Review Paper

Environmental Psychology in Architecture and Urban Design

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Abstract

The main effort of this article is to discuss the design theory development theory in architecture theory. Over years, many of sociologists and psychologists begun to study and research in design business, designers and architects' issues of interest. In addition, some people in fields of interior design, architecture, landscape design and urban design, have done structured research using behavioral sciences and this group grows larger day by day. Both groups believe that behavioral sciences can develop some models and concepts that lead to clear understanding of human-environment relation. The goal is to increase the skills of designers in interior, building sets and better environment and landscape design. Some psychologists believe that built environment has a little effect on human life. Some designers believe that behavioral sciences are just playing with words and makes simple works complex. Another group worried about complexities that can be solved by eye witness, decays by using the decremented philosophies. But if a good understanding of behavioral sciences in design theory development takes place, these considerations fade away. In conventional view point, believed that moral values of visitor can be separable of his/her vision and one can study the universe unaligned. The goal of making a clear foundation of environment design focal point is to determine a set of defined patterns such as: i. Decision making process in environmental design procedure. ii. Built environment and its usage and reaction of people. iii. Physical nature of built environment and its results in daily human living spaces.

Keywords: Environment, thought thrift, demonstrability theory, normative theory, design.

Introduction

Theory and design in modern movement declares that functional architecture was not as rational as architects acclaim. A reason for this acclaim is limited focus of modern architects in variety of human needs. To overcome this shortage and make a concise definition of functionalism, we used Abraham Maslow's human needs model. By accepting the human needs hierarchy defined by Maslow including from physiologic basic needs to higher needs like amour-propre, respect, dependency and need to aesthetics… a new path to functionalism proposed. This view point of wakeful design suggests the environment as a proper response to human needs and finds it the complement of scant rational thoughts in modern architecture. Typology of architecture theories, before setting a theory prior to another one, propose a summary of relations between theory fields and environmental sciences. This model in a peak and positive point is a typology and abstract type of relations between fields of environmental design body of knowledge and can help architecture students to understand the relationship between theory discussions and architectural design. A relationship that in its absence in theory and practical fields of study is one of weak points in most of architecture schools. As a result, this article with emphasis on behavioral sciences and exploring the relationship between human and environment, besides enhancing the body of knowledge in environmental design, gathers together some topics of environmental psychology and provides a basis for students and researchers to get familiar with this particular field of architectural[1].

Human <-> Environment (Causal Relationship or Coercive Architecture)

Uncertainty of human model that was the basis for most of architectural theories, leads to a misunderstanding of human environment Nature most of design theories are based on easy going model of determination –Response of environment and human behavior relationship in this model , natural are built environment is the motivation and behavior of human is the response for [2]. As a result, architects and most people often suppose that while these criteria are related, so there's a causal relationship between human and environment. This leads to wrong results about wrong effect of believing in architectural coercion. We discuss about both situations briefly. It's easy when variables had causal relationship. If there's causal relation between variables, change in one of the must lead to change another[3]. But related variable always are not causally related for instance, most of urban design topics, believe that there is negative and causal relation between population and quality of life[4]. But structured research won't accept it. Variable like loss of behavioral apace, some pollution and special population properties, are effective in understanding of Density itself is not

more than an inclinator of population in area unit. So low density in residential areas automatically enhances the quality of life. Both Dense and low density areas can be desirable. We can instantiate Southampton, Sutton place in New York, Chestnut fill and Society hill in philadelphier and Vaucluse a wharoonges in Sidney to shed a light on this topic. Of course the reverse cans be true. There are a lot of writings about problems of urban density, but they forget about problems of low density urban areas Analysis of architectural writing shows that most of architectural theories are based believing in built environment as a indicator of social behavior of humans[5].

Design based on knowledge or personal believe

There's a lot of deficiency in rational perspectives of design, public understanding of complexity life and capabilities of built environment to provide human need. Determination about functionality of special design can be derived Fra causal experience of environment more than structured and Orderly body of knowledge. Designers because of deficiency in structured access to information, behave like thin knowledge base and theoric fundamentals of any profession, needs a powerful basic structure. Currently the basis of theoric fundamentals of architecture is on viewpoints of other architects in good architectecture. Paying attention to this believes and ideolog of architects discussed less. Professional designers kept a lot of information about universe in their minds. Some scientists of architecture related fields, especially behavioral sciences, find the reason in lack of order in researches done before. The main reasons weak organizing models of knowledge in use by designers. Professional designer in other hand didn't provide theories for education or a model for architecture expertise. These shortages must be filled[6].

Proven Demonstrability Fundamentals

Designers, like everyone else consciously or unconsciously make privacy theories about environment and daily activities. Some of these patterns are fixed and constant; some of them have no special order and some other take shape randomly.

Orders of world can be seen and explained randomly or structured. Most of our knowledge of world is the results of random sights of Daily life, so is under the most influence of these sights. Scientific and oarascientisic research strategies decrease these random effects. It's obvious that Basics and truth of life is not always the result of scientific researches. Scientific theory is always « A probable image of reality ».

Making of theory. Is a guilty more than explanation of world and includes the analysis. Making of theory is a creative progress and conceptual structure to sort and analysis of sights[7].The goal is to use the capabilities of these structures to analyze the daily life and future events. Value of demonstrable theory is in its analytical capabilities and provision of it. Abraham Kaplan declares: "theory is a way of explaining a chaotic situation that allows us to recall effective rules, abstract them and depending on situation, replace new rules in place[8].

Economy of thought

Because of expansion in knowledge required by environmental design fields, teachers of these fields programmed longer courses for their students. Architecture education in America in fulltime method, takes years. Some architecture theorists like Horst Rittle :

"The universe of science believes that the moll we know about everything , the better students often fwd out this point better and usually act on this basis to pass their lessons with minimum knowledge so any kind of economy in education is good and desirable"

Bolding talks about how to gape this economy: If a single theory can be used in a wide variety of practical fields, we gawk some kind of economy in learning. This function of theory fundamentals is called "economy of thought."

Main purpose of proven theory is to enable people to extract a lot of discussion out of a descriptor theory. For example if someone knows the identity of life boundary marking by people, can create required design patterns for people. So theories can substitute thousands of descriptors about universe. Economy of thought is just one of many results of main purpose of proven theory and if we don't pay attention to it, many things remain meaningless[1].

Utilities of proven theory for environmental design

Any discussion about contents of theory fundamentals is a behavioral judgment. We can say that , there are issues in desirable environmental design for people and measure of success of designers in provision of human side of buildings and neighborhoods, draw their attention to more understanding, using and drawing people attention to environment. Topic of interest in theoric fundamentals is shown in following figure. So proven theoric fundamentals, enhances our understanding of natural and built environment in people life[9].

The theory is woven by understanding of design process and must interact with definition and analysis of rational continuity and internal credit. Knowledge of a field will grow there as a strong theoric fundamental. As mentioned before, proven theoric fundamentals, research and practice of architecture arena continuity. This continuity is perfect. This continuity determined by evaluation of premises, as the design of landscape or design of a building is a perms or a set of premises that evaluated in architectural theories framework. This evaluation can take place by using structured tests of building and briefing of designer, financial provider and users after building or after use. Through past decades, architects and behaviorolgsts in context of built environment and practical

procedure, shows current knowledge level of environmental designers. We need a definitive obvious framework to enlighten the results[10].

Demonstrability theory

If our knowledge have been weak about a group of people, to overcome this shortage we have to use personal experiences. Until these personal experiences are valid, there's no problem. Most of recent critics in architecture, urban design and landscape design. Say that there's a difference between mental image of designers about requirement and values of users. Paradigm in design fields, like other applied field includes Substantive and procedural theories . "Substantive theory deals with nature of phenomenon's that architects and other designer are working with Substantive theory deals with whole environment in kilometers to millimeters in scale and from cities to texture of facades. These scales are working area for environmental designers. As physicists and chemists are engaged with molecular pattern and space scientists are dealing with light years". So Substantive theory can divided to two main category natural environment theory and human environment relationship theory. Natural environment theory deals with physical, chemical and ecologic nature of human and other creature's surrounding environment. Its purpose to explain and discuss about nature of things, geometric properties, nature of structures and internal relationship of natural forces (like wind, rain) and built environment. Main item in understanding this phenomenon, are natural sciences like physics, chemistry and ecology. Interest of designers, right or wrong, can be detectable here. Landscape designer compared to architects, have wider understanding about some sides of nature. For example, these designers have to know more about natural plants[11].

Normative theory

Normative theory of design fields also includes contextual and procedure theories. Unlike paradigms, normative theory deals with nature of built environment and its design process. This theory deals with viewpoints of various designers or design cults to role of designer, desirable environment and design process, as mentioned before; there should be differentiation between proposed position of designers and their practical experience. Efforts done to create structured theorical fundamentals for design courses were not enough and just architecture master done something in this way. Although these efforts because of separation of published paradigms from normative theories faced obscurity, but are interesting though. With efforts and researches in structured manners in last three decades, publication of design theory became easy[1].

Methodology basics and the concept of environment

goal of creating a paradigm in environmental design, is to provide the knowledge to enable interior architects, landscape designers, architects and urban designers to better understand the nature of design process and current nature of built environment and how to analyses and use it. The ultimate goal is to review the body of knowledge in environment design. In addition, the knowledge shoal provides ability to deal with high complexity of design. Another reason incompleteness of little amount of information on practical way of design and effects of built environment on human life is another reason .scientific study on procedural and contextual theories are hard work and harsh path. This issue has many reasons. Some of them are about environmental design, including decision making process in an architecture office, by using scientific methods and Para scientific one are hard to organize[12]. Most of paper even can't draw attention of researches. Environmental designers often decide with uncertainty. Reason is designers always deal with future. The goal of procedural theory is to explain the understanding of decision making process in environmental design and design process. The discussion also declares the importance of possession a clear and structured text of contextual theory for design profession. The goal is to publish a contextual theory of reduction uncertainty in design decisions. A look at precedence of research shows that designers to relay on their personal image waitron avoid the structured research. As a result, their knowledge is fragmented and quotation[13].

Design

As mentioned before, analysis includes question and comparison four main processes has been recognized as basics of creativity: Providence- abstraction- enlightens- prove and deny Providence or readiness. Providence is the activities and understanding and abstraction is unknown thought process including understanding of situation and creating scenarios search solutions[14]. Enlighten is the view of designer to nature of problem and its possible solution. Prove and deny is the process of determining the absolute solution for design. Publication of whole progress needs a lot of effort[1].

Quality of final product of design process depends on .continual knowledge quality designer and his ability to use it creatively.

The key to creative thinking is the ability of imaging. In environmental design process, we get undesignable thing.

In environmental design process, there is a lot of obscurity. Design includes simulation of some motifs. Design is a process derive from meaning of being and self prove that in this process elements of a problem connects to some patterns and then changes shape and turns to a whole design. Because of convergence in thought, process of resulting can't be a simple combination of patterns[15].

Design stage

Designer, consciously or unconsciously. Decides about time to begin the project. Designer expected to begin design with the most important issues mind, but it's not always this way. Some designers begin the design process with the coziest elements of

problem. Some of them move from whole to details and some of them do it from detalls to whole. In most cases a progress will be chosen that shows the work progress. Some architects as known persons, design the space from inside to outside. (Le cur busier) while other architects known to design space from outside to inside (Meis van denaf). "Design, no matter how it works, has to accept a design or a set of designs. Some designers believe that in any given moment there must be a absolute solution. "Early denial of a design solution is one of issues .In selection phase[16]. A solution that is suitable for a part of problem maybe turns to be a good solution for whole. To solve his problem, some designer just considers main limits. Decision stages are reflected in designer's style. In practical work, there is a solution like ascension which a part of solution published and to ascend to next stage, best solution picked. Other stages based on this method. Worst mistake here for designer is to ascend wrong. One of most important factors that prevent to search a better solution is time limit[17]. Sometimes designer feels tired and knows that can't get a better result with more effort. In this situation, a travel outside of city and change of thought context will help, research on thought of creative designer is most known with works of Donald mc. Icinon and Frank Baron(1964).N environmental design, and there is an emphasis on architects. By icinon, creative architect is someone who is known as most creative in design. These people care about their independence. Creative people are a little self dependent and rude. Independent in judgment and careless about others. These people are weaker. John Alger and Carl Heyse propose design solution. One of these is analysis of historic Data[9].

Conclusion

In meantime, behavioral sciences make some side of creativity and ability to solve an issue obvious. Now properties of creative visions and processes are easy to understand. There are easy to understand method to publish the nature of design stage and methods of solution. Lack of enough research, is against development of text and proof of environmental design. Few researches about human behavior solution.Are related to environmental design. In design courses, most of results on design attributes are related to researches in other fields. Although there are contextual difference between fields, but design process seems to be the same with other scientific courses. Basic categorization of built environment shows a scope of its capabilities. In easiest case, hard surfaces of environment provide movement and transportation of human[18].

Some surface, are slipper than others. By combination of vertical, horizontal and slopes, built environment makes shelter of weather, hiding insecurity and gathering.

These are of main attributes of environment. In addition, configuration of surfaces can eliminate the need for playing devices and machines. These combinations express meanings like symbols. Special pattern capability of built environment

determined from its design, materials and attachment to a group of people in know meaning level (of understanding the depth) determination of environmental attributes, is a function of ecological capabilities of human. In symbolic meaning level, are functions of culture and social experience? If designers claim that they know the sensory nature of architecture theories, they lie to themselves. Understanding the essentials of human behavior, helps to understand the relationship by environment. This knowledge will show architects that how environment can provide different people with different needs. This knowledge helps us to surely provision and relay on our knowledge[1].

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