Symbolic Value of Transparency in Contemporary Architecture; an Evaluation of Recent Public Buildings in Famagusta

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ABSTRACT

The history of transparency in architecture demonstrates a long relationship between glass and architecture. In view of that, there is a strong tendency toward use of transparent structures. Accordingly, transparent glass architecture has become one of the significant characteristics of 20th century. Transparency is the basic and major characteristic of glass, which is arguably the most notable material ever discovered by human. It has a unique position in the history of technology; so expansion of architectural forms derived their significance from the use of glass. It has been one of the materials, which were used extensively in construction; and caused a significant change in the built environment, specifically in the 21st century. Nowadays, glass can be seen as one of the basic materials used in contemporary modern buildings. The usage of glass in architecture, specifically in public buildings, has increased during the recent few decades, and this trend is still continuing.

In addition, Modern architecture has grown rapidly around the world and it has been investigated from various aspects. However, relationship between architectural meaning and modern architecture has been one of the less investigated issues. Therefore, despite the many benefits of transparent architecture, looking for meaning is one of the important factors that need to be investigated. Since search for meaning has been one of the challenging issues for contemporary architecture, the purpose of this study is to find the link between transparent architecture and symbolic value in contemporary architecture to recognize how it is possible to bring these two together.

To achieve this aim, the research method in this study consists of combination of quantitative and qualitative research methods, besides; literature review has been analyzed based on "content analysis method". After literature review and collecting data related to transparent architecture and symbolism, study has been carried on by focusing on the sample of public buildings, since generally transparent architecture have been manifested in this type of buildings. Accordingly, three famous transparent building in London have been selected. As a result of analyzing the selected public buildings in London , 'key structural and idea behind the concept', 'deliberately symbolic building (contrasting a building with the aim of having a symbolic building)' and 'referring to a universal pattern', were the most effective factors in creation of symbolic value for transparent buildings. To compare and investigate symbolic value of transparent buildings, in sample study, thesis focused on transparent buildings in Famagusta, where data could be collected by questionnaire from ordinary users.

The results of this study emphasized that transparent architecture is certainly symbol of "modernity". Furthermore, in architecture, "form" has a fundamental role in defining symbolism and giving meaning to buildings. Also, the importance of function cannot be ignored, however in defining symbolic value, it is not as strong as form of architecture. Factor of "Time" is noticeable too, which means recent transparent buildings are more attractive in terms of implying symbolic value for people. Through analysis, also, it has been found that symbolic value of a transparent building "is not just related to the extensive usage of glass" in facade. There are other basic important factors, too, such as interior design, lighting, material and etc.

An interesting and arguable finding is that symbolism is interpreted differently by everyone and therefore it is a matter of view point. Although in general transparent architecture is symbol of modernity, but according to user's viewpoints there is different symbolic meaning for each transparent building. Accordingly, this finding is another proof to this important issue that people need to have meaningful built environment, so they even assign meaning for buildings.

Keywords: Contemporary Architecture, Transparency, Symbolism, Architectural Meaning, Public Buildings

ÖZ

Mimaride geçirgenlik tarihçesi; cam ve mimari arasında köklü bir ilişkiye işaret etmektedir. Bunun ışığında, özellikle son zamanlarda şeffaf strüktürler kullanma eğilimi giderek güçlenmektedir. Dolayısıyla, şeffaf cam mimarisi 20. yüzyılın en önemli özelliklerinden biri haline gelmiştir. Geçirgenlik muhtemelen insanoğlunun keşfettiği en dikkate değer malzeme olan camın en önemli ve temel özelliğidir. Teknoloji tarihinde eşsiz bir konuma sahiptir; dolayısıyla mimari formların yaygınlaşmasında camın yapı malzemesi olarak *kullanımı*nın önemli bir yeri vardır. Cam, yapı malzemeleri arasında en yaygın olarak kullanılan malzemelerden biri olmuştur ve özellikle 21. yüzyılda, yapılı çevresinde kayda değer bir değişikliğin ortaya çıkmasına sebep olmuştur. Günümüzde cam, çağdaş binalarda kullanılan en temel malzemelerden biridir. Mimaride cam kullanımı, özellikle kamu binalarında, son birkaç yılda artış göstermiştir ve bu artış halen devam etmektedir.

Buna ek olarak, dünyada hızla büyüme gösteren modern mimari pek çok araştırmaya konu olmuştur. Ancak, mimari anlam ve modern mimari arasındaki ilişki en az irdelenen konulardan biri olmuştur. Bu nedenle, şeffaf mimarinin birçok olumlu katkısı yanında, anlamı irdelemek araştırılması gereken önemli faktörlerden biri haline gelmiştir. Anlam arayışı çağdaş modern mimari için de merak uyandıran konulardan biri olduğundan, bu çalışmanın amacı, şeffaf mimarlık ile çağdaş mimarideki sembolik anlamın nasıl bir araya gelebileceği anlayabilmek için aralarındaki ilişkinin irdelenmesi üzerine oluşturulmuştur.

Bu amaca ulaşabilmek için, bu çalışma yöntem olarak, nicel ve nitel araştırma yöntemlerinin birarada kullanır; bunun yanında "içerik analizi yöntemi"ne dayalı olarak literatür taraması yapılmıştır. Literatür taraması ve şeffaf mimari ile sembolizme yönelik veri derlendikten sonra, çalışmanın kapsamı özellikle şeffaf mimarinin öne çıktığı kamusal binalardan örnekler üzerine odaklanmıştır. Bunun ışığında, Londra'dan üç adet tanınmış şeffaf bina örneği seçilmiştir. Londra'da seçilen kamu binalarının analizi sonucunda, ' kavramın ardındaki anahtar yapısal fikir', 'kasıtlı sembolik bina (sembolik bir bina elde etmek amacı ile binada zıtlık oluşturmak)' ve 'evrensel bir örüntüye atıfta bulunma', şeffaf binalar için sembolik anlam oluşumunda ortaya çıkan en etkili faktörlerdir. Şeffaf binaların sembolik anlamlarını karşılaştırıp değerlendirebilmek için, tez, verilerin sıradan kullanıcılar ile yapılacak anket çalışması ile derlenebileceği Gazimağusa'da yer alan şeffaf mimariye sahip binalar uzerine odaklanmıştır.

Bu çalışmanın sonuçları şeffaf mimarinin kesinlikle "modernite"nin sembolü olduğunu vurgulamıştır. Bunun ötesinde, mimaride, "biçim" sembolizmi tanımlayan ve binalara anlam veren temel bir role sahiptir. Fonksiyonun, sembolik anlamı tanımlamadaki önemi gözardı edilemezse de, mimari biçim kadar güçlü değildir. son dönem binaların sembolik anlamları insanlara daha çekiçi bir şekilde işaret etmeleri açısından "zaman" faktörü de dikkate değerdir. Yapılan analizler sonucunda, şeffaf bir binanın sembolik anlamının sadece "camın cephelerdeki yaygın kullanımı ile ilgili olmadığı" tespit edilmiştir. İç mekan tasarımı, aydınlatma, malzeme ve buna benzer başka önemli faktörler de söz konusudur.

İlginç ve tartışmalı olan, sembolizmin herkes tarafından farklı yorumlanmış olması ve bu nedenle bakış açısı ile ilgili olarak farklı değerlendirilebilmesidir. Genel olarak şeffaf mimari modernitenin sembolü olsa da, kullanıcıların bakış açılarına göre her şeffaf binanın farklı bir sembolik anlamı vardır. Bu bulgu, bir başka deyişle binalara anlam yüklenmesi, insanların anlamlı bir çevre ihtiyaç duyduğunun bir başka kanıtıdır.

Anahtar Kelimeler: Çağdaş Modern Mimarlık, Şeffaflık, Sembolizm, Mimari Anlam, Kamu Binaları

This thesis is dedicated to my parents for their love, endless support and encouragements. It is also dedicated to my husband, without whom I could not have completed this work.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

Architectural glass concept plays an increasingly important role in contemporary modern building design. The concept of transparency as an architectural ideal has been well recognized in the history of modernism; also, there are a number of overlooked and particular buildings from this time (Murray, 2006). One of the main features of transparent modern architecture is the relationship between inside and outside. It means "*a simultaneous perception of different spatial locations*" (Rowe & Slutzky, 1982), which can create the situation of being away from secrecy, excellently evident and simply discovered.

Transparency has been an important subject in architecture. Using transparent material in architecture and creating a sense of immateriality is not certainly related to contemporary architecture. Since the nineteenth century is beginning the era of transparency which oriented towards the glass architecture. In fact, transparency and lightness are two important factors in modern architecture and over the last years, glass has become a main architectural element particularly in the design of contemporary public buildings in many cities around the world. With this expectrum, some of public buildings, for instance offices, generally became entirely transparent. Also, the other building types followed this concept depends on their functions (Vidler, 2003 a).

Therefore, now architectural glass is as an integral part of contemporary building's structure and style, which has grown around the world. Along with this Expansion, people need to have meaningful built environment and building that can be shown through symbols.

Symbols are used frequently in every society and are employed to represent something other than what they appear to be. According to Kenzo Tange, 'There is a powerful need for symbolism, and that means the architecture must have something that appeals to the human heart'. Besides, Symbolic meaning has been one of the important aspects of built environment that especially in modern and contemporary architecture has been less investigated. Transparent building can provide both aesthetic and symbolic meaning if designed properly. So, it is important to know how a symbolic transparent building can be created. Therefore, this study attempts to find the link between transparent architecture and symbolic value. Obviously, this aim, this endeavoring to become symbolic, is the potential for architecture.

1.1 Problem Statement

The modern style originated in the 1900s and has been used to this day in contemporary architecture. However, that word embodies so many different forms of architecture, which often symbolic meaning aspect of them has not been considered deeply. One of the main criticisms about modern architecture is that architecture is reduced to a functional and purely utilitarian role. The beautiful art's lines change their place to the inflexible and cold lines of geometry. This becomes an extremely predominant issue that

is debated in today's architecture. Recently a great extent of criticism of modern architecture's affirmation on functionalism manifested (Radcliffe, 2007).

In view of that, modern architecture has grown rapidly and it has been accepted by all architects around the world, especially for developing countries. Architects have tried to imitate the Modern architectural buildings in the world, without considering the different effects on their cultures and their country. In some new designs, major preference placed on the physical aspects or design itself rather than meaning and symbolism. So, the main dilemma is to find the proper relationship between transparency and symbolic value in contemporary modern architecture.

1.2 Aim and Objectives

This study attempts to evaluate various aspects of transparent modern architecture in general and tries to look for symbolic value in transparent architecture and finding related important factors. Under this scope, the discussion generally centers around the problem of meaning in architecture in terms of both how it is defined conceptually and what it means for architecture and architectural design in particular. Consequently, this study tries to find a link between transparent architecture and symbolic value in contemporary architecture.

1.3 Research Questions

According to the aim and objectives, this study tries to answer the following questions:

- How can contemporary architecture and meaning be brought together?
- What kinds of symbolic meanings are existed in transparent modern architecture?

- How symbolic meaning of a transparent building is going to be understood by users?

1.4 Limitations of Study

In investigating chosen public buildings in London, and in the sample study of Famagusta, study has been limited to evaluate and analysis transparent public buildings. In addition, this study is limited to contemporary architecture. However, in order to study transparency in contemporary architecture; it has been needed to study the origin of it, which goes back to modern architecture.

1.5 Methodology

In this study, the method is mixture of qualitative and quantitative methodologies, which are literature review, survey, observation and distributing questionnaire. The thesis is made of two important parts of data collections: literature survey, and field studies (Figure 1). Literature survey and reviews on the sources that are about the subject of the thesis: 1- Transparent Architecture 2- Symbolism and Architecture. In addition, it is included of analyzing three famous transparent building in London. Accordingly, to obtain result and find key factors, literature review has been analyzed through "content analysis method", which is one of the qualitative data analyzing methods. In addition, field study is consisted of observations, analysis of buildings, visualization in the form of photography and maps. Also, it will be followed by application of a questionnaire through the people and users.

Under this scope, sample study approach has been chosen to find the answer of research questions of this study. Accordingly, the three samples study's buildings are the

examples of transparent buildings, and mainly focused on public buildings in Famagusta. Then, each of those samples is evaluated according to key factors that were derived from literature survey. At the end, conclusions are drown from the findings of the case studies (Figure2).

Accordingly, the approach of this study consists of these steps:

1. The method, which is applied in this study consist of both qualitative and quantitative.
2. Data collection is based on literature review, and two main chapter about Transparent Architecture and Symbolism were described. Results have been obtained through “content analysis method”.
3. Through survey, three sample studies have been selected.
4. Results of literature review were tested in the sample studies.
5. The selected transparent buildings were observed and studied.
6. Based on research questions questionnaire was proposed.
7. The obtained results from questionnaire were analyzed.

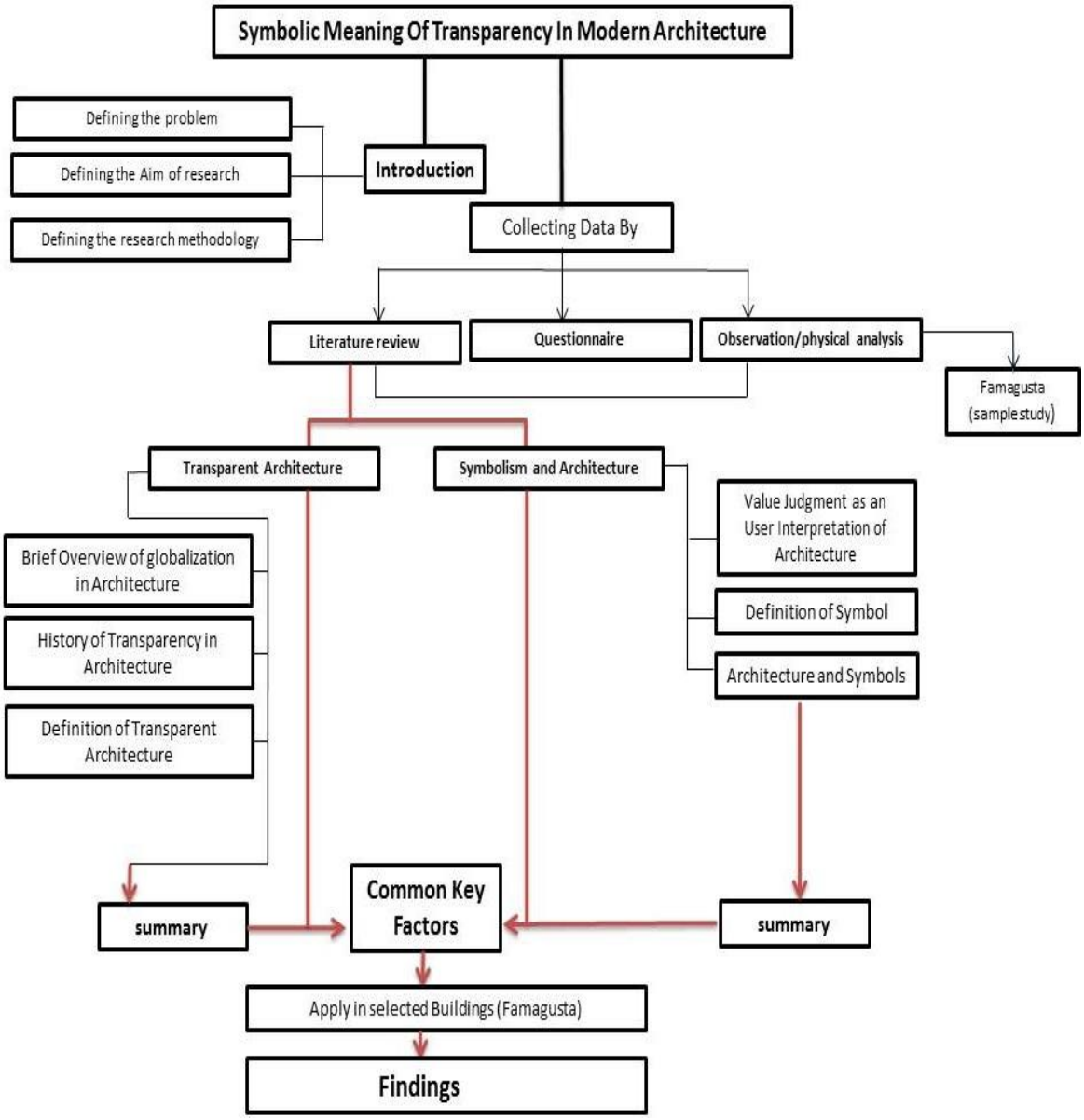


Figure 1. General view of the study.

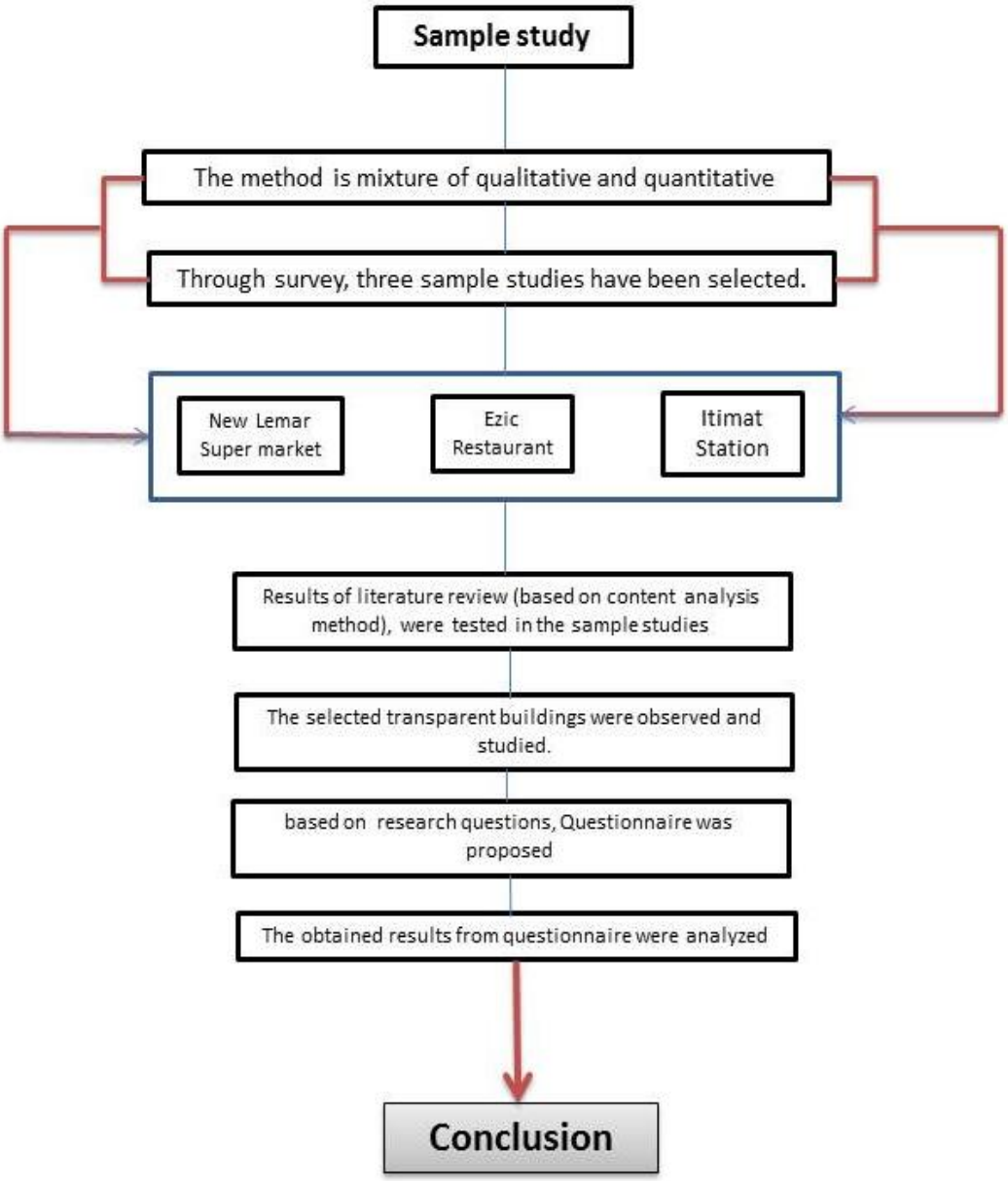


Figure 2. General View of Case Study

Chapter 2

TRANSPARENCY AND MODERN ARCHITECTURE

2.1 Brief Overview of Globalization in Architecture

Since transparent architecture has become a global phenomenon, and a new generation in architecture; it is worthy to do a brief study on globalization and its effects on architecture of the 20th century. Furthermore, in order to study transparency in contemporary architecture, this thesis tries to study the origin of it, which goes back to the Modern architecture.

Throughout history, architecture has changed rapidly around the world, and it varied basing on time and the architect. During the 20th century, architecture has grown universally therefore; architects committed the process of formation of an immense shift. Under this scope, facing the globalization process raises two key questions. What does globalization mean in architectural terms? Moreover, how has globalization changed architecture? (Eldemery, 2009)

The "globalization" term was introduced in the latter half of the 20th century; but globalization and its conceptual features did not attract the popular awareness until the latter half of 1980s (Chris, 2006). The phenomenon of globalization has attracted more

considerable attention than almost all other issues in recent decades and it still is used in various contexts, by many people to reach different goals (Eldemery, 2009).

There are many definitions about the globalization phenomenon. According to Robert Adam (2008), 'globalization is a collective rubric under which a series of changes in society, economy and politics occur and these changes affect everything from nations' operation to the daily life'. In addition, According to Bello (2007), the phenomenon of globalization goes much further, as the world is often dominated by global corporation. Within the passage of time and progression of technology ever scenario of life is continuously changing, cultures are combining exclusively, mix cultures are emerging and it also has effects on socio-political qualities. In this situation, architecture cannot stay isolated. Therefore, globalization is another key matter that all architects confront. As McNeill (2008) points out, the global architect discovers the growing importance of globalization processes of urban transformation, built environment and the architectural practice (McNeill, 2008).

Giddens (1990) defined globalization as "*the intensification of worldwide social relations that link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa*" (Giddens, 1990; p. 21). According to Giddens, globalization and modernization are intimately linked to each other. The most observable form that modernization is talking today is globalization. In this progression, globalization is assumed as a discourse of information that raises awareness of the relations between varieties of life's scales (Oncu & Weyland, 1997).

Consequently, the new millennium is dealing with two issues, in a situation that globalization works as a multidimensional phenomenon: first, the tension between the globalization's forces, which has been extensively argued as an exclusive contemporary trend; and second, the impact of globalization on local architecture and the attempts in order to demonstrate local identity and individuality throughout architecture. Architects frequently find themselves between the two opposing forces, which exist as an outcome of past or present divergent cultures and architectures, together with their present values and methods of diction (Eldemery, 2009).

Architecture only plays a slight part in human affairs. It does, however, bring together much, which is essential for society in general: technology, art, shelter, social function, economics, science politics, and many others. As a result, architecture performs as a mirror to society (Adam, 2008). Architects have tried, since the beginning of the 20th century, to connect the design to the illustration of a special analysis of society and its upcoming tracks, in a symbolic way. That was a non-material, psychological and even cosmological analysis in most of the cases. Conversely, the society can be taken reflective of architecture, and this could be the vision in opposite way. It is possible to consider architecture as a natural feedback of present social issues, both politically and economically (Mahgoub, 2004).

With globalization, Modernism conquered the earth. Globalization is becoming the favored idiom for characterizing current era. Just as the depression of cold war I, Space Age, and the roaring 20's are used to portray particular period in history; globalization describes the contemporary economic, cultural and political, status. The term

globalization has just become common in two previous decades, and academic critics who used this phrase during the 1970s precisely recognized the freshness of employing this term (Bello, 2007). Under this scope, the historical growth of globalization in architecture, very closely put through the dominance of Modernism. Modernist ideas had always been determined to establish in global scale (Adam, 2008). In the early 20th century, many architects disputed that the modern age demanded new architecture in response to new industry, technologies, mobility, and social and political orders. Thus was born the "International Style," epitomized by German architects Mies van der Rohe, Walter Gropius, Le Corbusier and others. Gropius claimed in 1919 that, "*One day there will be a worldview, and then there will also be its sign, its crystal – architecture.*" By 1932 it had been identified as the "International Style" and, although this was really a development of "parallel experiments" between nations, it was presented as a "*contemporary style, which exists throughout the world, unified and inclusive*" (Eldemery, 2009; Oncu & Weyland, 1997).

2.1.1 Modern Architecture in the 20th Century

Frequently, the word "Modern", which comes from the Latin root "modernus", has been used frequently to mention the avant-garde, radical, progressive or even revolutionary movement since World War II. This word means "just now," even though the term was not broadly used before the 15th century, when it presented a distinctive way to identify the stage after the Renaissance, from the medieval and ancient worlds. Moreover, it meant "new-fashioned, not antiquated or obsolete". It also comprised the term "contemporary" as transforming from sense of "now" to "just now". Afterward, on the way to the end of the 18th century, the term reached a lot closer to the "new art" of the

upcoming century. Consequently, the definition of “modern” spread out, as result of the so-called alteration (Denzer, nd).

The 20th century is very significant with its innovations in technology and science, warfare (World War I, World War II), socio-cultural and politic transformations. Moreover, some of the most considerable events of the 20th century, which are representatives of the modern era, were urbanization, capitalism, industrialization, and mass media (Henry Russell, 1987). The Modern movement, which appeared in the beginning of 20th century in architecture and industrial design, reacted to sweeping alterations in technology and society. It was the effect of industrialization, which has begun since the 18th century, and also declines historical patterns. Some principles were mainly supported by modernism such as Rationalism and organic architecture. Additionally, a new world of machinery and new generation of cities, made artists to think further more about their environment. This new world soon transfigured the way we distinguish, depict and contribute to the world (Denzer, n.d). Modernist ideas have permeates all forms of design, in various ranges from graphics to architecture, just as being a key penetration in literature, music and art. Numerous modern designers insistently asserted that they follow no "style." Modernism was surely more than a style; it was a new worldview, contingent by new discernments of time and space (Weston, 2001).

Under this scope, by the end of the 19th and the beginning of the 20th century, architects started to quit earlier periods’ methods and tended to create ulterior form of architecture, relevant to function, regarding to modern movement, in the West. After World War I,

the forenamed trend went under the name of International Style, building up simple, geometric forms and plain facades without any dedication or referencing from the historical examples. By the end of World War II, this method was asserted in clean-lined, unembellished glasses and curtain walls, in high-rise buildings and large-scale housing projects (Modernism, n.d). Obviously, rejection of previous styles is the considerable point in this part.

Deserting the "forms of the past" by the pioneers of modern architecture was more than ornamentations or motifs; it also was about some previous common space notion like "linear perspective of the Renaissance" or Baroque style patterns. Particularly, the modernist notion in architecture was in contradiction with the synthesis that academicians made out of the official architecture of Europe's 19th century. Design elements of old layouts, which are out of style, could not match with the new lifestyle in an open world, appropriately. After rejection of former "styles", it was necessary to originate the "new language of forms", by referring to new circumstances of life (Ciucci, 1981).

Regarding to a number of architecture scholar's thoughts, first and foremost, the Modern architecture was stimulated by technological and engineering improvements, and the usage of new materials like iron, steel, concrete, and glass in order to generate new construction techniques, as a stage in the industrial revolution. So, the Crystal Palace by Paxton in Great Exhibition of 1851 (Fig.3) , Galerie des machines by Dutert (Fig 4) also Louis Sullivan's steel skyscraper (Fig.5), Wainwright Building in Missouri, US around 1890, showed the first attempts toward Modern Architecture, clearly (Frampton, 1992).

Figure 3. Paxton’s Crystal Palace. (URL1)

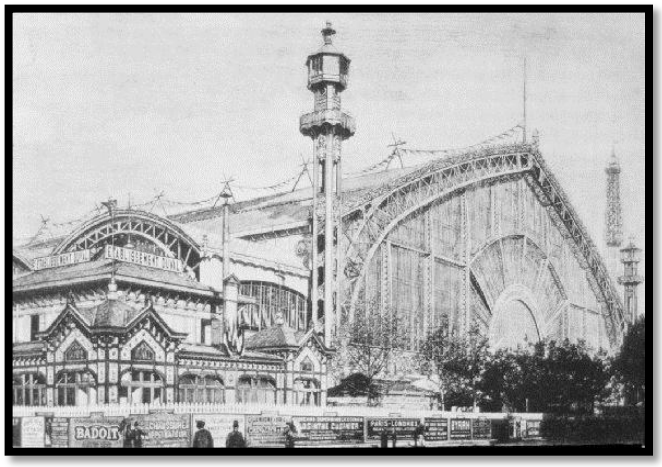


Figure 4. Dutert’s Galerie Des Machines. (URL2)

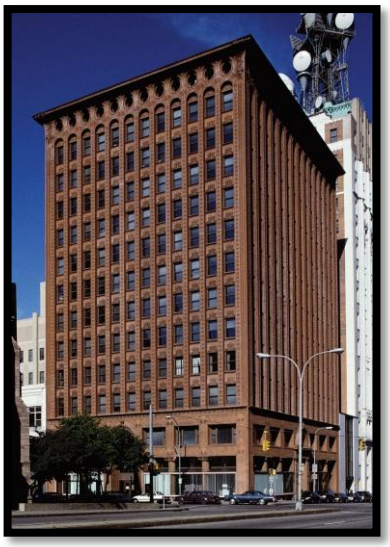


Figure 5. Louis Sullivan's Guaranty Building. (URL3)

Modern Architecture happened to be a feedback to a number of styles from the Victorian age and afterward Art Nouveau, including lots of ornamentation and embellishing details at the end of 19th century. Additionally, the modern movement's philosophy had numerous resources. One of the important facts in this progress, and the first major architect of modern time who stated the idiom "Form Follows Function" was the American Louis Sullivan. Sullivan destined to take away embellishment from functionalist architecture, afterwards the building could simply enter to its target; making buildings from the inside to out was the thought, which the standard led to, enjoining the required structure the form and then its external look **(**Denzer, n.d). Therefore, he gave his building a radical modern appearance by using large glazed facades and low decoration. Besides, he insisted on his slogan, "form follows function", until it became the principle for the whole modern architectural movement (Gregotti, 1983).

Tracing Sullivan, Viennese architect Adolf Loos, persisted that decorations should not be applied to functional matters; and doing so meant wasting capital, effort, and material. He brought up a manifesto appointed as "Ornament and Crime", which was his argumentation about the fact that he believed prevention of embellishment was "a sign of spiritual strength." This essay became one of the basic manuscripts to the modern movement. By the 1920s, modern designers started to open up to new technologies and the opportunity of mass manufacture; afterwards the focal theme of modernism became the aesthetic of the machine. Two faces that cultivated the industry's language were: Walter Gropius and Le Corbusier (Benton, 1986).

It was definitely expected from new material and technologies to transport new architectural forms to cities (Colquhoun, 2002). The Bauhaus School of art and architecture in Germany (Figure 6) played the main role in the beginning of Modern architecture; it was established by Walter Gropius in 1925-6. This building includes clean lines and simple elemental shape. Common materials, no embellishments or decoration; forms expressed their function and set on a pinwheel plan with glaze corners offering an ever-changing progression of solid and transparent (Gregotti, 1983).

Gropius aimed to connect art to technology, therefore to decline historical standards he trained a new generation of designers and architects to and adopt the ideology of modern industry. Rationalization was the considered issue by Bauhaus in design. The motto that contained aim of the modernists was: "Form follows function"; which was to mutate architecture's major principle to Constructionalism and Functionalism (Fleming & Honour & Pevsner, 2000).

Figure 6. Bahaous School. (URL4)

In addition, there are many other architects, which can also be named as the leader of modern architecture. Frank Lloyd Wright is one of the famous Modern Architecture pioneers. Some of Wright's most famous designs are; the Chicago Robie House (Fig. 7), Falling water in Pennsylvania, (1935-9) was Wright`s masterpiece, he realized therein a creative synthesis of organic architecture and cubist and rationalist influences, and the Guggenheim Museum in Manhattan (Fig 8& 9).

Figure 7. Robie House. (URL5)

Figure 8. Manhattan; Guggenheim Museum. (URL6)

Figure 9. Falling Water. (URL7)

The ultimate principal architect of modern movement and mainly in urban level was Le Corbusier; his ideas chiefly developed the modern tendency, particularly by his works in Chandigarh and Brasilia city. Lastly, those trends and principles of Le Corbusier had significant permeation on the International Congress of Modern Architecture (CIAM, established in 1928), as an international ideology of the Modern Movement **(**Colquhoun, 2002). Le Corbusier cited that "the house should be a machine for living in". Modernist architects employed glass, steel and concrete in building design, and that gave them the chance to do radical building designs, for instance the skyscraper, by which these materials made it believable to reach this scale of design pattern. Buildings like these without a doubt, redefined the urban context timelessly. He and the community of modernist architects dare said that a house should be as pure as a well-designed machine in terms of its form, in order to supply its function (Benton, 1986).

2.1.2 Charactreristics of Modern Architecture

The first absolute and clear break in the history of architecture was characterized by Modern architecture; which its main definition is far from tradition. The modern architecture is one of the most important eras in the progression of architecture, by means of its characteristics (Benevolo, 1971). Knowing the Le Corbusier principles is vital to understanding the world of modern architecture. His creation of the 'Domino house' was innovative in architecture, capable of being influential on the world for centuries ahead (Figure 10). Moreover, this innovation is applied entirely in both architectural and urban design (Corbusier, 1954). So, there is a single modular unit which is called Dom-ino (also known as "Domos-innovation"). This unit can be repeated in various organizations to create a more complicated whole that has this ability to serve an infinite amount of purposes. This style of architecture 'allowed for **more open spaces in designs'**. The goal was creating an appropriate **combination between exterior and interior** parts of buildings. According to Schulz (2000), this propensity led to a huge move towards a new style of architecture.

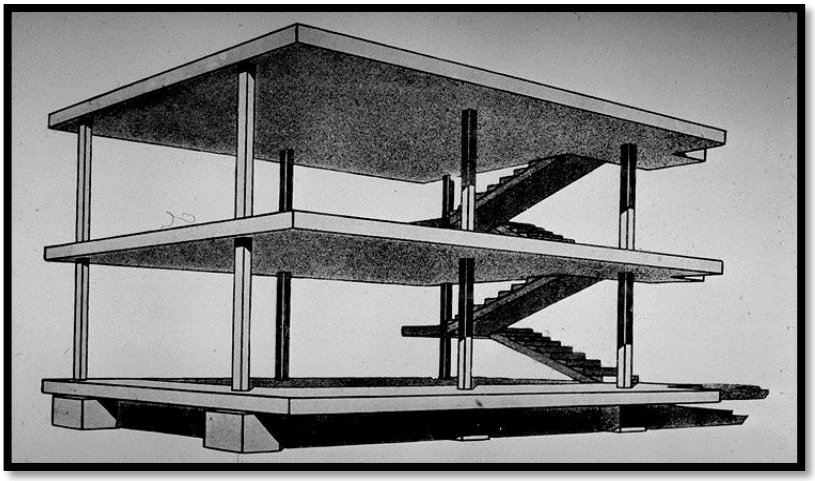


Figure 10. Domos-Innovation. (URL8)

Additionally, many consider the Villa Savoye as Le Corbusier's seminal work who is Swiss architect "5 points of architecture" became the principles for guiding many of Le Corbusier's designs, as he described it. Referring to the Le Corbusier's "five points" of new architecture's manifesto, the bases of modern architecture can be illustrated in the villa, that is one of the most renowned 'International style' example which is easily recognizable.

The points were illustrated best in Le Corbusier's domestic architecture are (Figure 11):

(1) pilotis, or ground-level supporting columns elevating the mass off the ground.

(2) Free plan, made possible by the elimination of load-bearing walls.

(3) Free facade, the corollary of the free plan in the vertical plane.

(4) Long horizontal sliding window, provide even illumination and ventilation, and finally

(5) Roof garden, made possible by the reinforced Concrete, provides more area for domestic use on the land retrieve the space for including a garden area (Corbusier, 1986).

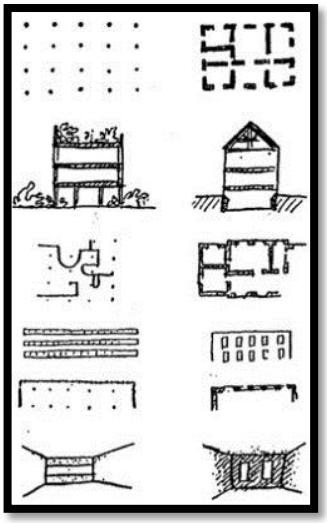


Figure 11. Five Basic Points of the New Architecture- Le Corbusier- . (Danielson, 1996)

Beside this explanation, **"free plan"** was one of those mentioned points which continuity and transparency of place were emphasized. This idea is essentially important for Modern Architecture's theory. He also pointed to **"free façade"** in relation to free plan, which brought the opportunity to use glass in larger scales in buildings. Therefore, the interaction between internal and external spaces, and the relation of them to the nature are emphasized, rather than a conventional composition that already existed (Schulz, 2000).

These formerly mentioned ideas are considered as the new points of architecture. Le Corbusier also prescribed the other new architecture's points, which are listed as: "pilotis", "the roof garden" and "the horizontal window". According to Colquhoun, (2002), using the modern technology and decoding the principles of new architecture achieve freedom which is presented by each point. Accordingly, the Villa Savoye can be named as a perfect example of a building that these five points are incorporated in. Probably it is Corbusier's most famous building from the second decade of 20th Century (1920s); it enormously influents on international modernism. This house defined the course in various ways that modern architecture was to take in the 20th Century (Figure 12).

Figure 12. Villa Savoy, France (Corbusier & Janneret, 1929).

Features of modern architecture can be categorized in general as:

- Rejection of ornament
- Rejection of historical styles
- Fundamentally simplifying the living spaces and forms by dispossessing ornamentation while showing the origination of materials and craftsmanship
- The openness of new materials (adopting glass, steel and concrete as first choices of materials)
- Simplifying the form and eliminating extreme details from design.
- Use of horizontal and vertical lines in façades
- Applying glass on the façades and additional transparency of construction (known as honest expression of structure) (Millais, 2009).

2.2 History of Transparency in Architecture

Glass has been used by civilizations since the ancient times. The history of glass_in architecture dates back more than two thousand years ago, the time when glass sheets

were first produced in Rome (Slessor, 2001). So, Romans began examining glass technology and started utilizing glass in architectural design (Richard, 2011). Many historians see the history of architecture as mixed with the social matters in times. Therefore, an era such as the medieval times is observed via the prism of spirituality. Many of these structures let the light to enter to a great degree. Another example is the Renaissance, when there was an appeal for open spaces in buildings in a way that it would be visible from a fixed viewpoint (Radcliffe, 2007).

In order to recognize role of glass in architectural design, it is essential to look its primary usage. Glass just appeared in small openings when first was utilized in architecture and construction. By improvements in construction techniques, the usage of glass began to change from its medieval decorative use to the shape that simply functioned as a part to let the light inside the buildings (Wheeler, 2005). Large glasses were first used in architecture at the Gothic church. While large sheets of glass were not achievable yet, stained glass windows, made by smaller pieces of colored glass created large areas of transparency that lit up dark spaces; it also provided an ornamental appeal. According to Slessor (2001), these windows have an applied function; they are a way of portraying scriptural scenes and stories. These windows interconnected bible's stories to an uneducated population and slighted the architectural tendency of searching for weightlessness, brightness and also transparency, through glass (Slessor, 2001).

The next immense step in glass architecture is nineteen's century. By this time, large sheets of glass were produced, and improvements in building materials let architects to use larger areas of glass in building design. In addition to new capability of mass

production of large panes, the potentials for utilizing glass in construction became almost limitless (Wheeler, 2005). As the tendency of using glass in conservatoires, rooms and other structures raised, the building that became inspiring was the Crystal Palace (Figure.13), which was built in 1851 in London to take part in the Great Exhibition. Also, addition, it characterizes the most striving glass architectural developments of its contemporaries. This huge and remarkable building, devoted to new technology, architecture and art contained 300,000 sheets, or more than one million feet of glass. This all were possible by steel arches that the held the sheets of glass together (Wigginton, 1996).

Figure 13. London Crystal Palace. (URL9)

Under this scope, the usage of glass by architects continued developing during the 20th century.

Historically, the main role of glass in architecture has been established in respect of light's transition. Actually, one of Le Corbusier's major official manifestos was that "*architecture is the masterly, correct and magnificent play of masses brought together in*

light". Light is one of the architecture's true crude materials. Glass allows the light in as it reflects the light, which is the phenomenon of glass in architecture (Corbusier, 1986).

2.2.1 Influence of Transparency in Modern Architecture

"*Ideas concerning transparency are one of the most relevant features of our time"* (Forty, 2000; p.10). Modern architecture is frequently identical by openness and transparency, which glass façades only present the aesthetic feature of it. In terms of façade construction, today's transparent glass façades have transformed from metal façades with glass incorporates to self-regulating fringes borders between inside and outside. Transparency is not only representative of being spectacular, but also needs connotation to generate symbolic architecture.

During the age of "new architecture" ,1910s and 1920s, transparency, remarkably, was a signifier of modernity, not only technically but also artistically and ethically (Whiteley, 2003). Conversely, the issue of transparency in architecture was developed since the late 19th century due to few causes and factors. The technological development of that time by helping to produce large glass sheets, was the main support for introduction of the issue of transparency (Vidler, 2003 a). Although it was not possible to mass manufacture at that time, the other concern was the quality of glasses. So, the idea of dematerialization and transparency was dominant during this time and architects around the world tried to use glass to create 'honest' buildings where the sense of light and space was the focal concern (Grass, 2011). On the other hand, transparency was used to show the clarity in architecture. To make transparent space means that there is no secret to hide, so concern of the space and all the details are shown; that was supposed to be the reflection of the society (Hassan Ali, 2011).

In an age discernible by greater and more extravagant office buildings and skyscrapers, the tendency began to utilize glass on external walls for more imposing and light releasing designs. One of the first buildings that used full glass external walls was the Fagus Factory in Germany (Figure 14), built in 1911 (Rob, 2003). This urban shoe factory was a work of Walter Gropius, in order to hold up the entire glass facades, he used a tinny steel structure to meet the client's demand of a smart vision. Also, one of the utmost achievements in glass architecture in 20th century is the new Hayden Planetarium that exists in the American Natural history Museum, located in Manhattan that opened to the public in the beginning of 2009 (Figure 15). There is a steel sphere of the planetarium, an 87-foot structure that can embed 585 people. Its breathtaking point is that it seems to levitate in the center of an amazing glass cube (Wigginton, 1996).

Figure 14. Fagus Works Shoes Factory. (URL10)

Figure 15. Hayden Planetarium, New York (URL11)

Usage of glass in architecture undoubtedly has passed a long distance from its start. Furthermore, at the beginning of 21st century, glass buildings, which are let the natural light enter, became symbols of green life (Hayatt, 2004). Continual improvements in glass and other building materials carried on raising the potentials for usage of glass in architecture and nowadays the results are several spectacular buildings (Annette, 2003). The contemporary glass productions are stronger; and more insulated glass has led to even more use of glass in architecture. Other innovations in use of glass have also provided the possibility for it to be used less as a building material and more as a design feature in houses across the globe. Entire buildings and entire walls contain glass in their construction. Nowadays glass is applied in any part of constructions, from roofs to stairways or internal walls, as a result of its strength and safety (Wheeler, 2005).

Utilizing glass in elevators, walkways or safety walls around rooftops help to open up views. Contemporary glass is also much easier to preserve even than the ones that have been used the year before. Developed exterior glasses are coated in order to remain safe

from dirt and also prevents from stabbing, also it help to get clean after every rain (Gonya, 2011).

By considering characteristics of modern architecture and opportunity of using glass in any place in the world of architecture, symbolization of the speed up momentum of globalization in the field of architecture in possible by the sleek facades of mega capital, which caused changes in the skylines of main cities all over the globe (Figure 16). Office towers, multinational companies, five-star hotels, transnational banks and universal trade centers (Eldemery, 2009; Mahgoub, 2004).

Figure 16. Mega Capital. (URL 12)

2.3 Definition of Transparent Architecture

Architectural transparency is understood as building development, the use of open and transparent material, or the combination of form and meaning, is one of the important features of twentieth century building practice (Murray, 2006). The context of building is based on the presumption that it is possible for a transparent building to be the key, which has the ability to make the inhabitant feel attached to the society; and the

spreading of the predetermined can help to generate a social building, it is also possible to happen vice versa (Hassan Ali, 2011).

Sigfried Giedion, among others, has observed that "*Transparency is a fundamental quality of artistic production that can be traced back to the origins of art and architecture*" (Vidler, 2003 b; Roset 2008). In addition, Adrian Forty identified Transparency in his dictionary as "*key twentieth century architectural term while at the same time acknowledging the tendency to discuss transparency in its material sense rather than its theoretical metaphoric ones*". Furthermore, he recognized that "*the term transparency is widely used within the architectural world and a term we are all familiar with; it's also a term we rarely seek to analyze for its exact meaning or application*" (Forty, 2004; p.54).

Sometimes it is difficult to summarize and categorize the different definitions of transparent architecture because of the wide range and several interpretations of the term transparency (Ascher, 2003). One of the important interpretations of transparency that is often used in transparent concept and architectural world is making indoor and outdoor spaces continuous and create a visual connection between spaces (Hayatt, 2004). There are different ideas of the term transparency as they are defined by diverse architecture critics such as literal transparency and phenomenal transparency which are identified by Row and Slutzy (1982). The transparent concept can provide clarity among different architectural elements, which is significant for the perception of a design (Rowe & Slutzky, 1982).

In addition, the early modernist situation – where the expressionless impartiality was the way to reach a civic public persona– was now inverted. For a while, the flat glass exterior was the most abstract and impartial communal façade imaginable, it also cruelly exposed inner spaces of the building to public view. This is a peculiar consequence of the more common aesthetic code of the term that Colin Rowe and Robert Slutsky called "phenomenal transparency" in 1956; Phenomenal transparency is "*the capacity of two figures to interpenetrate without optical destruction of each other*" (Rowe & Slutzky, 1982). Through phenomenal transparency, an object of the public territory and one previously transferred to the private territory suddenly appear on the same level. This interpenetration or simultaneity is made up by the flat glass sheet, which terminates the separation the depth (distance) between the public and private realms, placing them in the same level of perception. Then suddenly, a united space comes up a space as an assembly of objects that are limitlessly uncovered and are open to each other and to the public observation. The older Kantian notion of a public sphere as a neutral platform without set apart interests (objects) unexpectedly becomes quite problematic. And transparency, if installed successfully, ultimately makes architecture to move from the facades to the design of interior objects (Rowe & Slutzky, 1982).

Following on Row and Slutzy, According to Peter Rice's book Structural Glass, transparency is categorized in three different parts. The first one is "*need to allow light to penetrate the walls of a dwelling*" (Rice & Dotton, 1995). So, here visual connection has a minor role. Improving the glass technology could make the size of the pieces of glass bigger. "*Allowing for a better view to the outside*" (Rice & Dotton, 1995), is second way of transparency that create visual connection between inside and outside

which is very similar with "*a simultaneous perception of different spatial location*" or literal transparency (Rowe & Slutzky, 1982). About the third definition of transparency by Peter Rice, "*Architects and designers extended their designs to include not only immediate surroundings, but also views in the distance; expression of the transparent surface of glass*" (Rice & Dotton, 1995). This form of transparency is directly connected to the building's aesthetical properties and is found in many industrial design and late modernist projects (Rice & Dotton, 1995).

2.3.1 Classifications of Transparency

According to Row and Slutzy, transparency can be attained by two ways:

i) Literal transparency, ii) Phenomenal transparency.

i) Literal transparency

Literal meaning of the word "transparency" according to dictionary is*:* "clear, honest, truthful, not vague and easy to understand". By analyzing the meaning of transparency and also relating it to architecture, next ideas may appear: Clear can be interpreted as a clear design that is not difficult to understand in a three or two-dimensional world. Honest can explain the bright and reachable architecture as it was the aim of modern architecture with the impression: "*if I am able to see and have access to a space then I am able to control that space"* (Forty, 2004). Taking a position in a specific design method could be an opportunity for an architect by controlling a space. A closed design is not almost static, accessible and monumental, also it is not possible to be penetrated (Hassan Ali, 2011).

On the other hand, Literal transparency was introduced by Row and Slutzy, (1982): according to them, literal transparency means "previous to light" and "describes a condition that allows one to see into or through a building" (Figure 17). Nowadays it is possible to make a self-determining glass wall, as a result of development of frame construction to fix enormous glass sheets. Buildings can have a skin glasses around them, solid wall with windows are not only options any more. Although the window might be the main part, "*this window is the wall itself, or in other words, this wall is itself the window*" (Kepes, 1994). In addition, Literal transparency is generally used to explain the material situation of translucency within a building. Also, architects often used literal transparency to explain certain optical qualities in their architectural buildings. Literal transparency in architecture means "*a simultaneous perception of different spatial locations*" (Rowe & Slutzky, 1982).

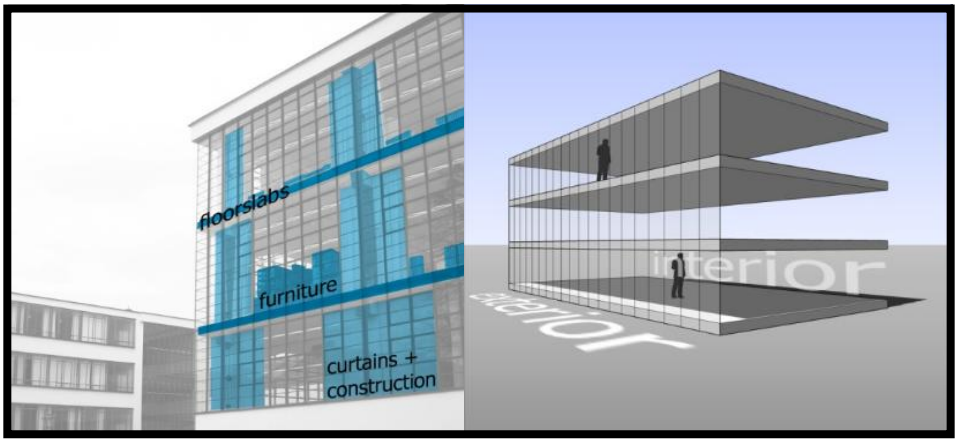


Figure 17. Literal Transparency (Roest , 2008).

ii) Phenomenal transparency

Between 1955 and 1956, Robert Slutzky and Colin Rowe wrote an article entitled: "The apparent space between solid objects", its discussion was introduced by a question from Gyorgy Kepes's Language of Vision 1944.

According to Kepes (1994), "*if one see two or more figures overlapping one another, and each of them claims for itself the common overlapped part, then one is confronted with a contradiction of spatial dimensions. To resolve this contradiction one must assume the presence of a new visual quality. The figures are endowed with transparency: that is they are able to interpenetrate without a visual destruction of each other*" (Kepes, 1994; p.41). In addition, phenomenal transparency is more complex than literal transparency (Figure 18). This kind of transparency "*refers to space, depth, and organization*" (Rowe & Slutzky, 1982). According to Rowe the definition of phenomenal transparency means "an inherent quality of organization" Also, they brought another impression about the phenomenal of transparency, which says that "*even if we are not able to see the behind layers we are able to construct an image of it*" (Rowe & Slutzky, 1982). So, Literal transparency depicts the material quality of being seen through, while phenomenal transparency explains the perceptual quality that permits the mind to distinguish the fundamental leading or spatial concept" (Rowe & Slutzky, 1982).

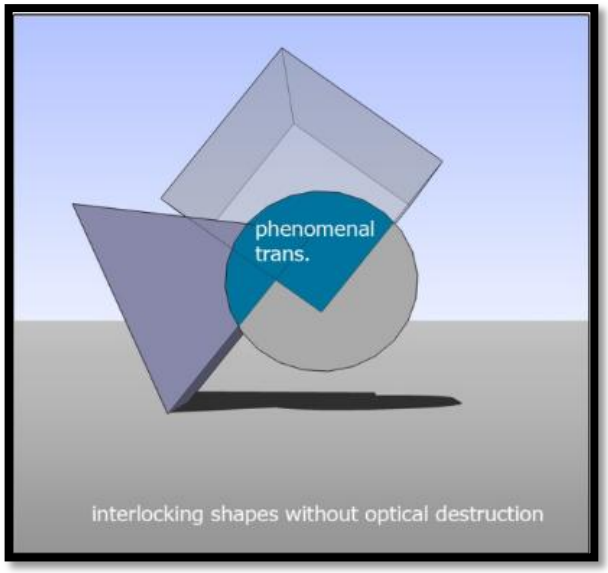


Figure 18. Phenomenal Transparency (Roest, 2008).

2.3.2 Material and Spatial Transparency

Following to Literal and phenomenal Transparency, the concept of transparency is to be categorized into two predominant types, Material and Spatial transparency. The term of material transparency is about using materials, which are transparent. It means literal transparency, which began while glass and mirror introduced to the world. Material Transparency (literal transparency) means, previous to light, let one to see inside or through a building. Basically, material transparency means seeing through material, in the other word it is visible and clear from the one side to the other. By using transparent material in a building, controlling the space will be possible. Although this may be realized as spatial transparency, it makes it possible through material transparency (Hassan Ali, 2011).

Spatial transparency can be classified into phenomenal transparency. The concept of Phenomenal transparency is having an image of a building, object, or some two-dimensional surfaces it is also possible to see the image without those names. Spatial

transparency is a kind of transparency that can be made by material transparency or by designing an explicit building, which its usage is clear (Hassan Ali, 2011).

In addition, Gyorgey Kepes has done some investigations about the characteristic of transparent material and the ways it can be used in architecture and art. In order to generate a design that is able to integrate the highest possible number of spatial vistas, contemporary architecture takes the advantage of transparent quality of artificial materials. The relationship between interior and exterior spaces becomes closer; and each perspective of the building gives widest visual comprehension of space (Kepes, 1994).

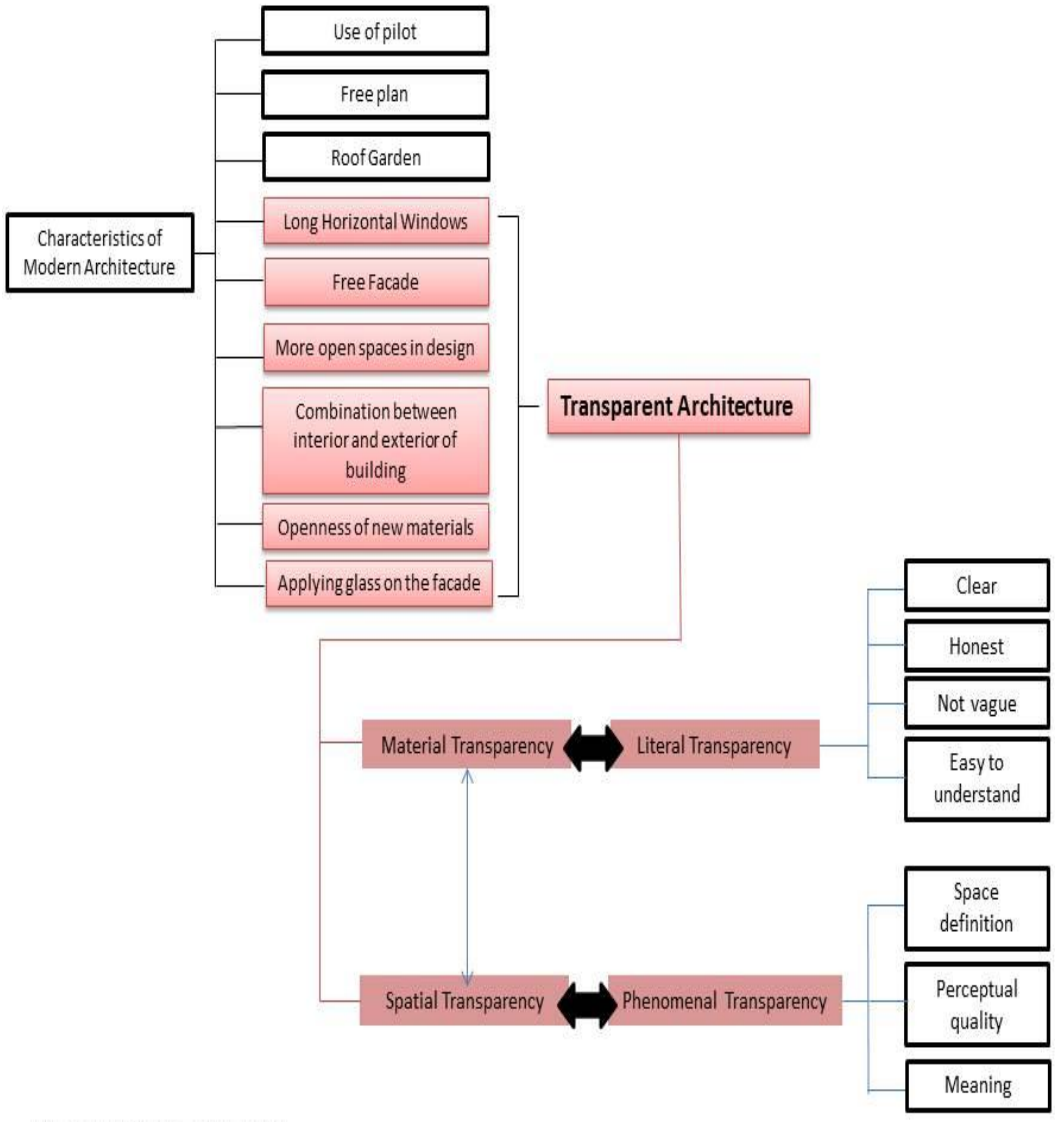


Figure 19. Summary of Chapter 2.

Chapter 3

SYMBOLISM AND ARCHITECTURE

3.1 Value Judgment as an User Interpretation of Architecture

Understanding how designers' thinking and acting enhance the value judgment and interpretation of the designs. A characteristic human behavior is to value and interpret other entities, persons, animals, actions, experiences, and even ideas. Through this behavior arise personal values, cultural values, intellectual values, religious values, aesthetic values, architectural values, gastronomic values and etc (Pultar, n.d). According to user's view points, value judgment of an architectural building is based on the interaction between the person and the representation of the object or building in the built environment. As a result of the interaction between the individuals and the product, a value judgment is always accompanied by an effective response and an assessment about the level of quality or value of product. Therefore, there is not an absolute scale in user's heads for measuring values of architectural buildings. The judgment of value is relative, dependent on environment and surrounding values (Volker, 2011).

If one presumes architecture as alteration of social, scientific, ideological, religious or philosophical values into concrete physical forms, then it will make it possible to see the physical forms as mediums of visual communication for human (Krampen, 1979; Rapoport, 1990 a). According to Lang (1987), the data captured from the environment has

symbolic features that give it value, ambient qualities that draw emotional reactions, and motivational messages that infuse needs. To him, the built environment can be perceived to communicate a diversity of meanings and interpretation, which are numerously possessed in any artifact or surrounding; from being applied to being symbolic (Lang 1987).

However, role of architecture is reduced to a functional and purely utilitarian during contemporary time. The beautiful art's lines change their place to the cold and inflexible lines of geometry. This becomes an extremely predominant issue that is debated in today's architecture. Recently a great extent of criticism of modern architecture's affirmation on functionalism manifested (Rimmer, 1997; Lampugnani, 2011). Therefore, architecture should recuperate its ability to express value, so the designers are much responsible; they should find a way to create valuable designs. Obviously, it is necessary for the designer to have valid design criteria, so that the design can reach to its target.

Under this scope, symbolic value is an option, which would give this opportunity to users to judge architecture. In fact, the human mind takes "images" from a concept or buildings' form, and provides them meaning and judging them by the symbolic forms of the mind (Smith, 2006). Therefore, the importance and role of architectural forms emerges, in order to create valuable architectural examples.

3.1.1 Importance of Form, Function, Meaning

According to Eisenman "an architect should always be able to answer the question 'Why does this building look like this'? With a nod to historical example or cultural meaning" (Jackson, 2008). Nowadays, the answer is because it can be produced by the computer, or because of imitations and globalization from other countries. Today, often modern architecture's focus is increasingly on "spectacular meaning", architectural building icon with no meaning (Smith, 2006).

Obviously, in the format of a traditional skill, knowledge of architecture was transmitted through the spoken word and also by practical demonstration for most; and it was depending on the place and was affected by geographic boundaries. Consequently, roots of all the rituals, myths, social norms were tightly in the instant local context, but architectural knowledge went free from the sense of place by the printed word, when it allowed the discourse to go up to an abstract conceptual stage, where it could be argued in terms of matters such as form, expression, proportion, character and meaning. Since the written idea could have come from a long distance, the source of knowledge may possibly come from an unknown source (Smith, 2006). In this sense, it became possible to discuss meaning by the terms, which were out of the immediate local background. Therefore, by going back to its roots in antiquity, the typology of the primitive hut; or by the theories adopted from another field, such as sociology or linguistics, meaning of architecture became justifiable (Rimmer, 1997).

The three important features that definitely form the foundation of all architectural form are Function, Form and Meaning**.** These features necessarily should be present at all

times, although they might have various individual importance. If one of these three is absent, then the mentioned work can simply be taken out from categorization of architectural work (Salura & Fauzy, 2012).

Apart from clarifying why these three features are considered essential, the diagram (Figure 20) is a description for the relation between the revolving features of Function, Form and Meaning or the process of making them operational under real conditions. According to Salura & Fauzy (2012), the features of idea and expression are accommodated in each and every form. It can be possible to give concrete shape to expression and ideas if there is a medium or "umbrella" for this purpose. As mentioned before, by basing on the diagram depicting, the ideas-medium of expression, three most essential features of architecture are *"function (equivalent to idea or representamen), form (equivalent to medium or object) and meaning (equivalent to expression or interpretant)"* (Adrian, 2006).In consequence, every result of architectural design must display function-form-meaning evermore. In (Figure 20) it is possible to distinguish that how the alteration (rotation) of these three ever-present features happen.

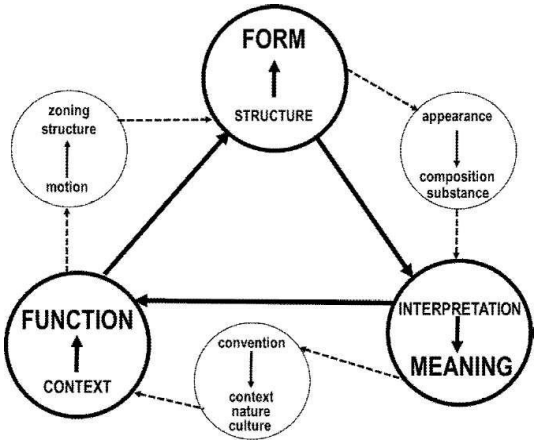


Figure 20. Diagram Showing Rotation of the Aspects Form, Function, and Meaning (Salura & Fauzy, 2012)

Displacing of Function-Form-Meaning in the diagram above shows the process of making its stages operational while their change. "*The functional aspect is always affected by its particular cultural and natural context. The formal aspect always contains within it the structure of the construction accommodating the function of zoning. The aspect of Meaning is obtained from the interpretation derived from the actual appearance of form*" (Salura & Fauzy, 2012; p,7088).

3.2 Definition of Symbol

Symbolism has permeated every aspect of human life. Nearly everything for example, a building, a movie or a painting has its origins in some sort of symbolism or, on the contrary, resorts to symbolism to express itself. Symbolism advanced as an art movement by the late 19th century, having its roots in arts and literature. This movement was a great reaction in contrast to both naturalism and realism notions, in favor of spirituality, dreams and imagination (Alford, 1955).

According to Oxford English Dictionary, "*A symbol is something that stands for, represents, or denotes something else."* symbols with meaning inscribed in it can be termed as symbolism. Symbolism means, to represent something in symbolic form, or to ascribe the symbolic meaning or symbolic character to something (Mukerjeea, 2008). In addition, Symbolism is the practice or art of using a word or an object to represent an abstract thought or idea. It could be a motion, place, person, object or word with symbolic meaning attached. Conversely, a symbol itself is something, which is representative of something else by affiliation, role or resemblance (Wood, 2011).

Symbol also can be a sing, which is written to represent an invisible thing, or it can be two different attitudes, intended or unintended. Remarkably, language is a system of spoken or written symbols that one can communicate. Every word is obviously a symbol; for example, the four characters of the word "book" represent a sound just like the way that a tangible object does. Similarly in writing, symbolism means usage of a word, a description or a phrase, which represent a stronger and deeper meaning than what the words are presenting themselves. Then, the written text can be transformed into a very powerful tool or instrument, by such meaning (Romaniuk, 2009).

The term symbolism is very ambiguous and has been represented or interpreted in many different forms, such as in political religious, color, mathematical, writing, advertising, (literature), music, poetry, architectural buildings, and even everyday life. However, tangible meaning must be traced to it. From a critical look, it can be seen that symbolism is found almost everywhere; but contingent on when something represents more than its actual meaning (Avis, 2005). Among others, as example, it is going to look briefly at three basic and different types of symbolism such as use of symbolism in religion, color, and architecture to gain more insight on how they are correlated respectively.

Initially, religious symbolism is stated as the use of images, texts, or actual existing objects to indicate an efficacy or Faith. The common used instance is the use of objects in order to symbolize "faith" in various religions such as cross for Christianity and the Star of David for Jewish in figure 21 & 22 (Wood, 2011).

Figure 21. The Cross; Symbolism of Christianity and Faith. (URL13)

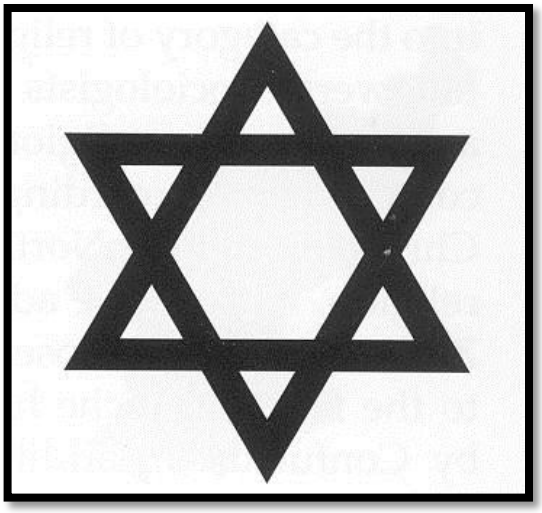


Figure 22. The Star of David that Signifies Judaism. (URL14)

Another example of Christian symbols consists of the dove which symbolic meaning is Holy Spirit and the sacrificial lamb, which on the other hand symbolizes Christ's sacrifice (Figure 23 & 24).

Figure 23. The Dove; Symbolism of the Holy Spirit (It May Also Symbolize Peace and Freedom). (URL15)

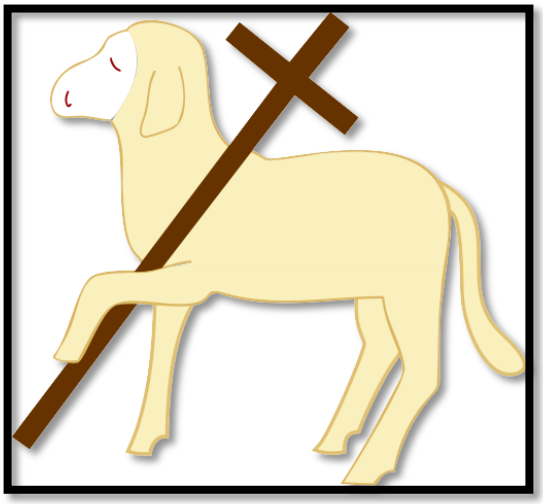


Figure 24. The Sacrificial Lamb that Symbolizes Christ's Sacrifice (On The Other Hand, Signifies Innocence). (URL16)

Symbolism is also traced in colors. Several research have illustrated that most colors are symbolic. Symbolism in colors is used to bring out the meaning it stands for such as when black is used to represent death or evil, white far life and purity, red to symbolize blood, passion, danger, or immoral character, purple for royal color, yellow for violence

or decay, and blue for peacefulness and calm. However, other people, culture, tradition, or custom might view it from a different point of view, although inscribing symbolic meaning into it (Romaniuk, 2009).

According to Ernst Cassirer, The diverse outcomes of culture — language, art, scientific knowledge, myth, and religion — become components of one major problem-complex: these multifold efforts, directed towards a single goal, which is to transform the passive world of mere impressions, the world that spirit seems imprisoned in it at first, into the world of pure expression of human spirit.

According to Hall (1996), "*It seems we have a natural tendency to create symbols in the way we are thinking or in art…"* (Hall, 1996; p.52). Therefore, symbol's usage does not belong to specific era or a certain society. According to Mitford (1996), human is surrounded by ideas, signs, and images, which are frequently very symbolic, apart from the type of their society or community, whether they have not changed by time or commercialized. Since the prehistoric times, signs and symbols have been an essential part of societies and cultures. Some scholars such as Eliade rely on significance of symbols for being 'homogeneous with human existence' (Eliade, 1991in M.Sani, 2009).

He interpreted symbols as doors of direct reality. According to Eliade, symbolism adds new values to an object or an activity tolerantly to its own original value without any interruption. "*…in application to objects or actions, symbolism renders them "open"; symbolic thinking "breaks open" the immediate reality without minimizing or undervaluing of it: in such a perspective this is not a closed Universe, no object exists*

for itself in isolation; everything is held together by a compact system of correspondences and likeness…" (Eliade, 1991in M.Sani, 2009; p, 53).

In order to define symbolism, Grabar (1979) compared 'symbol' and 'sign' and 'image' with each other; by making such division, he stated that between these three issues, symbol has a significant place, because symbols comprise various "charge" values that are given to them. Additionally, symbolic meaning is based on predetermined conventions, behaviors, or agreements, which object does not contain them directly but they are in those who share it (Grabar, 1979 in M.Sani, 2009). Obviously, the confusion over the essence of symbolic meaning has been more than other stages of meaning. That is the reason, which can help to identify concepts that image, sign and symbol are representing; concepts that are mostly used interchangeably.

3.2.1 Sign and it's Different Forms 'Symbol, Icon, Index'

According to Goldwater (1979), sign is "*something, which stands to somebody for something in some respect or capacity"* (Goldwater 1979, p. 17). This description clearly defines sign's function. The relation between sign and represented object can be situated in dimension of icon, index or symbol. Icon is a sign that resembles to the object, whereas an index sign directly refers to the object with an existential linkage (Goldwater, 1979).

Although definitions always contain an arbitrary element, but there should be a distinction between signs and symbols. Symbols include signs for they incorporate implication, but symbols overcome pure signs. Symbols are alive and dynamic; they are the invention of creative imaginings. . Symbols create a linkage between what is called

routine and superior, the precise fact and the widespread truth, the present moment and infinity. They cannot be artificial or invented at will. A sign does not have such strength**.**

In addition, sign is anything that exists in favor of something else; it represents a subject such as, an idea, an experience, an emotion, an object or a thing, etc. Sign belongs to the ordinary sequence of life; it is not dynamic and lively like a symbol and does not adhere new possibilities, therefore it is not open to the up comings (Avis. 2005). Unlike symbols, signs are not translucent. It can be said that signs help to remind of what is already known; symbols speak of the things beyond what is known. Signs extract an instinctive reaction or conditioned reflex—like routinely stopping at red traffic light—nonetheless symbols need some existential participation (Crow, 2003).

Moreover, sign has literal meaning, its meaning is easy and simple; substance of conventional agreement between people who use that specific sign, whereas a symbol has complicated meaning; it has "literal" meaning and in the same time, extra meanings further than the literal (Smith, 2006).

On the other hand, According to Erman (2004), the symbol is a sign which association with its object is a matter of culture, convention, habits, agreement, individual and social values. A symbol can indicate more than one meaning in the addressed mind and it varies from other sign groups with this characteristic. Symbols are polyphonic; this means that each object can have a number of symbolic meanings (Erman, 2004; Jarosinski, 2002). Consequently, Symbolic forms are the “highest objective truths” that

are “accessible” to the human spirit. “*A symbolic form is a true unity of consciousness, as a unity of time, space, objective synthesis, etc*” (Cassirer, 2004; p.87).

Jung discriminates symbol and sign by bringing up the statement that a symbol always implies a beyond: “*A specific expression for a known object always will be a pure sign and it won’t be a symbol at all. It is, therefore, quite impossible to create a living symbol, i.e. one that is pregnant with meaning, from known association*” (Jung 1964, p.232). In the course of differentiating between symbol and sign, Mitford also claims that symbols have a profounder meaning. In addition, a symbol is the linkage between the function and the sign, the two words are frequently used interchangeably, but in most of the time symbol has a profounder meaning, the nature and manifestation of a symbol is to represent or reflect something more insightful than its reality (Mitford, 1996 in M. Sani 2009). Obviously, one of the potentials of architecture has is this purpose itself, to struggle in order to become symbolic. After dealing with concept of the symbol concept, it is time for exploring the course of constituting the symbolic meaning in the architecture.

A building might not be entitled a real architecture unless it meets spiritual meanings or minimum symbolic. These kinds of buildings probably can meet the needs for “material”, but they cannot carry the sense of place over their inhabitants. Hence, the need for symbol and signs is not something fantasy, some buildings are in serious need of it, or it is necessary to exist sometimes. In the case of modern transparent buildings, symbols are important in terms of achieving the symbolic meanings.

3.3 Architecture and symbols

It is possible to use Architecture for symbolic aims too. Use of buildings in order to convey symbolic messages is not a new case. Actually, it has a very long history with its roots in early times. Consequently, the design of some buildings has been done in order to be symbolic. According to Rimmer (1997), Symbolic forms obviously constitute one's world and culture. Also, symbolic forms are the "*true sources of light, the prerequisite of vision, and the wellsprings of all formation*" (Rimmer 1997, p.5).

Architecture can play an illustrative role by representing meaning through the built environment. This points out that the buildings are able to represent and connect to socio- cultural traditions or express one's opinions and ideas. Rapoport, (1990 b) clarified statement, when he declared that "*a variety of cultural or symbolic values can be expressed in a building through choices in materials, colors, forms, sizes, furnishings, and landscaping*" (Rapoport, 1990 b). Indeed, symbolic characteristics can be seen in every category of buildings, from huge monumental ones to small normal houses. Each type of architecture may have different symbolic qualities, but relatively every building transmits some symbolic messages.

Architectural works or buildings can generate our communal and singular mental imagery by means of the emotions they evoke. Natural objects such as trees, woods, birds, ship, human being, vegetation, mountain, body of waters and flowers have been preferred symbols in expressive designs for example, birds' wings have been used several times in order to represent airports, which are related to the act of flying.

Santiago Calatravca is a famous Spanish architect and he is known for joining symbolism in his drawings by inspirational natural forms. For instance, the full length of building of the main terminal in Lyons Satolas Airport, France is bridged by a steel truss designed very likely to an animal skeleton, which is most obviously expressive of a bird and symbolizing flight, as delineated in Figure 25 (Rmaniuk, 2009).

Figure 25. The Building's Most Striking Profile; Showing the Two Converging Steel Arches With Expressive of a Bird, Symbolizing Flight. (URL17)

According to Kenzo Tange, "*There is a powerful need for symbolism, and that means the architecture must have something that appeals to the human heart*" (Erman, 2004). The symbolic performance is defined by symbolic meaning of the user and it is an element of building performance. Therefore, the symbolic meaning arises in the user's mind, relying on physical quality of the buildings (Erman, 2004).

"*In architecture, clearly, buildings are imbued with and embody multileveled and multipurpose meaning and messages*" (Rimmer, 1997). They provide structure and

form, and also text, context and meaning to social and cultural life. Consequently, symbols can be defined as semantic usage of recurring symbols or imageries within a work to create an additional level of meaning. Symbols give meaning to a plant, object and animal; likewise, symbolism is the practical use of any iconic representation by careening particular conventional meaning (Rimmer, 1997; Jarosinski, 2002).

Moreover, human provides meanings to the images that it received from objects and by his symbolic mind. Also, spatial relations between human and buildings are created by means of symbols more than forms; and more than being seen as form, architecture is seen as symbol. Therefore, a modern or transparent building's concept should be inherently symbolic or carry meaning; also its meaning is established by the ideas, images, and feelings, which it rises in the mind of visitors (Rimmer, 1997).

If every construct is innately symbolic, then to create something blatantly representative is irrational, since it becomes an artificial (Jarosinski, 2002).

3.3.1 Symbolism and Transparent Buildings

The Architecture's value is based on its meaning. Trying to minimalize architecture to its construction position would decrease the value of architecture. There are some remarkable symbolism's facts as expressed in some famous instances of world transparent architecture, such as Canadian War Museum in Ottawa, Reichstag Building by Norman Foster and Glass House by Philip Johnson.

It could be discovered from previous parts that design of some buildings is meant to be symbolic in nature. Likewise, the facades, interiors, building materials, colors, forms, furnishings, and landscaping of some of these transparent buildings have symbolism in their expression; it could be cultural, historical, and religious or communicate, architectural significance or resemblance of other objects.

- **Canadian War Museum in Ottawa**

The renewed Canadian War Museum's façade which is placed in Ottawa and designed by Moriyama and Teshima, which has many raw concrete walls both inner and outer side of the building and also the broke up concrete in addition to angled glass walls. This facade represents the ship's bow and symbolization of the Canadian navies and their role, which they played during war. The windows that are placed on the building's roof equally have a symbolic meaning devoted to it in "international Morse code ". This clarifies in detail, the phrases "Lets we forget", and "N'oublions jamais", that are English and French respectively as showed in figure 26 (Moriyama. 2003).

Figure 26. Modern Ottawa: Canadian War Museum. (URL18)

From the former example, it can be understood that architectural symbolisms can have a universal meaning; and also can be very subjective in their inferred response and they may be a result of individual's skills, and opinions. Having considering symbolism and architectural symbolism from a general point of view (Moriyama, 2003).

- **Reichstag building dome**

Figure 27. Reichstag Building Dome (Author, 2010).

Figure 28. Interior Of Reichstag Building Dome (Author, 2010).

There is a huge glass dome with a 360° view of the surrounding cityscape of Berlin (Figure 27). It is known The Reichstag dome. The debating hall of the Bundestag, the parliament of_Germany, can be illustrated down below. Sunlight is directed into the building by a mirrored cone in the central point of the dome. As a result, visitors can see what is happening inside the chamber. The dome is accessible for public and can be accessed by climbing two spiraling ramps that are made of steel and they are evocative of a double-helix (Chametzky, 2001).

The Dome symbolizes that the people are above the government, as was not the case during National Socialism. The futuristic and transparent design of the Reichstag dome makes it a unique landmark, and symbolizes Berlin's attempt to move away from a past of Nazism and instead towards a future with a heavier emphasis on a united, democratic Germany (Chametzky, 2001).So, this transparent dome is symbolizing accessibility of democracy process (Figure 28).

- **Glass house, Philip Johnson**

Masterpiece of Philip Johnson "the Glass House" is another example of transparent symbolic buildings (Figure 29). As Jarosinski (2002) mentioned**,** "*it is compared to a dream and conceptualized as containing encrypted and embedded representations of the self"* (Jarosinski, 2002). It is symbolism of The Dreams' Interpretation; in the same time it is the theoretic and methodological pattern for this approach to design-as-dream. A mirror that reflects a lens, an image that focuses it, and a prism that discloses its parts, the Glass House turns a clear eye onto its maker (Jarosinski, 2002).

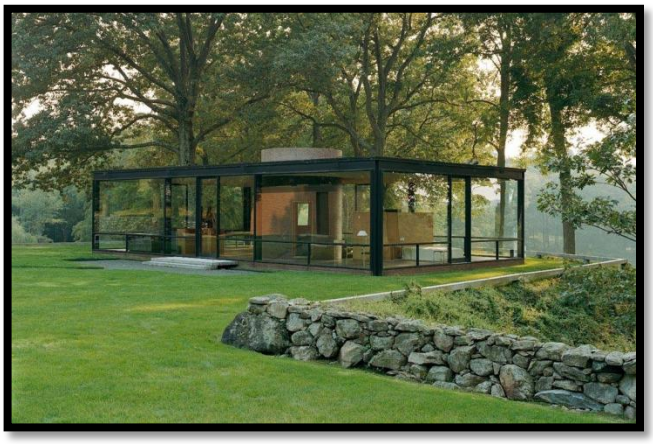


Figure 29. Glass House, Philip Johnson(URL19)

Accordingly, modern architecture should have a universal language system to create a symbolic concept (modern building). Therefore, each transparent building should have a structural key; and an idea behind its concept, which can generate a symbolic

architecture. Symbols should rely on profound memories and one's perception of the spiritual world also, sympathetic with our tradition and origins. This is done by diverse symbolic forms inherent in our mind: through art, religion, history, philosophy, etc (Smith, 2006). Additionally, a building is nothing less than the symbolic representation of the tradition, values, culture, and creativity levels of the special country in which it stands.

In order to examine the results of literature review, some architectural critiques related to famous transparent contemporary buildings in London has been explored in the following section.

3.3.2 Symbolic Meaning of Contemporary Transparent Buildings in London

In this respect, it is tried to find the world's most famous contemporary modern transparent buildings. Accordingly, London has been selected as the cradle of modern architecture. It is a well-known city for its magnificent and historic buildings designed by some of the world's most famous architects. Since the century turned, a new type of architecture, mostly using concrete, steel and glass has become an increasingly significant part of the ever-changing cityscape. This Transparent modern architecture is a highly visible characteristic of the city and absorbs the attention from all over the world.

So, London like any other modern city includes transparent buildings, of which some are widely well known to the world. Following this description, among all London's public transparent buildings, three most famous and well-criticized buildings (Gherkin Tower, London City Hall, Shard Tower) have been selected to be investigated and analyzed

according to their symbolic meanings. These buildings are as key examples of London's contemporary modern transparent buildings.

Figure 30. General View of London. (URL 20)

1. 30 ST MARY AXE (Gherkin Tower), London, Architect: Foster and Partners, 2004

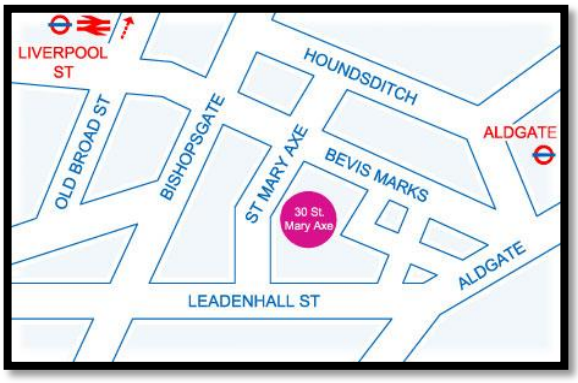


Figure 31. Gherkin Tower Location Map. (URL 21)

Figure 32. Gherkin Tower.(Author, 2012)

30 St Mary Axe, more famous with its nickname "Gherkin", is one of the most impressive buildings in London; and it is outstanding in the city's skyline. This **iconic London's landmark** is one of numerous modern buildings that have been constructed during years in a historical site of London (Figure 32). It is known as one of the most distinctive skyscrapers within the London's financial district. Moreover, it is the first skyscraper, which was built in the city with green technology (Shen, 2009).

Famous Gherkin is the design of famous architect Norman Foster and partners, performing as **Iconic Symbol of modern London,** located near the "Tower of London". The office tower with 40 stories and 180m height has a specific form, is joined to the cluster of high rise buildings that **symbolizes the center of London's financial**; and It is the first environmentally distinctive tall building (Hayatt, 2004).

The occupants of this transparent building enjoy the excessed awareness of the outside and benefit more from the daylights, by its fully glazed covering. In addition to being an office tower, 30 St Mary Axe is accessible on the street level to be used by public,

encompassing double-height retail outlets, serving the local working community; and it is set within a new public plaza. There are private dining together with related hospitality services at the top of the tower, serving the occupants and their guests. In addition, there is a restaurant under the glazed dome with extraordinary westerly sights. Many activities such as gatherings, presentations and other take place on the flexible mezzanine of the restaurant with a full 360 panoramic view of the city and beyond. This is a radical building in terms of technical issues, architecture and social and spatial features. This office building is not likely to any other building in its category both from the inside and outside (Powell & Grant, 2006).

The Gherkin has an extremely **unique form**, which is basically a prolonged and curved shaft with a rounded end, similar to a stretched egg. It is one of the world's most rare buildings, because of its egg-like shape. **The egg shape is symbolic,** and this came from the time that egg was once considered as the perfect shape, **the symbol of absolute and perfection** (Figure 33 & 34).

Figure 33.Gherkin Tower. (URL 22)

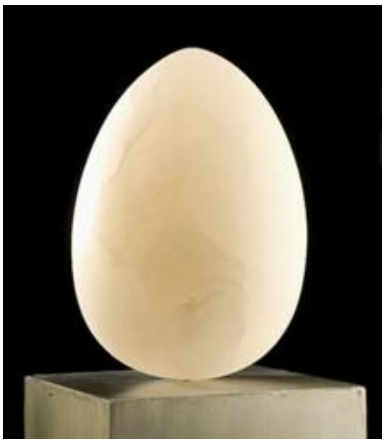


Figure 34. Perfect Egg Shape. (URL23)

Besides, on the outside, the building is covered consistently with glass panels, which are rounded off at the corners. Its lens-like dome at the top serves as a sort of observation deck.

With a circular plan, the building widens as it rises from the ground surface, and then narrows towards its top. This is a responding form for specific requirements of the small site. The tower looks less bulky than a formal rectangular block, shaped by equal floor areas; the narrowing of the building's layout on the ground level decreases the reflections while increasing the daylight penetration at this level and advancing its transparency. The floors on the mid-levels provide larger areas to accommodate offices; and the amount of sky's reflection is minimized because of the tapering top of the tower (Hayatt, 2004).

Moreover, the press have always been criticizing and admiring this **unique structure.** Also, some criticism has been given in terms of the urban design and contextual relationships of the building; and also about architectural scale and its aesthetic expression (Lewis, 2006). This skyscraper is placed in the central part of a low rise and midrise area; and "it is impossible to notice its variations of orientation exposures because of the rounded …it doesn't drag any consideration from its neighbors", according to the architect Roger K. Lewis, who is also a professor at University of Maryland (Lewis, 2006).

Finally, it is undeniable that Gherkin has a high level in Identity of London and it is significantly **important to London culture.** It has been on the cover of Newsweek, in advertisements for London's Olympics bid; and it was the set of some movies such as Match Point, Basic Instinct and Bridget Jones (Powell & Grant, 2006). Famous and successful figures of the events industry selected the Gherkin as the winner of "COOL venue awards", at 2012. The awards focus on venues, which have ***"Charisma, Originality, Style, Innovation, Sex Appeal, Authenticity, and Uniqueness"*** (Grant, 2009).

Key aspects of symbolic meaning in Gherkin Tower:

- It is Unique in the case of architecture. **(importance of form to create symbolic transparent architecture)**
- It is an iconic building/ Iconic Symbol of modern London **(deliberately iconic building)**
- Refer to the **egg shape**, which is a symbol for perfection and absolute (**key structural and idea behind the concept, referring to a universal pattern)**
- Skyscraper, the final symbol of wealth and power **(referring to a universal pattern)**
- Visual texture of the steel and glass **(Symbolizing a modern city) _ Literal transparency**
- Its role in London culture and identity **(referring to cultural meaning)**

2. London City Hall , London, Architect: Foster and Partners_ 2002

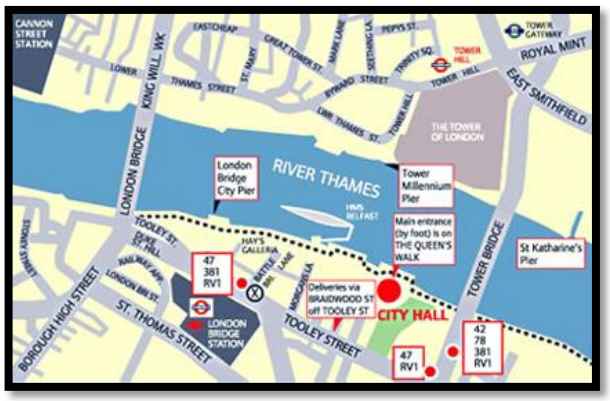


Figure 35.City Hall Location Map. (URL 24)

Figure 36. London City Hall. (Author , 2012)

The building of London City Hall, designed by Foster and Partners, is located in the zone that is known as More London (Figure 35). Seven major buildings comprised More London and the area was designed in order to prepare efficient quality office space for the workers, within the new business community in City of London. This building is part

of the urban development project that is giving a new face to its surrounding (Figure 36) (Norton, 2003).

It is noteworthy that the purpose for design of London City Hall was also to create a **new landmark for London**. Foster and partners created the building to reach visual and conceptual significance. The **uniqueness of the form** reveals immediately by the **spherical shape** of its structure that leans towards south direction. Moreover, River Thames and other buildings of More London are in the outlook of London City Hall (Figure 37). The clarity of the view to structures located on other side of the river and presence of the tower bridge is a contribution to magnitude of London City Hall as landmark (Freiberger, 2007).

Figure 37. London City Hall. (Author, 2012)

Figure 38. London City Hall. (Author, 2012)

Height of this 10-story building is 45 meters and each floor's area is 185,000 square feet. Conventionally there is no back or front defined for the building (Figure 39 & 40). The surface of the spherical shape of the building is approximately 25 percent less than a cubic form with the same volume. As the floor plates are stepped inwardly from the highest level to bottom, the building leans back to the south; and these moves are naturally providing shading from the strongest direct sunlight (Marmot, 2004).

Figure 40. London City Hall. (Author, 2012)

Figure 39. London City Hall. (Author, 2012)

The building of City Hall is designed as a symbol of **democracy, sustainability and accessibility.** It accommodates the chamber for 25 elected members of the London Assembly and the Mayor's offices together with 500 staff of the Greater London

Authority. It brings the visitors close to the working of the democratic process and this clarifies that London City Hall is a highly public building. This building carries a fine complex of office spaces, shops, cafes and public spaces within design landscapes to a part of the riverbank that has not been developed for decades (Norton, 2003).

The transparency of the democratic process, proceeded by the London authority was successful, by being accessible for the people and all parts of the government. The visibility of assembly chamber makes it easily to observe all the meetings in several perspectives. There is a circular ramp round the chamber, going up above, open to the public; the chamber can be seen and heard from this ramp (Figure 41& 42). This ramp is even a more emphasis on the accessibility of the democracy**.** The most used material on the surface of the building are steel and glass, and the structure does not contain any vertical column. These issues induce the **sense of openness of the government to the citizens and other visitors** (Marmot, 2004).

Figure 41. London City Hall's Spiral Walkway. (URL25)

Figure 42. Assembly Chamber. (URL26)

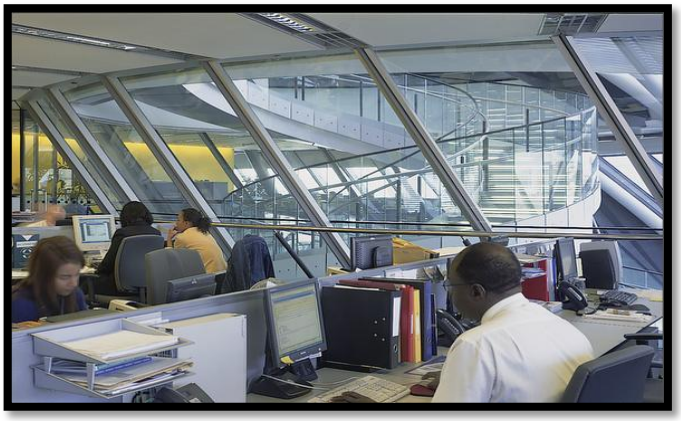


Figure 43. London City Hall From Inside . (URL 27)

Under this scope, it should be feasible for the public to witness local authority's function; and it is obvious by the spiral path going upwards to the boardroom. The building should also appear transparently to its surroundings and symbolize the transparency of the democratic process**.** In order to rich this goal, the whole surface of the building is covered by glass. According to literature review, symbolically it is same as Foster's previous design (Reichstag building).

At the end it can be said, the Foster design on the southern side of the river Thames near the Tower Bridge is **deliberately an iconic building.** Its shape, -a skewed sphere of glass, sometimes reminding of a head- shape- is justified for two types of function: environmental, decreasing the total amount of glazed area of the building; and democratic, by the ascending internal ramp, which the whole building designed around and is a symbolic walkway for people to rich above the arguing chamber of their elected representatives (Pearman, 2002).

Key aspects of symbolic meaning in London City Hall building:

- According to transparent façade and form of the building, it is showing the modern London. **(Transparency is a sign of modernity) _ Literal Transparency**
- It designed in order to be a new landmark in City of London. **(deliberately iconic building with Key structural and idea behind the concept)**
- Unique and unusual in the case of architecture **(importance of architectural forms)**
- It is as a model of democracy, accessibility and sustainability**. (Key structural and idea behind the concept/ referring to universal patterns)**
- It is one of the most important buildings of the capital so it representing civic symbolism and symbol of the capital. **(importance of functional aspect)**
- The building's structure does not contain any vertical column. These issues induce the sense of openness of the government to the citizens and other visitors. **(Important role of form to create and define symbolic meaning) _ Phenomenal Transparency**

3. Shard Tower, London, Architect: Renzo piano , 2012

Figure 44. Shard Tower (Author, 2012).

Shard tower is a mixed-use "vertical city", which provides a broad range of facilities and amenities to citizens and visitors from round the world. This is a building designed by Renzo piano architects, which has a place in one of the most exiting cities' skyline (Figure 44). The Sellar property foretasted that the Shard is going to be the most dynamic building of the capital and it will catch all universal attention to the London Bridge Quarter (Douglas, 2011). According to Irvine sellar, "*The shard at London Bridge Quarter has redefined London's skyline. It's a symbol for the capital, recognizable throughout the world*" (Sellar, 2012).

The building is also assigned as the shard of glass; and the tallest building existing in the west of Europe. The construction process of the building was started at 2009 and continued until March 2012. "The shard of glass", its nickname was originally chosen by English Heritage department; and its intention was to insult the building because the

Shard Tower was thought as a knife stabbed the historic London's heart. -"*a shard of glass through the heart of historic London*" (Moazami & Rahimi, 2008). It is ironically stuck on its site and now it is used by developers in the field of marketing. According to Sellar, "*From here, you can look out on more than a thousand years of history*" (Sellar, 2012).

With a crystalline façade, it is converting the skyline of London by means of a multi- use 310 meters height (1,016 ft) vertical city with high quality offices, world-renowned restaurants, the 5-star Shangri-La hotel, monopolized residential units and the highest viewing gallery of the capital, the 360° of the whole city (Figure 45). The shard has well connection to the facilities and amenities of transportation infrastructure of central London. "*The Shard is a timeless reminder of the power of imagination to inspire change. It is symbol of city's regeneration*" (Sammy, 2012).

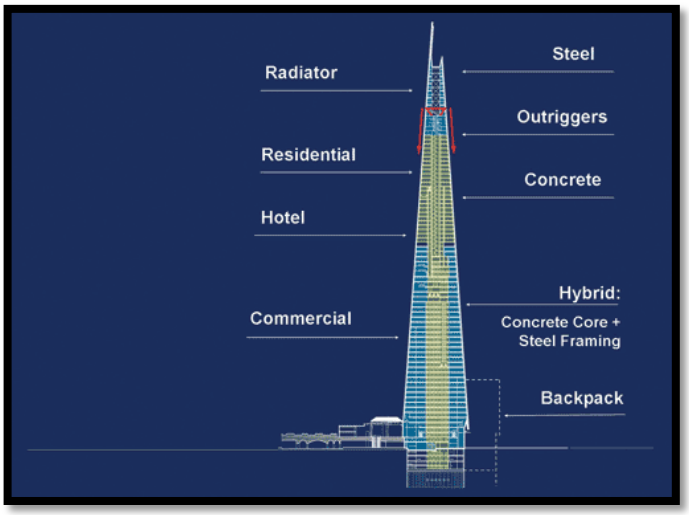


Figure 45. Analysis of Shard Tower Building. (URL28)

The shard, regarding to its form and also transparent façade, is the **Best metaphor to showing modern London;** it also contains plenty of Illuminati numbers and symbols.

The tower was not designed to be an ordinary high-rise building, it is neither static nor conventionally rectangular, but instead, it is rising inspirationally. Shard Tower is transparent and looks **like a shard of light.** It is able to reflect the changes that happen in a day, the year or in weather (Knöfe, 2012).

He tapered the building because "*I don't believe it is possible to build a tall building in London by extruding the same shape from bottom to top' it would be too small at the bottom and too big at the top*" (Douglas, 2011). Also, symbols are dangerous. High-rise buildings are frequently aggressive and overconfident symbols of ego and power, hermetic and selfish**.** As Renzo piano claims, the tower has a generous shape at the bottom and it is narrow on top (Figure 46); it is disappearing in the air like pinnacles of the 16th century or like a pole on top of a tall ship (Figure 47). Architecture of the shard tightly based on the form of London's historic poles and spires (Douglas, 2011).

Figure 46. Shard Tower. (URL 29)

Figure 47.View of a Tall Ship Mast. (URL30)

Moreover, The Shard is similar to the form of an obelisk**.** It is likely to a sharply and steeply angled; and delicately stepped pyramid (Figure 48). It is a completing part for the irregular nature of its site. Each part of its façade is a glass flake, tending inwards and rising above, which resembles a complete glass pyramid**.** It is jutting to the sky same as wedge made of glass with sharp contours (BloomField, 2011). As Knöfe, (2012) & Pearman, (2012) stated, definitely it is not a beauty, and it has a confident and often arrogant silhouette. This arrogance is represented even in its name: the Shard (Shard of the glass).

Figure 48. Pyramid. (URL31)

Additionally, Hal Foster who is professor of art at Princeton and author of The Art-Architecture Complex, he gave different imputation to this tower; he claims that *"If the Shard is a symbol of anything it's a symbol of finance capitalism"* (BloomField, 2011). each skyscraper serves as a symbol. This glass tower is intending to show that London is able to confront the financial crisis, or even if not, it is how the London's Mayor Boris Johnson expressed it one year ago (Sammy, 2012). Also Knöfe, (2012) reaches another scenario, which can be the worst one, is that "*the glass wedge will simply become a symbol of the fact that everything in London is growing fancier and more expensive, and that it's time for old England"* (Knöfe, 2012); with its eroding working class, to discard the city and its excessive living costs. Accordingly, Sellar says his "*skyscraper will change London -- and not just for today or tomorrow, but for centuries* (Sellar, 2012).

On the other hand, "*Architect Renzo Piano said: Up until now the building was ours. Now the building is yours.' This building is not going to be a symbol of power"* (Douglas, 2011). The possible meaning to be understood is that the building is not just a "merely symbolic" object, but also a symbol of power; because the human's power is now practically being harvested (Douglas, 2011).

Key aspects of symbolic meaning in shard Tower:

- The shard, regarding to its form and transparent façade, is the best metaphor to showing modern London**. (Transparency is a sign of modernity) _ Literal Transparency**
- The shard tower ,as an icon for London **(Deliberated design)**
- Unique in the case of architecture **(importance of form)**
- High-rise buildings are frequently aggressive and overconfident symbols of ego and power, hermetic and selfish.(**Important role of form to create and define symbolic meaning)**
- The Shard, also referred to as the "Shard of Glass",-even its name is inspired from the shape and form of the tower- . **(Importance of form) _ Literal Tarsnaparency**
- Form of the tower is similar to the 16th century pinnacle. **(Based on past experiences; refer to something from the past with our origin, tradition and history, also it is referring to an universal pattern)**
- It is similar to the mast top of a very tall ship. **(referring to a universal pattern, which is known for everyone)**
- Resembling an entirely glass pyramid. (**inspiration of universal subject ,also it is based on past experiences) _ Literal Transparency**
- Rising inspirationally, transparent likes a shard of light**. (symbolizing a shard of light which is an universal subject)**

- Each skyscraper serves as a symbol. This glass tower is intending to show that London is able to confront the financial crisis**. (key structural and idea behind the concept)**
- "*the glass wedge will simply become a symbol of the fact that everything in London is growing fancier and more expensive, and that it's time for old England"* (Knöfe, 2012) . **(inspiration from the form of the building and user's view points)**

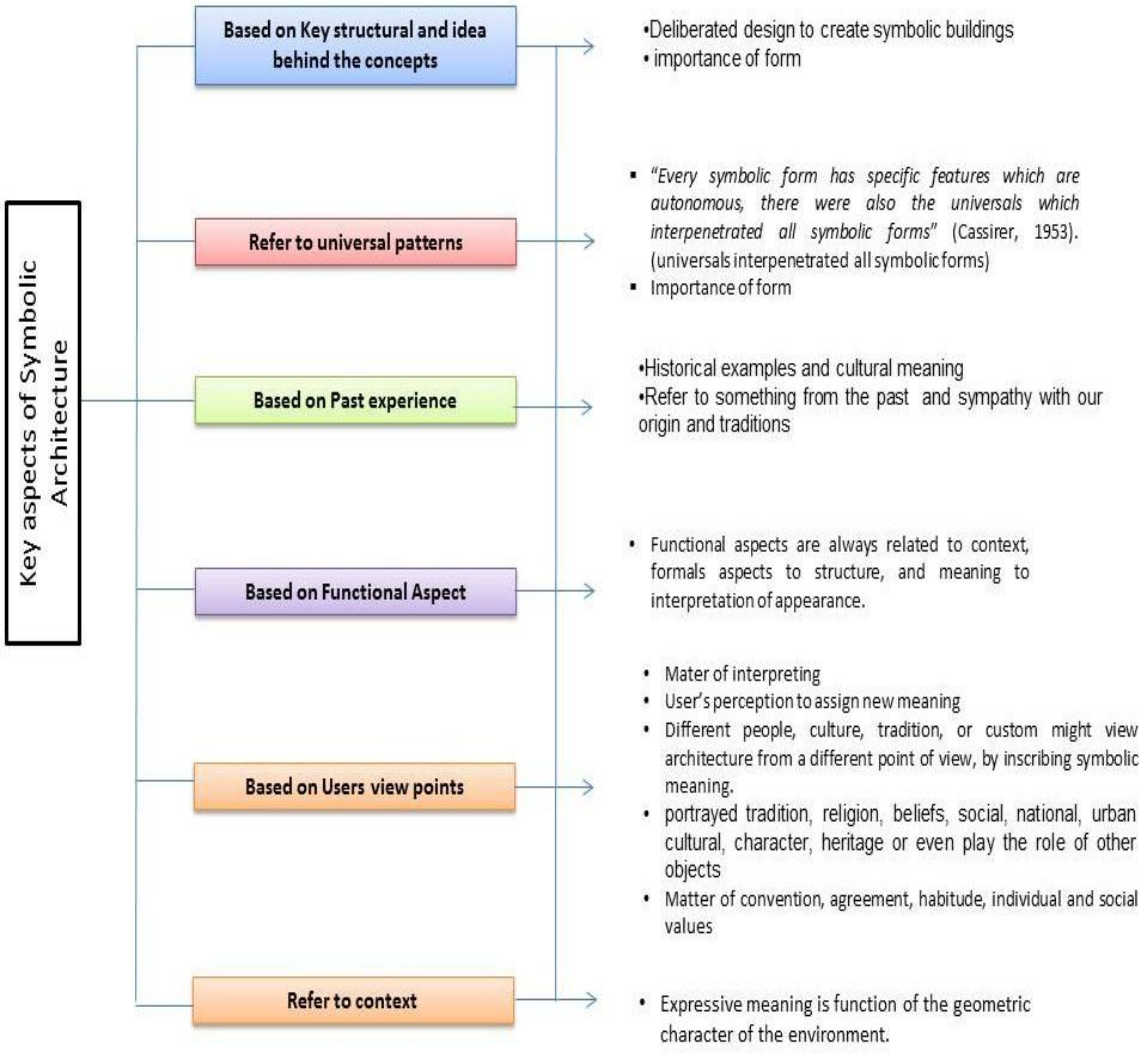


Figure 49. Summary of Chapter 3.

Chapter 4

EVALUATION OF SYMBOLIC MEANING IN CONTEMPORARY TRANSPARENT BUILDINGS OF FAMAGUSTA

During the 20th century, many cities all around the world transformed radically in accordance with the process of modernization and industrialization. The technological, political, cultural, economic and demographic transformations caused effects that appeared in public built buildings. In other word, one of the most parts of the built environment influenced by changes was public buildings. Famagusta in North Cyprus with its historical image of the city wasn't an exception. This study is going to evaluate the significance of symbolic meaning of the modern buildings on some examples, which were selected according to their transparent facades from Famagusta city.

4.1 About Famagusta

Famagusta is located on the east coast of Cyprus Island on Mediterranean Sea, which is the second large city in North Cyprus; with the population of approximately 6,000 and harbor. The city accommodates several remarkable historical monuments, as a part of architectural and cultural heritage of the Island from its long, ironic, unique and turbulent history; including the fortifications that are considered to be one of the most valued ensembles of medieval architecture in the world. New urban developments have

been surrounded the historical core of the city, formally or informally as the centuries; and the new layout is drastically different than the traditional layout (O¨ nal, Dag˘lK ,DoratlK, 1999).

4.1.1 Historic Development of the City

From the first century AD the urban development of Famagusta has been shaped and continued in seven particular eras until the contemporary situation of Gazimagusa. Those seven periods are: "*the early periods (648–1192 AD — the foundation date of the city); the Lusignan (1192–1489); the Venetian (1489–1571); the Ottoman (1571–1878); the British (1878–1960); 1960–1974; and the time after the 1974's war*" (O¨nal, Dagli ,Doratli, 1999).

After the Venetians era, the Ottomans came to the island, and afterwards the British colonial period began in (1878). Cyprus became independent from Britain in 1960. By the time of modernization, in the end of Cyprus's British period, for so many reasons such as current demands of the community and changes in society; new inhabited, commercial, tourism and entertaining zones were established out of the old city walls, as an extensive part on Asagi Maras district. This was same as some other areas out of the walled city. Therefore, the 1960's were the time for Famagusta to flourish in terms of culture and economy. The city developed on the way to the south west of Varosha as a tourist center (Saeidi & Oktay 2012).

Accordingly, in the late 1960, Famagusta became one of the best-known international centers of entertainment and tourism. On the other hand, there were structures that assigning the features of British colonialism; these buildings are reflecting contemporary

tendencies in architecture, and they were mostly located in Varosha. In this period, Famagusta's Architecture reflects a wish to join history and modernism chasing the progress. From its background, as a small harbor in the 7th century, in the 1970s Famagusta had become a town displaying the global tendencies of the modern architectural movement (Saeidi & Oktay 2012).

4.2 Method of Evaluation in Samples

The reason for choosing Famagusta in order to be evaluated is that it has been experiencing radical transformations, mainly, during the recent years. The examples are chosen regarding to their construction date in the city. Moreover, there are only four buildings known as transparent, on the edge of the main street in Famagusta. In this regard, the total number of three transparent contemporary public building has been analyzed.

1. Itimat Station
2. Ezic Restaurant
3. New Lemar supermarket

These buildings have been constructed in three different periods during the recent 10 years. One of the buildings is Itimat Station, which is constructed in 2005, second building is Ezic restaurant constructed in 2008 and the last one is the new branch of Lemar Supermarket, which is constructed in 2013.

Accordingly, the study was conducted using questionnaire (Appendix 1), which has been dealt with 40 peoples to find out if symbolic meaning of these buildings can satisfy,

them or not. It should be mentioned that at first the questionnaire was carried out by ordinary users. The first results showed that they don't have enough related education. Accordingly, it this method has been continued by educated responders. Afterwards, data collection started by observations, recorded by photography, in order to analyze the transparency and architectural meaning in forenamed buildings because of their special facades. The aim is to evaluate the problems of symbolic meaning in this kind of transparent buildings to find a connection between the transparent architecture and symbolism. Consequently, the results of literature review, which obtained based on "content analysis method", have been applied in four sample study buildings.

Figure 50. Top View of Famagusta City. (URL 32)

1. Itimat Bus Station

Figure 51.Top View of Itimat bus station in Famagusta. (URL 33)

Figure 53. Famagusta, Itimat Station (Author.2012)

Figure 52. Famagusta, Itimat Station (Author.2012)

This building is constructed at the edge of the main street, which its construction date back to 2005. It is the only bus station in Famagusta city. Itimat station has curvilinear form, which is not a huge building and its façade entirely covered by reflex glass, so inside of the building is not visible from the outside (figure 52 & 53).

2. Ezic Restaurant

Figure 54. Top View of Ezic Restaurant in Famagusta. (URL34)

Figure 55.Famagusta, Ezic Restaurant. (Author. 2012)

Ezic Restaurant is the newest one among all the restaurants in Famagusta. Observations about Ezic restaurant in Famagusta illustrate that this building emphasizes form and it has a transparent façade. In more area it is be covered by glass and it has created a modern façade for the building. This building has simple curved plan and façade rather than ridge and furrow, with the glass draped over the steel frames. The use of covered glass to terminate the elevation is a powerful and typical expressionist image. In addition, there is a strong relation between outdoor and indoor spaces. Also, its

transparent façade allows a better view to outside. For this kind of transparent facades with large scale of glass that window is wall itself and wall is window itself, it is difficult to understand the difference between inside and outside of the building especially at night that facade shows the entire interior space of this restaurant (figure 55).

A Transparent façade can make a building more attractive and more welcoming to customers. The restaurant is not built exactly at the edge of the street; there is distance between street and building. However, when you pass from this part of the street it comes to your eyes and can act as a focal point of that area and it is visible from the main street. It is also envisaged as a special, memorable and symbolic building of the arrival in Famagusta. The building combines symbolic architecture with interesting, functional features.

3. New Lemar Supermarket

Figure 56. Top View of Lemar Supermarket in Famagusta. (URL 35)

Figure 57. New Supermarket.(Author, 2012)

New Lemar supermarket was constructed in 2012. This shopping mall is located on Salamis street in Famagusta (Figure 56). It is the newest constructed public building in the city, also the largest supermarket. The style and method of design and construction of building shows that glass has been major material in the concept of the structure, and it has been beautifully used. It is a massive building, with a linear plan created by angular forms with straight lines. Moreover, the total façade of the building is covered by glass, which gives its impact on beautiful landscape. It is a fine example of modern architecture, outstanding within its mostly traditional neighborhood. The fully glazed cover of the building lets the users enjoy better external consciousness; moreover, it benefits from the daylight (figure 57). Accordingly, this building is symbol of modernity, economic growth and technology of the city.

4.3 Analysis of the Questionnaire

Table 1. Result of Question 1.

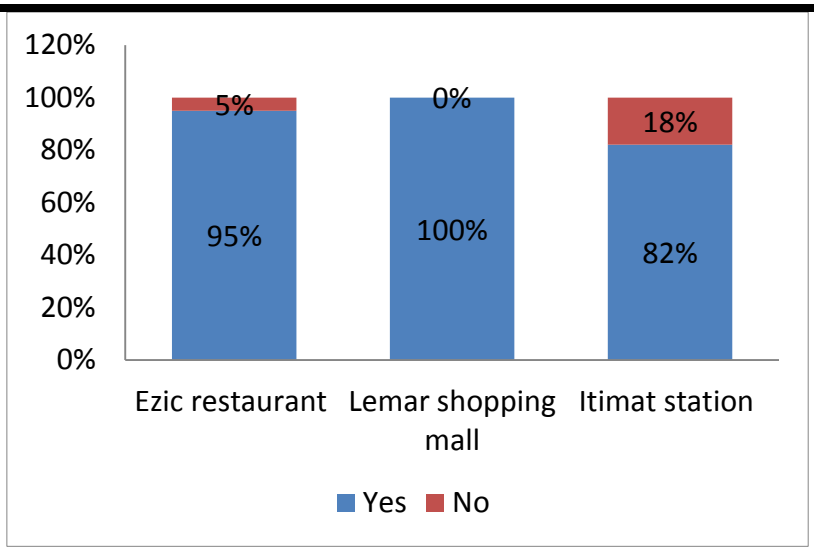
QUESTION	1. Is this building a kind of modern architecture?
DIAGRAM	
ANALYSIS	• **Finding** The diagram illustrates that there were differences in the perception of modernity between people. It can be seen also from the diagram that all four samples, are modern buildings. In addition, in compare those together, The highest percentage is related to Lemar Supermarket and Ezic restaurant**,** because of their huge glass facade.

Table 2. Result of Question 2.

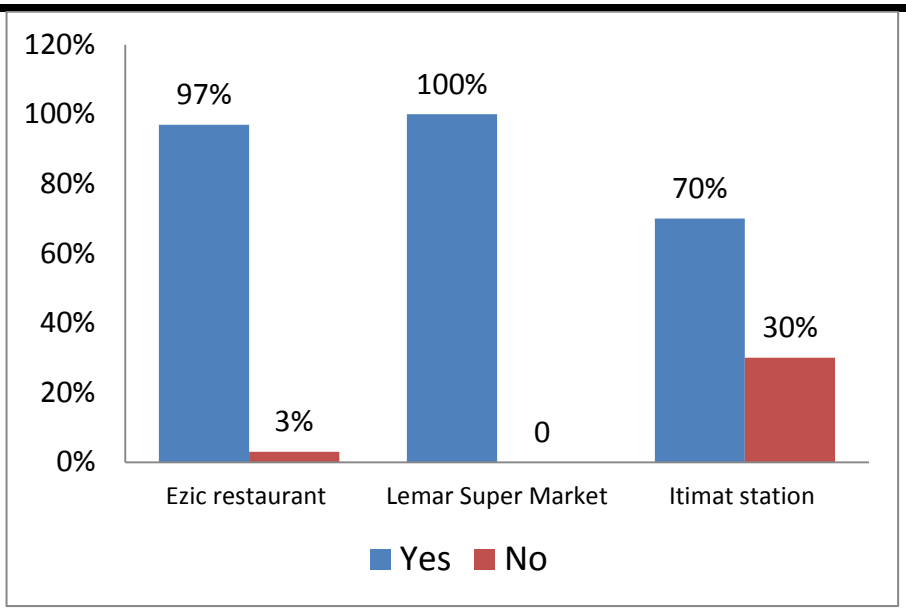
QUESTION	2. Is it a kind of transparent building?
DIAGRAM	
ANALYSIS	• **Finding** As it has been shown in the bar chart, four buildings are transparent buildings. In compared with each other, Lemar shopping mall and Ezic restaurant have the highest percentage, which is because of their huge glass facades; also, the lowest level of transparency is related to Itimat Station building.

Table 3. Result of Question 3.

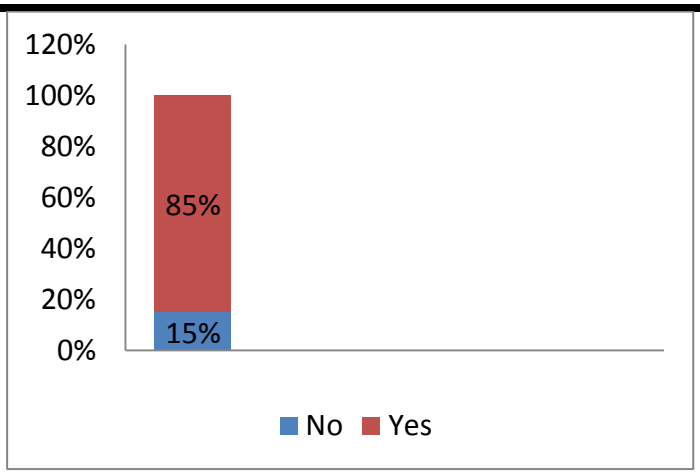
QUESTION	3. Is it correct to say, Transparency of a building is a sign of modernity?
DIAGRAM	
ANALYSIS	• **Finding** The purpose of this question is to understand the value and role of glass and transparent facades as a sign of modernity of buildings. According to the bar chart, 85% positive answer confirms that transparency and usage of glass in buildings is an obvious sign of modernity.

Table 4. Result of Question 4.

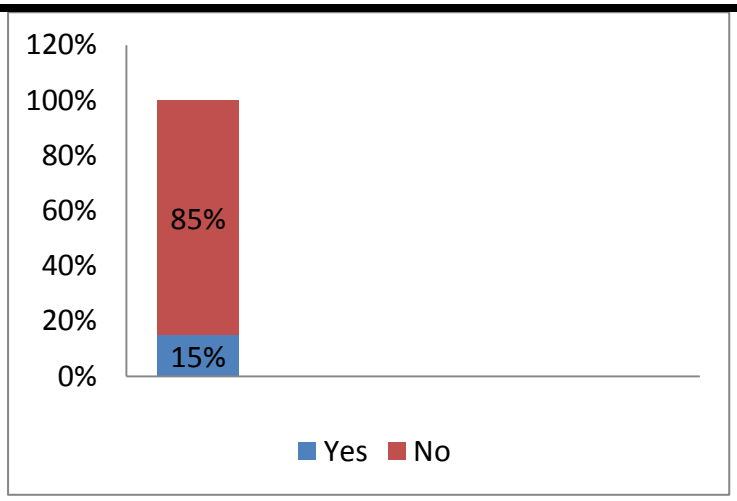
QUESTION	4. Is it correct to say, each glass building is a transparent building?
DIAGRAM	
ANALYSIS	• **Finding** This general question was aimed at finding out the importance of the relationship between glass architecture and transparent architecture. Accordingly, the important point of the result is that there is strong difference between them. Therefore, it is not possible to say each glass building is a transparent building.

Table 5. Result of Question 5.

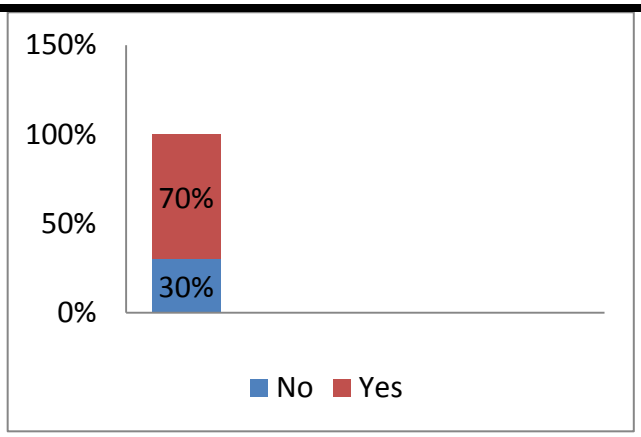
QUESTION	5. Do you generally agree with globalization of Transparent Architecture in the world?
DIAGRAM	
ANALYSIS	• **Finding** The diagram illustrates that the highest percentage (70%) of peoples are approve of the globalization of transparent architecture in the world. So, most favor more modernity in design of buildings. In addition, it depict that 30 percent of them are disapproves about this subject, which is because of concerns about loose of their local architecture by imitation of western architecture.

Table 6. Result of Question 6.

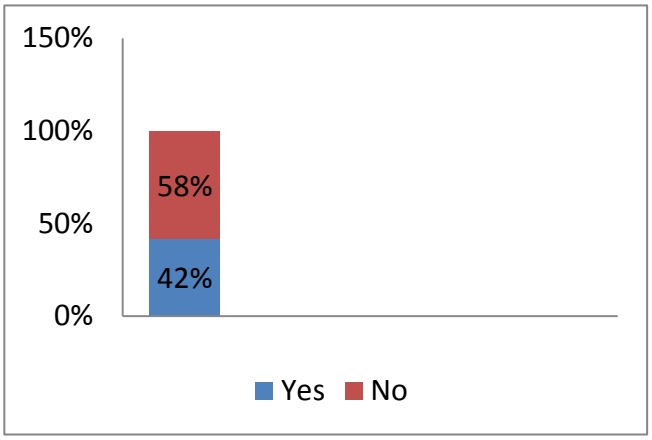
QUESTION	6. Do you generally agree with globalization of Transparent Architecture in Famagusta city?
DIAGRAM	
ANALYSIS	• **Finding** This question has same concept as previous one, but it has been limited in Famagusta city. As it has been shown in the bar chart, the smallest percentages of the peoples were satisfied with the globalization of transparent architecture in Famagusta city. While more than 50 percent of them were not satisfied. In compared with the previous question, there is strong contrast between peoples idea. In generally they are agreeing with globalization of transparent architecture in the world, along with this, for them there is concern about keeping their vernacular architecture and their culture. Accordingly, they preferred to see just a few signs of transparent architecture in the Famagusta as symbols of modernity.

Table 7. Result of Question 7.

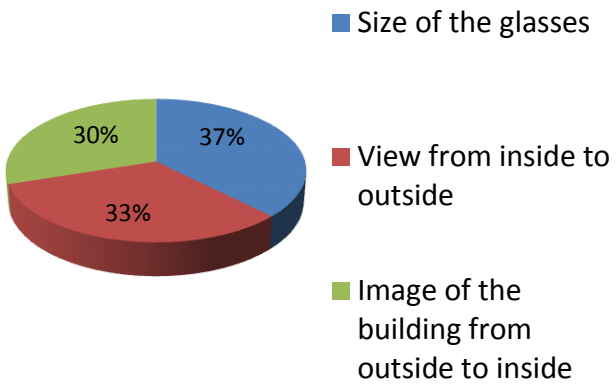
QUESTION	7. Which factors can change a glass Architecture to a transparent Architecture?
DIAGRAM	
ANALYSIS	• **Finding** This question was aimed at finding out the focal points in which changing glass architecture to transparent architecture. As it has been shown in the bar chart, the highest percentage (approximately 37%) is related to the size of the glasses. also, according to the results, all 3 factors are important to create transparent architecture.

Table 8. Result of Question 8.

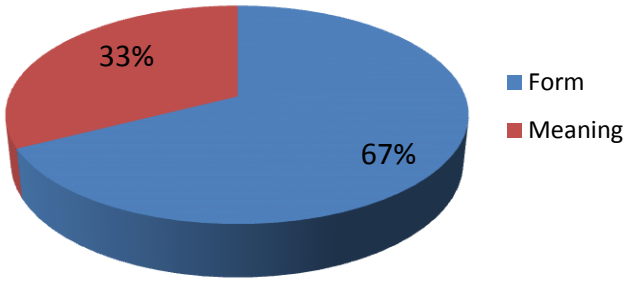
QUESTION	8. Which factor is more important in design of modern buildings?
DIAGRAM	
ANALYSIS	• **Finding** According to the users view points, this general question was aimed at finding out the importance of form and meaning, also their relationship in design of modern buildings. It is apparent from the bar chart more than 65 percent of the peoples preferred form and only 34 percent of them were agree with the importance of meaning in design of modern buildings. Form and meaning are two important poles of architectural design. There is a strong relationship between them for modern buildings. But, For people form of the buildings has special value, so one of the important aspects of modern architecture which is meaning is often missing.

Table 9. Result of Question 9.

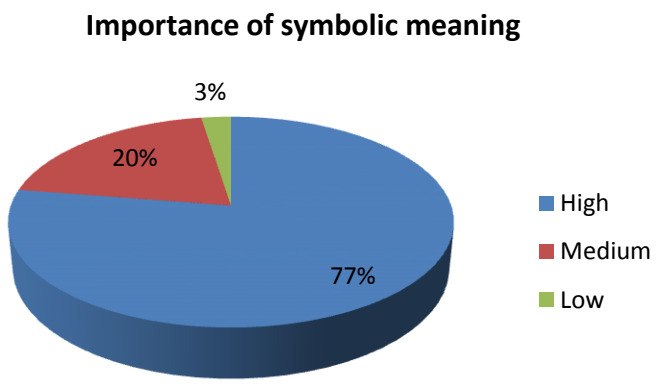
QUESTION	9. How do you rate the importance of symbolic meaning to be a kind of language for our architecture?
DIAGRAM	
ANALYSIS	• **Finding** As it has been shown in the bar chart, most of the people are approve of the importance of symbolic meaning in architecture (77%). It can be said most favoured more symbolic and meaningful buildings. In comparison with the result of last question, it depict that peoples are interested in both special and aesthetic also meaningful architectural forms. So, It is important to create a balance between form and meaning in design of modern buildings.

Table 10. Result of Question 10.

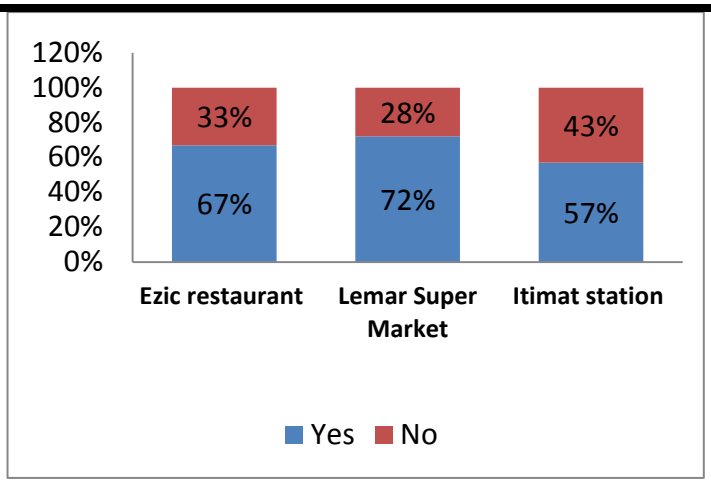
QUESTION	10. Have you ever thought about the meaning of this transparent building?
DIAGRAM	
ANALYSIS	• **Finding** This question was aimed at finding out the importance of transparent building's meaning for users, also their attention to the meaning of these transparent modern buildings as a viewer. According to this diagram, the highest percentage (72%) is related to Lemar supermarket, which is the newest and more attractive transparent building for people. so; it can force them to think about the symbolic meaning of the building. Accordingly, time is important too. It means recent buildings are more important to design symbolic. The second highest percentage (67%) is related to Ezic restaurant, because of its unique architectural form, which has significant role on attraction of peoples. Importance of both form and meaning can be understandable, especially for transparent buildings, which they have strong ability to attract peoples. It can be said, there is a strong relationship between meaning with unique form of architecture and time of construction.

Table 11. Result of Question 11.

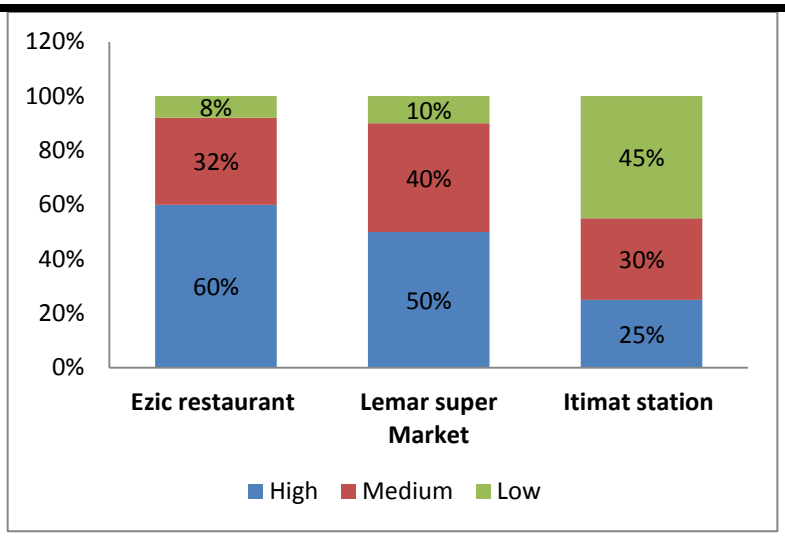
QUESTION	11. How do you rate symbolic meaning in this building with transparent façade?
DIAGRAM	
ANALYSIS	• **Finding** Based to the user's viewpoints, Investigation of the value of these buildings according to their symbolic meaning and people's perception of symbolism is the purpose of this question. Under this scope, The diagram illustrates that there were differences in the perception of symbolic meaning between people. In addition, in compare those together, the highest percentage is related to Ezic restaurant and second highest percentage is related to the Lemar supermarket, which are as two landmark and famous glass buildings of Famagusta. According to the 60% positive votes about the symbolic meaning of Ezic transparent building, The focal point of the result is that symbolic meaning of a transparent building is not just related to the extensive usage of glass in facade. There are other basic important factors too, which is related to concept of architectural design.

Table 12. Result of Question 12.

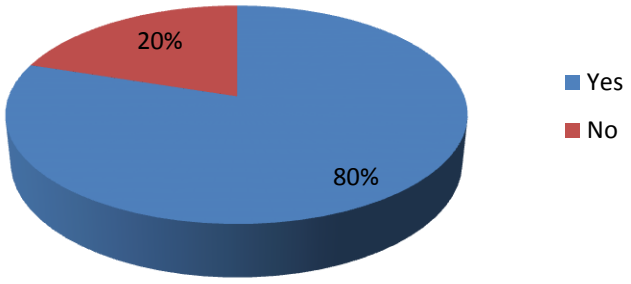
QUESTION	12. Apart from the symbolic meaning of a modern building, are you interested in transparent façade (glass façade)?
DIAGRAM	
ANALYSIS	• **Finding** According to this general question's diagram, when customers were asked about this kind of architecture, it was obvious that apart from the importance of symbolic meaning for every transparent building, also among different aspects of modern architecture, people are interested in transparent architecture. In addition, it is very attractive kind of architecture for them, which can act as a focal point among the other buildings of a street. So, the result of the question is positive, which can confirm the importance of architectural forms in designing symbolic transparent buildings.

Table 13. Result of Question 13.

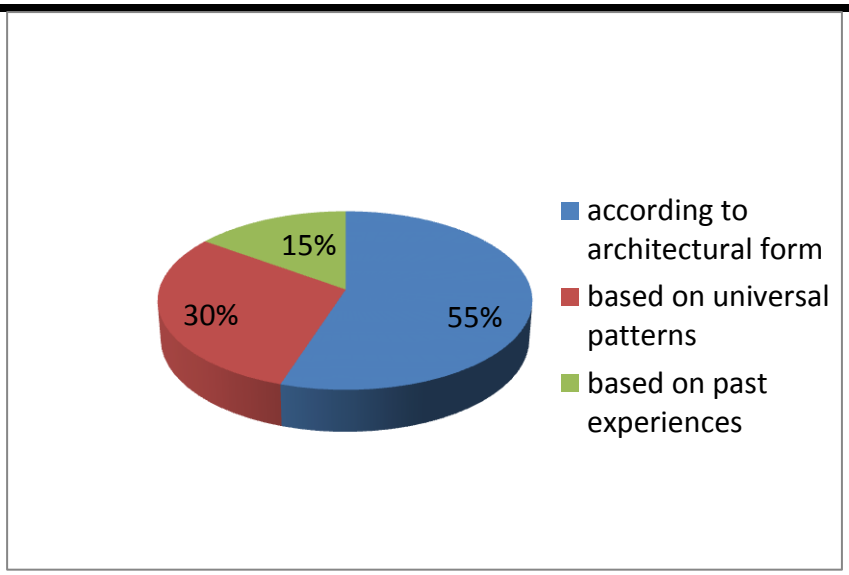
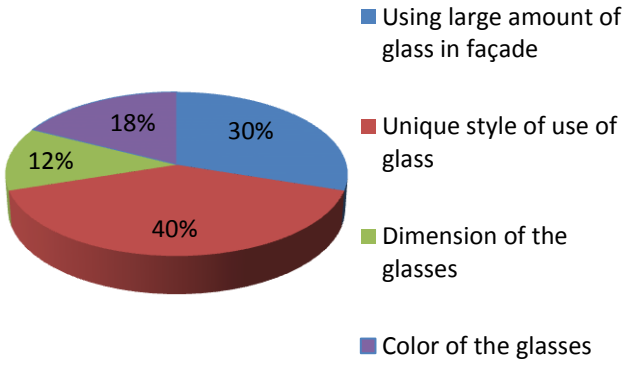
QUESTION	13. How symbolic meaning of a transparent building is going to be understood by users?
DIAGRAM	
ANALYSIS	• **Finding** This question with general concept is about the Important and effective factors on user's perception of symbolic meaning of transparent buildings. According to the diagram, the factor of "According to the architectural form" with 55% vote is realized as the most important factor in designing symbolic transparent buildings. The second most influential factor (30%) is "based on universal patterns". The result is showing the continuation of importance of form in designing symbolic buildings; also referring to experiences is noticeable in defining symbolic meaning for a transparent building.

Table 14. Result of Question 14.

QUESTION	14. We can design a meaningful transparent building through…….. .
DIAGRAM	
ANALYSIS	• **Finding** In this question, the important features of designing a meaningful transparent building have been asked. The obtained result showed that "unique style use of glass" is the most important factor among the other choices. Also, "using large amount of glass in façade" is located in the second place, which is showing that to create a symbolic transparent building, using a huge glass façade is not the most valuable factor.

15. This transparent building **(Ezic Restaurant)** is the symbol of……

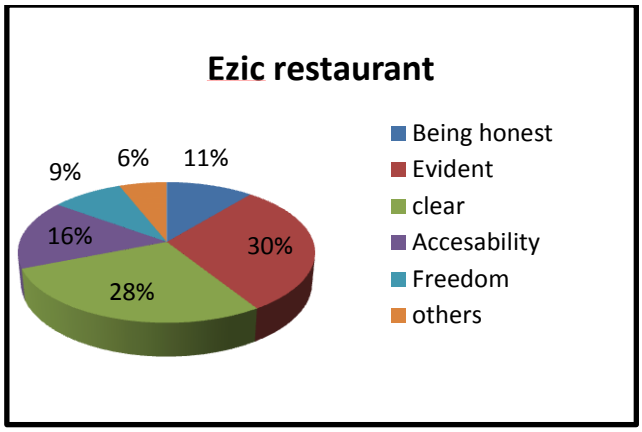


Figure 58. Analysis of Question 15.

Ezic: according to the diagram (figure 58), "Evident" with 30% vote, is located in the higher level and after it "clear" (28%) was voted by people. it is because of the façade of the building, which is covered with glass and it is possible to see inside the restaurant from outside and inverse. "Empty space", "endless","abstract space" also "purity of form" was added by peoples.

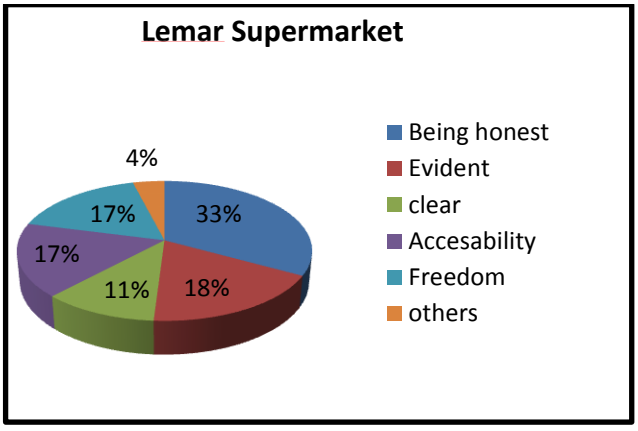


Figure 59. Analysis of Question 15.

Lemar Supermarket : The highest percentages (approximately 33%) is related to "being honest", because of its function and expectation of people from a shopping mall and after it "Evident, Freedom and accessibility" were voted by people. also, "technology" , "economical growth of the city" and "power" were added as symbolic meaning by people (figure 59).

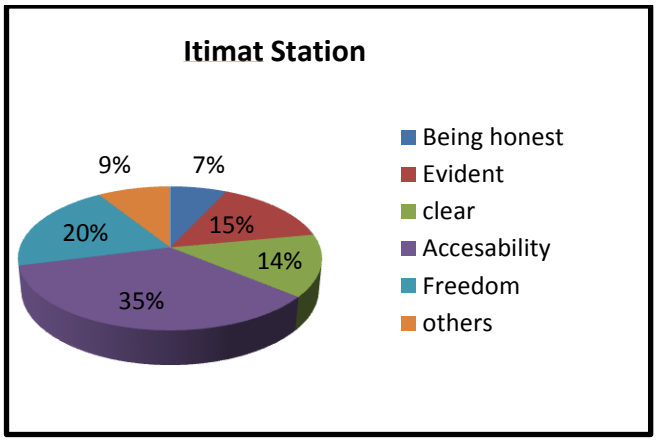


Figure 60. Analysis of Question 15.

Itimat Station: According to the above chart, the highest percentage is related to "accessibility 35%" and second highest percentage is "freedom 20%", which is exactly because of function of the building. So, the result of the questionnaire is confirming the effects of function on people's understanding of symbolism (figure 60).

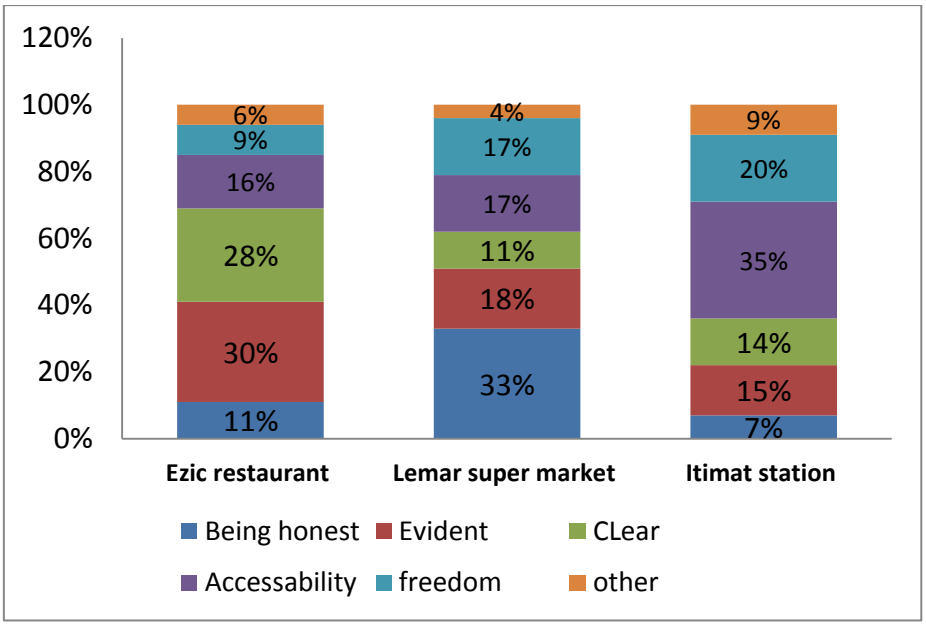
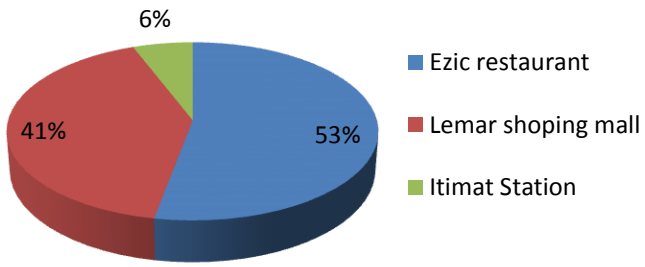


Figure 61. Total Result of Question 15.

This question was aimed at finding out the way in which the peoples perceived the symbolic meaning of the transparent buildings. The answers of the customers showed that there were differences in the perception of symbolism between individuals. It can be said, there is a strong relationship between understandings of symbolism in people with diverse function of the transparent buildings. In addition, it is very depends on the people view point's and idea. Also, as it can be seen in the above three diagram and according to the user's view point, "Evident, clear, being honest," choices are the most frequent answers between other. So, it can be said these are as symbolic meaning of transparent buildings (figure 61).

Table 15. Result of Question 16.

QUESTION	16. Which one of these transparent buildings has more symbolic meaning for you?
DIAGRAM	
ANALYSIS	• **Finding** Last question is purposed as a personal question, which investigates the most symbolic transparent building among the four case studies in Famagusta, north Cyprus. According to the above chart, highest percentage (53%) is related to "Ezic restaurant" compared to other choices, which is because of its function and unique form, also special lighting and interior design. Also, Second highest percentage (41%) is related to "Lemar supermarket". because of its huge glass building scale, also it is the newest transparent building in the city. In comparing Lemar and Ezic together, we can get to this result easily that / the result is the proof to this important issue that good architectural design has the most influential effect than transparency on making a building symbolic.

Chapter 5

CONCLUSION

The present study intended to find out, how it is possible to create modern transparent buildings with an understanding of the integration of transparency and meaning. After literature review and collecting data about transparent architecture and symbolism, as a part of literature review, three famous transparent building in London have been analyzed, which the results of literature review obtained based on "content analysis method". Accordingly, to compare and verify the findings of literature review including analysis of transparent buildings in London, the study focused on three transparent building in Famagusta as sample study buildings.

As a significant part of modern world, transparent architecture has a deep root in Modern architecture. Hence, in order to find the roots of contemporary transparent architecture, Modern architecture should be concerned. Usage of glass in architectural buildings developed with the globalization and its forces in the world of architecture. In contemporary architecture, transparent or glass buildings have been frequently applied everywhere, from simple housing units to large public buildings. It can be said, transparency and usage of glass in buildings is an obvious sign of modernity.

Beside these architectural developments over the world, people need to have meaningful built environment and building. Accordingly, Architectural meaning can be shown through symbols, also form has a fundamental role to invest meaning to architecture. Indeed, symbolism is very broad and complex issue and it can be found almost everywhere. It is depends on many factors, so there is no single expression of symbolism. In fact, "symbolism" could be seen as a system of ideas, which is effective in the people's interpretation of different things such as architectural buildings.

Under this scope, Architecture and its symbolic values are based on so many factors, such as 'form of the buildings', 'Idea behind the concept', 'universal patterns', 'past experiences', 'functional aspects', 'context', and 'user's viewpoints', which effects on impression of architecture. These factors are changeable from time to time. They were different for diverse types of buildings, different people, and various times.

In view of that, study focused on analysis of three famous contemporary public transparent buildings in London. The chosen buildings with monumental character, heavily borrowed their shape and forms from universal patterns. As a result of analyzing the buildings through content analysis method, three factor of 'key structural and idea behind the concept', 'deliberately symbolic building (contrasting a building with the aim of having a symbolic building)' and 'referring to a universal patterns', were the most effective factors in creation of symbolic value for transparent buildings in London. An important finding is that the famous transparent buildings in London have been constructed at first with the goal of being a symbolic building. To achieve this goal, 'form' of building has been the most important factor in creation of symbolic value in

three sample buildings in London (Gherkin Tower, London City Hall, Shard tower). So, this buildings are a kind of symbolic and meaningful architecture. In addition, the architects erected these buildings to show the modernity and to be as a landmark for the city. So, transparent architecture is certainly symbol of modernity. These findings would reinforce the outcome of literature review.

Accordingly, to investigate these findings, three transparent buildings in Famagusta have been analyzed. Based on the obtained results from the literature review and analysis the buildings, Ezic restaurant by gaining more credits by people can stand as a highly symbolic transparent building comparing to the other transparent buildings in the city. This finding comes from its 'unique form and function', also 'importance of concept of architectural design', such as 'special lighting' and 'interior design' and etc. In addition, the second symbolic transparent building in Famagusta is New Lemar super market, which is the 'biggest and newest' transparent building in the city.

Under this scope, to comparing Ezic restaurant and New Lemar supermarket, the most important result is that symbolic value of a transparent building is not just related to the extensive usage of glass in facade. In addition, Ezic restaurant with smaller glass façade has more symbolic meaning than Lemar. This finding can appear as contradiction between these results. Accordingly, the most important point is that designing a modern building with a huge glass façade is not the most valuable factor to create a symbolic transparent building. There are other basic important factors, too. Such as, Form, Function, lighting, material, interior design. Furthermore, how to use glass and how to create a great architectural building is the most noticeable factor. So, 'Form' and

‘concept of architectural design’, played the most important roles in people choices of symbolic buildings in sample transparent buildings in Famagusta. Factor of ‘Time’ is noticeable too, which means recent transparent buildings are more attractive in terms of implying symbolic meaning for people. Also, Form has a fundamental role in defining symbolism and giving meaning or value to buildings. In addition, the importance of function cannot be ignored, however in defining symbolic meaning, it is not as strong as form of architecture. This finding would reinforce the outcome of literature review.

Moreover, it can be mentioned that based on definition of literal transparency, which is referring to material quality, these buildings in Famagusta are as kind of literal transparent buildings. Although literal transparency is generally associated with the use of glass material, the findings of this study demonstrates that symbolic value of a transparent building is not just related to the extensive usage of glass in façade. In addition, it seems, value judgment of the people is more related to the phenomenal transparency, which is referring to perceptual quality of buildings.

Briefly, it is reasonable to conclude that there is difference between people, builders and architects in viewing architecture. Although in general transparent architecture is symbol of modernity, but according to user’s viewpoints there is different symbolic meaning for each transparent building. Accordingly, this finding is another proof to this important issue that people need to have meaningful built environment, so they even assign meaning for buildings.

Based on all of these findings, it is possible to put the concept of meaning forward as an essential aspect of architecture. However, creating transparent architecture that is not able to associate to the users should be considered as construction and not architecture. Therefore, the essential duty of architects is to design for meanings, sine people need to assign meaning to their buildings.

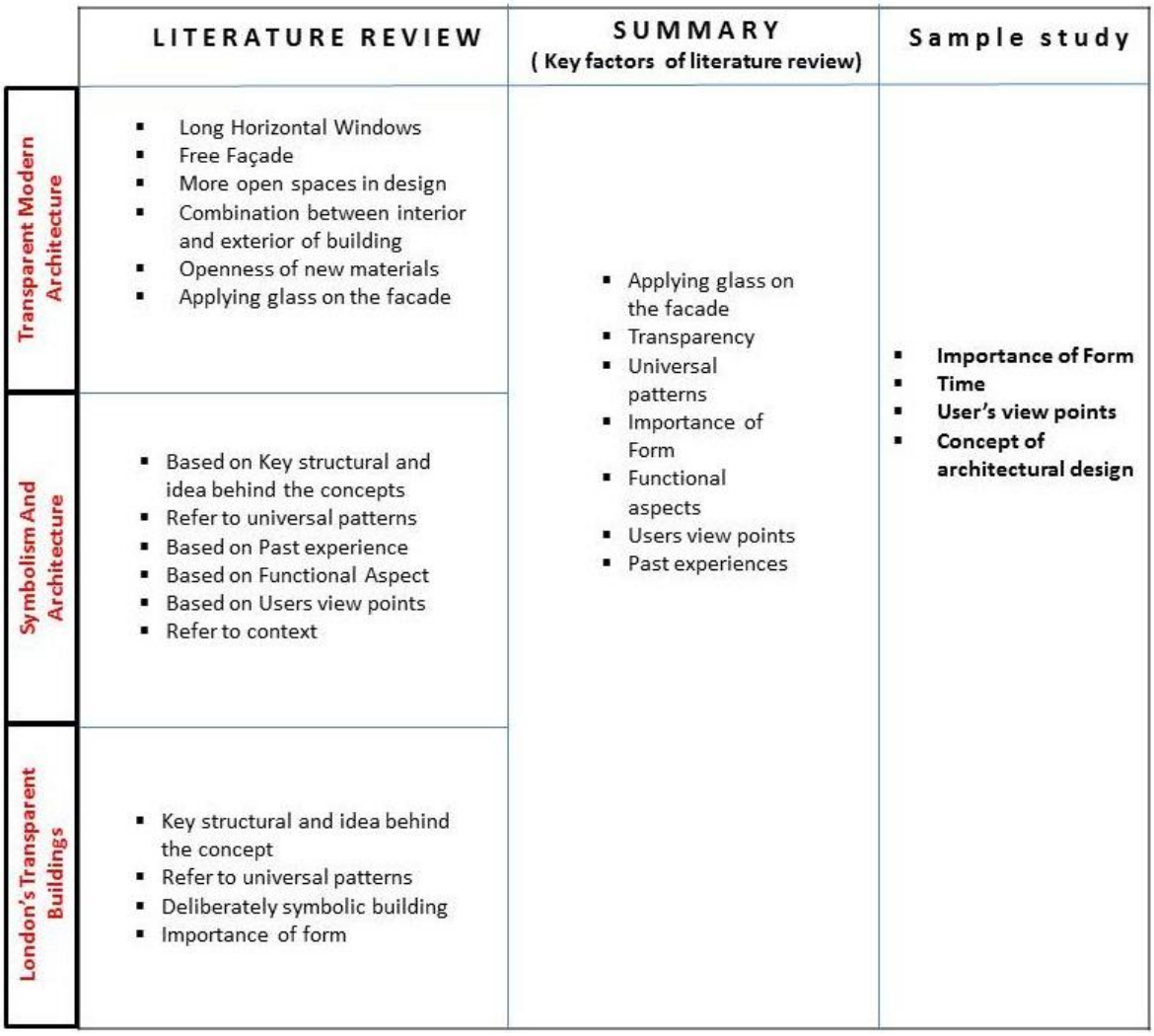


Figure 62. Key Factors.

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APPENDIX

INTRODUCTION: Good morning / afternoon .I am from EMU Architectural department, this paper is contain some questions, which are aimed to evaluate the symbolic value of contemporary transparent buildings, within New Lemar supermarket which has transparent façade (glass façade). May I ask you a few questions:

For statistical purposes only, would you please tell me your:

Age…… Gender…….. Nationality…….

1. Is this building (New Lemar) a kind of modern architecture? Y/N

2. Is it a kind of transparent building? Y/N

3. Is it correct to say, Transparency of a building is a sign of modernity?

4. Is it correct to say, each glass building is a transparent building? Y/N

5. Do you generally agree with globalization of Transparent Architecture in the world? Y/N

6. Do you generally agree with globalization of Transparent Architecture in Famagusta city? Y/N

7. Which factors can change a glass Architecture to a transparent Architecture?

   a) Size of the glasses (Using large amount of glasses in façade)
   a) View from inside to outside
   b) Image of the building from outside to inside
   c) ……

8. Which factor is more important in design of modern buildings?
   a) Form
   b) meaning

9. How do you rate the importance of symbolic meaning to be a kind of language for our architecture?
   a) High
   b) Medium
   c) Low

10. Have you ever thought about the meaning of this transparent building? Y/N

11. How do you rate symbolic meaning in this building with transparent façade?
   a) High
   b) Medium
   c) Low

12. Apart from the symbolic meaning of a modern building, are you interested in transparent façade (glass façade)? Y/N

13. How symbolic meaning of a transparent building is going to be understood by users?
    a) According to architectural form
    b) Based on universal patterns
    c) Based on past experiences

14. We can design a meaningful transparent building through…….. (you can choose more than one answer)
    b) Using large amount of glasses in façade
    c) Unique style of use of glass
    d) Dimension of the glasses
    e) Color of the glasses

15. This transparent building (Lemar) is symbol of……(you can choose more than one answer)

    a) Being honest
    b) Clear
    c) Evident
    d) Openness
    e) Accessibility
    f) Freedom
    g) ……..
    h) ……..

16. Which one of these transparent buildings has more symbolic meaning for you? Why?
    a) Ezic Restaurant
    b) New Lemar shopping mall
    c) Blue Sky Plaza
    d) Itimat Station

Thank you for your help!