1. Introduction

Today, commentators and designers have shifted their attention to the integration of different fields of knowledge, in order to gain a better understanding of holistic meanings, which have often been neglected as a result of decades of reductionism. As an interdisciplinary practice, architecture benefits from many different fields of knowledge, often justifying the final product via theoretical issues in the epistemological atmosphere. Accordingly, in recent years, many architects (the author included) have contemplated on the interrelation between science, art, philosophy and religion.

In philosophy, existing phenomena have two main characteristics. The first is internal and concealed; it is natural potential providing the possibility of change from within, which is the main source of transformation in the universe (similar to Heidegger's Physis). The second is the essence of composition and innovation (Techne), which unfolds hidden potentials as a cause of "being" within the domain of art (Poiesis). Thus, by hearing the divine voice of the Originator (Logos), the artisan realizes the existence of things and by pursuing a recurrent narrative theme (Mythos) realizes the becoming of phenomena. Therefore, Man tries to create things that possess truth and deep meanings, which are rooted in culture and history.

Focusing on truth and using it to actualize imagination is one particular method to define the design process and the notion of creation in man-made products. For example, Heidegger [1] emphasizes on truth as "Dasein" to understand the concept of "being". He regards truth as a coincidence of mentality with objective matters. He propounds "aletheia", which was converted by Plato into "idea" and then was forgotten, as non-concealment. Therefore, truth according to Heidegger, is perpetually oscillating between non-concealment and
concealment.

"Being" is not necessarily what exists, but rather it can be something else. In its process of becoming apparent as that which exists, Being conceals that which can be. Being is always more than that which is apparent. In other words, that which becomes apparent always conceals other possibilities which remain hidden. Revealing occurs where Man establishes a relationship with the non-being (hidden being) of things; when he is addressed by things instead of things being governed by his will. In this position, Man is a witness to the revealing or coming to light of things. But, as soon as Man tries to impose his dominating wills on things, the truth of their "Being" becomes concealed. Heidegger considers subject-centric thought as governed by the deeds of a forceful will, while a free thought is defined as that which is subject to the light of the revelation of things as they are. Thus, truth becomes the disclosure of beings through which essence unfolds into appearance. That is called "Gelassenheit" or freedom in thinking.

One can develop this theory using the different stages of perception associated with the world of Nasoot, one of the Sufi's five worlds: Hahoot (essence of God), Lahoot (world of God's names), Jabaroot (origin of angels), Malakoot (world of sensual appearance) and Nasoot (material world), which are described as the different layers of "intuition", "wisdom", "knowledge" and "science". For example, in the general and experimental stage of intuition, there is no mechanism for the dominating will to impose itself. However, as the process gradually advances towards the materialization and specification of thought, the domination of rational and scientific principles spreads until the mechanisms and rational man-made products emerge. This dominating power, according to Heidegger, takes Man under its reign instead of being at his service. Such dominance of human will causes the concealment of truth. Thus, freedom is necessary for attaining the truth, whereas hegemony conceals the meaning of "being". However, withdrawing from dominance over things is just one moment of freedom. In other words, Man must always be in the position of exposure to the revelation of truth, rather than the position of dominance which causes the concealment of truth. This is because hegemony and dominating will always cause the concealment of certain aspects of Being.

Industrial production, when it becomes the transformation of nature into utilitarian goods, is the concealment of Being. On the contrary, as Man experiences his humanity along nature close to others and things as they are, he approaches the non-concealment of truth of "being" [1]. It is with reference to this philosophical approach that a minority of architects (which includes the author) are looking for a space which is the result of people participation in the construction of their own dwellings. With this in mind, the author argues that instead of "design for people" or "design with people" [2] it is possible to propose "design by people" which would be more successful in the revelation of truth (or the non-being aspects of being).

Thinking in heideggerian philosophy is non-thingness, non-systemic and non-computational, or in other words, intuitive. According to Heidegger, in the pre-Aristotelian era, the word "Logos" was not used for the rational relationship between things, but rather it was used to describe the harmony between the worlds of Man's thought and being. However, metaphysics after Aristotle interpreted logos as the rational relationship between things and reduced thinking to judgment based on rational techniques of thought. Turning back to essential principles in order to qualify life has been of great concern for some theoreticians in architecture who have sought to give a definition to the essence of truth and the nature of technology in technical and artistic dimensions. There is no doubt that the answers they arrive at, possess a significant role in improving our understanding of the process of design, especially architectural design and its relative pedagogical strategies.

2. Revealing the Truth

In Heidegger's viewpoint, occurrence of things is in time and language and poiesis is the virtue of thought and consciousness of being which overtures our usual perception and lead us to experience peculiar relation among things. Poetry, for Heidegger, is the highest manifestation of language as that which unites thinking with being. In poetry the revelation of truth becomes possible. If true existence is the cause of the emergence of existence, poetic thinking is the cause of the revelation of truth. Thus, all art, as the letting happen of the advent of truth, is essentially poetry. True language moves us towards the place of ever quietness. In poetic thought, being-in-the-world overcomes our interpretation of the world and so thought becomes free of concerns for economical or political exchange. Therefore, I and the others find the opportunity to be free of such strategic orientation towards one another making poetic language the most genuine way of being-with-others and being-in-the-world.

The hierarchical process of revealing, particularly in architecture, is especially sophisticated. Elaborating such ideas through epistemology, one can arrive at the conclusion that not only are such concepts helpful in solving life's problems, but they can also support the claim that all human beings are artists. Therefore, the different processes through which architecture is brought into existence gain a new significance.

In the language of architecture there is poetry which is not only original and intellectual, but it also attempts to actualize truth by using technologies and different techniques. Thus, there are certain pedagogical methods in which students of architecture are encouraged to temporarily put aside their preconceptions in order to approach the essence of truth and discover deep and hidden meanings, instead of following their own personal presuppositions. Here, the author proposes an alternative approach to design based on the following conceptual layers:

- Concepts: which are a legacy of the past; which originated from the previous experiences and are accepted by experts in the field;
- Personal Images of Thought: intuitive discoveries and poetical sensations that attempt to relate reality with the real. These personal projections are aesthetic and personal interpretations that look into the future;
- Ideas and Beliefs: that concern timeless and placeless affairs beyond the dominance of reasons, which regardless of common consensus deal with personal beliefs such as

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ideology, religious beliefs, philosophical orders, cultural
values, mystical inspirations, myths and so on.

According to the above proposal, each of these domains of
thought creates its own architecture, emerging from the depth
of beliefs and theories to the surface of phenomena, e.g.
"functional space", "artistic place" and even "sacred place"
(Figure 1).

When designers assume the position of outside-the-self,
meaning that they expose themselves to events and people
without any dogmatic preconception, they allow potentialities
to become actualized and revealed. Thus, truth is attained by
letting go. In other words, truth is not achieved by the correct
definition of an "object" explained by a "subject" (designer),
but rather, it is arrived at through an appropriate positioning of
oneself in relation with things and people without the authority
of dominating will. With this in mind and after the above
discussion about the essence of being, it is important now to
devote some time to the different ways of becoming. For this,
the author follows the formation process of man-made
products through the "production process" paradigm, which is
one of the paradigms in his endogenous development model,
proposed by the author in 1998, as well as Aristotle's
conception of cause and effect which describes the
relationship between final, subjective, material and formal
causes, with an added emphasis on final cause.

Although the need for standards of manufacturability, utility
and durability are always present, yet paying attention to users' needs for a creative architectural solution is much more
significant. Following this thought leads to a "People-centric organization", versus the concept of "Goods-centric Organization" [4], in which the feedback (opposite to feed-
forward) from people's perceptions and concerns leads to the
improvement and evolution of theories. This proposed model is a dual transition from theory to case and vice versa. In
presenting an appropriate understanding of Endogenous Development, the proposed model looks at the scientific
process of design, which moves from theory to case via deductive reasoning, and also tries to point out to a reverse
process from case to theory developed by an intuitive,
inductive inference. In the first route, creativity is one of
discovery of scientific, technical and technological achievements that are useful for executing products. In the
second route, creativity is of the innovative kind which works
according to ideals that are the results of instinctive knowledge
or understanding, which stem from feelings and individual
imagination. This distinguishing quality, which is a divine gift
awarded to people, asks more about the origin of products
(why), rather than questioning ways in which they have been
produced (how).

Defining the architects' role in different stages of the design
process to qualify the structure of space, Habraken words [5]
illuminate new dimensions of design. He writes: "creativity is
an individual activity but designing is accomplished by
people". Design is an activity for people, with people and by
people. Creativity is a process within the architect's individual
domain, which s/he should create and get approval for. This
means that promoting the quality of design is not only based
on the designer's creativity, but it is also dependent on the
creative powers of the users, authorities, private and public
corporations, consultants and contractors. The quality of
architecture should lead us to the quality of life. Figure two
illustrates some ways people and authorities use to contribute
to the design process, which has different levels of control and
supervision.

Design has been defined as a controlled, goal seeking and
problem solving process. On the other hand, it has been argued
that the growing differences in scientific and artistic fields
have made it difficult for designers to carry out the whole
process of design. Thus, the knowledge, experience and
innovation of designers in the different fields has to be
organized in such a way that they act as a contributor in the
design process. In this light, design becomes a "decision
making process" of a unified team. Each individual, while
respecting the common goal of the team, motivates the process
with her/his personal desires and interests. Lawson [6]
classifies the contributors of a design process into designers,
clients, users and legislators whose work alter from
nonobligatory to compulsory projects.

Having the above theories in mind, the author has set up two-
way studios in which students of architecture are able to
contribute to their own education and organize their findings
structured models of thought. It is clear that data is abundantly
available in books and articles. Even collecting information
(processed data) is not the main aim of this studio. Instead, an
attempt has been made to place students in a position where they can construct a model of thought to better understand the opportunities and threats presented by the environment and the strengths and weaknesses of their own designs.

Thus, in this approach to design, it is possible to pursue the relationship between subject and object, fact and act and cause and effect. Though Descartes' subject-object duality is less popular these days, it is nonetheless possible to argue that the aforementioned endogenous method in architectural education, proposes an alternative approach in which subject and object are conceived as the two ends of the same stick. In other words, the author argues that they are in close relations with each other and their point of separation is not easily discernable. Thus, the emphasis of the proposed method is to train good architects in order to reach good architecture. Moreover, students are encouraged to seek the origin and structure of architectural products using their Endogenous Model. Though they are interested in the quality of their final products, they also search for depth of truth and the initial starting point that determines the nature of their designs. Another outcome of this transcendent journey is their delight and passion in learning from the environment and also from their own experience. Therefore, the aim of this method is to direct the students towards the origin and depth of meaning so that whilst striving for scientific and artistic results, they are able to improve their individual creativity and transform themselves.

In such studios, after a few sessions discussing the theoretical aspects of the process, students begin working with mud. In the theoretical stage, they become fully familiar with the process of design by preparing pictorial models and learning from each other's experiences. They begin their design process from general to specific through three stages, then they proceed to designing from specific to general. (Figure 3)

The first exercise of working with mud is intuitive in which students are encouraged to resist imposing their will and knowledge to shape the mud. Instead, they must allow the mud to reveal hidden meanings as it communicates to them. This exercise occurs in an abstract atmosphere with specific messages, where forms are found through working with pictorial grammar and the students' own skills (Figure 4).

The second exercise is an attempt by the students to transform the result of the first exercise into something that belongs to the practical architectural domain and follows the laws of gravity and geometry and responds to functions and requirements, whilst maintaining an appropriate form and composition (Figure 5).

In third exercise students are prepared to adapt the result of their experience in the second stage with client's expectations, site requirements, climatic situations and other confinements. They are allowed to use other materials like cardboard and foam board to present their ideas. Through these three stages students realize that their new, individual creations are closely related to their personalities. At the end of this stage the character of the final design begins to take shape (Figure 6).

In the last stage, students start a process from specific to general, setting up a program to consider the difference between function and behavior. Then bubble diagrams are prepared according to specific dimensions and standards of spaces. The best alternative is chosen after different compositions have been tested. Therefore, the final design passes through different channels of conditions and after adapting to essential alterations, assumes the general form desired in the previous stages (Figure 7).

In this method, students experience design in a noncompetitive manner. The philosophical, psychological and sociological dimensions of this endogenous method are broad and cannot be limited to the confines of this article. Nevertheless, it is important to note that the author's experience of working with students in this manner has shown encouraging results. Not only have students deepened their
understanding of architecture, but also by paying careful attention to their psyche as well as spatial standards, have also managed to produce good architectural places.

3. Concluding Remarks

Although increasingly modern technology defines the relationship between Man and all beings, some still believe that this is a threat to the rootedness of Man. They believe that contrary to modern theoreticians' claim, the true characteristic of modern Man is defined by his escape from thinking. Modern Man is entrapped by mass media and his own false images and his mind is enslaved by futile consumerist agendas. This is the result of an approach initiated by modern philosophy in which the world is seen as an object to be exploited by Man. Technology is a particular way of communicating with other beings. Heidegger believes that "technology is not mere equipment, but it is a particular way of revealing things". Therefore, technology and the ability to use it relates to the concept of truth. For Heidegger "technē" and "aithēria" are closely linked. Technē is a way of revealing. It is a knowing that is also a doing. "Thus what is decisive in technē does not lie at all in making and manipulating or in using of means, but rather in revealing things. It is as revealing, and not as manufacturing, that technē is a bringing-forth." [1]. The point that is being made is that often the modern expert with his desire to dominate things takes away their opportunity to reveal themselves as they are. The hegemony of technology has in fact facilitated the escape of things from their true self, rather than helping their escape from a hidden state. With this in mind, the author argues that approaching the original essence of architectural design through an intuitive and experimental endogenous process of design, which is firmly placed in the material world, provides the opportunity of immersion in things and the attainment of a technology that facilitates the revealing of truths.

References