ITU A|Z
VOL:2, NO:1/2, 21-51, 2005-1/2

From systematic methods to the metaphorical approach in the design studio

Nezih AYIRAN
Istanbul Technical University Faculty of Architecture, Istanbul, TURKEY

Received: September 2005 Final Acceptance: January 2006

Abstract:
Defining design as "a form of problem solving" is a definition, which normal science-based approaches as well as design instruction approaches of today's general design studios depend on. Design studios' adapting this very definition which is imported from a totally different tradition and which is far apart from reflecting the real characteristics of design plays a negative role on student productivity and motivation. Design's being identified as an interpretative and hermeneutical event seems much more appropriate for its nature. Based on this definition at design studios, it is expected that productivity and motivation will increase. The importance that metaphors gain in a hermeneutical event makes them one of the basic notions of design studios. Views in this article have been tried to be implemented in the undergraduate design studio of author as a tryout. It will be presented some information and sample studies regarding this experiment in the sixth chapter.

Keywords: *Design studio, problem solving, interpretation, hermeneutics, metaphor*

1. Introduction

When we consider the core of this article, we can say that it is an interpretation based on possible reflections of previously suggested viewpoints of authors of various fields over the design studios. It has no further meaning beyond interpretation. An attitude coherent to the natural science methodology indexed to researching the existent is not the subject matter here. Coherence in this sense would clearly cause a contradiction with the basic view of the article. Without a question, since it is not based on researching the existent, it turns out to be speculative point of view. It is not necessarily a must remain from speculation just because it carries negative meaning as of the usual usage. That is because; it is an inevitable situation for almost each and every theoretical and philosophical study, given that "theory" is the synonym of "speculation".

Points of view towards the design activity vary from one pole, which considers the design activity as a field that deals with solving technical

problems with the objective reasoning method that is seen in science, and another pole that defines the designer as a creative genius that expresses himself. According to these varying points of view, approaches of design studios are prone to one of those poles (Coyne, 1991). While the objective reasoning pole emphasizes concepts such as scientific methodology, analysis – synthesis, problem solving, rationale, conscious design and theory, the other pole highlights concepts such as the subconscious, emotions, self expression, imagination, intuition and creativity. Independent from the tendency of educational instructions, there might be examples of those among faculties that are prone to different poles. It's even possible to observe that the same single person has behaviors that are prone to both poles within particular time intervals. The most important reason of this situation is the different and unstable position of the design discipline, in today's academic environment where normal science model is dominant. This instability happens due to the weakness of design in explicitly defining what kind of an activity design is around its own ontology as well as the fact that it refers to different concepts such as science in order to define itself properly. This situation makes it hard for the design to be taught in an efficient manner which could be appropriate to its own nature.

From the view point of Coyne and Snodgrass (1991), if a human being's complete thought and activity is in a hermeneutical character as Gadamer has posited, then the "dual knowledge" thesis that delegates antagonist roles to science and art in the design process is a needless segregation which is worthless to defend. To their point of view, "When we see that all understanding is hermeneutical, then the idea of creating art and designing as being mysterious and different to other activities disappears" (Coyne, Snodgrass, 1991: 129). At first sight, this viewpoint could be deemed to the potential to ensure the transformation from a two-poled world to a single-poled happy world. "The hermeneutical nature of understanding is shared by both the 'divergent' activity of designing and the 'convergent' activity of solving mathematical problem" (Coyne, Snodgrass, 1991: 126). Despite the whole optimism of Coyne and Snodgrass, it will not be easy for the objective reasoning pole, which is still committed to the positivistic principles, to accept this. That is because, the viewpoint claiming all types of intellectual activities are hermeneutical in nature, makes understanding dependent on the experience of men and highlights the interpretation concept. Thus, it is based on subjectivism rather than objectivism. For this reason, a single-poled happy world is a far possibility. Their view is obviously closer to the other pole due to its own qualities. In fact, the reason of antagonism between the two poles is the passion of normal science in gathering all traditions under its own paradigm, which it believes to be superior. "Systematic design methods movement" of 1960's and 1970's is the endeavor to put the design discipline in the narrow and different template of normal science by taking the advantage of the weakness of design discipline in defining itself as well as having itself acknowledged that it's totally a different tradition. In those years, despite the limited effects of this movement over architectural practice, there have been serious reflections of it over design instruction. Direct effects of this deed over design education have become remarkably weak. However, it still maintains its indirect effects via some concepts that it has implemented to our design culture. Because, we can still see that studio instructions approach that depend on problem solving, analysis, synthesis, ill or wicked problem and methodology concepts all of which this very movement has engraved to our conscience are still prevalent. This prevalent manner, which has weak relationships with the

ontology of design, makes it hard to operate student motivation. Design's being defined as an "interpretative and hermeneutical activity" rather than "a form of problem solving" bring up new concepts and throw back what is inherited from the "systematic design methods movement". Metaphors are the important concepts in studio instruction approaches in regard to the roles they play in a hermeneutical event.

Design is a discipline, which experiences serious difficulties in defining itself in the academic environment. Moreover, it never happens easy for it to have any definition it reached acknowledged. Therefore, the importance and value of design's being defined as a hermeneutical event in design instruction, the differences of this discipline from normal science will be obvious through discussions over concepts that have been imported to design culture from the normal science and thus a ground where design could be better interpreted will be created. This attitude will most probably be an appropriate approach to hermeneutics thesis, which tells that new ideas would only become meaningful around our previous experiences.

2. Design as a different tradition from science

The demand around which every discipline behaves in the framework of normal science paradigm is based on the acceptance unity of all academic activities and universal excellence of science and rationality. However, the universal excellence of science and rationality will never be an unquestionable truth. According to Feyerabend's point of view, "Neither science nor rationality are universal measures of excellence. They are particular traditions, unaware of their historical grounding" (1988: 231).

Without being so much rigid, Simon suggests the normal science model for design instruction. According to his direct explanation, "The professional schools will reassume their professional responsibilities just the degree that they can discover a science of design, a body of intellectually tough, analytic, partly formalizable, partly empirical, teachable doctrine about the design process" (Simon, 1969: 58). Systematic design methods movements' being considered as a light of hope for addressing problems such as uncertainties within the design process, contradicting aims, instabilities and problems that emerge even more strongly due to the instruction thereof, points of view of Simon and other science researchers of the same understanding affected design instruction for a while. The following determination of Schön is another factor that helps this affinity find supporters in systematic design instruction: "In the context of modern research university the architectural studio is deviant" (1985:5). Because this movement was also an opportunity that would help get rid of the "deviant" phase.

If Kuhn's following insights are based on true detections, then taking natural sciences as a model just like Simon has suggested will mean importing important weaknesses and inadequacies to design instruction. From the view point of him, a student in natural sciences would be depend on textbooks until the third or fourth year of education. Even at the graduate license level, textbooks are systematically preferred more than creative scientific studies; this is an effective way of educating. A scientist will become completely prepared to puzzle solving as is defined by the traditions of textbooks; however, this educational format lacks the adequacy to educate people with the capacity to discover new approaches (Kuhn, 1970). Yet, the profound characteristic of design instruction is the discovery of new

approaches. Kuhn's prospect over education types over fields such as music, graphic arts and literature is much more positive. Textbooks in those fields are less important; during this education, the student witnesses the prosperity of problems that have been tried to be addressed regarding his or her major as well as rival solutions that never tally with each other, so he or she eventually gets the capacity to use initiatives and solve problems gaining the conscience and knowledge that those problems can only be solved by himself or herself at the final stage, however this process works somewhat slow (Kuhn, 1970). When compared to scientific education, it can never be assessed as a rational attitude for the sake of science if we get away from such an education type that Kuhn considers as much more positive and even in which we can easily locate design.

Normal Science concept is defined by Kuhn as follows: "…normal science means, research firmly based upon one or more past scientific achievements that some particular scientific community acknowledges for a time as supplying foundation for its further practice" (1970: 10). Yet, design cannot be made by firmly depending on previous successes like this or in a better saying, if made so, it would result as ordinary design results which never mean anything for the society or the professionals. Design aims to reach a conceptual and phenomenal innovation. "Perhaps the most striking feature of normal research problems…is how little they aim to produce major novelties, conceptual or phenomenal" (Kuhn, 1970: 35). One of the most important properties of design is its being a non-routine activity (Love, 2002). However, "Normal science is highly determined activities" (Kuhn, 1970: 42). By the direct words of Kuhn, "…the scientist does not preserve the gestalt subject's freedom switch back and forth between ways of seeing" (1970: 85). The design's being complicated and non-straight-lined, backwarded type of an activity, which includes contradictive aims highly requires such a freedom.

On a certain aspect, designing is very close to the intellectual activity kind of revolutionary scientists who bring forth new paradigm. The following words of Einstein being a scientist who has put forward a new paradigm proves this close relation: "…search for those highly universal laws…from which a picture of the world can be obtained by pure deduction. There is no logical path leading to these laws. They can only be reached by intuition, based upon something like intellectual love (Einfühlung) of the objects of experience" (Popper, 1980:32). The most important scientist of the last century locates himself in an unexpected side of "dual knowledge" polarization, which has been indicated earlier. Another cited insight will most probably intensify this vision: "The external conditions which are set for (the scientist) by the facts of experience do not permit him to let himself be too much restricted, in the construction of his conceptual world, by the adherence to an epistemologist" (Einstein, 1951: 10-11).

Simon explains the basic difference between design and natural sciences as follows: "The engineer is concerned with how things ought to be… Natural science…concerns itself how things are" (1969: 5). Based on this insight, one of the properties of design is its being a normative discipline. In fact, there is a profound contradiction between this property of design and Simon's previously highlighted suggestion arguing design instruction to be partly dependent on scientific methodology; it is because, "Methodology of natural science was the only access to objective and certain knowledge" (Snodgrass, Coyne, 1997: 72). The attitude as to "how things ought to be"

will be inevitably subjective and open-ended. Therefore, Simon's suggestion will not even be "partly" justified to a good reason. Yet, design discipline's getting more and more involved with "how things are" in action proves that normal science model gets strong acceptance in this discipline or that academic conditions push it to that.

"Despite the differences of aim, approach, strategy and methods, natural sciences and humanities eventually are up to a existent situation, being or event. Yet, design is an activity which considers the primary nature as a strong competitor that should be fairly competed with and sometimes a good friend by whom one should remain in close relations with to reveal a new phase called 'the secondary nature' " (Ayıran, 2002a). The design activity could be a scientific examination issue but design itself is a nonscientific, ascientific activity (Grant, 1979). As Porier has pointed, architects design "an environment that thwarts any attempts to translate (it) into the terms of conventional environments" (1966: 7). However, "...science is compulsorily indexed to the conventional environment. When architecture maintains its 'conventional' attitude regarding concepts such as making synthesis, transformation and free research, based on its core necessities and ontology, it turns out that it will develop by helping new environments and correspondingly new concepts evolve; however, when it finds itself deeply involved 'novelty' desires, such as referring natural science model, it faces a paradoxical situation which ironically can be described as being stuck inside the boundaries of the 'conventional' " (Ayıran, 2002a: 142).

According to Popper, "…it is the aim of science to find satisfactory explanations leads us further to the idea of improving the degree of satisfactoriness of our explanations by improving their degree of testability" (1992: 134). "Design's aim is not to come up with an explanation, but on the contrary it is ideally to reveal an innovation that extends our experiences so wide that it would be necessary for them to be explained. In other words, design does not aim to explain, but rather it aims to become the subject of the explanation" (Ayıran, 2002a: 143). The main purpose of the scientific activity is to ensure the generation of knowledge; it is not about the benefit or utility thereof. On the other hand, design is about beneficial usage of generated knowledge (Eder, 1995). However, new environments that designers propose will expand the boundaries of "the existence" and the examination and observation field thereof (Ayıran, 2002a). In particular situations, they might indirectly support information production by demanding non-existing information just like R. Rogers did in his New Lloyds Building design. We employ extensively the knowledge, which has been generated by scientific activities when we design something. In this sense, "design makes science visible" (Willem, 1990: 45). Above explanations as to the differences between design and science grants us the right to turn the earlier saying all around: "science makes design invisible". At this point, by the usage of "the invisible" notion, what is implied is that, when a design activity acts in liaison with normal science, it moves away from the innovation mission, and when this happen, it will not be worth attention for the society and professional media.

Differences between science and architecture make their problem solving strategies radically different. According to the results of Lawson's (1980) research, the main difference between these two strategies was that while the scientists focused on the discovery of the rule, designers were revealing highly passionate endeavors to reach the desired result. "Science is analytic;

design is constructive" (Gregory, 1966: 224). In this context, "…scientists problem - solve by analysis, whereas designers problem – solve by synthesis (Cross, 1982: 223). What we get from this is that design studios' working with the science's methodology obstructs the development of students' synthesizing capacity.

3. Some normal science based concepts in design education

"Systematic design methods movement" has been targeted by serious critics. Many design researcher and especially Schön have indicated the drawbacks would occur when design discipline which possesses adequate and strong intellectual culture if subject to the effects of different cultures such as science or art (Cross, 2001). Moreover, there wasn't a significant proof that indicates systematic design methodology applications would lead to successful results in designing (Cross, 2001). Rather than importing scientific methodology into design instruction, Schön defends the vice versa: "...the schools of other disciplines have a great deal to learn from the unique institution of architectural education, the studio" (1985: 5).

In spite of all critics made for the systematic designing movement, some concepts that this movement has brought to designing terminology such as and most initially the "problem solving" concept keep on limiting our thoughts and activities as well as obstructing the performance of more efficient instruction approaches to be delivered in studios. Therefore, these concepts should be discussed in length.

Problem Solving:

According to Akın's definition, "Architectural design is a form of problem solving" (1984: 192). This definition is widely accepted by today's architectural educators as well. Despite the fact that it is widely accepted, there are still some questions that ought to be asked to this definition:

1. Is designing really a form of problem solving?
2. Having considered that the first question was answered positively, the second question emerges: What kind of benefits does such definition provide the studio designing process with? What are the proofs thereof?
3. Even if the first two answers to the first two questions are positive, there is still a chance for the third question: Can't we reach a better definition of design that could provide us with more practical benefits in respect to design education?

The usage of the concept "problem" which in the first place associations of mathematics and physics are very wide in daily life. In daily life, everything that needs or that needn't be done is called as a problem. Therefore, usage of such concept that covers a very wide range of meanings seems to cause problems when used in defining design. Because, this bears the risk that what is implied could be so vague. This definition could be considered to gain a concrete meaning in the designing technique context such as the "morphological box" that depends on the researches of alternative solutions to sub-problems by dividing designing decision subjects into sub-problems based on predicted aims. However, even in such specific technique, the aims, decision subjects, alternative solutions offered for sub-problems are options that are subject to the interpretation of the person who will use that technique. In such technique, the interpretation is still in the foreground. In designing, solving the contradiction between aims that have very concrete physical solutions such as getting the utmost from the daylight and minimizing the heat loss makes interpretation once again compulsory.

Another issue is how to solve the contradictory demands received from several role owners of the design subject such as client, users, official authorities and constructors. In this point, it is inevitably necessary to make an interpretation. Even if these contradicting demands are to be met with particular optimization, since the demands of role owners will not be completely met, they might think that the problem on their aspect was not entirely addressed; if optimization is not processed, while a group will become entirely satisfied, the other group's problem will remain completely unsolved. The fact that there is never a solution for such contradictions in designing makes the definition claiming that "design is a form of problem solving", highly arguable.

We see that design is also defined as a unique form of problem solving to highlight the idea that design is a different form of problem solving. The "unique" concept here stands for the characteristic of design rather than the peculiarity of problem. An important aspect of its uniqueness probably is open for an interpretation that design is not "a form of problem solving". According to Willem (1995), if something is going to be defined as "design", then it should be brought foreground with a "creative problem solution"; otherwise, it is impossible to call that thing a "design". Based on this, we can say that Willem's previously outlined design definition is revised as "design is a form of creative problem solving". At this point, the asked question "why insist on the 'problem' concept just to commit to the normal science terminology and why avoid defining 'design' as a direct creative activity based on interpretation.

Rittel and Webber (1973) specify the solutions of design problems as good or bad rather than right or wrong. At this point, it is natural to have grades such as less good, average, less bad between good and bad. This requires the acknowledgment that the problem is solved in every case, probably even in a bad way. Having considered all these logical necessities, it is inevitable to have serious doubts as to whether defining design as "a form of problem solving" is meaningful or beneficial. On the other hand, the end of the design process is not dependent to its inner conditions as it is in mathematics problems, rather it is a situation determined dependent on external conditions such as the deadline of the project. Every designer knows he or she could enhance his or her design, if he or she has given extra time and other conditions and he or she could never reach to a final conclusion in such "ideal" conditions (Snodgrass, Coyne, 1997). Rittel and Weber (1978) have also stated that there is no end to the design process. In this aspect, when acting in its own inner conditions, it would not be appropriate to define an activity which would never reach to a final solution as "a form of problem solving".

The instruction approaches in design studios are based on a very controversial definition; and drawbacks, which emerge thereby, are obvious. Snodgrass and Coyne define design in an alternative way as follows: "The design process can be compared with the interpretation of a text. Design is an interpretative activity, one of understanding a design situation rather than of solving a problem… We consider the term 'project' to be more appropriate to describe the design task and its goal than is the word 'problem', which carries over connotations from mathematics and the physical sciences… the etymology word 'problem' itself carries associations with 'project'. It comes from the Greek *problematos,* from *pro – balô,* 'to throw before', that is, 'fore throwing' (1997: 87). In the positivist methodology, experiment finds an

answer to the question asking whether the hypothesis is right or wrong; it never changes the content of the question. The design activity on the other hand changes the content of the problem. (Snodgrass, Coyne, 1977). And being in the same parallel Jones (1970) outlines that changing the problem in order to find the solution is the most difficult and challenging part of designing. And perhaps this indicates defining such a discipline, which it is not even known what is to be solved and in which there is an entire freedom to choose what problem to solve, "as a form of problem solving" seems to be quite odd. As a matter of fact, in designing there is always a problem, but this problem is rather than belonging to the subject, it is a personal problem which possesses to the designer on the aspects of delivering successful results within the given deadline or convincing the client for his or her own design concept and similar derivatives.

Wicked or ill – Defined problem:
Design problems are defined by Rittel and Webber (1973) as "wicked problem", and by Simon (1973) as "ill structured problem" or "ill – problem". These concepts which emerged due to prejudices that normal science imposed to minds, imply that designing is not a positive form of activity and failure is a destiny for design. This is because, the formulation of the problem determines the solution thereof (Csikszentmihalyi, 1996). In order to ensure the motivation and success of design students, initially it is a must to have an approach that makes the activity look positive. Taking designing as an interpretative and hermeneutical event is a point of view, which makes it positive.

Even design is insisted to be seen as a problem solving process, the ill or wicked defined problem definition would not seem appropriate. Because, as Cross (1982) has outlined, when compared to scientific problems, design problems are real problems just like those human beings need to solve in daily life. On the other hand, whether the problems in science are well defined or not is open to discussion. As the quantum theory has clearly revealed, determinism that need to evolve according to positivist points of view does not even exist in the nature itself (Feyerabend, 1987). One example of this is the difficulties that are faced when the quantum physics problems are not well defined.

Method:
While a particular method in science practice always gives the same results, it is not possible to reach to the very same results all the time in designing. In fact, this is already not a situation desired in designing (Cross, 2001). According to Popper, adapting scientific methodology, which is based on determinism and positivism to human and social sciences while it is not even suitable for natural sciences, is a completely unacceptable attitude (1991: 186). Pluralist approaches are necessary in science as well (Popper, 1991: 252). About the existence of scientific methodology, Popper is far beyond being suspicious: "Scientific methodology does not exist" (1992: 5). Logical methods are linear and solution-oriented, but in design, due to the characteristics of activity, a final point to be reached does not exist. Logic based models anticipated for design would be inadequate to understand designer's sort of activity which are irrational, contradictory, complicated and far from being logical. The design activity which cannot be explained with a rationale can only be perceived when the designer tries to understand why he made it and when it's located into a real design situation framework (Snodgraas, Coyne 1997).

Analysis-Synthesis-Evaluation:
According to Jones (1963) who is one of the leading names of “Systematic design methods movement”, the design process could be divided into three stages called analysis, synthesis and evaluation. In the design studios, it’s still seen that these three concepts maintain their validity. This conceptualisation anticipates that design is a linear process; the design process is the synthesis of components acquired by theoretical analysis, which is based upon logic. However, as Schulz (1966) has affixed the design process cannot be considered as the synthesis of components acquired by theoretical analysis, which is based upon logic. In fact, Jones was including an element regarding the usage of subconscious capacities to his model. However, this was limited to a brainstorming technique, which is based on a group technique where naïve and crude ideas can be expressed.

This design process model, which aims to cover design within the normal science paradigm framework, is paradoxically a sample of designer’s basic concern ”how things ought to be” rather than scientists’ interest in “how things are”. As a matter of fact, as Rittel (1970) has clearly declared, the design methods movement is a project of the design of an educational system for design. With a contrary attitude, Darke (1979) researched how architects designed, in other words with a scientific attitude she researched how designers design. According to the findings of this research, architects were generating solutions towards a single target or a concept, which is defined as a “primary generator” without having considered a list on which all factors are clearly outlined. “Thus, the analysis-synthesis model would seem be refuted as a method which can readily be used in practice” (Darke, 1979: 43). “Designers tend to reject design methods as time consuming and impractical” (Snodgrass, Coyne, 1992: 70). Again, here a paradoxical situation is confronted. This model, which was proposed to comply with scientific basis, was refused due to the results obtained through a research made with scientific methodology. This finding indicates that approaches based on analysis-synthesis concepts in design studios would not bear practical validity.

4. Considering design as a hermeneutical activity
Simon’s (1969) point of view claiming that design is a field which focuses on “how things ought to be” is kind of an acceptance that almost all designers might have a different point of view as to how that particular thing “ought to be” when a specific design is to be created. Such a point of view varies according to the experiences and the previous understanding of the designer. Therefore, we can consider the design activity as an interpretation process. All architectural manifestoes are also texts that can be read or interpreted, as “here is my interpretation in regard to design.” Although, it generally does not match with or even contradicts to verbal manifestoes, all introduced designs are visual manifestoes of how architects interpret their designs. The previously discussed “primary generator” concept that Darke (1979) had observed at the design processes of working architects in practice can be seen as a preinterpretation that triggers the design process in this context.

The main aim of concept studies required from students at the beginning of the design process in design studios is to make sure the main interpretation of students for the subject can be used as a tool that triggers the design process. Either it is an experienced designer or just a novice student; it’s an

inevitable fact that such an interpretation would be on the basis of a preunderstanding possessed earlier. As Gadamer has highlighted, "…the horizon of the present cannot be formed without past…There is no more an isolated horizon of the present in itself than there are historical horizons which have to be acquired. Rather understanding is always the fusion of these supposedly existing by themselves…fusion is continually going on, for there old and new is always combining into something of living value" (1999:306). Even Le Corbusier who wishes and systematically claims and also leadingly supports the modern architectural exploit which aims to be isolated from the past and all specifications thereof explains with Colquhoun (1982) illustrations that past and present horizon have merged: basic approach of Le Corbusier in his designs can be evaluated in two categories. The first category is adapting the principals of architectural traditions to new solutions and the second is giving an insight by contradicting to architectural traditions; the displacement of concepts is not a re-creation work independent from the past but rather it is the re-interpretation of the past. Therefore, this is an ascertainment that confirms the above insight of Gadamer.

Our sensing of something as a particular thing can only be possible by our previous understandings. The noise emerging from a car's brake or a crying baby can only be meaningful based on our previous understandings. We sense such things as an effect in the first place and we give them a meaning thereafter (Snodgrass, Coyne, 1997). "An interpretation is never presuppositionless apprehending of something presented to us" says Heidegger (1962: 190-191). Introduction of a new idea or a pre-output regarding a new design that is related to our subject is a situation that develops in internal processes. Therefore, it is undoubtedly something different from giving a meaning or interpreting concepts that we have just mentioned. However, the hermeneutics thesis of Gadamer is not only related to the interpretation of an external effect but it's also related to offering a basis for a brand-new being (Vedder, 2002). For this reason, any output, which is in correlation to a design situation that becomes extrinsic through a development within the internal processes, is the derivative of the previous understandings of the particular person who makes it extrinsic. Once the output becomes extrinsic, it turns out to be an external factor for the designer. Similarly the interpretation of these external factors is dependent to the previous experiences of the designer. According to Gadamer (1999), our prejudices caused by our previous experiences take an active role in creating the interpretation. Consequently, the interpretation which means the concept at the initial steps of the design process will be depend on prejudices as well as other elements that provides sensing. Prejudice is a concept, which bears a pejorative meaning in academic considerations as well as in daily life. Therefore, we might ask ourselves the question, "how appropriate would it be to be dependant on this in the first place?" However, according to Snodgrass and Coyne's explanation, Gadamer "…aims to rehabilitate prejudice (pre-judging), rescuing it from pejorative connotations. All understanding, necessarily involves prejudice, fore-meaning that are not fully objectifiable. These prejudices can be either enabling or disabling on the way in which they are opened up hermeneutical understanding" (1997: 78). Meanwhile, design is extremely prone to prejudices and from a certain aspect it is an activity, which works with prejudice. "Ornament is a crime" of Adolf Loos, "The house is machine for living in" of Le Corbusier, "Less is more" of Mies van der Rohe expressions are some of such widely accepted prejudices. Based on the design

expression way of designers, it's natural that they utilize visual prejudices rather than verbal. Also, in the design studio, the students' basic interpretations, which mean the "primary generator" that triggers the design process, should be located on prejudice basis. The hermeneutical circle neither has a start point nor an end. Thus, such prejudice is the first booster power that helps to be included in this circle from the most trusted and known point. According to Schön (1983), the design process can be identified as "reflective-in-action" or "reflective conversation with the situation". But during the design process, in these types of conversations, the questions and answers last without reaching a final end. An answer provided for a question evokes another question, thus it makes understanding an abyss process, which never reaches to an end, and a process in which new understandings become always possible (Snodgrass, Coyne, 1997). In this process, "…an interpretation evokes new interpretations" (Snodgrass, Coyne, 1997: 95). A sketch which is output in design processes is reminiscent of other ideas and interpretations. Drawings made according to newly output interpretations again leads to other interpretations. When design reaches to a certain externalization in studio works, the instructor and probably other students in the studio participates to these interpretations. The design process is extremely similar to the "hermeneutical circle" process that was identified by Heidegger (1982). What is ideal and expected in the design processes does not reach to a definite conclusion, but to get a closer point of it. In other words, this is the phase where the pre-interpretation that the designer keeps in mind gets more detailed and more evident.

In the design process, while it might have an active role in shaping the idea details of the designer as to the design as a whole, it also can have the sub-layer "primary generator" or a component property in particular situations according to the point of view of the designer towards the world and might affect the meaning of the whole playing an engrossing role. For this reason, it is obvious that there is a huge proximity between Gadamer's below insights and the specifications of the design process: "We recall the hermeneutical rule that we must understand the whole in terms of the detail and the detail in terms of the whole ... The anticipation of meaning in which the whole is envisaged becomes actual understanding when the parts that are determined by the whole themselves also determine this whole" (1999: 291). According to the hermeneutics thesis, understanding will develop in such circular or spiral relationship but it will never reach to a final end being always open to new interpretations. It is also obvious that the model that divides the design process in phases such as analysis – synthesis and the variations thereof have missed this point. This is simply because, when we take a look through the hermeneutical point of view, components that are obtained by analysis will determine the quality of the synthesis. Likely the quality of synthesis will determine what the components and the qualifications thereof ought to be. The first step needs to be taken in order to cope with this situation, which looks like a vicious circle is to acknowledge its existence. The second step is to get involved with the hermeneutical spiral to have this process developed to a point by a modest approach emerged by the awareness that such mutual interaction would never reach to a final end but it could only be possible to get closer to it.

In the design process, we make the projection of the whole meaning and then we interpret this projection on all the components. Design is continuously re-determined based on the change of preunderstanding; the

preunderstanding of the designer over the whole guides him throughout the thoughts about the parts. The understanding develops by continuous revision processes (Snodgrass, Coyne, 1997). Bernstein identifies this process as follows: "…Continuous dialectical talking between local detail and global structures… a sort of intellectual perpetual motion" (1985: 95). It's obvious that, during the design process, while the slope of a roof, the dimension of a window, the characteristics of a material used on the front changes the total meaning, it is stable with our design experiences that the anticipation and pre-interpretation in regard to the total meaning determines the qualifications of components.

Hermeneutical anticipation is a total different structure from the verification or falsification of the hypotheses in the positivist methodology; at this point, whether the anticipation is met or a disappointment is experienced, the designer will find an opportunity to widen its vision in both alternatives; if the anticipation is met, it will be ensured that the details of the design will be richer, and unless it is met, new expectations will arise and further projections will be sought. Thus, the horizon will continuously widen up (Snodgrass, Coyne, 1997). This can be interpreted as a different "fusion of horizon" from the one that Gadamer has outlined.

Since design is a hermeneutical activity rather than an epistemological one, in an activity with these qualities, theory and practice would never divorse from each other; in epistemological events and situations, knowledge and its application is distinct and sequential, knowledge and theory leads to the praxis (Snodgrass, Coyne, 1997). Feyerabend explains the merging of theory and practice as follows: "Creation of a thing, and creation plus full understanding of a correct idea of a thing, are very often parts of one and the same invisible process, and cannot be separated without bringing the process to a stop" (1988: 17). For this reason, the design knowledge is basically a type of know-how, which develops, in the hermeneutical spiral on a particular design situation and it's only a meaningful type of knowledge for that particular design situation. According to Coyne and Snodgrass, "Design ideas are personal and they are unavailable for general scrutiny" (1991: 131). What we get out of this in design studios is that different knowledge is necessary for each and every design situation and that an approach teaching the student that it should be produced by the student itself to be adopted. Such an approach initially requires avoiding the stress of epistemology and theory. However, in today's design field what is seen us that the highlight given to theory is enhancing. This is because of the baseless insistence to see design as an epistemological event. Throughout a process that goes all the way from Loos to Le Corbusier and Gehry, there has never been a complete epistemological consistency between the verbal and graphical or plastic expression at any moment or sample of the design history. This is the natural result of the hermeneutical characteristics of the design event. As Snodgrass and Coyne have claimed, "In the design process we often do not fully know what the goal is until we have reached it" (1997: 87). Another point as to the epistemological consistency is the difficulty and inadequacy of verbal and visual expressions to be converted to each other. Some abstractions can only be made by non-verbal expression types (Langer 1957). According to Polanyi (1966), we know much more than we can verbally tell. Talking about our subject, we can interpret this as it is possible to design much comprehensively than we can verbally express. Therefore, in the hermeneutical characteristics, epistemological consistency researches in a design field which is based on graphic and plastic

expression is similar to making researches in a room whose all walls are covered by mirrors which distorting view of an object being reflected infinitely on the mirrors to find out which one of those reflected views look most alike to the original one. It is an amusing yet pointless and naive effort.

The differences between the teaching methods of normal science and design and similar fields that Kuhn has pointed out (1970) give us the opportunity to make the comment that according to teaching basis, the normal science is epistemological in character and that the design and similar fields are hermeneutical. Naturally, both teaching ways have epistemological and hermeneutical aspects. It is not possible to find a traditional way of teaching such as the one that can be found in normal science, in the method where design is taught. Therefore, students educated in the design field feel much more necessity to develop their self understanding system. "All understanding is self understanding" (Snodgrass, Coyne, 1997: 85). The basis to develop such a self – understanding is the previous experiences and prejudices of the student. Even their being simple or naive is not important. What is expected in the studio is that these prejudices to get and evolve to a more sophisticated phase in time. The first step to ensure this is to consider the design process as a hermeneutical event. Based on Darke's (1979) research, we can tell that the difference between novice and experienced designers are related to the sophistication level of their prejudices. According to her, "… the most interesting direction for design research is to find further ways of 'looking inside of the designer's head' of exploring subjectivity" (Darke, 1979: 43). Based on the above explanations, we can understand that deeming design as an interpretative and hermeneutical event at least makes it easier for us to get closer to what designer has in his mind. By getting closer, we can clarify the fogs that conceal the mystery over the design process. That is because, the output of an interpretation is the self interpretation of the person who makes the interpretation (Gadamer, 1999). In order to make a successful interpretation, the discovery of hidden potentials within the design subject and conditions thereof is necessary. The basic mechanism in their discovery is the metaphors.

5. The role of metaphors in a hermeneutical event and design studios

Metaphors give us an opportunity to understand an experience in terms of another experience (Lakoff, 1987). On the other hand, hermeneutics defines the role of metaphors successfully (Von Oech, 1983). According to Vedder (2002), the hermeneutic meaning of metaphors is initially different from a stylistic figure, secondly they are the denotation and reference dimensions rather than revealing a meaning and lastly, they will cause new beings to evolve and trigger new visions to form regarding life and our environment.

The literal meaning of the metaphors is "carry over". It has been derived from the "meta" word which meant "meaning" and the "pherein" word which meant "over" in the Old Greek. According to Aristotle, "…metaphor consists in giving the name that belongs something else" (Poetics, 1457b). Aristotle explains the importance of metaphors as follows: "…ordinary words convey only what we know already: it is from metaphor that best get hold of something fresh… It is great thing by far is to be master of metaphor" (Rhetoric, 1459a). He also explains his opinions over the roles of metaphors with the following words: "It is the thing that cannot be learnt from others, and it is also sign of genius, since a good metaphor implies an intuitive perception of the similarity in dissimilar" (Poetics, 1459a-3-8). By envisaging

the contradiction with the design instruction concept that is frequently used in this article, based on the fact that a normative activity type, which is based on creative interpretation such as the design, cannot be taught, it can be told that the role of the design instructor can remain limited by only being a catalyst. In an activity type such as the design where an outsourced instruction cannot be processed, the insight of Aristotle regarding the role of metaphors becomes much more important. Theall (2001) points out that even the metaphors that do not seem adequate can function as "Do- It-Yourself" and a "Creativity Kit". The light that Aristotle held centuries ago on the way that goes to finding concepts such as fresh ideas and intuition is now being reinforced by the new yet same-target-pointing lights that today's researchers held. According to Langer who is one of those researchers, "Metaphor is law of every semantic. It is not a development but principle" (1951: 119). From the point of view of Lakoff (1987), new metaphors bear the capacity to create new realities and they create the entire conceptual system that human activities depend on. On the same parallel, Ricoeur (1991) underlines that metaphors increase our perception of reality by shattering our sense of reality and that reality goes through phases of metamorphosis through metaphors. At the end of the design process in studios, it is ideally aimed to reach to a new design reality, which has never existed until then, just like it is in all design situations. In order to achieve this reality, it is a must that our current sense of reality gets through phases of metamorphosis. Otherwise, we can never find the opportunity to add new realities on to existing realities. The above insights of Ricoeur point out that this opportunity can be acquired by the metaphors. Insights of Johnson reinforce those insights: "Metaphorical projection is one fundamental means by which we project structure, make new connections, and remould our experience" (1987: 168).

Student oriented instruction approach becomes more intensive in design studios when compared to normal science education. Because, the design work of the student becomes inherent and turns out to be successful in the ratio of his world perception and interpretation. The problem here is how the studio instructor will understand the world perception of the student and perhaps more important from that is how the student will discover his or her hidden potentiality. Research of Lakoff and Turner (1989) indicates that this problem can be overcome via metaphors; according to them, metaphors are the tools through which people confront their hidden potentialities and which they discover their own world perceptions. As such, metaphors are tools that lead up to a student oriented approach. When compared to the analysis-synthesis method, the student would create a design that he or she would consider it as his or her own commodity via metaphors with a higher motivation.

A point which is in very intimate relation with the previous insights is that the design is kind of a personal journey and discovery exercise (Coyne, Snodgrass and Martin, 1994). Metaphors undertake a function as tools to go on to this personal journey. The reason of this journey is related to our necessity to take a remote glance to a confronted situation and experience by putting a distance for a while (Coyne, 1995). That is because, as Von Oech has pointed out, "It is difficult to see the picture when you are inside of the frame" (1983: 83). Our perception in an interpretative activity rises depending on the increase of the distance. Such secession is provided by a metaphor journey as Weinsheimer (1985) has defined; within the interpretation process we go through an inherent journey in order to perceive

the unfamiliar and the unlikely; this is not a linear repetition rather a journey to go back to the original point, but once we get back, everything will look different than before. Petrie and Oshlag outline the importance of this journey on the educational aspect as follows: "…the educational function we are proposing for metaphor are that it does, indeed make learning more memorable…metaphor is what enables one to pass from the more familiar to the unfamiliar in the sense that it provides key mechanism for changing our modes of representing the world in thought and language" (1983: 589). Meanwhile, Gordon (1961) defines this secession in context with the "metaphor journey" concept as "making the strange familiar" and "making familiar the strange" expressions. According to him, "Play with metaphor one of the most fruitful of the mechanism which can be used to make the familiar strange" Gordon, 1961: 30). Key words for Gadamer are also "familiar" and "strange": "Hermeneutic work is based on a polarity of familiarity and strangeness" (1999: 295).

Uncertainty, contradictions, flashbacks that design activity involve in design studios make the student feel that he or she undertakes a mission which is very hard to fulfill. A metaphoric journey for students might take them away from their problems and put them in the middle of a fast-pace, adventurous game. By this method, the feeling of discomfort might be superseded by a enjoying of relaxing/motivating feeling. "Design can be characterized as generating action within a 'play' of metaphor" (Coyne, 1995: 292). "An emphasis on metaphor also represents a liberal attitude to design cast largely in terms of devising appropriate metaphors rather than solving a problem through theoretical analysis" (Coyne, 1995: 250). Logic-based scientific methodology comprehension on design exactly defines this activity and limits it with operational phases. Snodgrass and Coyne claim that, "The hermeneutical metaphor establishes no such artificial boundaries. Its border are undefined and ambiguous, and this ambiguity is the source of its generative power, or its richness" (1992: 72). Due to previously expressed reasons, the systematic design process based upon problem solving approach is not adequate for the ontology of designing which happens to be an interpretative event, so it is very difficult to get prosperous results with this method. The self-confidence of a student in the design studio who cannot get any productivity out of this method will be damaged and boredom and lethargy will be preeminent. Defining design "as a form of problem solving" will stand for a way of problems that one should challenge with all the time right from the very beginning. Since problems and problem-solving recall people of depressing situations, moving around these notions will make it difficult for students to see themselves in a role in which they are constructive and transformative as well as adequate for the ontology of a designing activity; the desire and energy across designing decrease correspondingly.

Since designing is not only an activity around conscience and logic, subconscious capacity of design students should be triggered as well. Gordon points out the role that metaphors can play as follows "…metaphoric sort of activities operates not only on conscious, but also on preconscious and subconscious levels" (1961: 117). Design activity in design studios is completely a new way of learning, which is totally different from the instruction method based on science, and logic that students have faced. An adaptation problem to the conditions of this new experience is generally confronted. Hyatt indicates how metaphors would help overcome this problem with the following words: "Metaphor also provides means to

inexperienced situations" (2000: 56). Petrie and Oshlag (1993) shared parallel thoughts: "…the very possibility of learning something radically new can only be understood by presupposing the operation of something very much like metaphor" (1993: 582).

It has been observed that design students are affected by the designs of leading designers so they generally are late to create and adopt their own identities. The characteristics of metaphors, which lead to fresh ideas, reshape the reality through metamorphosis and increase intuition make it easier for the student to get free of such effects quickly and find his own personality. Even though the entrance door to hermeneutical circle is opened with a prejudice, this prejudice will transform towards very different directions within these processes and the student will have a complete different point of view over the design which he or she used to deem it as ideal. We can probably use the "prejudice against prejudice" notion of Gadamer (1999) with a different interpretation in order to define this situation. Metaphors' helping designer reveal his own hidden potentiality would inherently help him discover the hidden potentiality over the design subject as well.

According to the direct explanation of Vedder, "The hermeneutics power of metaphor comes from creative ability of the imagination" (2002: 202). Metaphors, in this context, are important catalysts that trigger creativity and imagination all of which are requisite for designing. Davies and Shakespeare outline the function of metaphors as catalysts with the following words: "Metaphors can be the catalyst, acting as springboards for inspired and exciting ideas. The complexity of a site is often a barrier to the creative process. Metaphors can simplify complex structures, condensing disparate elements into single idea" (1993: 30). Metaphors play a role to create basis for intuition, which is a sibling notion for creativity and imagination, and an instruction method based on such basis increases the performance (Hyatt, 2002). In design studios and especially in the initial phases, a need for a "primary generator" notion that triggers the creativity, imagination and intuition of the student emerges. Metaphors with their outlined capacities might be tools that would meet this requirement. At this point, we can generate a "primary generative metaphor" through the synthesis of Gordon's (1961) "generative metaphor" and Darke's (1979) "primary generator" concepts at design studios and propose it for design studios. Metaphor based such approaches in design studios would not mean ignoring other requirements that should be met in design processes, the intersection points of designing and natural sciences and humanities. It only means emphasizing the triggering process of the student's creativity. Because relevant experiences show that once a motivation is gained, other design requirements turn out to be very easy to be fulfilled. For this reason, the primary purpose of design studios is to provide motivation whatsoever.

According to the research of Ornstein (1972), the left cerebral of the brain controls the management of language, mathematics, rationality, deduction, and linear processing of information. The right cerebral controls the skills related to nonverbal and non numerate issues. Perceiving the space, the form and the texture and the holistic appreciation is related to the right cerebral. Smith (1975) claim that every phase of today's educational system aims at developing the left cerebral. Developing skills associated to the right cerebral have completely been neglected. For this reason, a studio approach that depends on metaphors will never mean that the role of the left cerebral

over design education will be underestimated or ignored. It can only be considered as the trial to actuate the skills that have been neglected in the right cerebral. In current conditions, the sole environment for these trials over design education is the design studio.

The dominancy that metaphors have acquired in today's designing is not only a matter of studio practice. It is also about the basic concepts of computer software which is having an increasing role in designing: "The effective use of metaphor seems to be an important consideration in computer interface design" Coyne, 1995: 249). In this time section where a transformation to the Post-industrial era is experienced, we can see that the aim to address individual and personal desires is getting prevalent. The most important characteristics of Post-industrial societies are that the technology becomes intellectual. (Rose, 1991). "Architecture is kind of an intellectual interpretation of technology" (Ayıran, 2002b: 52). In architecture where the aim to meet personal and individual desires have been much more all along when compared to massive technology products, it might be predicted that the aforementioned demands will increase (Ayıran, 2002b). The increase in importance of identity seeking that individuals as well as institutions adopt is another factor, which bring the metaphoric approaches in designing in the foreground. As a matter of fact, it's proven in the state-of-arts of several architects including Gehry, Correa, Koolhaas, Libenskind, Calatrava and Holl that such an approach is more dominantly adopted. In design studios, a research based on metaphors in order to raise the candidate architects competitive for today's and tomorrow's world's design expectations is important. Analysis-synthesis model and the variations thereof which are based on normal science, on the other hand, seem to be inadequate to meet the pertinent demands.

Researches in the psychology field indicate that metaphors do not only trigger emotions and subconscious capacities, but they also are important for the development of reasoning (Gentner, Gentner, 1983). Metaphors, being the basic elements of human thought, are mechanisms which enhance the efficiencies of intellectual activities. They also undertake an important role in scientific studies and inventions (Kuhn, 1993).

6. Some samples of the studio approach that are based on metaphors

It was already pointed out that theoretical and practical aspects of design cannot be separated from each other. This is also valid in design studios. For this reason, it turned out to be necessary to give some sample studies of results related to praxis of these suggested viewpoints. It's inevitable that this only remains within the limited and selected samples framework. The reason why such a drawback is considered is that once any theoretical point of view lacks of a certain relationship with the praxis, it becomes far beyond from being persuasive. Samples are studies selected among the undergraduate level of design studio experiment of the author. Probably, the first point that should be noted here is that results of praxis in a normative discipline cannot lead to an exact judgment in verifying the theory. The second point should be considered that, this experiment has been performed in academic conditions where the enthusiasm of "scienticism" gradually makes design and its education less significant.

This approach is based on a concept where students use a metaphor as a "primary generator" which they think to be important because of conditions historical background of site area, specifications of the project or just

because of their own architectural points of view. It's requested that students claim the metaphoric interpretation that they come up with, as a written text together with a concept sheet. The purpose of this is to let the student get away from the subject for a while to make sure she or he gets to look at the design situation from a totally different aspect and to take the advantage of the subconscious capacity arousing characteristic of metaphors. Some of the students claim that they could only express the metaphoric interpretation that they reach by only visually rather than putting those in words. Since metaphors more often appear as visual images in design, this demand can be positively considered. Even the metaphoric interpretation whose expressions do not look very appropriate for the subject in the first place or do not promise a wide development potential, sometimes improve dramatically with new interpretations that generally arise in the hermeneutic circle of the design process and lead to design which could be accepted as successful.

Naturally, evolving of this metaphoric interpretation will process based on the factors such as the current natural and men-made environment, climate, economy, technology, and physical and psychological needs of men and society. Students will have to challenge with hard processes such as resolving possible contradictions between these factors and their theoretical thoughts. However, it's generally observed that once the student reaches-via metaphors- to architectural idea which they believe to be new and original and also feel that there are their own possession, they gain the motivation to fulfill other conditions of design.

Samples:

School of Fine Arts and Architecture
Place and conditions of the site area: Historical city walls where Golden Gate is located to the west, in Yedikule, Istanbul; the area which is surrounded by coast road and Marmara Sea in the southwest; old gasometers, railways and Yedikule Dungeons on the north. One of the two gasometers structures, which happen to bear industrial archeological characteristic, was demolished. Re-constructing of this demolished gasholder and maintenance of the existing one is still among design data.

First Sample of School of Fine Arts and Architecture
Student: Sinem Binzet / Seventh Semester Project
Things cited from the written comment of the student: "…Golden Gate is a curtain opening to city walls which is assigned to protect the city. City walls and associated dungeons bear many stories from Ottoman convicts to the sultans thereof. Place stories of hundreds of years earlier are completed by the energy, which symbolizes industry revolution and gasometers that is assigned to deliver the energy. Gasometers symbolize the services received by the public. …After the industry revolution,

a. *Concept*

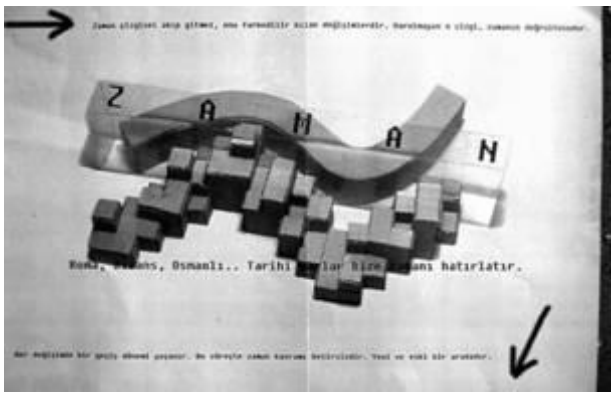
b. *Model*

Figure 1: *Project of Sinem Binzet*

c. *Site Plan*

d. *Elevation*
Figure 1: *Continued*

art unchained from being the property of the elite and became available to the public as well.... Differentiating processes and constitutions in a particular branch of art will obviously be disadvantageous. That's simply because branches of art are inter-connected to one another and each have similarities to other branches of art in their break points. In this form thereof, we can assimilate art to a toy cube of six faces on which there exist nine variable squares. While it carried one color on each surface earlier, after the industry revolution, branches of art interacted with each other, and totally new and different formations occurred. And the most impressive point of this art history is it's reaching the public becoming the property of everyone. The variable, which I think of it as the symbol of the variation and reaching the public and which happens to be the cube that bears 6X9=54 distinct colored small squares, expresses the common purpose via binding with gasometers built for the good of the public."

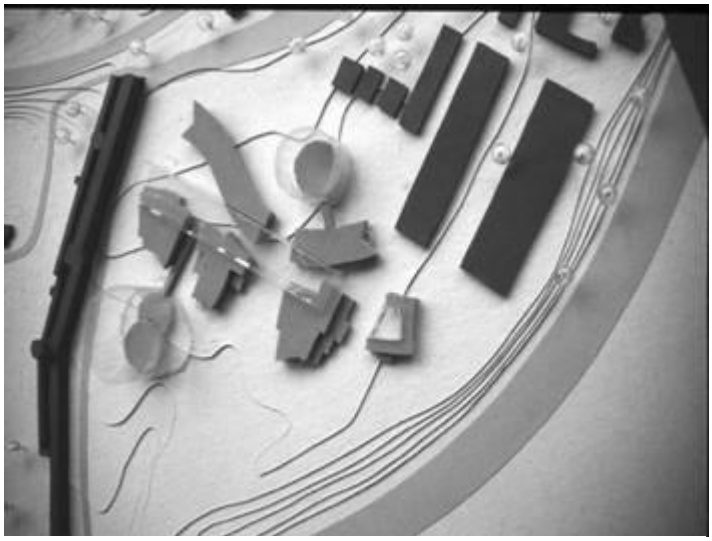


a. *Concept*

Second Sample of School of Fine Arts and Architecture
Student: Murat Adıyaman / Seventh Semester Project
The written explanation of the student on the concept sheet is as follows: "Rome, Byzantium, and the Ottomans… historical city walls remind us of the time. Time does not flow linearly; what make it noticeable are the varieties. That non-existing line is the collinear of time. There is a transition process in every change. Time concept is uncertain in this process. The new and the old are together …"

b. *Elevation*
Figure 2: *Project of Murat Adıyaman*

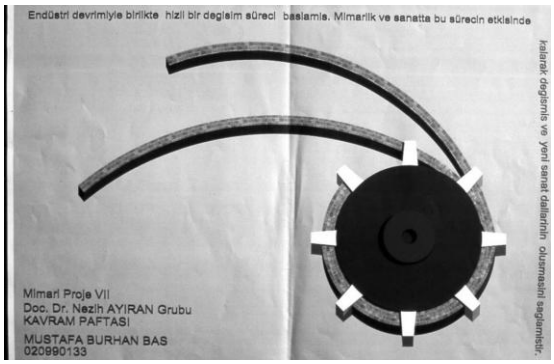
c. *Site Plan*



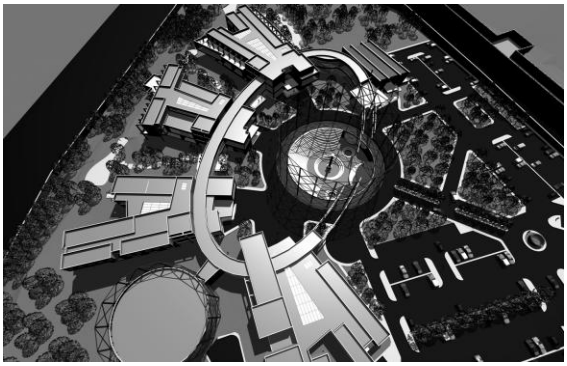
d. *Model*

Figure 2*: Continued*

Third Sample of School of Fine Arts and Architecture
Student: Mustafa Burhan Baş / Seventh Semester Project
The written explanation of the student in the concept sheet is as follows: “A fast-track change process has commenced with the industry revolution. Architecture and art have been subject to and affected by this change and new branches of art have been formed.”

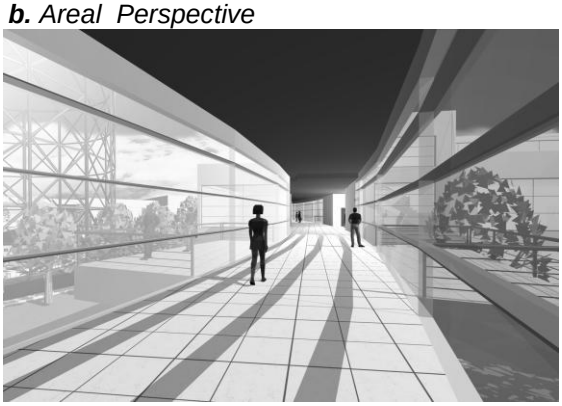


a. *Concept*



b. *Areal Perspective*

c. *Perspective*



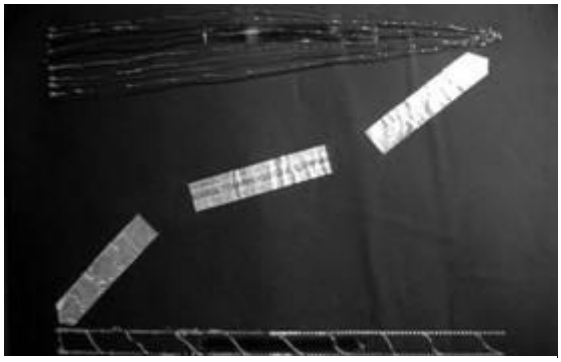
d. *Interior Perspective*

Figure 3: *Project of Mustafa Burhan Baş*

Museum of Modern Art
Place and conditions of the site area: water cistern and “Maksem” located on the west side of Taksim Square, Istanbul, and the place beyond there.

First Sample of Museum of Modern Art
Student: Seda Kaçel / Seventh Semester Project

Words cited from the written comment of the student: “Interview that took place between the project designer and his own inner-world at the beginning of the design process: What are the key words that constitute the project concept, area location and the basic lines of the third dimension? Reflection, Flow, Sparkle and Trip. Why these four concepts? The intersection of art, life, light and water is the characteristic which all of them shelter. Why discovering the life, the light and the water? At the beginning phase of design, I examined Taksim and museum concept. Maskem (where water is allotted) at Taksim and the water cistern are symbols each. Improvement in this area commenced after water has been allotted by Maskem. Water is an important symbol which has a start and flow; it is moving, remarkable, impressive and phenomenal. And museums are art houses … they are more like art mansions. To my own belief, it is impossible to consider art, artists and their pieces of arts independent from life. That is simply because; artists mention about the life itself and all. They examine what is going on out there and reflect those on to our lives. Artists live the life up to full end with their arts and they reflect life to their artworks just to make sure *we* live the life up to full end, meaningfully, and with a notion of complete awareness. And light is an indispensable part of art and museums. With their integrated magic, they attract people to themselves and input meaning to spaces. I was deeply impressed when I had first read



a. *Concept*

b. *Perspective*

c. *Model*

d. *Site Plan*

Figure 4: *Project of Seda Kaçel*

the following words of Louis Kahn: 'There is no space without a natural light.' I made researches at Taksim and museums and reached to art, life, light, and water facts. But, how could I even manage to find an intersection point in-between them? I was supposed to find more abstract concepts. That is because, I was going to carry those abstract notions to my design. My museum was supposed to be reminiscent of these abstract concepts when it was perceived. Art, life, light and water were so concrete to lead me to results that wished for. So I hit the road by considering them all together. Lots of words and concepts popped up in my mind. I wrote and wrote continuously. Finally, I made a decision and reflection, flow, shine and travel were the words that satisfied me the most. All four were present in my concrete concepts and they were almost their common grounds, in other words their intersection areas.

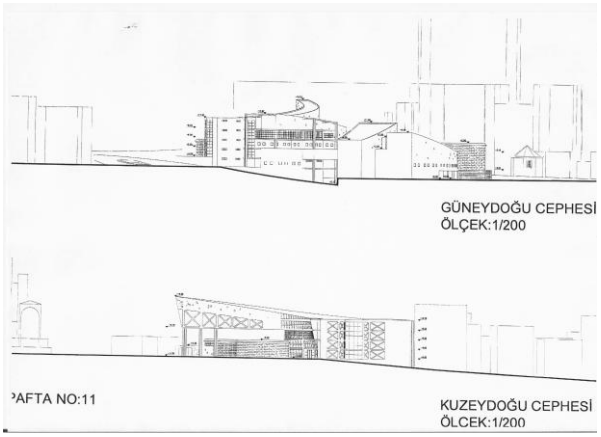
Second Sample of Museum of Modern Art
Student: Sinem Anka Özçürümez / Seventh Semester Project
The written comment of the student is: "…Even though Maskem has lost its function, the water cistern survives and people keep on living in Beyoğlu nearby the water, possessing the water as they always had. They prove that they are alive by performing art… While the contemporary art becomes digitalized and is involved with pixels due to technology's endeavor for existing in all fields, it managed to maintain the water and pulse inside yet trying to search and investigate the most flawless relationship as it has always done so."

a. *Concept*

b. *Model*

Figure 5: *Project of Sinem Anka Özçürümez*

c. *Site Plan*

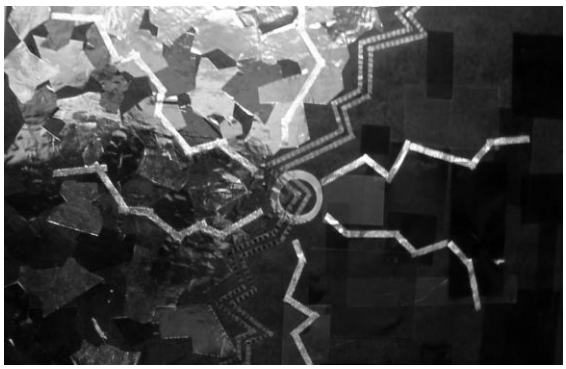


d. *Elevations*

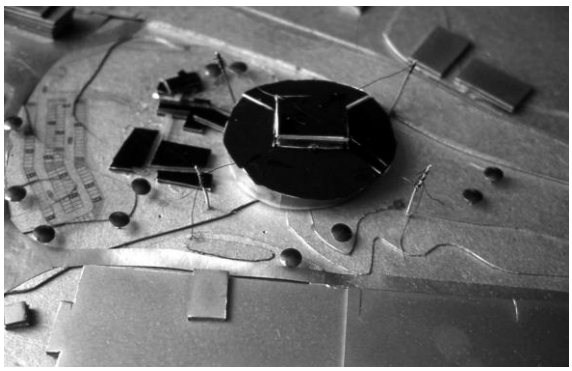
Figure 5: *Continued*

Swimming Pool
Place and conditions of the site area: It is the area in a narrow line at Zeytinburnu, Istanbul on the south of Veliefendi hippodrome and the railways; on the north of the Marmara Sea and the coast road.

First Sample of the Swimming Pool
Student: Melike Beril Alpagut / Sixth Semester Project
The brief written explanation of the student is: “Zeytinburnu changing and differentiating in time … Units differentiating from each other in different shapes and forms… A bridge combining them… The 'magic wand' function.”

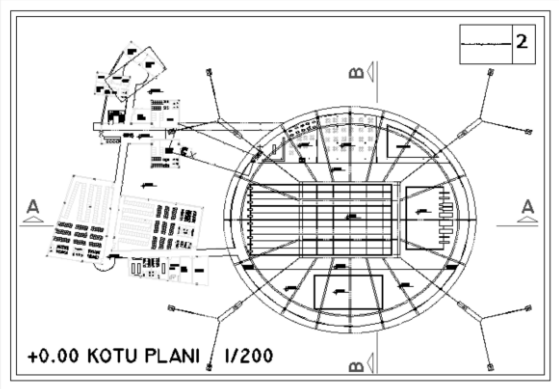


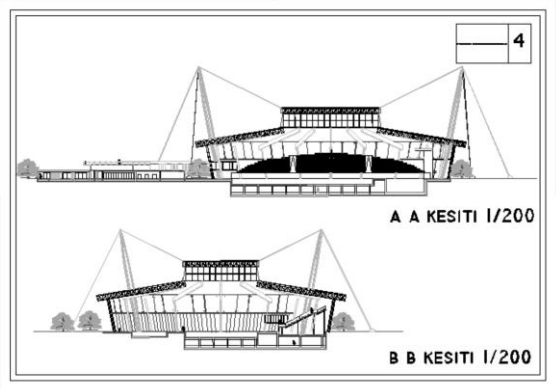
a. *Concept*



b. *Model*

Figure 6: *Project of Melike Beril Alpagut*

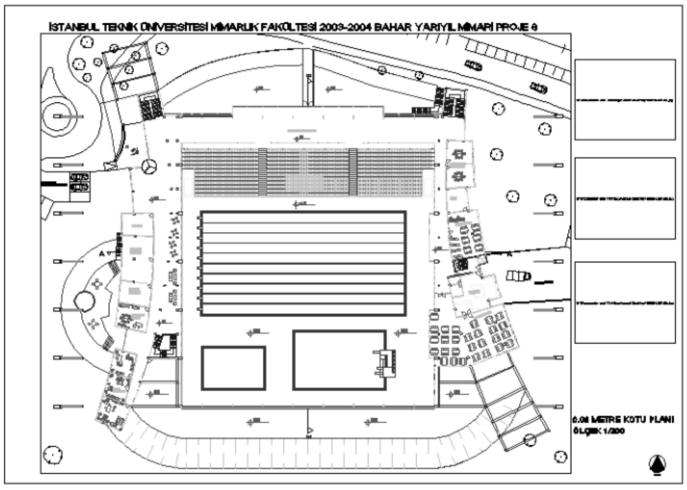




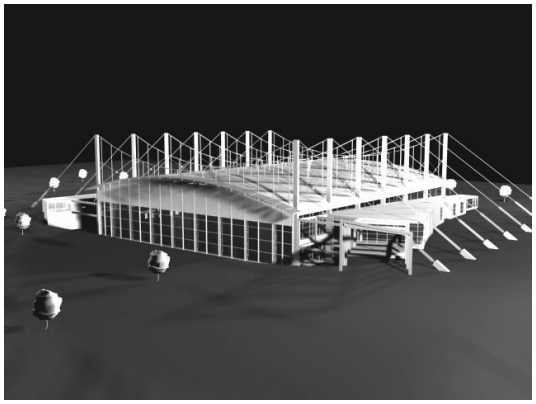
c. *Basement Floor Plan* ***d.*** *Sections*

Figure 6: *Continued*

Second Sample of the Swimming Pool
Student: Ali Şimşek / Sixth Semester Project
Written explanation of the student in the concept sheet is as follows: "The recycle of water in nature… The refreshing effect of water drops over Zeytinburnu… Water's meeting with the *green*. … Relationship of the *green* with the *water*… Water's flowing to the *green*."



a. *Concept* ***b.*** *Basement Floor Plan*



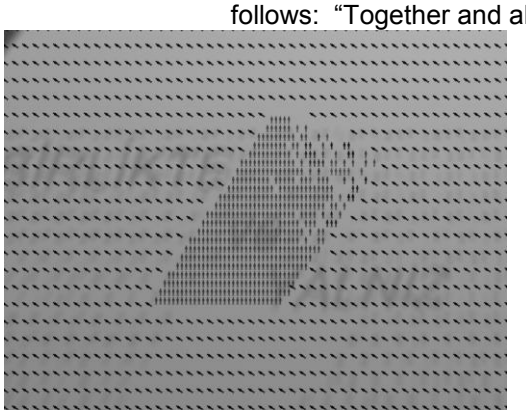
c. *Elevation* ***d.*** *Perspective*

Figure 7: *Project of Ali Şimşek*

Student Housing
Place and conditions of the site area: A building block close to the Göztepe Campus of the University of Marmara, at the Fikirtepe shanty town.

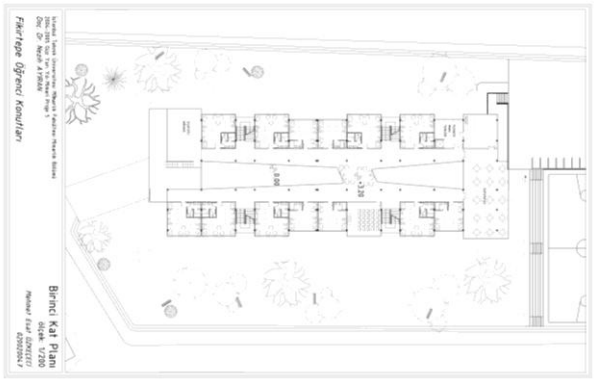
First Sample of the Student Housing
Student: Mehmet Esat Özkeçeci / Fourth Semester Project

The brief written explanation of the student in the concept sheet is as follows: “Together and alone.”



a. *Concept*

b. *Site Plan*

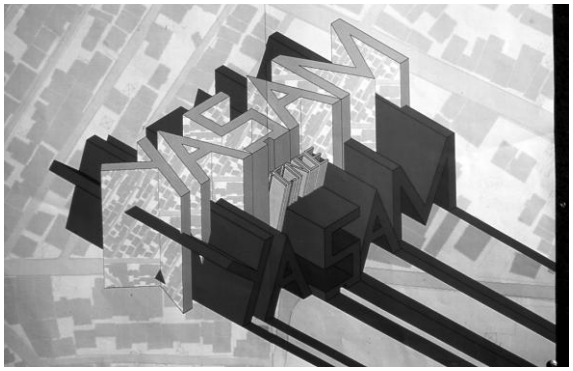


c. *First Floor Plan*

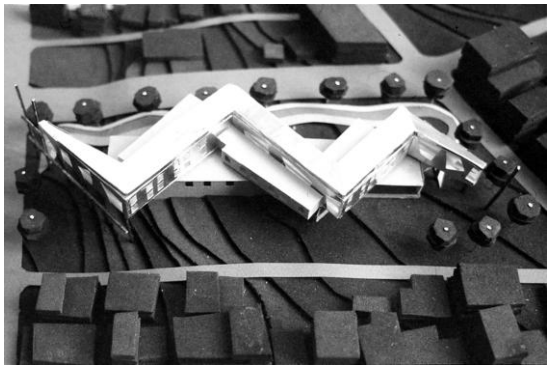
d. *Perspective*

Figure 8: *Project of Mehmet Esat Özkeçeci*

Second Sample of the Student Housing
Student: Begüm Alyemiş / Fourth Semestre Project
Here is the written comment of the student: “...If it isn’t the freedom inside the youth the student that makes them live independently, rebel against the order with little manifests and tiny activities! …While experiencing all those, we reject to hear from anybody the words: “Do not do those, it is a mistake” since we are genuinely willing to get through our own experiences by ourselves. Therefore, we do not wish to get stuck among those who are not excited for the *new,* who live within the “boundaries” that we could never manage to fit in and how even happen to be curious and interventionist. As a result, we choose to be free of the environment that we delay to be a part of for a while and survive in little yet our own worlds dreaming of streets where two lives do not touch one another. Having briefly explained, we want LIFE IN LIFE …”

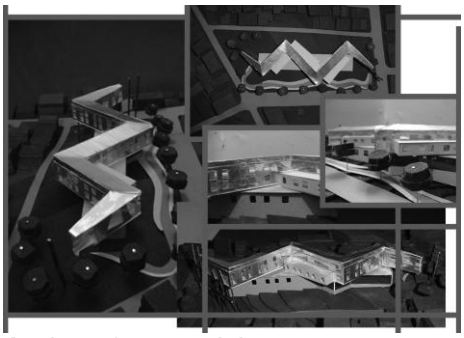


a. *Concept*



b. *Model*

c. *Elevation*



d. *Views from Model*

Figure 9: *Project of Begüm Alyemiş*

7. Conclusions

The aim of this article is to research the conceptual framework of an instruction approach that helps the student in design studios increase his motivation as well as productivity in conjunction with a highly practical and pragmatic target. In order to fulfill this, it is necessary to bring foreground a design definition which is appropriate for the ontology and nature of design activity. The core of this definition is that designing is not “a form of problem solving” that depends on analysis and synthesis concepts but rather an interpretative and hermeneutical event. The conceptual frame reached in conjunction with such a definition is naturally open to different studio approaches. This is because the design is a normative discipline and designing is an interpretative event.

Even if the old enthusiasm of systematic design methods movement under the dominancy of positivist point of view over design instruction is not vivid as before, some concepts that it left behind are now established in our design culture maintaining their indirect effects. Some concepts that are left over from this movement such as analysis, synthesis, and problem solving and methodology still maintain their important place in the design studios’ terminology. Since this theoretical frame, which is based on normal science, is not appropriate for the instruction of design, which is a total different tradition than science, it plays a negative role on student motivation and success in design studios. If today we face a situation such as “design instruction paradigm suffers from the following weakness: motivational difficulties, insufficient instructions of design process and inefficiencies in learning” (Akın, 2002: 414), the most important reason of this is that design instruction is not processed within a theoretical frame which is appropriate for the ontology thereof but rather is processed with the concepts of a

different culture called science. Aforementioned sufferings and weaknesses experienced in design studios can only be overcome by radically introducing a new theoretical frame, which is appropriate for the core properties of design . Because, science and design are two radically different traditions on aims, explanation tools, operation conditions and forms of evaluation aspects. As today's experienced academic conditions show us clearly, design's moving with science methodology means staying indexed with the existence and staying remote from the mission to introduce new stuff. Since design is a hermeneutical event, praxis and theory do precisely not separate from each other in an activity with such qualities. Science, which is an epistemological event, the theory and its application are separable and sequential, in this case, the knowledge and theory guides to the praxis. Considering design as an epistemological event that moves under the guidance of theory just like in science makes it a routine activity.

Defining designing as an interpretative and hermeneutical event, and concepts that highlight in this context will increase the efficiencies of design studios. The most important concept is the metaphor due to its role in a hermeneutical event. At the beginning stages of design, metaphors have the ability to be the tool that help the student take a new and fresh point of view towards the subject by making sure the student recede from the current situation. Metaphors also help the student reveal the hidden potentialities that even he or she is not aware of. In conjunction with the form of designing activities of experienced architects, a primary generator that will trigger the motivation of the student at especially the beginning stages of the design process in the design studios is needed. The primary aim at design studios is to help create motivation. Once this is achieved, experiences prove that other stages of the design process are run much more easily. A studio approach based on metaphors will increase the motivation of the student due to the fact that the student will adopt the design he or she created as his or her own commodity.

References:

Akın, Ö. (1984), "An Exploration of the Design Process" in Cross, N. (Ed.) , **Development in Design Methodology**, John Wiley & Sons, Chichester, pp.189- 208.

Akın, Ö. (2002), "Case-Based Instruction Strategies in Architecture", **Design Studies**, Vol. 23, No: 4, July, pp. 407-431.

Ayıran, N. (2002a), "Mimarlık Eğitiminin Öz Gereklilikleri", **Mimarlık ve Eğitim Kurultayı I**, 3-4-5 Aralık 2001, İstanbul, Kardelen Ofset, Ankara, 2002, pp. 140-150.

Ayıran, N. (2002b), "Kategorileri ve Rolleri Açısından Mimarlıkta Metaforlar",**Mimar-ist**, No: 5, Bahar, pp. 39-54.

Bernstein, R.J. (1983), **Beyond Objectivism, and Relativism**, Basil Blackwell, Oxford.

Coyne, R.D. (1991), "Objectivity and the Design Process", **Environment and Planning B: Planning and Design**, Vol. 18, pp. 361-371.

Coyne, R. (1995), **Designing Information Technology, From Method to Metaphor**, MIT Press, Cambridge, Massachusetts.

Coyne, R., Snodgrass, A. (1991), "Is Designing Mysterious? Challenging the Dual Knowledge Thesis", **Design Studies**, Vol. 12, No: 3, July, pp.124-131.

Coyne, R., Snodgrass, A., and Martin, D. (1994), "Metaphors in the Design Studio", **Jounal of Architectural Education**, Vol. 48, No: 2, November, pp. 113-125.

Colquhoun, A. (1981), **Essays in Architectural Criticism, Modern Architecture and Historical Change**, MIT Press, Cambridge, Massachusetts.
Cross, N. (1982), "Designerly Ways of Knowing", **Design Studies**, Vol. 3, No: 4, October, pp. 221-227.
Cross, N. (2001), "Designerly Ways of Knowing: Design Discipline Versus Design Science", **Design Issues**, Vol. 17, No: 3, Summer, pp.49-55.
Csikszentmihalyi, M. (1996), **Creativity, Flow and the Psychology of Discovery and Invention**, Harper Collins, New York.
Darke, J. (1979), "Primary Generator and the Design Process", **Design Studies**, Vol. 1, No.: 1, July, pp. 36-44.
Davies, A., Shakespeare, R. (1993), "Mixing with Metaphors", **Landscape Design**, May 1993, pp.30-34.
Eder, W.E. (1995), "Engineering Design-Art, Science and Relationship", **Design Studies**, *Vol. 16, No: 1, January,* pp,117-127.
Einstein, A. (1951), "Remarks Concerning the Essays Brought Together in this Co-operative Volume" in Schilpp, P.A. (Ed.), **Albert Einstein Philosopher Scientist**, Harper, New York.
Feyerabend, P. (1987), **Science in a Free Society**, Verso, London.
Feyerabend, P. (1988), **Against Method**, Verso, London.
Gadamer, H.G. (1999), **Truth and Method**, Continuum, New York.
Gentner, D., Gentner, D.R. (1983), "Flowing Waters or Teeming Crowds: Mental Models of Electricity", in Gentner , D., Stevens, A. (Eds.), **Mental Models**, Erlbaum, Hillside, New Jersey, pp.99-128.
Gordon, W.J.J. (1961), **Synectics**, Harper and Row, New York.
Grant, D. (1979), "Design Methodology and Design Methods", Design Methods and Theories, 13:1; quoted in Cross, N. (2001), "Designerly Ways of Knowing: Design Disciline Vesus Design Science", **Design Issues**, Vol.17, No:3, Summer, p.53.
Gregory, S.A. (1966), "Design and Design Methods", in Gregory, S.A. (Ed,), The Design Method, Butterworths, London, quoted in Cross, N. (1982), "Designerly Ways of Knowing", **Design Studies**, Vol. 3, No: 4, October, pp. 221-227.
Heidegger, M. (1962), **Being and Time**, Trans. Macquarrie, J., Robinson, E., Basil Blackwell, London.
Heidegger, M. (1982), **The Basic Problems of Phenomenology**, Trans. Hosfstadter, A., Indiana University Press, Indiana.
Hyatt, M.H. (2000), **Metaphoric Models for Creative Thinking**, Stanford University, Unpublished Ph.D. Dissertation.
Johnson, M. (1987), **The Body in the Mind: The Body Basis Meaning and Reason**, Chicago University Press, Chicago.
Jones, J.C. (1963), "A Method of Systematic Design" in Jones, J.C., Thornley, D. (Eds.), **Conference on Design Methods**, Pergamon Ltd., Oxford.
Jones, J.C. (1970), **Design Methods**, Wiley-Interscience, Letchworth.
Kuhn, T.S. (1970), **The Structure of Scientific Revolutions**, The University of Chicago Press, Chicago.
Kuhn, T.S. (1993), "Metaphor in Science" in Ortony, A. (Ed.), **Metaphor and Thought**, Cambridge University Press, Cambridge, pp.533-542.
Lakoff, G. (1987), **Women, Fire and Dangerous Things: What Categories Reveal About the Mind**, University of Chicago Press, Chicago.
Lakoff, G., Johnson, M. (1980), **Metaphors We Live By**, University of Chicago Press, Chicago.
Lakoff, G., Turner, M. (1989), **More Than Cool Reason: A Field Guide to Poetic Metaphor**, Chicago University Press, Chicago.

Langer, S.K. (1951), **Philosophy in a New Key**, Harvard University Press, Cambridge.
Langer, S.K. (1957), **Problems of Art**, Charles Scribner's Sons, New York.
Love, T. (2002), "Constructing a Coherent Cross-Disciplinary Body of Theory About Designing and Designs: Some Philosophical Issues", **Design Studies**, Vol. 23, No:3, May, pp.345-361.
Norberg- Schulz, C. (1966), **Intentions in Architecture**, Grondahl & Son, Oslo.
Ornstein, R. (1972), **The Psychology of Consciousness**, W.H. Freeman, New York.
Petrie, H.G. Oshlag, R.S. (1993), "Metaphor and Learning" in Ortony (Ed.), **Metaphor and Thought**, Cambridge University Press, Cambridge.
Poirier, R. (1966), **A World Elsewhere: The Place of Style in American Literature**, Oxford University Press, Oxford.
Polanyi, M. (1966), **Tacit Knowing**, Doubleday, New York.
Popper, K.R. (1980), **The Logic of Scientific Discovery**, Routledge, London.
Popper, K.R. (1991), **Objective Knowledge**, Clarendon Press, Oxford.
Popper, K.R. (1992), **Realism and the Aim of Science**, Routledge, London.
Ricoeur, P. (1991), "**A Ricoeur Reader in Reflection and Imagination**" in Valdes, M.J. (Ed.) , University of Toronto Press, Toronto.
Rittel, H. (1970), "Some Principles for the Design of Educational System for Design", **DMG Newsletter**, Vol. 4, No:12, pp.3-18.
Rittel, H., Webber, M. (1973), Dilemmas in General Theory of Planning, **Policy Sciences***,* 4, pp.155-169.
Rose, M.A. (1991), **The Post Modern and the Post-Industrial**, Cambridge University Press, New York.
Simon, H.A. (1969), **The Science of Artificial**, MIT Press, Cambridge, Massachusetts.
Simon, H. (1973), "The Structure of Ill-Structured Problems, **Artificial Intelligence** 4, pp.181-201.
Schön, D.A. (1983), **The Reflective Practitioner, How Professionals Think in Action**, Basic Books, U.S.A.
Schön, D. (1985), **The Design Studio**, RIBA Publications Ltd., London.
Smith, P. (1975), "Peter Smith Supports the Right Against the Left in Education", **RIBA Journal**, January 1975, pp.12-14.
Snodgrass, A., Coyne, R. (1992), "Models, Metaphors and the Hermeneutics of Designing", **Design Issues***,* Vol. 9, No: 1, Fall, pp. 56-74.
Snodgrass, A., Coyne, R. (1997), "Is Designing Hermeneutical?", **Architecture Theory Review***,* **Journal of the Department of Architecture**, The University of Sydney, Vol. 1, No: 1, pp. 65-97.
Theall, D.F. (2001), **The Virtual Marshall McLuhan**, McGill-Queen's University Press, Montreal.
Vedder, B. (2002), "On the Meaning of Metaphor in Gadamer's Hermeneutics", **Research in Phenomelogy**, Vol. 32, pp.196-209.
Von Oech, R. (1983), A Wack on the Side of the Head , Warner, New York; quoted in Hyatt, M.H. (2000), **Metaphoric Models for Creative Thinking**, Stanford University, Unpublished Ph.D. Dissertation.
Weinsheimer, J.C. (1985), **Gadamer's Hermeneutics: A Reading of Truth and Method**, Yale University Press, New Haven.
Willem, R.A. (1990), "Design and Science", **Design Studies***,* Vol. 11, No: 1, January .

Bu yazının amacı son derece pratik ve pragmatik bir hedef doğrultusunda tasarım stüdyolarında öğrencinin motivasyonunu ve verimliliğini artırıcı bir öğretim yaklaşımının kavramsal çerçevesini araştırmaktır. Bunu yapabilmek için öncelikle tasarım faaliyetinin ontolojisine ve özelliklerine uygun bir tasarım tanımının ortaya konmasını gerektirir. Böyle bir tanımlamaya bağlı olarak ulaşılan kavramsal çerçeve, doğal olarak farklı stüdyo yaklaşımlarına açıktır. Temel tutumu açısından bu makale, daha önce çeşitli müelliflerce öne sürülen görüşlerin tasarım ve tasarım stüdyoları üzerine olası yansımaları konusunda yoruma dayanan bir çalışmadır. Yorumlamadan öte bir anlam taşımaz. Mevcudu araştırmaya indeksli doğal bilim metodolojisine uygun bir tutum burada söz konusu değildir. Bu anlamda bir uygunluk makalenin temel görüş açısı ile ciddi bir çelişki oluştururdu. Mevcudu araştırmaya dayanmadığı için de hiç kuşkusuz spekülatif bir bakış açısıdır. Spekülasyonun alışılagelen kullanışta negatif anlam yüklü bir kavram olması ondan uzak durmayı gerektirmez. Hemen her kuramsal ve felsefi çalışma için kaçınılmaz bir durumdur Çünkü, sözlük anlamı açısından spekülasyon kuramın eşanlamlısıdır.

Tasarımın ontolojisine uygun bir tasarım tanımının ortaya konabilmesi öncelikle, tasarım ve bilim farklılığının irdelemesini gerektirir. Simon'a (1969) göre, tasarım ile bilim arasındaki temel farklılık, tasarımın "bir şeyin nasıl olması gerektiği", biliminse bir şeyin "nasıl olduğu" ile ilgilendiğidir. Aralarındaki amaç, yaklaşım ve metot farklılıklarına rağmen, doğal bilimler ile insan ve toplum bilimleri sonuç olarak mevcut bir durum, varlık ve olayla ilgilidir. Tasarım ise "birincil doğayı" , bazen sportmence yarışılması gereken güçlü bir rakip, bazen de uyum içinde bulunulması gereken yakın bir dost olarak kabul eden bir anlayışla, "ikincil doğa" diye de tanımlanabilen yeni bir durumu ortaya koyma etkinliğidir. Böyle bir ontolojik durum çerçevesinde mimarlığa bakıldığında, onun sentez yapma, dönüştürme, özgürce arama gibi kavramlara dayanan "konvansiyonel" tutumunu koruduğunda, yeni çevrelerin ve buna bağlı olarak yeni kavramların ortaya çıkmasına yol açarak gelişeceği, doğal bilim modeline başvurma gibi "yenilikçi" heveslere kendini kaptırdığında ise, "konvansiyonel" olanın dar kalıpları içine sıkışıp kalacağı gibi paradoksal bir sonuçla karşı karşıya kalırız. Günümüz akademik ortamında doğal bilim modelinin egemenliği ve kurumsal yapılanma içinde mimarlığın doğal bilimlere ilişkin bir faaliyet şekli olarak görülmesi, bu anlamda bir paradoksu yaratarak mimarlık eğitiminin kendi ontolojik gereklilikleri çerçevesinde sürdürülmesini son derece güçleştirmektedir. Bu koşullarda mimarlık eğitimcilerinin egemen doğal bilim modeline uygun olarak aktivitelerini mevcudu araştırmaya kaydırmaları ve bunun tasarım stüdyoları üzerindeki yansımaları günümüz mimarlık eğitiminin önde gelen problemidir.

Tasarlama eğitiminde pozitivist ilkelere bağlı doğal bilim modelini esas almayı amaçlayan 1960 ve 1970'lerdeki "sistemli tasarlama metotları hareketi"nin eski hararet bugün geniş ölçüde sönmüş görünse de, bu hareketin geride bıraktığı, tasarlama kültürümüze yerleştirdiği, analiz ,sentez, problem çözme gibi kavramlar stüdyo öğretimindeki kilit rollerini hala korumakta ve tasarımın "bir problem çözme şekli" olarak tanımlanması günümüzde stüdyo öğretimi yaklaşımlarının temel referansı olmayı sürdürmektedir. Hangi problemin çözüleceğinin genellikle tam olarak bilinmediği, ayrıca, süreç sırasında "çözümü bulmak" için problemin değişikliğe uğratılabildiği tasarlama gibi bir aktivitede böyle bir tanımlamayı esas alan bir öğretim paradigmasının öğrenci motivasyonunu sağlamada yetersiz kaldığı görülmektedir. Eğer bugün, "tasarım öğretimi paradigması, motivasyonel güçlükler, tasarım sürecinin öğretiminde yetersizlikler, randımansız öğrenme gibi sıkıntılarla" (Akın, 2002: 414) karşı karşıya kalıyorsa, bunun en önemli nedeni, tasarımın ontolojik gerekliliklerini karşılamaktan uzak böyle bir tanımlamanın temel referans olarak kabulüdür.

Simon'un (1969) tasarımın "bir şeyin nasıl olması gerektiği" ile ilgili olduğu görüşü, her tasarımcının o şeyin nasıl olması gerektiği konusunda farklı bir düşünce ve yoruma sahip olabileceğinin de kabulü anlamına gelir. Böyle bir yorum ise kaçınılmaz olarak tasarımcının daha önceki kavrayışlarının bir türevi olacaktır. Çünkü, biz her şeyi daha önceki kavrayışlarımız çerçevesinde anlamlandırır, ona göre hareket eder ve ona göre üretiriz. Bu açıdan bakıldığında tasarlamanın, "bir problem çözme şekli"

olarak değil, bir yorumlama ve *"hermeneutic"* bir aktivite olarak tanımlanması gerekir. Bu pratikte çalışan mimarların davranış şekli ile de doğrulanmaktadır. Dolayısıyla, böyle bir tanımlamaya bağlı olarak ön plana çıkan kavramlar çerçevesinde geliştirilecek yaklaşımların tasarım stüdyolarının etkinliğini artıracağı öngörülebilir. Epistemolojik bir olgu olan bilimde kuram ve uygulama ayrı ve ardışıktır; kuram uygulamaya rehberlik eder. Normal bilim esaslı modeller tasarım stüdyoları için de aynı çalışma şeklini önerirler. Böyle bir çalışma şekli ise onun ontolojisine aykırıdır, tasarımı rutin bir aktiviteye dönüştürme sonucunu yaratır. Tasarım bilgisi, en işlevsel ve operasyonel şekliyle, belirli bir tasarım durumunda *"hermeneutic"* döngüde gelişen, sadece o tasarıma ilişkin ve o tasarım bağlamında anlamlı bir bilgidir, genelleştirilmesi zordur. *"Hermeneutic"* bir aktivitede kuram ve uygulama birbirinde kesin sınırlarla ayrılamaz, iç içedir. Kuramın uygulamaya rehberlik etmesi söz konusu değildir. Bu açıdan da tasarlamanın yorumsal ve *"hermeneutic"* bir aktivite olarak tanımlanmasının onun ontolojisine uygun düştüğü görülmektedir.

"Hermeneutic" bir aktivedeki rolü açısından en önemli kavram metafordur. Tasarımın başlangıç aşamalarında, öğrencinin konuya farklı, yeni ve taze bir görüş açısından bakabilmesi için metaforlar içinde bulunulan durumdan bir süre uzaklaşmayı sağlayan araç olma yeterliğine sahiptir. Metaforlar ayrıca, öğrencinin içinde kendisi için bile gizli kalmış kapasiteleri ortaya çıkartmada yardımcı olurlar. Yetişkin mimarların tasarlama faaliyet şekline uygun olarak, tasarlama stüdyolarında da özellikle tasarım sürecinin ilk aşamalarında öğrencinin motivasyonunu tetikleyecek "temel bir saik"e ihtiyaç duyulmaktadır.Tasarlama stüdyolarındaki öncelikli amaç motivasyonun sağlanmasıdır. Bu başarıldığında tasarım sürecinin diğer aşamalarının daha kolay yürüdüğünü deneyimler göstermektedir. Metaforlara dayanan bir stüdyo yaklaşımı öğrencinin yaptığı tasarımı kendi öz malı gibi benimsemesini sağladığı, yeni ve özgün olana ulaştırma potansiyelinde olduğu için motivasyonu artıracaktır.

Tasarlama hiç kuşkusuz bilinç altına ve duygulara dayanan kesintisiz bir yorumlama süreci değil, son derece örgütlü bir emektir. Bu konuda fazla bir tartışma da yoktur. Tasarım stüdyolarında ulaşılan metaforik yorumun, mevcut doğal ve mimari çevre, iklim, teknoloji, ekonomi, insan ve toplumun fizyolojik ve psikolojik gereksinmeleri gibi etkenlerin göz önünde tutularak, bu etkenlerle kavramsal düşünce arasındaki olasılı çelişkilerin çözümlenerek geliştirilmesi, doğru ve yeterli mimari anlatım teknikleri ile tasarımın ortaya konması gibi öğrencilerin önünde aşılması gereken zorlu süreçler bulunmaktadır. Metaforlara dayanan bu anlamda bir yaklaşım, bu gerekliliklerini önemli saymamak anlamını taşımaz, sadece tasarlamanın ontolojik gereklilikleri çerçevesinde şiddetle ihtiyaç duyulan, ancak günümüz eğitim sisteminin her aşamasında geliştirilmesi ihmal edilen yetenekleri harekete geçirmeyi amaçlar. Bu makalede öne sürülen görüşler deneme niteliğinde yazarın lisans düzeyindeki tasarım stüdyosunda uygulamaya geçirilmeye çalışılmıştır. Altıncı Bölüm bu deneme konusunda bazı bilgi ve örnek çalışmaları içermektedir.