A Research On The Reading Of Architectural Buildings With Semiotic Design Setup¹ (Jewish Museum Example By Daniel Libeskind)

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Abstract

Architectural structures are always considered as one of the important elements that define civilizations. Despite the harsh conditions, human beings have always used the cultural assets, belief values and artistic aspects of the communities in buildings as well as their shelter functions. In this direction, it is seen that the socio-cultural and beliefs of the societies are reflected in the structures of each period. This meaning emerged as a semiology branch under the title of Semantic Architecture in the postmodern period, and in the direction of this fiction, symbolic and meaningful structures emerged in building designs.

Recently, the subject of semiotics has been discussed from different perspectives as thinkers, philosophers and architects such as De Saussure, Peirce, Eco and Jencks and discussed in various dimensions. The main question is how the logic of semiotics will turn into a concept in architectural buildings, and the effect of this fiction on the reading of buildings will be examined. In this study, the concepts and theories related to indicators and the basics of their reading as a concept in architectural buildings are examined. The data obtained formed a framework for the analysis and reading of the buildings designed with the logic of semiotics. As material, the Jewish Museum of Daniel Libeskind, who is a pioneer in this field, has been handled and evaluated with semiotic methodology. As a result, the relationship between architecture and semiotics and the semantic and cultural values of the buildings designed with this concept have been examined, and a reading methodology has been created for the definition and evaluation of such buildings.

Keywords: Semiotics, Semantic Architecture, Jewish museum, Peirce, Conceptual Architecture.

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Introduction

From ancient times to the present, human beings have thought about architecture as well as other areas of culture and worked on it. Thus, architectural structures are also a reflection of human thought and mentality. In other words, the reflection of human culture was realized in architectural structures. The construction of culture, on the other hand, has survived to the present day by changing its style in different periods since ancient times.

Schulz (1998), as in other fields, it is possible to come across the unique meanings and codes of each culture in the fields of architecture. Today, architecture, like semaphores, are carriers of cultures on a large scale. Therefore, it is possible to observe that the indicators are a design concept on old buildings contemporary buildings, and as a result, this effect, its connection with socio-cultural and its transformation into symbols in a long time. Techniques and methods of disciplines such as semiotics or semiology were used to examine this connection and design setup. Semiology is an interdisciplinary field, which is based on the systematic consideration of all factors, including the production and understanding processes of symbols and signs. For this reason, it will help to examine the meaning and communication issues based on different sign systems in the fields of architecture.

Atasagun (1997), Semiology is defined as the science of "signs" or "symbols". This science is a branch of science based on the systematic examination of all factors covering the interpretation, production and understanding processes of signs and symbols. However, semiotics is an interdisciplinary field and examines meaning and communication with various sign systems.

Sargazi (2013), Semiology is the science of all spoken or unspoken, adequate or not, animate or inanimate signs about humans and animals. This science is especially important for a designer because the designer will have used

his/her consciousness to achieve the work he/she wants to create or to create the desired emotion. The designer, who is familiar with semiology, will use the color, form, light and shadow factors by using semiotics.

In other words, the subconscious mind, which has been formed in people since the first ages, is triggered by color, light, form and shadow. In addition, the design based on the knowledge of harmony and balance can leave the desired effect on the target audience.

Botwina (2012), It seems that in recent years, the theories and concepts of social sciences are in a close relationship with art and architecture. Thanks to this relationship, new forms, mentalities of space, perceptions and readings have emerged in architecture. In other words, nowadays, it is possible to see the traces of philosophy, linguistics, law, psychology, anthropology and sociology in the field and criticism of architecture. This relationship shows itself in the researches on the common areas of architecture with the aforementioned disciplines. As it is known, architecture has been one of the most important fields reflecting a culture. Therefore, the influence of other elements of a culture on architecture can be discussed. However, these various disciplines suggest different methods in explaining different elements of culture. In this context, it has benefited from some disciplines to analyze and explain the quality and characteristics of architecture in different regions and cultures around the world. Semiotics is one of these disciplines. Because of its architectural artistic structure, it is not dependent on a definite concept or movement, but various thoughts in different time periods have affected these areas. The subject of semiotics has always emerged with different ideas and fictions in this field, especially recently, many architects and theorists have focused on architecture and meaning and have shown through research that semantic architecture is more emphatic.

Koç (1998), Symbols that affect architects formally or structurally, come to the fore especially in terms of creating an "architectural language". Semiotics provides the opportunity to express a word, idea, concept, belief or cultural thought by shaping it with various symbols and signs. "Symbolic understanding of language" emphasizes experience in general and the lack of overlap between experience and language. In other words, there can be other ways of expressing the truths that are difficult to explain with language and cannot reach.

Atasağun (1997), According to Gustav Mensching, every object can become a symbol, but nothing is a Symbol by itself. Symbols are something that a group of people or societies assign and agree on the meaning of an object.

Schimmel (1954), There are two elements that make up every symbol, the first is the symbolized object, the second is this matter and it is the truth that represents the object. In terminology, as in mythologies, there are some primary symbols that we know, whether they are in the form of signs or not. These prominent symbols are a special language and signs that are formed in experience or life and do not change over time and are irreplaceable, and they usually plan to go beyond their own truths, and their value comes from what they aim to show.

Çaylı (2013), Architecture is a discipline with a wide scope and duration of influence, since it has a more accessible and more permanent structure compared to other artistic branches. In addition, it is more powerful and effective than other designed ones due to the diversity of expression forms, the wide spectrum of the addressee audience and the easy accessibility to these criteria. In this respect, the existence of the "symbolic language" in question also has a special place.

Schwarz (1997), semiotic architecture, which we assume to be as old as the history of the world, is observed to be a design concept,

mystical and semantic architectural formations, all the structures encountered from different totems and statues to large and monumental buildings since the first civilization.

With the industrial revolution, the changes and transformations that occurred in human life in general showed themselves in architectural fields. The formation of the indicators and signs of modern culture in architecture is generally related to the philosophy of industrialization and modernization. It is an accepted proof that traditional and local architecture, unlike modern architecture, is faithful to local-cultural codes. However, as a result of the spread of modern architecture in the world with globalization and the local architecture being in the background, the effect of local-cultural indicators on architectural structures has also decreased.

With the wave of modern architecture, artificial elements have started to be used in buildings instead of natural elements. As a matter of fact, the modern architectural movement, unlike the old one, has created its own style on the basis of technological

possibilities by differentiating from naturalness. With the spread of the modern style in the world, even if the building materials change, local cultures continue to use signs, symbols and semiotic signs that reflect their own elements. In this context, semiotics and semiotics analyzes have a great influence on their architectural structures.

Semiotics, one of the most important subjects of modern science, has an effective role in the reading and interpretation of architectural works. Ferdinand De Saussure, besides examining the life of signs in the social life of knowledge, showed that their cultural influence and symbols have an important meaning today (Ahmadi, 2018).

Indicators reflect historical periods as well as various cultures (Alodalı, 2015). During the 1970s, research into the semiotics of architectural drawing was done by Manar

Hamma and Grup 107 in Paris (Tasheva, 2012). It has shown that symbols have different and various meanings in architecture and can create a concept and fiction in space design. Donald Preziosi argued that, contrary to its linguistic meanings, architecture is a type of visual semiotics and has long argued that signs and symptoms affect culture and people's spatial perception. Another important manifestation of the semiotic trend in architecture was mentioned in the articles titled "Meaning in Architecture" edited by Charles Jencks and George Baird and published in 1969. These articles actually formed the basis of what was later called "the language of postmodernism in architecture" (Hale, 2000). The semantic design that emerged in the postmodernism period has played a major role in the design of architectural and landscape areas and has put forward the concept of space design again and in a different language, enabling the building and green spaces to be read and perceived as a text. Linguistic studies, which found its place in the field of art in 1970, revealed the effect of semiotics as a subbranch of linguistics in the context of art criticism and reading. In the 1980s and 90s, several doctoral thesis and book studies were carried out in the field of architecture with the semiotic method (Juodinyte Kuznetsova, 2011; Doraj et al. 2021).

Semiotics, with its simple definition, is the science of signs that exist in a culture. It is possible to see the indicators in all cultural areas. Although the indicators used in the fields of architecture with various methods around the world have a common aspect with the indicators of the regional culture in general, they sometimes reveal great differences (Doraj et al., 2022). Therefore, it is possible to consider in architecture the indicators that can be analyzed in fields such as language, religion, traditions, folklore, and art. In the postmodern period, different structures were designed under the title of architecture and constructed with the logic of semiotics (Ahmadi, 2018). In this direction,

from the design and editing process of Daniel Libeskind's Jewish Museum to the building stage, the use of signs, their meanings, differences in form and content are discussed and examined. In addition, in this study, the approaches and thoughts of architects such as Charles Senders Peirce and Charls Jenks, who used the concept of semiotics in the field of architecture and introduced new theories were used. For the analysis and examination of this structure, semiotic analyzes of the museum were carried out with semiotic concepts such as the first symbol, image and symbol. Meaning and semiotics have formed the basic analyzes and evaluations in the examination of the building, where it has the capacity to turn into a concept for architectural design and we can use indicators to make sense and understand a design at different times.

I. Semiotic Approaches from the Perspectives of Philosophers

Semiotics is defined as the "science of signs". Semiotics often includes the work of any instrument as a "signal system". Semiotics generally treat all tools as a "text". According to Ferdinand De Saussure (1857-1913) and Charles Sanders Peirce (1839–1914), they developed the principles of semiotics to apply to language for the first time. In Ferdinand De Saussure's words, semiotics shows us what kind of features signs have and what laws they are related to. Semiotic tools have been used to show the formal expression of architectural works and how they formulate meaning to create readings of the reference object (Ramzy, 2013). Semiotic tools reveal meaning by interpreting and understanding the expression of architectural forms and transforming each element into a communication tool. This process is used to understand architectural forms.

Ferdinad de Saussure, the founder of structuralism and semiotics, also evaluates semiotics as a science based on the concept of sign, signifier, signified and signification. The

basic concept of Saussure's semiology is the "sign", which consists of the signifier and the signified. Since the 1960s, semiotic theory has also been successfully applied in the field of architecture (Nezbitt, 1996). Ferdinand de Saussure and Charles Sanders Peirce are known as the fathers of semiotics. Charles Sanders Peirce (1839-1924) tried to use semiotics in wide areas. Peirce has worked towards making semiotics a self-sufficient discipline and classified the indicators according to a triple order (Rifat, 1990, 2014) (Figure 1).

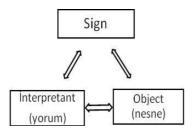


Figure 1. Charles Sanders Peirce's semiotic thought

The symbols Pierce put forward fall into three categories (Amraei, 2011).

- 1. Sign: a sign (such as cigarette and fire) that there is an ordinary relationship between the event and the meaning.
- 2. Icon: signs and indications that make up a formal relationship.
- 3. Symbol: are purely random occurrences as evidence of the relationship between event and meaning (the relationship between lights and police is linked to the concept of security).

The interpretative sign is concerned with the relevance of a triggering response and evidence in the audience (reader/listener). Roland Barthes has summarized the semiotics of body (matter), thinking and symbols (shown) and the base of the triangle referred to above in the following typology (Lang, 1987).

I.I. Semiotics in Architecture, Text and Space

Considering social and cultural relations, semiotics analyzes space as a man-made text. As the reader of this text, the audience defines and reconstructs the architectural spaces in accordance with their mental images. Therefore, the meaning of space or space in architecture is reconstructed and gains a new identity. The user (reader or spectator) sees and revives the space as a readable text full of signs and characterizes the space by means of sense organs and using his/her own mental images (Schulz, 1993). Consequently, the semantic analysis of architectural forms performs many tasks. Umberto Eco claims that these forms make it easier to read and interpret the hidden meaning. Semantic analysis is an important element in the communication process between landscape architecture and its recipients.

I.2. Icon, Index and Symbol Symbol in Architecture

According to Jencks, the most important point that the semiotic triangle focuses on is the simple relationship of language, thought and reality. In the binary structure that defines the show, the signifier is its form and the signified is the content. The most common diagram of indicators (Figure 2) is given (Jencks and Baird, 1970).

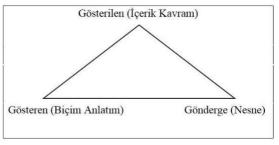


Figure 2. The semiotic triangle (Jencks and Baird, 1970)

Pierce divides indicators according to their attributes into three classes: Icon, Index and Symbol. The indication is the physical cause and effect relationship between the signifier

and the sign (Doraj et al., 2022). Jencks tried to define or adapt the signifier and the signified in the field of architecture. Meaningful strings represent areas, volumes, shapes and masses with properties such as texture and color. Iconographic and aesthetic meanings are those shown in function. The architectural product itself is the indicator of itself (Broadbent et al., 1980; Ziaee et al., 2022).

MATERIAL

The boundaries of the study in terms of its broad and expansive subject, the most important concepts and thoughts, the most emphatic and symbolic examples of the leading philosophers who produced ideas in this field, and the comments and fictions that are thought to contribute more to the study have been created. Therefore, the philosophical and historical narrative of the research is sufficient to shed light on the definition of the concepts described. In the literature research conducted during the study period, scientific studies that examine the different definitions, content and expansions of the concept of semiotics, especially related to the fields of culture, philosophy, architecture and art, were reached. In the study, considering the subject of "The effect of semiotics in architecture", Daniel LIBESKIND's JEWISH museum was chosen as one of the active structures in this field. In this building, which has come to the fore with references to symbolism, diversity in the context of culture, belief, concept, movement and period, and being a pioneer in the subject, symbolic elements that come to the fore with their different dimensions and elements that define semiotics are mentioned in detail. In this study, first the concept of sign and semiotics as a science were discussed, and then its position in the field of architecture was discussed. It is possible to see the wide use of signs in culture, daily life and architecture. On the other hand, it is seen that semiotic studies date back to ancient times, but gain more importance especially with post-modern studies. In the field of architecture, it is seen

that the signs are used in semantic and conceptual architecture, mostly influenced by semantic art. With these examinations, the reading of the signs in building design, the analysis of meaning and the role of general form and structure in the design formation of buildings were determined.

Method

In order to evaluate the effects of the indicators in the study and the conceptual approaches in architecture, firstly, analyzes were made on the design principles in the selected example and while the general form of the area, the axes and the balance and hierarchy were examined, the formal approaches in the buildings and the design setup were introduced as a whole. Based on the findings and data obtained in the literature study, it has been determined that after the examination of different thinkers and philosophers on the subject, the concept of semiotics in the field of art and architecture is impressive, so that the designers use it as a concept or project construct with the logic of sign and semiology in various fields and methods. In his work, the relationship between language and architecture emerged from the thoughts of Ferdinand De Saussure, and Charles Sanders Peirce who later expanded this concept, divided semiotics into three main elements. The first symbolic analysis table was created by making use of these distinctions and examinations. These table indicators, as signs, images and symbols, have been examined in detail in the JEWISH museum, which is especially determined in the field of architecture. According to Umberto Eco, another thinker who deals with semiotics with a different dimension, symbols contain objects (whether natural or artificial) give a different and deeper meaning and expression and show that the relationship between object subject is more meaningful symbolized. Finally, the second symbolic analysis table was designed by considering the thoughts of Charles Jencks who explained and introduced the postmodern period in

architecture and landscape. In the table, symbols of the JEWISH museum related to or consisting of nature, symbols with concept and fiction or meaning, indicators that create a trend or turn into a symbol of thought are examined and analyzed.

2. General Characteristics of Daniel LIBESKIND's JEWISH museum

Daniel Libeskind's Jewish Museum was originally designed as a result of a 1988 competition for the development of the old museum. The old building was designed in 1933 with the neo-classical movement, but was closed during the Nazi period. A decision was taken to reactivate the museum, which remained in use and abandoned until 1975, a competition was held for the development and more active use of the museum, and these two buildings were opened to the public again in 2001. The design of the building is defined as a turning point in architecture and is an example worthy of multi-faceted evaluation examination. This building, which designed with the deconstructivism movement, was planned with a meaning-filled and transcendent fiction in other aspects (Atasagun, 2001). In this building, Jewish faith and mystical meanings were handled and Jewish history was expressed with lines and forms.

2.1. Indicators constituting the design of Daniel LIBESKIND's IEWISH museum

The Jewish Museum design is one of the important examples of semantic architectural buildings that should be studied. Different indicators were used at all stages of the building design, and these issues were systematically examined in line with the semiotic criteria specified in the research. The principle idea of the building is based on the of diconstructivism misunderstanding. The most symbolic sign of Jewish finance is known as the Star of David. In the first stage of its design, this star has deteriorated and points to the story of the Jewish concept's exposure to immigration in various periods and troubled processes throughout history, and also the deeper meaning appears in the formation of form. While the breaks in the form showed the historical migration stages, the strong Axis symbolized the right path and purpose. The lines on the façades have visualized the scars of whips, and have been an indicator of the suffering and disasters in history. On the other hand, according to some studies, it reflects the plan of Jewish neighborhoods in Berlin. In general, it symbolized all Jewish beliefs and was revealed in form, material or design fiction. The building is full of meanings and expressions like a text rather than architecture, and a symbolic form or concept is included in every corner. Table 1 examines the constructs consisting of these signs, images and symbols.

Table 1. Analysis of Jewish museum semiotic principles

Analysis of Indicators in the Museum Sign Index **Symbol** DESIGN CONCEPTS Figure 3. The Change Process of Figure 5. Symbolic Elements the Star of David, Main Design Figure 4. General Form concept (Soltanzade, 2011) It Symbolizes the Deformation The folds formed on the main axis of This museum, which is the symbol of the diconstructivism and Unification of the Star of the building show a dual relationship David in accordance with the and setup as both functional and movement, has also been defined Great Power Story in Jewish meaningful elements. as a Jewish story or a Jewish History. Every fold is a function and every symbol. The Combination of These Two function has a meaning, circulation in This museum, which is Concepts is the Marker of the the museum reflects the living form determined by its axis, form and Form and the Background of the of a sacred text or story. monuments, is one of the important symbols of conceptual Story. architecture. BETWEEN THE LINES Figure 6. Form Between Axes Figure 7. Star and Migration Axis Ima Figure 8. Symbolic Concept and Lines The interior spaces were The meaning and deformation of the This place, designed with the arranged in the direction of the Star of David is designed as a logic of deconstructivism, has a main axis and left a mark on the reference to the historical process. It symbolic value rather than a

is planned that the sacred symbol will

disappear over time and be revived again with a different meaning and function.

2.2. The separation of signs in the design of Daniel LIBESKIND's JEWISH museum

design as a correct way

indicator.

In the concept of this building, completely inspired by Jewish religious concepts, direct

mystical symbols are used both formally and functionally in the design. The deterioration of the Star of David and its breaking at certain angles, the telling of the story of historical migration, the design of spaces reminiscent of

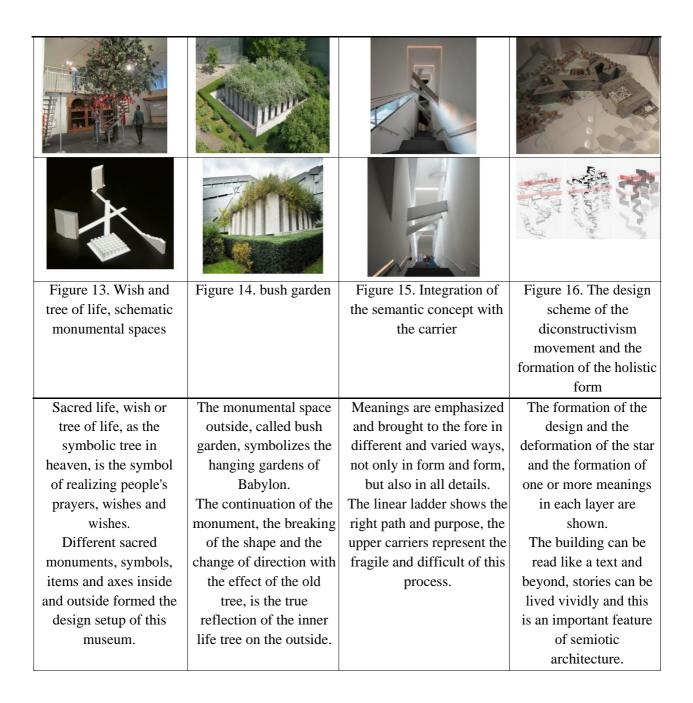
monumental building.

the Holocaust, the distortion of the linear axis inside with oblique carriers, and the tunnel reflecting torture are all symbols that have mystical and sacred beliefs or values (Jencks, 1980). Natural symbols, on the other hand, are well-constructed in the place called the Garden of Exile, this monumental place which reminds of the hanging gardens of Babylon was designed as a reference to the life story of the Jews in Babylon. In addition, the columns and the plants on them are symbolic of an abandoned temple. The place specially designed for the protection of an old tree on one side of the building and its effect on the general form emphasize the importance of nature symbols. The tree of life and wish

located in the interior is the reflection of other natural and sacred symbols used in this museum. This museum is a space constructed with meanings and every district of the building is designed with a meaning or distortion of meaning. This space, which reflects the distortion of meaning and form as a trend in general form, and the search for order in disorder, is the best example of the deconstructivism movement. It reflects this trend both formally and conceptually. In addition, the concept of semiotics and semantics were also influential factors in the design of this building. Table 2 has classified and evaluated the subjects mentioned in the research method.

Table 2. Indicative diversity analysis of the Jewish museum

Indicator Diversity and Conceptual Perception			
Mystical Icons	Natural Icons	Anlamsal Simgeler	Icons Showing Trends
STRETCHNG STRETCHNG CUTTAG			April and
			Figure 13 Joseph L Committee William Van Joseph Joseph L Committee William Van Committee
Figure 9. Reflection of	Figure 10. Trees that are	Figure 11. Space and	Figure 12. Star of
sacred meaning in form	reverse pruned	meaning	David, Main Design
and interior			concept
The deterioration of	The trees appearing	The sound of walking on	The design process
their sacred beliefs due	deformed symbolized	heads, reminiscent of	and the development
to the troubles they	that this place is	screaming steel and metal	phase of the form is
have been exposed to	beyond normal in its	on the ground, represents	the telling of a story.
throughout history and	natural areas.	torture. Cross-shaped	This process is
their appearance in the	It represents heaven	windows express	recognized as the
interior is a sign of	rather than earth.	religious meanings.	symbol of conceptual
Jewish myths.			architecture.



DISCUSSION AND CONCLUSION

The buildings designed in architecture develop their own patterns and language in line with the indicators that they create a formation due to their function and thus can communicate with people and societies. It is defined by the fact that the indicators are very diverse and have a communicative purpose and generally carry a meaning and concept. Indicators point to a design concept, cultural value or a trend in the formation of spaces. Therefore, symbols and symbols in semantic and conceptual architecture replace the ideas and concepts

they represent while expressing the values of cultures, communicating with the user mass, meaning and fiction have emerged as a promotional value of the society.

Architecture is generally expressed with language, symbols and meanings as a communication element. Different symbols, whether functional or formal, in the perception of movement or space, add semantic dimensions beyond the design fiction of buildings. Architecture is to watch the architectural spaces that reveal a society or culture, to read the created indicators or

patterns and to perceive all the values of the society in the cultural, belief, ideological and sociological context and to predict the ideas, fiction and belief systems obtained.

According to the findings obtained from the results of semiotic analyzes in the design of the Jewish museum, the signs turned into a main concept in the design of this building and caused the reflection of culture, period or currents. As a result, symbols consisting of signs, images and symbols were examined, on the other hand, they emerged as symbols that show natural, semantic and current, and as a result of these analyzes, the reading and analysis tables of a conceptual building were revealed. Analysis tables created a new method and methodology for examining and reading conceptual buildings. By addressing the concepts formed by the symbol in the analyzed Jewish museum, what kind of fiction and concept transformation of a belief, culture and symbol and the functioning of its semantic architecture were revealed and examined.

Therefore, in the design of a conceptual structure, indicators can be evaluated in two ways.

(1) Signs have turned into design ideas, constructs and concepts and have defined the formation and meaning of mass as a concept and sometimes expressed a movement, culture, belief and mystical meaning.

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(2) Indicators have emerged in the design of small-scale items and elements, such as sculptures, monuments, functional items, etc. the elements have a symbolic and semantic interior and reveal a story or idea.

As a result, in their conceptual designs, the semiotic approach in general states that they are a communication tool and that the structures are perceived as a text and generally have a meaning. In line with this, we can classify the formation of conceptual architecture and the reading of buildings as a result of the analyzes obtained from semiological charts.

- Signal approaches generally represent an image by conveying the pictorial story of an object. Distinctive imaginative approaches have led to the design of more legible spaces, especially post-modern, and have made the spaces perceived as a text.
- Imaginary approaches have led to the formation of very semantic and legible areas, especially in the design of recent conceptual structures.
- Symbols, on the other hand, are indicators that reflect a cultural value over time, form the basis of a movement and style, and symbolize a period or a sacred thought.
- As a result of the detections, while the sign and image consists of micro indicators, the symbols appear on the macro scale.
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