

Architectural Trends and Aesthetic Perceptions of Architecture Students

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Abstract:

The concept of aesthetics in architecture is intertwined with the artistic side of architecture. The architectural environment and the building should give pleasure both technically and functionally and aesthetically. The changing culture, aesthetic judgments and architectural trends and tastes affected by it also change in the historical process. In this study, it is aimed that evaluated for aesthetics perceptions of architecture students. In this context a questionnaire is applied with ordinal scale and closed-ended questions for architecture students. Some photographs were showed to students about famous architectural building belongs to different architectural trends. In the result of the study, summarily, the building, in which the deconstructivism movement, characterized by the most beautiful, most impressive, most original, and most exciting definitions by students.

Index Terms— architecture, aesthetics, architectural trends, perception, architectural student.

I. INTRODUCTION

People have visual perception to describe and evaluate everything according to their visual sense. This sensorial evaluation based on what is seen was considered as sensorial perception and thinking about beauty until the middle of the 18th century. After that it has turned into an autonomous discipline with the name 'Aesthetics' thanks to Baumgarten's 'Basic principles of fine arts' published under the title 'aesthetica' and Kant's criticism of 'beauty' [1]. It is defined as "the branch of philosophy that deals with beauty and its effects on human memory and emotions" [2]. 'aesthetics' which is originally included in the subject of philosophy as a term that seeks and questions the beauty in nature or art, has developed and improved as a 'thinking system of the beautiful'. So that it has been the subject of other disciplines also. Architecture is one of the most important of these fields, as it has visual communication and interaction with people and has artistic features. In architecture, which is the built environment arrangement of the world we live in, there is a close connection between the architectural product and the senses. This is seen as architecture's internalization of aesthetics within its own discipline, in terms of its examinations on feelings and sensations [1].

Changes in the structure of societies over time have been influential in people's way of thinking and aesthetic perception; This situation has historically been reflected in the shaping of architecture. The buildings built at a certain time were accepted as expressions of aesthetic thoughts as well as bearing traces of the society of that time. In this respect, the changes called architectural movements/trends in history and reflected on architecture to this extent also reflect the aesthetic understanding of their period [3]. Even though aesthetic values and ideas change over time, they are a reflection and visual representation of their own periods on the built structures, and even sometimes they are seen as a source of inspiration for the development of new ideas about the future. The statements of Pritzker Prize-winning architect

Norman Foster are remarkable in this sense; "Architecture is an expression of values. The way we build architecture is a reflection of the way we live. Therefore, the traditions of the local age and the layers of history of a city are so impressive as each era is expressed in its own words. Sometimes we need to search the past to find inspiration for the future..." [4].

In this study has been prepared in order to investigate the aesthetic preferences of the students who receive architectural education, who can be defined as the architects of the future, through architectural trends. In this context, it was asked to evaluate the famous and important buildings representing the architectural movements from past periods to the present in terms of aesthetics.

II. ARCHITECTURAL TRENDS AS AESTHETIC FROM PAST TO PRESENT

Architecture is described as a process from meeting basic needs such as shelter to creating spaces that provide pleasure and sensory pleasure in today's comfortable and comfortable living spaces. Masiero [1] explains this as transforming it into actions aimed at beautifying life, providing conveniences, increasing pleasure, and creating more refined and elite lifestyles from functions aimed at meeting essential needs. Changes in people's lifestyles over time are reflected in the products used, the spaces created, and the architecture in the living environment in the most obvious way. These changes formed the defining styles of the period, and one of the traditional and permanent approaches was accepted as "Style and Period" in the narratives of architectural history [5]. It also reflects the artistic taste of the 'Style' periods as the most distinctive features describing the period. So much so that Leach [5] 'style', in the words of James Ankerman, is "the sum of the distinguishable features of the works"; in Wöfflin's words, he defines it as "the visual manifestation of the work of art, which is a product of its own period". In the differentiation of styles over time, aesthetic pursuits, which are called sensory pleasure and thinking about beauty, have been effective as well as the changes in lifestyles. In Vitruvius's, *De Architecture*, which is the oldest architectural history text in hand, architecture is described as based on "sequence, arrangement, rhythm, symmetry, conformity and economy" belonging to the Ancient Greek and Roman periods. Aesthetics, on the other hand, was created within the framework of order, symmetry, and analogy (mimesis) as the idea of beauty. Beautifully is described with dimensions and proportions that resemble nature and what happens in nature; In this sense, symmetry is accepted not only as logically beautiful, but also as beautiful in appearance [1] [5] [3].

In medieval Europe, a style formed by religious thought was developed with a system based on the balance of forces in which pointed arches, cross vaults and flying buttresses were used under the name of Gothic architecture. The idea of beauty as aesthetic understanding; While it is seen in the condition of creating brightness, proportion and integrity, the thought of building using light connected to pointed arch and window systems has become a strong and sublime expression of "Reaching to Heaven" [2] [6].

In 15th century Europe, the Renaissance was influential as the largest cultural movement of all time. Emphasizing the importance of human in the world order, 'Humanism' was accepted as a way of representing the natural, and holistic structures were created from the harmony and harmony of straight-line formal parts. The 'beauty' created by the integrity and sublimity provided by this harmony is made over the definition of Alberti, the author of the period; "All parts are harmonious and harmonic in such a way that nothing can be added, subtracted or changed for the better" [1] [3].

Against the Renaissance movement of the 16th-18th centuries, the influence of the Mannerism/Palladianism style, in which the structural elements of the ancient period were used for appearance purposes without a functional effect, and the Baroque and Rococo architectural styles of the 17th-18th centuries were seen [7] [3]. It was a period in which the effect of the form with the material, in which the Baroque decoration was seen as an integral part of the architecture, was revealed. Masiera [1] compares decoration in Baroque architecture to the description of people in clothes and explains it with the idea of "The priest is the clothes that make the priest". Aesthetic understanding has also been expressed as the reinterpretation of the famous painter and writer Bellori's inferences obtained from the first forms of magnificent works created in nature, called 'ideas', arranged by numerical laws. In this respect, instead of the focus and clear forms, various and complex formal compositions, ornamentation, and details are defining in Baroque aesthetics. Excessive folds and exaggerated sense of movement caused the style to be interpreted as emotional/romantic. Rococo, on the other hand, is named as the style defined as 'Elegant and Exotic', in which natural motifs and curvy decoration elements are used, especially in the interiors, as well as on the building facades [3]. Masiera [1] states that this new form of relationship with nature brings multi-style, artistic fusion of natural and artificial beauty; In this respect, he stated that the diversity and asymmetry suggested by the painter and cartoonist William Hogart in his work "Analysis of Beauty" is realized and beauty is liberated. Especially the developments in the field of industry have been effective in the rapid social change and development; Architecture, which is the expression technique of power, authority, and splendor with cathedrals in medieval cities, became the expression of technology, that is, information science in the age of enlightenment [8].

In this respect, a kind of industrial effect developed under the influence of the Industrial Revolution on architecture has brought a new dimension and diversity to aesthetics. Forms that will provide aesthetics are no longer seen as belonging to a natural or traditional repertoire because they are made optionally producible. On the other hand, with the developments in the field of Archeology, the idea of reinterpreting the ancient Roman and Greek architecture in a different way brought the new period classicism to "Neoclassicism", and the aesthetic understanding was seen as "catching the beautiful spirit of the ancient period". Similarly, Neo-Gothic and Neo-Romantic styles emerged as a movement to revive the past against the industrial revolution. In addition, the 'Eclecticism' style has also developed depending on the idea of eclecticism, such as the use of several currents together. In the 19th century, a style 'Beaux-Art' developed in a hierarchy, axis order and symmetrical designs, especially used in public buildings. In terms of appearance, it has an eclectic classical style under the influence of Classical and Neo-Classical architecture. Roofs hidden behind parapets, semicircular window series, decorative details and sculptures that aim to show the buildings magnificent and ornate were used. Contrary to all this effort to show it ornate, besides the 'Art and Craft' movement, which defends the craft against the plain beauty of the material and industrial architecture, the decorative and romantic 'Art Nouveau' movement, which defends both craft and industrial technology with its natural motifs and curved architectural forms, has been effective in the late 19th century. [1] [9] [3].

In the 20th century, Modernity as an "International Architectural Style"; A period in which ties with history and old tradition were severed and a new free and progressive way of thinking developed [10]. The architectural understanding of this new era, the basic building material of which is concrete, glass and steel, differentiates itself and develops movements such as Futurism, De-stijl, Avangard, Minimalism, Expressionism, Hi-tech, Constructivism, Deconstructivism, Deconstructivism-Folk, Organic architecture. The aesthetic understanding of

Futurism, with the expressions of Futurist architect Antonio Santelia, is stated as a scientific understanding of construction instead of ornamentation, beauty is provided through the logical lines and masses of the buildings, and large-scale design of masses by giving up ornaments and details. In De-Stijl, colors are used as a means of determining the space rather than being a means of decoration in functionally shaped spaces with geometric simplicity, while in avant-garde architecture, geometry is used as a formal organization tool and directly targets emotions. Minimalism, on the other hand, is seen as the 'plenty of few' and 'beauty of simplicity' as an understanding of simple design with the least material. Constructivism was born as a design concept on a new artistic order aiming to glorify industrial material. On the other hand, Deconstructivism, which has become widespread with different interpretations today, has been adopted in an aesthetic understanding that divides the buildings that emerged at the end of the 20th century into pieces, whose appearance is uncertain, and which stimulates the emotions endlessly with abstract arranged structures. Apart from the general style of modern architecture, Expressionism as a way of using original expressions that reflect their own personalities in their designs, and High-Tech styles have developed with a design approach that uses advanced technology and tends to reflect this clearly on its visuality. As an approach to make careful choices in garden and building materials and to achieve harmony with the environment by being sensitive to the building area, Organic Architecture connects aesthetics to this harmony and composition. Similarly, at the end of the 20th century, with the idea of protecting the world we live in within the scope of renewability and sustainability, the Green architecture movement was developed as an environmentally sensitive and material-defined design approach [9] [3].

In addition to all these, there has been a post-modernism movement as an opposition to Modernity. Against the modernity's ignoring the bonds of the past, postmodernism is in the understanding of using an element as an aesthetic element in the past. In this respect, it has been stated that he advocates designing the future with an aesthetic understanding that connects the past [1].

In architectural aesthetic evaluation, if the information that can relate to emotions reflects a meaningful whole between content and form, aesthetic perception is seen as inevitable [11], as cited in Maser). In this respect, aesthetic evaluation in architecture is realized as a result of semantic (symbolic, sensory) and formal interaction between the built environment and people. Formal aesthetics is stated as the evaluation of the emotions that develop due to the visual evaluation of the stimulating sources [12] [11] [13]. Similarly, with the definitions of 'formal Aesthetics' and 'Symbolic Aesthetics'. 'Formal aesthetics' in terms of its physical and psychological aspects; It is stated that formal constructs such as dimensions, proximity, complexity and order. 'Symbolic Aesthetics' are evaluated in terms of containing natural elements, sustainability, density and style of design [14]. Aesthetic evaluation as an architectural object first develops depending on the formal features of the perceptions of the outer shells of the buildings, and this situation creates variability in terms of general evaluation. In his study on Kant's understanding of aesthetics, [15] draws attention to the connection of formal aesthetics with aesthetic objectivity, as an idea presented with rules that determine the shape of what is seen, which cannot be characterized by pleasure and satisfaction, basing it on Kant's third view. Therefore, while formal aesthetics can provide variability in all directions in the emotions that correspond to the effects of what is seen, it can also be an explanation of reactive difference. In this respect, the link between 'perception' and 'meaning' in architectural aesthetics can also be arranged as the relationship between Meaning and Response.

III. MATERIAL AND METHOD

Within the scope of the study, depending on the survey method, it was asked to rank nine buildings, which have the characteristics of the important and innovative movements of the period, from the 15th century to the present, using an ordinal scale. The selected structures were presented for visual evaluation in a random order without any information on them. In order to be able to make a sound assessment of whether the light and color factors also an effect have, it was requested to make a separate rating on the night appearances of the buildings, within the scope of explaining whether there are differences in perception.

The words with the evaluation criteria (adjective) selected as descriptive in the questionnaire with closed-ended questions are a) the most beautiful, b) the most interesting/interesting c) the most impressive, the most emotional/romantic, d) the most ornate, e) the most original/original, e) the most populist f) most complex, g) exciting, h) the calmest. The sampling area of the study was formed by the students of Akdeniz University, Faculty of Architecture, Department of Architecture located in Antalya Province. The data obtained according to the results of the online questionnaire were analyzed in the SPSS statistical program and the perceptions and aesthetic preferences of the students about the photographs (Figure 1) that were shown to them were determined within the scope of the defined criteria.

(Explanation of Photographs)

- A) 19th Century –Beaux Art – Grand Palais – Paris
- B) 20th Century –Modernism -Farnsworth House – Illionis- U.S.A
- C) 15th Century – Ottoman Architecture – Topkapı Palace- İstanbul-Turkey
- D) 21th Century –Deconstructivism –Haydar Aliyev Cultural Center – Bakü- Azerbaijan
- E) 17th Century –Baroc Architecture – Versay Palace – Paris- France
- F) 20th Century –Post Modernism – Denver Civil Library- Denver-U.S.A
- G) 18th Century –Eclecticism – Karl Church – Vien- Austria
- H) 20th Century –Deconstructivism+Folk – Dancing House
Prag- Chek Republic
- I) 16th Century – Ronnesance Architecture – Marciana Library- Venedic- Italy



Figure 1. Day-night views of the selected period buildings within the scope of the field study, sorted by random codes

IV. RESULTS AND DISCUSSION

A total of 162 students participated in the survey conducted within the scope of the students in Antalya, Akdeniz University, Faculty of Architecture, Department of Architecture. Among the participating students, 132 students stated that they did not go abroad, and 30 students stated that they had at least one experience abroad. Among the participants with overseas experience, it was concluded that 17 students visited European countries/countries, 10 students visited Asian countries/countries, and 3 students visited countries/countries in the Americas at least once. The results obtained from the 'Day' and 'Night' views of the structures given as A-B-C-D-E-F-G-H-I in random order are given in (Table 1 ve Table 2).

According to the answers of 162 participating students on each descriptive adjective, Haydar Aliyev Cultural Center as the Most Beautiful, Most Impressive, Most Original/Original, Most Exciting building, Farnsworth House as the Most Emotional/Romantic, Most Populist and Calmest building, most interesting The Dancing House was chosen as the Attractive/Interesting, Most Ornate, and Most Complex building (Table 1).

When the students were asked about the building style that they were most inspired by during their education, they replied that they were inspired by Farnsworth style buildings with 109 answers. While the number of those who did not find their work close to any of the buildings sampled was 37, the number of students who expressed that they were inspired by the buildings close to the Haydar Aliyev Cultural Center, which was chosen as the most admired building in general, is 27 (Table 2).

To which 162 participating students answered, "What did you most want to define the designs you made during your student life?" 71 students original/unique, 22 students Impressive, 14 students Rational, 12 students Interesting/Interesting, 12 students Emotional/Romantic, 12 students Exciting, 10 students Nominative, 4 students Calm, 2 students Beautiful, 2 students Simple, 1 The student gave the answer Complex (Figure 3). Table 1 and Table 2. In both cases, although the representative structure of Deconstructivism is first, there is variation in the rankings (Table 3, Table 4, Figure 2 and Figure 3).

Table 1. Aesthetic rating results of the participants according to the daytime views of the buildings

RATING	A	B	C	D	E	F	G	H	I
1ST	9	23	0	98	14	1	9	3	5
2ND	34	52	2	19	10	13	14	10	8
3RD	16	19	2	17	16	10	12	54	16
4TH	14	15	8	9	42	12	20	24	18
5TH	21	15	44	6	32	8	16	12	8
6TH	47	10	38	7	22	12	5	9	12
7TH	8	8	23	4	15	50	16	11	27
8TH	5	11	20	2	9	23	31	14	47
9TH	8	9	25	0	2	33	39	25	21

1. 'D' Code Building Haydar Aliyev Cultural Center
2. 'B' Code Building Farnsworth House
3. 'H' Code Building Dancing House
4. 'E' Code Building Versay Palace
5. 'C' Code Building Topkapı Palace
6. 'A' Code Building Grande Palais
7. 'F' Code Building Denver Civil Library
8. 'I' Code Building Marciana Library
9. 'G' Code Building Karl Church

Tablo 2. Aesthetic rating results of the participants according to the night views of the

buildings

RATING	A	B	C	D	E	F	G	H	I
1ST	5	18	0	67	49	0	9	9	5
2ND	8	18	1	57	40	7	13	13	5
3RD	10	28	13	16	27	10	10	43	5
4TH	18	11	14	9	8	42	25	26	9
5TH	12	36	34	6	18	8	17	9	22
6TH	16	18	41	6	9	37	10	10	15
7TH	49	14	24	1	7	15	31	7	14
8TH	14	10	18	0	3	23	45	17	32
9TH	30	9	17	0	1	20	2	28	55

1. 'D' Code Building Havdar Aliyev Cultural Center
2. 'D' Code Building Haydar Aliyev Cultural Center
3. 'H' Code Building Dancing House
4. 'F' Code Building Denver Civil Library
5. 'B' Code Building Farnsworth House
6. 'C' Code Building Topkapı Palace
7. 'A' Code Building Grande Palais
8. 'G' Code Building Karl Church
9. 'I' Code Building Marciana Library

Table 3. As a result of the students' rating of architectural trends over buildings

DAY	NIGHT
1. Deconstructivism	1. Deconstructivism
2. Modernism	2. Deconstructivism
3. Deconstructivism+Folk	3. Deconstructivism+folk
4. Barok Arch.	4. Post Modernism
5. Ottoman Arch.	5. Modernism
6. Beaux-Art	6. Ottoman Arch.
7. Post Modernism	7. Beaux-Art
8. Ronessance Arch.	8. Eclectisim
9. Eclectisim	9. Ronessance Arch.

Table 4. Evaluation Results of Structures on Descriptive Adjectives

	THE MOST BEAUTIFUL	THE MOST INTERESTING	THE MOST IMPRESSIVE	THE MOST EMOTIONAL/ROMANTIC	THE MOST ORNATE	THE MOST ORIGINAL	THE MOST POPULIST	THE MOST COMPLEX	THE MOST EXCITING	THE MOST CALM
A	2	4	5	7	23	4	4	29	2	0
B	18	3	3	82	3	3	47	1	2	113
C	0	0	1	5	1	5	6	0	3	12
D	100	43	95	4	5	100	43	4	108	1
E	15	2	20	30	18	6	8	5	9	3
F	4	10	8	2	20	0	12	45	9	2
G	15	2	13	14	5	10	4	13	12	8
H	4	98	15	5	87	31	21	65	13	1
I	4	0	2	13	0	3	17	0	4	22

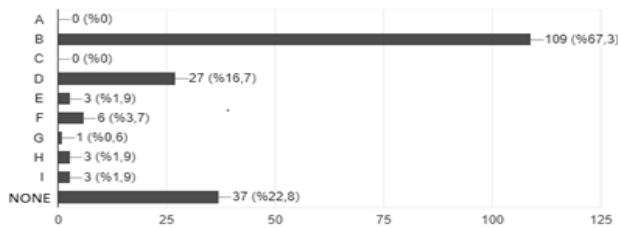


Figure 2. Building style inspired throughout studentship

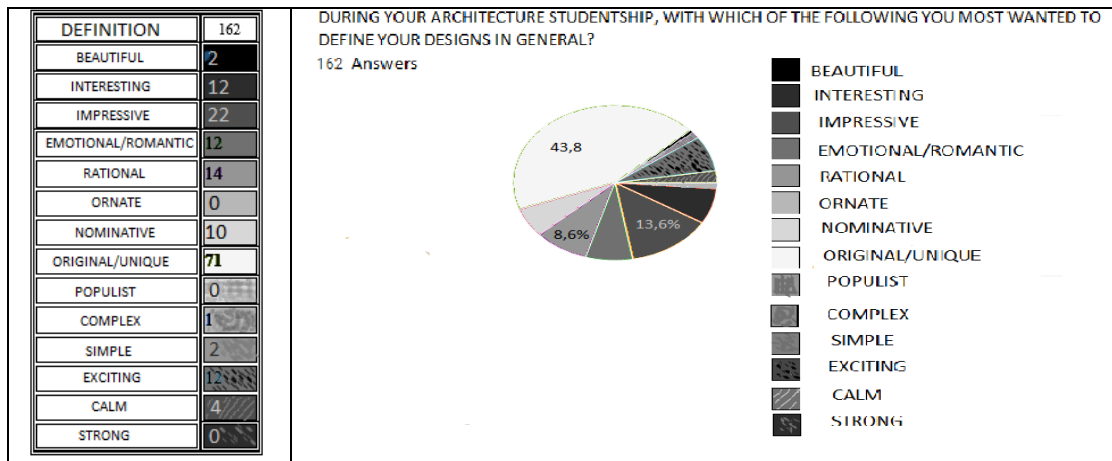


Figure 3. Most Desirable Definition by Students

V. CONCLUSION

What gives meaning to buildings as architectural products is the value judgments of the observer, and this situation can be revealed in the form of emotions as concrete data in aesthetic evaluation. In the field study, the way in which the students handled architectural aesthetics was revealed with the emotions they felt through the building photographs they saw as a result of their own value judgments. So that; The fact that the majority of the students do not have overseas experience shows that the structures to be evaluated or similar have not been physically experienced either. In the evaluations of the architecture students, their preferences for the Haydar Aliyev Cultural Center, designed by Zaha Hadid, which is shown as the representation of the 'Deconstructivism' movement, which is one of the recent architectural movements, draws attention. Deconstructivism style and Day and Night appearances showed high values in the first place, and lower values and close values were observed in the evaluations after the first order. This situation can be interpreted depending on the fact that the taste is in the same direction on the first place, but the value judgments after it differ. It can be said that the building style that students stay away from is Renaissance and Classical Period Eclecticism. In addition, it was observed that the night and day views were interpreted differently in the ratings of architecture students. In terms of aesthetics, while the first row does not change in day and night appearances, there are general differences in other rankings. The variability in the preferences of the students in night appearances resulted in the first two rows on the same structure. According to the results, it is seen that the students were under the influence of baroque and deconstructivism in the first place in their night appearances. This evaluation can be accepted as proof of the differences in aesthetic values in the night and day appearances of the buildings.

The rating made by the architecture students over the day and night views has provided important results in terms of how they characterize the movement as well as their interest in deconstructivism. Participating students define the Most Beautiful, Most Impressive, Most Original/Original, Most Exciting definitions over a single structure, reflecting their perspectives on deconstructivism as well as the commonality of taste definitions. It can be said that the students find the forms created with ambiguous forms and abstract arrangements aesthetically beautiful, impressive, original, and exciting. As a matter of fact, while original and impressive definitions took the first place in the most decisive definitions that students wanted in their designs, it was seen that beautiful and exciting definitions were not the only determinants. In this respect, it can be said that the definitions of beautiful and exciting develop depending on the formal and impressive effects of the structures. This attitude is a result that emphasizes the importance of the structures in terms of determining the formal aesthetic values of the buildings.

Farnsworth House, which the students chose as the 'Most Romantic', 'Most Populist' and Most Calm building in their preferences, is a building with a minimal style as the representative of the modern movement. It is seen that the students interpret this simple style as 'Calm' and 'Romantic', as well as 'Populist' since it is the building style they were inspired by during their student life. The Dancing House, which the students chose with the definitions of 'Most Interesting', 'Most Ornate' and 'Most Complex', emerged as a different interpretation of deconstructivism. It is seen that the detailed and colorful design, which symbolizes dance with abstract forms by Frank Gehry, is interesting, ornate and complex by the students.

As a result, each design reflects its own aesthetic value. As a result of the interpretation of these values through the common value judgments of the users, generally acceptable results can be mentioned. As the architects of the future, as a result of the study on the aesthetic preferences of today's architecture students, it can be said that the students will be the

supporters or developers of the Deconstructivism movement, one of the architectural movements of the last period, with the potential to continue modern architecture from different angles.

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