

# Urban Context: Between Theory and Application

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**Abstract:** *Since architecture is partly an art involved with feelings, as well as social and cultural discipline, also architecture can give us insight into the nature of one's culture because it is so bound up with the culture as a whole, then it seems inevitable that both the architect and his client are moved by ideals external to architecture for those ideals of one sort or another continually appear and change.*

*Socio Cultural contexts had been suffering from a long time ago lacking some issues ,results from the absence of theoretical paradigms in all aspects of culture and civilization, such as safety, territoriality, privacy, and identity. Any design process is supposed to be depending on these aspects and issues in the socio cultural contexts.*

*The paper will spot light on these different aspects, on the conceptual and practical levels, with reference to the local Cairene contexts.*

**Keywords:** *Urban Context - Pattern Language - Defensible Space*

## 1. Introduction

Achieving a compatible context involves several aspects of fittingness: environmental, physical, cultural, perceptual and conceptual compatibility. One of the main problems of the contemporary Arabic Architecture is the absence of theoretical paradigms and methodologies, specifically in aspects related to culture and society, thus inconvenient architecture is gained lacking socio cultural aspects. Most probably when the organised paradigms combine together with the local culture, then architecture united as a convenient product. Yet practicing those paradigms and methodologies is a must to solve this problem.

## 2. Research problem

Architecture always influences the perception, memory, and clarity of the images that people form about their environments. Within the context, environmental mystery can be better understood by the perception of contextual fit. Moreover one can see contemporary local contexts lacking the social identity, the fittingness and the cultural spirit of the place in different setting types; residential, commercial, and public settings.

It is worth to say that although the norm is to investigate all types of compatibility; the environmental, physical, cultural, conceptual, and perceptual compatibility, but the paper will concentrate on the socio cultural compatibility in the urban context. Yet the research main problem states that although Architects and Urban Designers are aware of theories of context, there is a lack of different tangible frameworks for applying these theories in different Cairene settings

## 3. Theory of context

It is a theory of how environmental design and planning of new development should relate to its context. When decisions have been taken they are implemented by means of land Use plans, Zoning plans and Environmental Assessments. A number of context theories set out principles for relationships new designs and the existing environment [1].

Most, if not all of architects put the concept of contextual architecture in consideration, they observe the surroundings in which their buildings will eventually exist, before making their preliminary drawings. Thus categories of contextual Architecture are always done by theorists and critics.

#### 4. Anthology of ‘Theories of context’ at the international and regional fabrics

Theories of context had many interpretations: so that contextual design can be done by several methods of application, such as (by Architect/Designer: in which the architect considered as enabler to the community, and it is almost individual decision making [5,6], for example; Christopher Alexander, Hassan Fathy, RasemBadran, Abd el Halim Ibrahim,...etc., by Design Method/Approach: in which it is set of instructions for reaching correct or valid conclusions, such as Pattern Language theory and Defensible Space Theory,by Design Topic/Interest: such as the Sustainability...etc.).Also context can be developed by several methods, by Development Scale: in which it can be Urban scale, Architectural scale, Interior scale...etc. by Setting Type: one of the setting types can be chosen to upgrade the context, as residential, public, commercial...etc., by Context: choosing one of the context types and work on improving it: Rural, Vernacular, Egyptian, Regionalism, Provincialism ...etc. by User/Cultural Group: in which the whole context will be substituted to a place for families only or women only...etc. and this method could be done by participatory approaches, as users participate in decision making, by Cultural Issue: such as issues of Privacy or Status or Safety or Territoriality...etc.

The following are excerpts from theories of Context which derived from the upper interpretations, some related to the concept of Architect/Designer and some to Design Method/Approach...etc.

##### 4.1. Oscar Newman: Defensible Space Theory

It is a theory reaches its limit when attempts are made to use it to construe how the wider public domain of cities might be designed for control; Oscar Newman defined the defensible space as “A surrogate term for the range of mechanisms—real and symbolic barriers, strongly defined areas of influence, and improved opportunities for surveillance—that combine to bring an environment under the control of its residents” [2]

It is how physical aspects of a setting may affect resident-based control of the environment and ultimately lead to lower crime rate, yet defensible spaces are clearly bounded, or semi-private, spaces that appear to belong to someone; that is a visitor is likely to recognize them as someone's territory. They are spaces which lead residents to feel ownership over them, and social coherence between neighbours [3].

Gated Communities; as Defensible Space:

Fenced and gated neighbourhoods even if not guarded can reduce crime, not due to barriers only, but to the need for neighbours to work together to implement a plan. For that the defensible space can cause the formation of local ties among residents, and people usually feel safer, which causes them to use the space more, and to come into increased contact with neighbours.

Moreover defensible space could lessen crime, since it may strengthen people’s territorial functioning. For example because areas characterized by defensible space are well bounded and more defensible. As shown in figure (1).



Fig. 1: El Karma Residence: layout illustrates territorial definition reinforced with surveillance opportunities, defensible space (the researcher, 2012)

##### 4.2. Christopher Alexander: A Pattern Language Theory

It is a theory based on the work of Christopher Alexander and his colleagues in University of California Berkeley, so that they grasp the collection of 253 patterns as a whole, as a language, within which they can

create an infinite variety of combinations. It is a Design by yourself approach, derived from an architect or designer theme. It is a design relies on certain "languages", which allow the articulation & communication of infinite variety of designs within a system and instructions, while the Patterns, the units of this language, are answers to design problems.

Moreover what enables us to take Christopher Alexander's theory as an applicable example for what Fish said, is what Paul added, that anything approaching instructions for correct decision-making tends toward method, and is already framed within a theoretical view of architecture, moreover it is a way of leading an already persuaded architect or designer (that is, not just anyone and certainly not a layperson as he said) to a resolved outcome [2].

Christopher Alexander illustrates the patterns of this pattern language as:

- A problem statement
- A discussion of the problem with illustration
- A solution

The format of presenting the patterns of this pattern language as stated in his book[4] is as follows:

- A picture, describing the archetypical example of the pattern
- An introductory paragraph, sets the context for the pattern by explaining how it helps to complete certain other patterns
- Three diamonds, (\*\*\*) to indicate the beginning of the problem
- The problem, in bold type headline
- Long section, describes the empirical background of the pattern, evidence for its validity, range of manifestations in buildings, etc.
- The solution, in bold type headline
- A diagram, the solution in diagram form
- Three diamonds, (\*\*\*) Pattern main body finished
- A paragraph, tying the pattern with smaller ones

Moreover Chris Alexander admitted that Patterns are interconnected and not isolated, and Problems and solutions can be judged and modified, he and his team also recognized that each pattern may be looked as a hypothesis and each pattern is alive and evolving and can be improved.

Yet Paul Alan Johnson stated several observations about the pattern language, one of which when he argued that many patterns of which rely on behaviorally determinable settings, not the least being Christopher Alexander as he said, they are all couched in the phenomenological language of life-events, and the descriptive language that emanate from these concepts, it is the idea of being fixed to human activities and hence this is the conventional wisdom of designing [2].

Moreover Chris Alexander had categorized the pattern in 3 different types as a result after solving the problem. First one, he gave it the form of \*\*, he meant by this, success in stating a true invariant, and he then summarizes a property common to all possible ways of solving the stated problem, also he means it's not possible to solve the problem properly without use of the pattern in shaping the environment in one way or the other, second probability or result is when he put one diamond only as \*, he meant by this; he had made some progress in stating a true invariant, and solution can be improved, and he calls others to be encouraged to seek out variants of the solution, as if he and his team meant that other ranges of the solution are not covered in the written explanations. While the last probability or result, he expressed it by putting no diamonds, and he meant that he hadn't succeeded in defining a true invariant, and there are certainly other ways of solving the problem other than one presented, and he insisted then that the true invariant, the true property behind all possible solutions to this problem remain unfound [4].

General Tips he and his Team had been devised, along through the different applications in their book, such as recognizing that each society should have its own unique & distinct pattern language, each individual should have his own unique & distinct pattern language partly shared by others, however people should be encouraged

to make their own pattern language, and he hoped the society to be more effective in design, where people should become conscious of their pattern language and work on improving it.

As an application to one of the pattern languages of Christopher Alexander, I chose the pattern number (25), and tried to review it with Christopher's same instructions in our traditional society.

#### 25- ACCESS TO WATER \*

A look on Nile River, Giza, Egypt.



Fig. 2: Nile River and Embaba Bridge, a picture captured from Nile City Twin towers,  
(The researcher, 2008)

Water is always precious. Among the special natural places covered by SACRED SITES (24). We single out the Ocean beaches, the Sea beaches, Waterfalls, Lakes, Rivers, because they are irreplaceable. Their maintenance and proper use require a special pattern.

\* \* \*

“People have a fundamental yearning for great bodies of water. But the very movement of the people toward the water can also destroy the water.”(C. Alexander, 1977)

In his, pattern language, Alexander stated that roads and industries destroy the water's edge and make it so dirty and neglected, that it is virtually inaccessible; and when the water's edge is preserved, it falls into private hands such as the fishermen who construct their own settlements along the riverside or seaside. Figure (3)



Fig. 3: Human Settlements along riverside and seaside, ([www.wikipedia.com](http://www.wikipedia.com),2009)

But still, the need that people have for water is vital and profound, Alexander argues that the problem could be solved, only if it is understood that people will build places near the water because it is entirely natural.

Moreover, He added that the land immediately along the water's edge must be preserved for common use and he argues that the roads which can destroy the water's edge must be kept back from it, and if there is a must for laying them, they are allowed only if they lie at right angles to it.

This slot exactly of the river which I have chosen lacks access to water due to several factors, such as:

- -The existence of many grass and bushes along the water's edge which prevent the view completely, the view is seen only from the high rise buildings opposite to the river.

- -The road along the water's edge is categorized as a high way, however it lacks pedestrian tunnels for crossing, so that the promenade next to the water's edge is deserted and isolated, allowing the water's edge to be fallen into private hands.
- -The road's width is small, regarding the promenade next to the water's edge which is small too, as shown in Figure (4)



Fig. 4: A picture shows the bushes, trees, the promenade's width, the road's width, the entrance and parking of the Nile city twin towers, (a picture captured from Nile City Twin towers, the researcher, 2008)

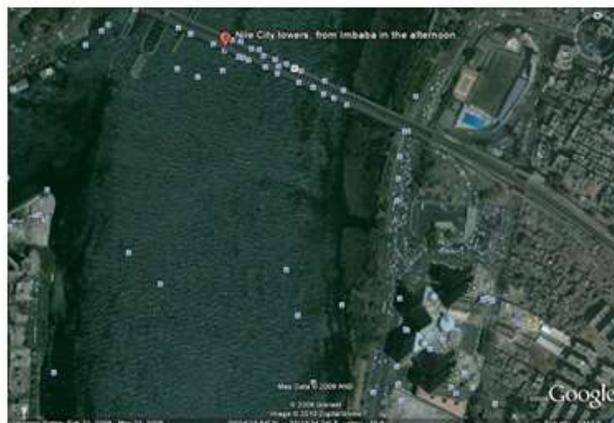


Fig. 5: The location including the road, water's edge, Embaba bridge, and Nile city towers as a dominant high rise building in this location.(www.google.earth.com, 2010)

Alexander recommended that when natural bodies of water occur near human settlements, treat them with great respect. Always preserve a belt of common land, immediately beside the water and allow dense settlements to come right down to the water only at infrequent intervals along the water's edge. Figure (6)

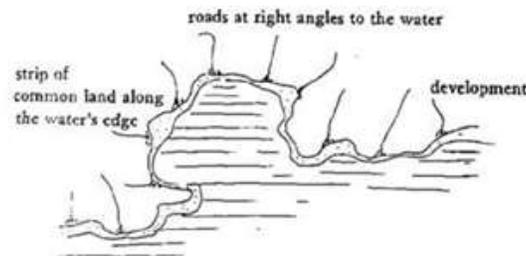


Fig. 6: Problem solving according to Alexander, (C. Alexander, 1977)

And he stated that the width of the common land will vary according to the activities and developments will be done in it, in one case it may be just a simple stone promenade – PROMENADE (31) if the developments include high densities or just common parkland – SMALL PARKING LOTS (103) incase of low density developments, Moreover for creating recreational promenades, create pockets of activity along the promenade

such as selling some sort of food or beverage- **ACTIVITY POCKETS** (124) and invest the tree places as much as possible to give a pleasant view and not to prevent the river view – **TREE PLACES** (171).

In any case, do not build roads along the water with in one mile of the water, instead, make all the approach roads at right angles to the edge and very far apart – **PARALLEL ROADS** (23). This is to provide car accidents while crossing the road, and provide damaging the water's edge.

## 5. Conclusions

- Christopher Alexander comes closest to having explored theory most assiduously, and his 'pattern language' approach has had and still has an enormous impact on architects and architectural education, despite his own claims to its non-satisfactoriness, most probably for that, it has been one of the few to theorize graphically as well as conceptually.
- Practicing theories of architecture and urban design helps in upgrading urban contexts on the social, cultural, perceptual, conceptual, environmental levels, not physical levels only as the norm says.
- Different Methodologies could be substituted from theories and theoretical frameworks, such methodologies could be valuable contributions to the different thinking processes for the contextual design.

## 6. Recommendations

The research is considered as a base for further studies related to several topics categorized under many aspects; social, cultural, physical and technical, which could be analysed and practised in future researches such as:

**SITES SAMPLE:** choosing other sites with different characteristics, will have other impacts on assessing contextual compatibility.

**SETTINGS:** selecting other settings owing other activities such as recreational or functional settings will lead to other results in the analytical and empirical work.

**SCALE OF APPLICATION:** urban design including landscape architecture could be another scale of application in future researches.

**TECHNIQUE OF ANALYSIS:** highlighting the role of computer base analysis in assessing contextual compatibility could be a future study.

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