

# Designerly way of understanding the role of theory

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*Every “good” scientific theory is a prohibition: it forbids certain things to happen...*  
Karl R. Popper

## Abstract

The role of theory is generally assumed, from a certain way of understanding, as theory as an instrument or know-how that would lead practice to an appropriate and successful outcome. Consequently, the basic concern of a great number of instructors and numerous scholarly papers in many applied disciplines including architecture is “integrating”, “connecting”, “linking” or “bridging gap” between theory and practice. As a matter of fact, this seems as a “pseudo-problem” because the disparate circumstances of natural science and design are overlooked. While the essential mission of natural sciences is to reveal the “hidden pattern” in nature, the essence of architectural design is the bringing of a hidden pattern into being. Thus, it is necessary to establish a new sort of relationship between theory and practice which will lead to the successful outcome in architectural design processes, instead of dealing with a pseudo-problem. This article aims to conceptualize a new relationship between theory and practice in literature searches and the inferences acquired from them.

There is a generative tension during the design process between theory and practice in which neither of them accepts the dominance of the other. This new conceptualization proposal is the preservation of this generative tension, consequently the autonomies of both theory and practice rather than uncritically accepting the guiding role of theory.

## Keywords

Theory, Practice, Pseudo-Problem, Dilemma, Autonomy, Generative tension.

### 1. Common comprehension of the relationship between theory and practice

According to Aristoteles (1933), while theory aims at truth, practice aims at action. The relationship between theory and practice has been a very complex, problematic issue. Primary reason for this situation is related to the fact that theory embraces various and contradictory meanings such as procedure proposed or followed as the basis of action; the body of generalization and principles developed in association with practice; systematic analysis of elucidation, conception of formula; conjecture, speculation, supposition. Depending on which one of the meanings you take as a basis, the relationship between theory and practice differs and, therefore, it has become difficult for the parties to find a common ground and understand each other during any discussion about this issue - as usually happens in such cases. It is the evidence of this ambiguity is the lack of consensus about the very notion of theory in contemporary science. As Eger (1992) points out, while some people understood theory as something literal, some others understood it as something metaphorical. And some other people think that it has an instrumental function. Practice means actualization of something concrete. But at the same time, it indicates a certain kind of wisdom based on trials and errors in the past which can be related to the Greek notion of *phronesis* (Connolly, 2008). In this respect, there is not much discussion over the meaning of practice.

As the natural sciences are assumed to be the supreme and exemplary type of activity and due to theory's instrumental role in leading to successful achievements in this realm, theory also gains prominence in other fields. The solution of any "ordinary science" problem or explanation of an event is made under the guidance of theory. Theory is important and the history of science can even be written as the history of theory (Lenoir, 1988). Despite all attempts from past to present, there is not much progress for a sufficient solution of the relationship between the theory and practice "problem" in

architectural design as is the case in almost all applied disciplines. This has given rise to the thought that it is probably a pseudo problem in the context of architectural design. According to Popper (1959, p.59), theory is a process of abstraction and conceptualization whose function is to "rationalize, to explain and to master." Mohanty (1995, p.8) states, theory is frequently comprehended in a very strict sense: "There is a certain way of understanding the relation between theory and practice, which is that practice is the application or use of theory." It is evident that this apprehension assumes the relationship between theory and practice as uni-directional. As long as it is perceived this way, it seems that the relationship between theory and practice always continues to be problematic. Indeed, in many applied disciplines including architecture, the basic concern of numerous academic papers is "bridging", "integrating", "linking" or "connecting" the gap between theory and practice since it is widely acknowledged that theory is an instrument which should necessarily guide practice to a successful end. Yanchar, South, Williams, Allen and Wilson (2010, p.39) affirm this belief that "Scholarship in the field of instructional design and technology has traditionally emphasized theory. Theories are viewed as the principal mechanism for advancing research and understanding."

### 2. Problems of common comprehension in architectural design

It is seen that theory is frequently referred to as an authoritarian argument of truth. The current architectural education system generally assumes that accurate practice can only be achieved through the guidance of correct theory (Snodgrass, 2000). Schön (1983) declares that:

...in the second half of the twentieth century we find our universities, embedded not only in men's minds but in the institutions themselves, a dominant view of professional knowledge as the application of scientific theory to the instrumental problems of practice. (p.30)

One of the incentives which generally directs design education to such a conception is avoiding risks. But

at the same time, this is an attitude which alienates design education from its essential purposes; because every type of real learning process inevitably includes the unpredictable and requires experimentation and risk taking (Claxton, 1984). Especially a “learning by doing” process like architectural design requires taking risks and coping with the unpredictable more than other fields. Operating under the guidance of theory is a reductionist attitude although it ensures a comfortable design process by eliminating the “unpleasant” unpredictable. Consequently, it leads to a schematic result since such an attitude excludes the unpredictable which is a very important factor that cannot be codified verbally. Theory, Martin Hernández (2008) remarks, in the most commonly accepted sense, means a set of rules for comprehension and interpretation of multiple reality during activity and interpretation processes with relatively fewer instruments in which the theory plays a role in architectural design. As Brawne (2005, p.7) states, “Architectural thought is primarily non-verbal thought.” But theory is related to a verbal form of expression, “...the relations between words and form are still unsolved in architectural theory” (Kogod, 2000, p. 35) and Dewey (1980, p.38) indicated, “Thinking directly in terms of colors, tones, images, is a different operation technically from thinking in words... can not be translated into words.” Today’s prominent architect Jacques Herzog confirms this point of view: “We do not remember any text that has changed our way of thinking that has had any meaning for us... Words and text are mere seductions” (as cited in Martin-Hernández, 2008, p.2).

Feyerabend (1987) is quite critical of the leading role of the theory. According to him, this approach is very synthetic and shallow which reduces the complexity of ideas, facts and actions formed through the fermentation of rich values to arid and abstract concepts. Theoreticians exclude profound epistemological problems encountered when human nature is being defined. Our emotions evoked when some music is listened to or an architectural space is experienced and a meaning re-

flected on human face cannot be fully described by words (Eraut, 2005) can be given as examples pertinent to Feyerabend’s idea. Such a practical knowledge based on personal experience is a reality and we cannot renounce this essential factor which should give its essential meaning to design just to remain within a restricted theoretical framework. Popper (1959, p.280) points out that the authenticity of these kinds of experiences is as follows: “Only in our subjective experiences of conviction, in our subjective faith, can we be absolutely certain.”

As Pallasmaa (2013) explains, architecture which frames the human experience and enhances his world of meaning has never arisen from purely material, climatic and economic conditions or pure rationality through out history. Revealing a meaning in architecture and then criticizing it is more difficult than designing within a framework of a prescriptive rational principle. However, unless this meaning is created, the most essential intention of architecture remains unfulfilled. As Pérez-Gómez (1987, p.57) remarks, “Architecture is not embodiment of information; it is embodiment of meaning.” Nevertheless almost all of the other tasks of architecture seem possible to be achieved by other disciplines, especially engineering, by some means or other. In fact, architecture has devolved many of its tasks to other disciplines over time. Hence, the profession of architecture will eternally survive because of its indicated essence task which can never be endorsed to other disciplines. Architecture as a branch of visual arts is essentially sensual and “... poetic image lies at the heart of architecture. And the only source possible for poetic images is the experiential world” (Walker 1987, p.86) because experiential world has concomitantly encapsulated all existential dimensions of human beings in which architecture can gather its natural mode of understanding. As Sartre (1993, p.9) states: “...understanding is not a quality coming to human reality from the outside, it is its characteristic way of existing.” In this respect, the current tendency of architecture, which seeks its own existential truth and comprehension in other

realms, seems to have an inappropriate attitude. Based on the designated view of Sartre, Pallasmaa (2013) posits that the very essence of architecture is the contours of the consciousness and externalization of the mind which has to address all dimensions of human beings as in all other artistic activities, and needs to pursue an understanding that is congenial to its own existential priorities. Subsequently, Pallasmaa (2013) reaches the conclusion that the true essence of architecture does not originate from theoretical knowledge but from our existential desire. In a sense, Heidegger (1971) affirms this claim, since according to him, the essence of architecture is related to how we live in the world. In this regard, the essential problem of architects is how to realize a meaningful environment considering their existential priorities which widen human beings' experiential realms. Because of the role of theory in natural science which is indexed to the existent, architects will be confined to the borders of the conventional when theory is rigorously appropriated to architecture. It will lose the possibility of revealing a "vivid" innovation which expands the sensational, intellectual and imaginative world of human beings.

### 3. Role of theory in science and design

Science is related to an extant form, situation or event and is based upon observation. Architecture, on the other hand, is an activity creating a very new situation which was defined as "secondary nature" by Marcus Tullius Cicero more than two millennia ago. Science is an epistemological event, its theory and practice is sequential; knowledge and theory lead to the praxis (Snodgrass and Coyne, 2006). Although the relation of theory praxis is deemed as a problematic and contentious philosophical issue similar to the chicken and the egg polemic, the operational model of ordinary sciences is insistent on the chicken hatching from the egg. Other disciplines, including architecture, initiate the establishment of a bridge between the theory and practice gap or a quest for a valid theory for their disciplines imitating the theory's

critical instrumental or prescriptive role in natural sciences. Researchers, influenced by this critical role in science, anticipate such a role for design as well. Rapoport (1983, p.56) seems deliberate when saying that design teaching should be done under the guidance of a theory similar to natural sciences by stating that "...there is no valid theory involved in design teaching. In fact there is no theory of design worth that name. Without such a theory, design cannot be thought and it is not really suitable as a university subject." The point that is generally missed in these types of views is that architecture is an activity radically different from science as Cunningham (2005, p. 343) declared: "Architecture is a distinct epistemological category, a practical art occupying its own cultural territory." Design can be characterized as a discipline that sometimes has the mission of covering contradictory purposes and is associated with notions such as inexpressibility, vagueness, ambiguity, instability, contingency and interrelatedness (Ledewitz, 1985; Wakary, 2005). The task of natural science is to reveal the "pattern hidden" in nature (Simon, 1996, p.1). Designing, on the other hand, is the bringing of a hidden pattern into being. Science is fact-oriented while design is a value-oriented activity (Cunningham, 2005). "Science starts with the specific case and diverges to the general; design starts with the general and produces a specific instance" (Winkelman, 2001, p.54). In other words, scientists and designers work in opposite directions. The situation pointed out by Lawson (2005, p.387) as "while most professions rely extensively on theoretical or semantic knowledge, architects are much more reliant on experiential or episodic knowledge" can be interpreted as the result of this adversity.

Another important problem related to the instrumental role to be played by theory in architectural design is that theories are borrowed from other traditions such as philosophy and science which have almost no concern for the space and form that are essential issues of architecture. Architecture is an activity of creating new situations; not observing the existing ones. It can

be easily predicted when theory plays a role in architectural design which is similar to natural sciences, architecture will remain indexed to existing, and within the framework of the conventional. Architects are assumed to have accomplished their essential mission of expanding the boundaries of experiential realms of human beings solely when they construct such environments. Ideas, approaches and methods developed in design are generally based on the definition of design as being "a form of problem solving," which has been adapted from the definition of science. This definition of design expresses the main reason for the belief of the existence and necessity of a theory for solving design problems. The problematic situation or dilemma in taking a problem as a key term when defining architectural design activity is that a design "...problem cannot be known until solution is accepted" (Norton, 2002, p.194). This is due to the complex character of design and competitive interests and values constantly changing during the design process. It is not very meaningful to expect solving the problem under the guidance of theory when the problem cannot be exactly defined (Usher and Bryant, 1987). In close respect to this, Snodgrass and Coyne (1997, p.87) point out, "In the design process we often do not fully know what the goal is until we have reached it." The meaning and function of theory in an architectural design activity related to open-ended situations, when the problem and the aim cannot be exactly known from the beginning, appear to be fundamentally different from its meaning and function in science.

As various desperate attempts in design history have proven, no theory should be functioning as "know-how." Nor are there any direct guiding principles in such an activity as in the case of science because the essential factors of design that cannot be codified verbally in these attempts are excluded. For this reason, it seems that all attempts remain futile for bridging the gap between theory and practice, linking or integrating or connecting them in design processes. No matter how faithfully the designers wish to behave

within the framework of certain static, theoretical principles and rules during dynamic design processes, when the designer gets through to the design's own territory, her/his mode changes and deviation from the theory becomes inevitable. The guidance of theory in the sense of know-how cannot absolutely meet frequently contradicting intentions of a very complicated architectural design process and cannot remain perfectly loyal to the theory from the process' beginning to the end. In a real design situation, as Buchanan (1998, p.18) indicates, "By focusing on concrete problems and practical situations...design shifts attention away from ideology and theory...towards action and production." Contradictory aims should necessarily be realized during dynamic design process at the same time. Schneider (1981, p. 14) defines the designers' desperate position since any theory could not be helpful at this "pregnant movement", by saying, "theoretically there is no theory in architectural theory" and defines this as "timeless dilemmas." Harries (1983, p.20) shares the same opinion: "Problems of building and dwelling cannot finally be resolved by theory...without commitment there is no escape from arbitrariness." From a relatively different point of view, the situation which is defined as "arbitrariness" by Harries (1983) is pertinent to the design subject and can be thought of as an architect's wide freedom area for interpretation. Acting under the guidance of theory can be metaphorically likened to a situation in which a sailor is advised to sail in geographical regions whose mapping has already been done. At first glance, it seems reasonable advice for going from one place to another quickly and safely. However, the design process consists of many unpredictable and contradictory purposes and changing current and wave directions. It is inevitable for the designer to change her/his route with respect to the wind force in order to reach safely a previously determined destination. Most important of all, this apparently sensible suggestion does not give answer to the questions such as how to explore untrodden and endless geographical parts of the world and how

to map these geographical regions. The designer who aspires after adventure or, more specifically, a unique meaning, is obliged to find the answers to these questions. From this respect, within the framework of our sailing metaphor, perhaps the primary role of theory is to give adventurers the cues about geographical regions which are open to exploration because these regions are indeed outside of the familiar places that have already been mapped.

#### **4. Criticism directed to theory's instrumental role**

From the point of view of Knapp and Michaels (1985), theory is merely an attempt to avoid practice. It seems that theory could not exist anywhere other than practice. Although modern architecture does not go any further to claim that it is completely science, it assumes itself to be a very rational, analytic and objective activity and a product of theory (Walker, 1987). However, Einstein (1954, p.294), regarded as the last century's most important scientist claims that: "Theories are speculative to much higher degree. They not only are ...not directly connected with complexes sense of experience... The principles and concepts of theories are therefore entirely 'fictitious' ". Longino (2002) states that a single theory will remain insufficient for all physical and biological processes and, more than one theory is required for these distinct realms. In this respect, theory's capability to be a single and absolute guide even for science is disputable. The central idea of Dewey's pragmatism is that there is no epistemological difference between theory and action because action should already be performed on the basis of philosophical considerations (Maaranen and Krokfors, 2008). Related to Dewey's ideas, Biesta and Burbules (2003) claims that:

...it is not that theory can tell us how things are and that practice merely has to follow...if knowledge is indeed human factor in human action, then theory no longer comes before practice, but emerges from and feeds back into practice. (p.105)

In order to compensate for its deprivation of any instrumental valid theory, architecture unnecessarily tends to appropriate theories from

other disciplines such as philosophy, mathematics, natural sciences and humanities uncritically at the expense of interrupting its ties with its unique existential necessities. The "nomad theories" appropriated from these disciplines are regarded as know-how or an instrument that is considered as the sanctuary of the legitimacy of architecture and directed to more "impeccable" and more "accurate" architectural achievements. However, there are two points seemingly overlooked in such appropriations. Firstly, the theories in these disciplines are assumed to be conceptually pure (Ostwald, 1999). Yet, a conceptually pure theory is just an assumption. Feyerebarend (1987) points out that there are few theories in complete harmony with the accepted phenomena in natural sciences. Secondly and more importantly, these disciplines have almost no concern with the essential issues of architecture such as space and form. Johnson (1979) posits that the validity of architecture comes from itself and does not need any reference from other disciplines to justify or make viable its value. Today's mainstream tendency in architecture does not see any impairment in opening the doors widely to the invasion of nomad theories and thus seems on the opposite side of this view, in fact, Johnson reflects a general acceptance in architecture over the centuries. Linder (1992) expresses this vigorous criticism to the attempts at theorizing architecture with nomad theories imported from other disciplines:

...it is usually understood, architectural theory is not a theory that is architectural, but is an attempt to make architecture theoretical. But it seems that being theoretical means to borrow the "discipline" of the scientist or the philosopher, and while this may be enlightening or potentially very sophisticated, it ignores the fact that architecture does not share all the features of philosophy or science. (p.167)

The generation of architectural meaning, which is the essence of design activity, in a sense is to grasp the existential desire of human beings and the lived reality, and mediate between consciousness and the world. The sufficiency of this meaning depends on the success of this mediation task. Ar-

chitects can never endorse this task of mediation to the nomad theories imported from other disciplines, because it means rejecting the essential responsibility of this profession. According to Diggelen and Overdijk (2009), theory does not generate design and during the design process it can solely play a modest role; it is also necessary to refrain from “top-down” and prescriptive approaches in design education. Martin-Hernández (2008) claims that theory no longer plays an instrumental role in general and immutable knowledge in architecture. Schön (1983) points out that thinking and doing cannot be separated and the construction of a new theory is required for each unique case instead of using certain theories and techniques during design processes. As theory is a generalization, it does not have any capability of leading to better designs. Because theoretical terms are exclusively related to generalizations and can blind us, we cannot see the uniqueness or particularity of any practical problem (Jecker, 2004). This is a crucial problem since “Design ideas are personal and they are unavailable for general scrutiny” as indicated by Coyne and Snodgrass (1991, p.131).

### 5. Priority and supremacy of theory

Because of its generally accepted role as “master” or know-how or “prescriptive” and contingently its association with divinity due to its roots, theory is considered to be prior to and superior to practice. Although theory seems to have priority and supremacy in natural sciences regarding its guidance for practice, in some instances observation and experimentation can be done without having any relation to a theory. As Lenoir (2008) points out,

...scientific paper is not the transcription of a previously planned investigation designed to test a theory set out in advance. Lavoiser, for example, did not have a theory of respiration which initiated his experimental work and provided its logical grid throughout. (p.5)

When the airfoil wing enabling planes to fly was invented, the fact that no machine heavier than air could fly had been newly “proven”. Its aerodynamic properties were understood only after the planes started to

be used. This demonstrates that the aerodynamics theory did not contribute to the construction of wings with an airfoil section but the invention of these made a substantial contribution to aerodynamics theory (Alexander, 1964). Another example which shows that practice is more important than theory in some cases is the fact that thermodynamics owes much more to the steam engines than steam engines owe to thermodynamics (Price, 1986). Simon (1996) also states that the guidance of theory in the development of a “time sharing” system in the field of computer technologies is considered negligible; these systems are first built and then checked for their behavior. Although theory is assumed to be effective enough to predict this behavior, in fact, it is not quite effective.

Some examples from architecture can also be given. When Frank Lloyd Wright’s Johnson Wax Building was designed, theoretical knowledge at the time was not sufficient to make static calculations of mushroom columns. As a result, a mathematical model could not be established. It is known that the static strength of these columns was tested with a model constructed with real material in actual size, and construction was realized after successful testing. Another example is Jørn Utzon’s Sydney Opera House. The existing theoretical knowledge was insufficient to solve the proposed structural system of this building at the time but through long and arduous endeavors, the required theoretical knowledge was formed. In Richard Rogers’ New Lloyds Building, the theoretical knowledge was also incapable of completion of the design as projected by the architect. So as Jencks (1988) indicates, knowledge was gained through specific research. In all these examples, practice transcends the inefficiency of theoretical knowledge and behaves autonomously. Consequently, architecture’s experiential realm and the boundaries of theoretical knowledge are expanded. These arguments illustrate that the relationship between theory and practice is not uni-directional; it is bi-directional and in some cases practice leads theory even in science. In other words, sometimes chicken has the ability to

bring about the egg.

Pallasmaa (2009) points out that there is widespread confusion concerning the relationship between architectural theory and praxis in architecture and criticizes the current fashion of assuming a prerequisite of a philosophical statement for a valuable architectural design. Impropriety of the current tendency of accepting instrumental role of theory in architectural design can be set off by paradoxically referring to philosophy since most scholars refer to philosophy especially to Heidegger to imply that theory is more eminent than praxis. As a matter of fact, Heidegger himself seems on the opposite pole of these academics because he revives the notion of praxis (Güneş, 2011). He considers practice is more eminent within the Greek "theoria" concept with these words: "It is not their wish to bring practice into line with theory, but the other way round: to understand theory as the supreme realization of genuine practice" (Heidegger, 1993, pp.31-32). As Uygur (1975) remarks, neither is theory important for just being theory nor is practice unimportant for just being practice. It is always possible to find shallow theories as well as profound practices particularly in art. It is evident that the consequences of all these arguments, the problem of integration of theory and practice, can never been solved in one way or another in architectural design. Therefore, it is certainly a pseudo-problem.

## 6. The necessity of both theory and practice's autonomy

With respect to the arguments discussed so far, another important point is that theory and practice could have autonomy at least temporarily and this autonomy could be beneficial for both practice and theory. Mohanty (1995, p.10) explains this situation: "The practical 'path' does not follow the theory, but is added on to it, and must have a different and independent origin." Hacking (as cited in Lenoir 1988), remarks that both theory and experimental practice could have their own autonomies. "Every 'good' scientific theory is a prohibition: it forbids certain things to happen..." says Pop-

per (1963, p. 36). In this respect, acting under the guidance of theory means accepting limitations in advance. Objection of an existing theoretical system leads to the dilemma of creating new theoretical frameworks and thus, new restrictions. For instance, Le Corbusier (1965), considered to be the most effective theoretician of modern architecture and the designer of buildings in the crystallized form of modern architecture's idea says, "architecture is stifled by custom" (p. 92). It is apparent that Le Corbusier was referring by these words to the restrictions of a theoretical establishment in architecture at the time. He systematically criticized the existing theoretical establishment in his book, *Towards a New Architecture* and shifted the architectural paradigm. However, the remarkable point here is that his new theory entirely stems from practice since he inspires machines which are the practical outcomes of the Industrial Revolution. This situation seems closely related to Popper's (1970) statement indicating a dilemma:

...at any movement we are prisoners caught in the framework of our theories; our expectations; our past experiences; our language. But we are prisoners in a Pickwickian sense: if we can break out our framework at any time. Admittedly, we shall find ourselves again in a framework, but it will be a better and roomier one; and we can at any moment break out it again. (p.56)

In a similar way, Le Corbusier saved himself and a few generations of architects from being prisoners of an existing theoretical system, but he built a new, different and probably better and "roomier" one, but still a prison. However, as he considered his sentence in this roomier prison as sufficient for himself, he sneaked out of the prison of this theoretical framework or he generated a practice which claims its autonomy through the theories he has "designed". Thanks to this autonomy, he designed Ronchamp, one of the architectural masterpieces of the 20th century. For the sake of the breathtaking spatial and visual quality of this building, Le Corbusier's serious contradiction with the ideas in his book *Towards a New Architecture* is neglected by people except those who perceive

the relationship between theory and practice very rigorously. In this sense, the prison of a theoretical framework in architecture and the fact that the search for escaping this prison leads to a new and hopefully more roomier and comfortable prison is an eternal dilemma which has existed so far and will continue to exist. Theory is required because it is not possible to design in an intellectual vacuum. The designer should essentially have certain knowledge and a theoretical basis. While theory is needed, it contradicts with the essential intention of design if the theory is taken as a prescriptive principle for design activity since this process ends up with a product that does not bring any novelty. This is one of the most fundamental dilemmas of this discipline. As a matter of fact, at least from a pragmatic point of view, this is not a dilemma to be resolved because it has the potential of generativity and innovation as in the case of Le Corbusier. The designer who inherently aims at extending the knowledge, imagination and experiential realms of human beings and their limits of existence is in a position to oppose being a slave to theory even if it was established by her/himself and every sort of restriction which would obligate her/him to be entirely dependent on it. Therefore, during the design process, there is a tense and dialectical relationship between theory and practice in which neither accepts the dominancy of the other. A successful design process preserves the autonomy of both theory and practice and at the same time allows for their regeneration through interaction with each other. When the theory and practice integration ideal which has been ambitiously pursued up to now in architectural design is realized, this generativity terminates. It is a necessity of this generative tension in the architectural design process and depends on autonomy of both theory and praxis as is the case in the separation of powers principle in political science. It is also part of their checks and balance capability of each other's power from which they should mutually benefit. Perhaps a most important secret of attaining successful designs in architecture should be related to the

proficiency of discovering the exact distance in which theory and practice can most intensely balance each other which should be called the designerly way of understanding the role of theory.

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### Kuramın rolünü mimarca anlamak

Kuram ve uygulama ilişkisi antik çağdan bu yana tartışıla gelen, yumurta tavuk polemiği gibi üzerinde bir sonuca ulaşılammış karmaşık ve problematik felsefi bir konudur. Mimarlıkta da konuda görüşlerin tarihi de gene antik çağlara, Vitruvius'a kadar uzanır. Normal bilimde problemin çözümünü kuramın rehberliğinde yapılır. Bir başka ifadeyle, normal bilimin çalışma şekli tavuğun yumurtadan çıktığı kabulüne dayanır. Bu nedenle kuram önemlidir, bilim tarihi neredeyse kuram tarihi olarak yazılabilir. Diğer disiplinlerin, bu arada mimarlığın da, en prestijli ve üstün bir aktivite olarak

kabul edilen doğal bilimlerdeki kuramın bu rehber veya "know-how" rolünün etkisinde kaldığı ve bu nedenle sayısız akademik toplantı ve yayının başlıca meselesinin, kuram ve uygulama arasında köprü kurma veya bu disiplin için geçerli bir kuram arayışı olduğu görülmektedir. Tasarlama konusunda geliştirilmiş pek çok düşünce, yaklaşım ve metot, tasarlamanın bilim tanımından uyarlanmış "bir problem çözme şekli olduğu" yönündeki tanıma dayanmaktadır. Tasarlamanın bu şekilde tanımlanması problemi çözecek bir kuramın da olması gerektiği inancının temel kaynağıdır. Günümüzde, doğru pratiğin ancak doğru kuramın rehber-

liğinde yapılacağı anlayışının mimarlıkta hâkim olduğu görülmektedir. Bu anlayış çerçevesindeki arayışların genel olarak gözden kaçırdığı nokta, mimarlığın, çok sayıda, bazen de birbiriyle çelişen amaçları aynı anda karşılaması gereken, belirsizlikleri, karşılıklı etkileşimlerin neden olduğu sürekli değişkenlikleri içeren bir aktivite olarak doğal bilimlerden çok farklı bir karakterde olduğudur. Problem kavramının esas alınmasındaki problemler durum veya dilemma da, tasarlamanın karmaşık yapısı ve gerçek bir tasarlama sürecinde ağırlıkları sürekli değişen, birbiriyle yarışan öncelik ve değerler nedeniyle, hangi problemin çözülme-ye çalışıldığının çözüm kabul edilene kadar tam bilinmemesidir (Norton, 2002). Doğal bilimlerde doğadaki “gizli örüntü”yü açıklamayı (Simon, 1996), tasarlama ise bir şekilde “gizli bir örüntü”yü gerçekleştirmeyi amaçlar. Bilim gerçekliğe ulaşmaya, tasarım ise değer yaratmaya odaklıdır (Cunningham, 2005). Bilimde kuram ve uygulama ayrı ve ardışıkken tasarlama da kuram ve uygulama iç içedir ve bunlar kesin sınırlarla ayrılmazlar. Bilimde genelden özele hareket edilirken, tasarlama da özelden genele hareket edilir. Sonuç olarak, bir başka anlatımla, bilim insanları ile tasarlama uzmanları ters yönde çalışırlar. Bu nitelikteki tamamen farklı bir aktivitede üzerinde anlaşma sağlanan belirli bir kuramın bilimdeki gibi direkt olarak know-how veya rehberlik işlevine sahip olup olamayacağı ayrıntılı olarak tartışılmaya değer bir konu olarak görünmektedir. Buna bağlı olarak, mimarinin esasına ilişkin alanlarda geçmişten günümüze, ısrarla sürdürülen kuram ve uygulama arasında köprü kurma, birleştirme veya entegre etme arayışlarının sonuçsuz kalması, bu problemin sahte bir problem olabileceği kuşkusunu kuvvetle uyardırmaktadır. Bu kuşku çerçevesinde, makalenin amaçlarından biri, literatür incelemeleri ve bu incelemelerden çıkarsamalar ışığında, kuramın mimari tasarlama süreçlerinde bilimde olduğu gibi bir rehber rolü oynayıp oynayamayacağını tartışarak, tasarlama da kuram ve pratiğin entegrasyonunun sahte bir problemle uğraşılması anlamına geldiğini ortaya koyabilmektir. Bu belirlemeye bağlı olarak, bir diğer amacı

ise, mimari tasarlama süreçlerini daha etkin sonuçlara yönlendirecek kuram ve pratik arasındaki yeni ilişkinin nasıl kavramsallaştırılabileceğidir.

Bilimin işleme şekli, kuramın rehberliğinde ısrarlı olsa da, bilimde de pratiğin kurama rehberlik ettiği örnekler vardır. Örneğin, aerodinamik özelliklerin uçaklar kullanılmaya başlandıktan sonra anlaşılması ve bunun sonucu olarak “aerodinamik kuramın” uçakların aerodinamik kesitli kanatlarının yapımına değil, tam tersine, bunların icadının aerodinamik kurama önemli katkısı olduğunu kanıtlamaktadır (Alexander, 1964). Benzer şekilde, termodinamik kuram, buhar makinelerinin ona olduğundan çok fazlasını buhar makinelerine borçludur (Price, 1986). Bu da bilimde de her zaman tavuğun yumurtadan değil, bazı durumlarda yumurtanın tavuktan çıkabildiğine işaret eder. F. L. Wright’ın Johnson Wax Binası’nda mantar başlıklı kolonların statik hesaplarının yapılmasında o günkü kuramsal bilginin yeterli olmaması nedeniyle, taşıyıcı sistemin matematik modeli kurulamadığından gerçek boyut ve gerçek malzeme ile yapılan bir modelle test edilerek yapımına karar verilmesi; J. Utzon’un Sydney Opera Binası’nda da taşıyıcı sistemin çözümü konusunda mevcut kuramsal bilginin yetersiz kalışının uzun ve zorlu çalışmalarla yeni bir kuramsal bilginin ortaya konmasını gerekli kıldığı gibi bu konuda mimarlıktan da örnekler verilebilir. Bu argümanlar da, genellikle varsayıldığı gibi kuram ve uygulama ilişkisinin tek yönlü değil, iki yönlü bir ilişki olduğunu ve bazı durumlarda uygulamanın kurama rehberlik edebildiğini gösterir.

Mimarlık, tasarım süreçlerine rehberlik edecek geçerli bir kuramdan yoksun bir disiplin olarak, bu “eksikliği” telafi için matematik, felsefe, doğal bilimler, insan ve toplum bilimleri gibi başka disiplinlerden kuramları hiç bir eleştiri süzgecinden geçirmeden doğrudan kendine uyarlamaya yönelmiştir. Bu uyarlamalarda gözden kaçan iki nokta vardır. Bunlardan birincisi, bu disiplinlerdeki kuramların kavramsal olarak pür varsayılmasıdır (Ostwald, 1999). Oysa doğal bilimlerde bile kabul edilen olgularla tam uyumlu kuram sayısı çok azdır (Feyerabend,

1987). İkinci ve daha önemlisi, bu disiplinlerin mekân ve biçim gibi mimarinin asli meseleleri ile hemen hiç ilgili olmamalarıdır. Bu tutumun isabetsizliği, mimarlığın özellikle son yirmi yılda kendi meşruiyetini aramak ve geçerliliğini kanıtlayabilmek için fazlasıyla sempati duyduğu bir alan olan bizzat felsefeye başvurularak ortaya konabilir. Mimarlıkta kuramı uygulamadan üstün görenlerin yöneldikleri Heidegger, aslında “praxis” kavramını yeniden canlandırması (Güneş, 2011) ve Eski Yunanlıların kuramı hakiki pratiğin en üst düzeyde gerçekleştirilmesi olarak anlamış olduğu şeklindeki değerlendirmesiyle (Heidegger, 1993), kuramı pratikten üstün görmenin bir aracı olarak felsefeye yönelenlerin tam tersi kutupta yer alır.

Popper’ın (1963) işaret ettiği gibi, her “iyi” bilimsel kuram bir yasaklamadır, belirli şeylerin olmasını yasaklar. Bu bakımdan kuramın rehberliği belirli kısıtlılıkları da peşinen kabul anlamına gelir. Mimarlık tarihinde yer almayı başaran önde gelen mimarlar bu pozisyonlarını mevcut kuramsal sistemin kısıtlılıklarına karşı çıkmalarına borçludurlar. Ancak getirdikleri yeni kuramsal sistem de başka kısıtlılıklara neden olur. Örneğin, Le Corbusier, mevcut kuramsal sisteme karşı çıkarak tasarladığı yeni kuramsal sistemin kısıtlılıklarına itirazını bizzat kendi “praxis”i ile ortaya koymuştur. Entelektüel bir boşlukta tasarlanamayacağından, bir tasarımcı belirli bir kuramsal temele ihtiyaç duyar. Bir yandan kurama ihtiyaç duyulurken, diğer

yandan da sadece kuram rehberliğinde davranıldığında tasarlamamanın esas amacına aykırı, tasarlama sürecinin sıradan, yenilik getirmeyen bir ürünle sonuçlanması mimarlığın en temel ve ebedi dilemmalarından biridir. Aslında pragmatik bir açıdan bakıldığında, bu çözülmesi değil, sürdürülmesi gereken, üretkenlik ve yenileşme potansiyellerini içeren bir dilemmadır. İnsanoğlunun bilgi, imgelem ve deneyim alanını, kısaca mevcutların sınırını genişletme tutkusundaki tasarımcının onu mevcutlara endeksli kılacak her türlü yasağa ve bu arada kuramın mutlak rehberliğine de karşı çıkması kaçınılmazdır. Bu nedenle, tasarım sürecinde kuram ve pratik arasında, birbirinin üstünlüğünü kabule yanaşmayan gerilimli ve diyalektik bir ilişki söz konusudur. Başarılı bir tasarım süreci, aynı zamanda kuram ve uygulamanın otonomluklarını koruyarak, karşılıklı etkileşim içinde birbirlerini yeniden üretmeleri sürecidir de. Bu makalenin amacı, mimari tasarlama bu üretken gerilimin korumasının kuram ve pratiğin her ikisinin de politik bilimlerdeki “kuvvetler ayrılığı” prensibindeki gibi otonom kalmalarına, ancak birbirinin gücünü dengelemelerine bağlı olduğuna ve bundan karşılıklı çıkar sağlayacaklarına, mimarlıkta başarılı tasarımlar yapmanın belki de temel gizeminin teori ve pratiğin birbirlerini en etkin şiddetle dengeleyecekleri mesafeyi keşif becerisi ile ilgili olduğuna işaret edebilmektir. Böyle bir anlayış da kuramın tasarlamaadaki rolünü mimarca anlamak olarak tanımlanabilir.