, preserve jobs and encourage small business and enterprises.
- Improve local funds and allow community access and control over them.
- Encourage private investment in land, infill and adaptive reuse projects.
- Provide systems of (passive) incentives and rewards including taxation exemption, reduced rates etc.

Epilogue

Appropriating a process that deals with ongoing changes in environmental complexities - even if it aims at taming and controlling changes - is an open-ended and continuous action.

Defining the limitations of the process should pinpoint approaches to solutions while the formulation of guidelines is the first step in appropriating urban conservation process and practice in Developing nations.

Monitoring and feedback of experiments and policy implementation is of crucial importance to improve and restore balance to the underlying principles and guidelines.

Experimentation in urban conservation should be approached with care and sensitivity as the price of mistakes is rather dear; the permanent loss of invaluable architectural and urban heritage.

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PART 3  PAPER 15

INTERNATIONAL CONVENTION ON URBAN PLANNING, HOUSING AND DESIGN
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URBAN FORM GENERATION FOR NEW COMMUNITIES - AN ALTERNATIVE APPROACH
DR. SAYED ETTOUNEY
URBAN FORM GENERATION FOR NEW COMMUNITIES—
AN ALTERNATIVE APPROACH

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ABSTRACT

In new communities development, UrbanForm generation is that critical phase where: planning goals and objectives, development programmes and physical & non physical determinants mix, interact and clash, and where form alternatives are formulated, developed and finalized.

The present paper suggests a modified approach for plan formulation in urban form generation rationales namely: "to enhance the sequential and synthesizing nature of the generative process with emphasis on the evolution of alternative forms rather than on sieving, selection and elimination of options".

Thus the form generation process is transformed into a structural action: building up merits and avoiding drawbacks in a progressive drive towards the optimum form or plan-to-be.

The suggested approach was applied in a recent Egyptian development project— a new settlement to accommodate 35000 population and provides a new settlement for Damietta City, in the North East corner of the Nile Delta.

The paper comprises three sections and an Epilogue, namely:
1- On Urban Form Generation.
3- An Egyptian Experiment: A brief review of the form generation of Shattah New Settlement, Damietta Egypt.

1. ON URBAN FORM GENERATION - THREE INTRODUCTORY NOTES.

1.1 Urban Form

Urban form is the ultimate objective of the design phase, the creative most of the planning process. It marks the turning point (and hence the transition) between the conceptual and the implementatory phases of the process. Urban form is that heavily loaded, abstract-graphic statement that provides the spatial setting for development strategies and related activities.

It is the synthesis of planning goals & objectives, planning and development programmes and the planning context and its determinants.

In simple words, an urban form may be defined as: "the spatial..."
organization of landuses within a physical context, a site or a designated geographic location. Or the physical configuration providing the optimum fitness between: landuses, functions, activities and linkages on one hand and the site on the other, (See also Alexander (1)). To reiterate it is the optimum composition of form components.

To reiterate it is the optimum composition of form components that integrates with the locale to fulfil and achieve certain development objectives.

Urban form is basically the concentration of the "drama" of Urban Development into a single abstract statement that is able to expand in essence and details through time to provide for, satisfy and accommodate development activities.

1.2 Urban Form Components

From a "purely" physical perspective an Urban Form (in the planning process is a "Map". Its two dimensional, apparent nature is only skin deep, as the shapes and areas of landuses reflect and affect most of the related three dimensional, qualitative and quantitative aspects of the resulting built environment (e.g. densities, intensity of usage, urban land economics, environmental quality... etc). (See for example Lynch (3)).

The major physical components of Urban Form are: functions, linkages and visual form elements. Function includes: landuses, activities & behavioural settings, i.e. housing, services, community facilities, open spaces, industry etc., see also Lynch (3). Linkages, circulation networks and flow systems provide communication channels and connectors between landuses and activities - or the grains of city fabric. Further more it (together with adjoining infra structure) delinates urban tissues, and provides a key element in determining the efficiency of landuse on one level and the character of built areas on another.

Visual form elements and quality result from the interactions between the two key components (and their sub-components) on one hand and their integration (or lack of) with the site or the physical context on the other, (see also Pillorge (6)). Visual form qualities inspite of their qualitative nature, play a key role in the success or otherwise of urban forms as they affect form generation decisions as regard structure, unity, articulation, tissue formulation, growth qualities and complexity or simplicity of spatial organization.

1.3 Urban Form Generation

It is that "intuitive" or pseudo rational process aiming at the achievement of maximum fitness between an urban forms (to-be) and its physical context. The drive towards the formulation of a form is a directional, iterative sequence that emanates from the planning objectives and progressively passes through (and shuttles between), the programme and the contextual determinants (See also Roberts (9) & Ratcliffe (8)). Within the bounds of the pseudo-rational nature of the process, form generation is achieved (conventionally) through three overlapping techniques, namely:

1- Elements matrix and Synthesis.
2- Abstract versus Detailed patterns dialectics.
3- Actions and Design Criteria Sets.

The Element Matrix and Synthesis, comprises two distinct phases. The first phase is the articulation and manipulation of form elements and the formulation of a design matrix, or a vocabulary of alternative solutions. Each covers a possible interactive scenario for an element and combining: objectives, programme & determinants.

The second phase is to develop comprehensive solutions or "total" form alternatives based on combinations of the elements matrix.

The Abstract versus Possible (or contextually fit) patterns dialectics, technique is based on the exploitation and development of archetypal urban forms to suit the site, accommodate programme and satisfy planning objectives (see for example Lynch (3)).

Actions and design criteria sets, technique attempts to logically simulate planning rationales, by translating design objectives into alternative actions and design criteria (decisions). Urban forms are then developed as sets of patterns, criteria and actions.

The three form generation techniques, besides their intuitive nature, share structural similarity of the processes involved, i.e. a sequence of closely related steps comprising
- Formulation of Alternatives.
- Evaluation of Alternative urban forms.
- Selection and development of a proposed urban form.

The Evaluation and Selection are decisive factors in the success and efficiency of the process.

2. EVALUATION VERSUS EVOLUTION – AN ALTERNATIVE APPROACH.

It is generally accepted that the most critical aspect of the plan making (or generation) process is decision making and taking, i.e. the evaluation and selection of alternative strategies, plans and urban forms.

An urban form is the solution to a planning problem, hence is the relative importance of Evaluation of alternative solutions, contents, features and potentialities which is justifiably regarded as the cornerstone of the form generation process. Evaluation combines the rational and quantitative together with the subjective, qualitative and value oriented aspects.

The evaluation process stems from & closely relates to development goals and objectives as it practically transforms them into evaluation and weighting criteria; reflecting their relative importance. The scores and weights of the various criteria allow ranking and grading of alternative forms and solutions.

Weighting and ranking of qualitative and value oriented criteria and planning objectives is a major deficiency of evaluation rationales. The tendency to force false precision on the evaluation process through the use of numerical ranking of solutions or parts thereof, is likely to adversely affect the product and results in poor, inadequate proposals.

False precision is also a by product of the forced simplicity on,
and abstraction of, the complex planning problems characterized by the clashing requirements and nature of its components. (see for example Rapoport (7)). False precision, misleading evaluation criteria and the resulting unsuccessful selection of urban form and plans-to-be may be avoided through minor modifications of the generation-evaluation process. The modifications concentrate on the use of resources, attitudes towards and understanding of the nature of the process rather than on the ingredients.

The suggested modifications on the generation & evaluation process may be summarized as follows:
1- The use of rich vocabulary of archetypal urban forms, solutions and physical alternatives covering theoretical and practical approaches to the spatial organization problem, Lynch (3),(4).
2- Form alternatives should be formulated and developed to the highest possible standards. They should satisfy two simple and hard to achieve criteria, namely:
   - Maximum fitness with the context.
   - Suitability for implementation.
   (for further elaborations, see Lynch (5)).
3- Evaluation of alternatives should be executed as a synthesizing process, i.e. synthesis of merits and potentialities of the various alternatives rather than mere weighting & ranking, exclusion of the inferiors and selection of the topmost.

In short the evolution process should be developed into a dynamic drive, avoiding drawbacks and minimizing their effects on one hand and enhancing merits on the other. Furthermore collectively mixing and transforming alternatives into a final optimum configuration, i.e. integrating alternatives.
Within this integrating framework numerical weighting and quantitative evaluation are acceptable as a tool for selecting details and components that may be used in the developments of solutions and enhancing its efficiency in the drive towards the optimum. Thus the quantitative weighting provides an effective and flexible indicator in forms evolution.

3- AN EGYPTIAN EXPERIMENT –
A BRIEF REVIEW OF THE FORM GENERATION
OF SHATTAH NEW SETTLEMENT, DAMIETTA, EGYPT.

The proposed evolution oriented – evaluation of alternative urban forms, approach, directly affects the form generation process and transforms it. The approach was applied in an Egyptian new settlement project, Shattah New Settlement (SNS), located on the North east most corner of the Nile Delta – a satellite to be of Damietta, City, Fig.1, Ettouney (2). SNS site is 91 Hectares and is located some five km to the east of Damietta, the proposed target population for the settlement is 35000 by the year 2010. The SNS is a semi autonomous settlement with a mixed economic base comprising services and light integrated industry.

This section briefly highlights selected aspects of the form generation process for SNS. It may be regarded as graphical presentation of the discourse & proposals introduced earlier (Sections 1 & 2).
The SNS form generation phase comprised three closely linked
stages namely:
- Formulation of planning determinants.
- Urban forms development.
- Evaluation and synthesis.

The three stages are briefly presented in this section with emphasis on their structure and outline, rather than details.

3.1. SNS Planning Determinants

Four physical form determinants affected form generation and element organization of SNS namely:
1- The designated site, shape, boundaries and neighbouring uses, Fig. 2.
2- The regional road bisecting the site and forms a physical barrier, a functional & visual edge; which for political and administrative reasons could not be relocated at the early stages of the settlements development. Fig. 2.
3- The proposed functions and development programmes for SNS, i.e. to create a reasonably self contained settlement comprising housing, workshops and light integrated industry together with essential community facilities. Two types of residential areas were to be developed: conventional neighbourhoods and mixed (residential – workshops) neighbourhoods. The mix of work and residence is a traditional physical pattern in Damietta city, where typical urban plots comprise workshops, show rooms and dwelling units, Ettouney (2).
4- Conventional physical determinants, including the physical context, site, topography, soil, views & micro climatic aspects etc. Those were however of relatively minor influence on elements organizations. The SNS site is flat and homogenous throughout, with no accents or view points. The micro climate is thermally comfortable with a need for breeze penetration during the hot-humid season.

3.2 Urban Forms Development

The settlement comprised four major landuses namely: Industry, mixed neighbourhoods, residential neighbourhoods and service centres. Figures 3, 4, 5 & 6 illustrate nine urban form alternatives, developed from a larger number of possible forms.

They provided a rich vocabulary to answer development requirements, Figure 7 summarizes the basic concepts and classifications of alternatives. Four basic concepts are presented namely A, B, C, D. For each concept two or more variations were developed (where the location of the Regional Road is retained or changed) resulting in variations: A1, A2, B1, B2, B3, C1, C2, D1, & D2.

Concepts A, B & D share the linear service spine perpendicular to the Regional Road. In concept C the services are centrally located. The alternatives also share the principle of mixing, juxtaposing and segregating landuses.

3.3 Evaluation and Synthesis

The evaluation criteria was an elaborated transformation of the development objectives for SNS. The evaluation criteria comprised the following:
1- Urban and visual form related aspects.
2 - Efficiency of Landuse.
3 - Accessibility, (internal & external).
4 - Location and spatial relationships of the service centre.
5 - Infra-structure efficiency.
6 - Internal & external flexibility.
7 - Phasing of development - autonomous phasing.
8 - Environmental considerations.
9 - The regional road and the general urban form.
10 - Social development considerations.

Table 1 summarizes the evaluation of the form alternatives, indicates the relative importance of the weighting criteria and shows the performance of the alternative against each criterion.

Table 2 shows the relative weighting and the evaluation ranking scale matrix, used in Table 1.

Alternatives A & B were then developed and partly integrated with merits of other alternatives incorporated, resulting in the proposed urban form for SNS, Fig. B, Ettouney (2).

EPILOGUE

Generating urban forms, to meet development objectives and to fit the planning context, followed by evaluating the resulting forms to select the fittest for future development and implementation (arguably) mark the critical most phase of planning rationales. The relative importance of the phase is attributed to its ultimate objective, i.e. the urban form-to-be. Which in turn will provide the physical setting for development activities and functions, and effectively determine the success or otherwise of the process.

The critical nature of the generation-evaluation phase stems from the dual nature of its components and performed tasks within its bounds, i.e. the combination of the qualitative & intuitive and the qualitative, rational & methodical.

Form generation and evaluation should be transformed into an evolutionary process, based on the concepts of integration of alternatives and synthesis of their potentialities and merits.

Furthermore the evolutionary process depends on:
1 - The skilful formulation of rich vocabulary of form alternatives,
2 - The quality and standards of formulated alternatives, i.e. they should be thoroughly competitive, contextually fit and suitable for implementation.
3 - The exploitation of the iterative nature of the planning process, i.e. review of and feedback of earlier phases (e.g. goals and objectives and planning criteria) to add flexibility and enhance integration possibilities.

The transformation of urban form generation process is likely to secure better results, in terms of optimum fitness and objectives fulfilment. The dialectic clash between the qualitative and quantitative aspects (inherent in all creative processes) of the evolution process will however remain a serious challenge to physical planners.
Fig. 1. SNS Location, Damietta Governorate

Fig. 2. SNS Site
Fig. 3. Alternative A: variations A1 & A2
Fig. 4. Alternative B: variations B1, B2 & B3
Fig. 5. Alternative C: variations C1 & C2
Fig. 6. Alternative D: variations D1 & D2
Fig. 7. Alternatives and Variations.
Fig. 8. Proposed Master Plan, SNS, Damietta, Egypt
### TABLE 1. Evaluation Of Urban Form Alternatives

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<th>EVALUATION CRITERIA</th>
<th>RELATIVE WEIGHTING</th>
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<th>ALTERNATIVE B</th>
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### TABLE 2. Evaluation - Weighting Matrix

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PART 3  PAPER 16

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