

MEANINGS OF ARCHITECTURAL PERFECTION ACCORDING TO MODERN AND POSTMODERN STYLE

HAZIM RASHEED KHAMO* and AHMED ABDULWAHID DHANNOON**

*Dept. of Architecture, College of Engineering, University of Duhok, Kurdistan Region–Iraq

**Dept. of Architecture, College of Engineering, University of Mosul–Iraq

(Received: September 11, 2022; Accepted for Publication: December 1, 2022)

ABSTRACT

Perfection is everything correct, complete, excellent, and has a supreme level of beauty. Style is a distinctive way of doing something and associating groups of people, locations or durations. Thus this study deals with the meanings and principles of architectural perfection of modern and postmodern styles. The study analyzed some previous studies about architectural perfection and turned out that there is no comprehensive study that combines the perfection's meanings of modern and postmodern styles in one study. Depending on that this article aims to collect perfection's meanings of modern and postmodern styles, also determining which perfection's meaning is more crucial between the perfection's meanings of one style and which one is less. Research methodology depends on an Analytical study (a study that gathers data from the theoretical framework), therefore, the study determined eight variables from the theoretical framework: Nature, Simplicity, Openness, and Functionalism for modern style also Symbolism, Fragmentation, Complexity, and Historicism for postmodern style. The method of measurement of variables depends on the qualitative measurement; each variable has four levels of quality which are Poor, Fair, Good, and Very good. Additionally, the study analyzed six building samples from modern and postmodern styles then applied perfection's variables to them. The results of the modern style in sequence were: functionalism 89%, simplicity with openness 67%, and nature 11%, however, in the postmodern style were: complexity 78%, symbolism with fragmentation 67% and historicism 22%. Finally, this study concluded that functionalism-meaning was the fundamental meaning of achieving perfection in modernism. On the other hand, the fundamental perfection's meaning of postmodernism was complexity.

KEYWORDS: Perfection, Style, Meaning, Modern, Postmodern

1. INTRODUCTION

This study will elaborate on the perfection term in detail, including its definitions, the historical and philosophical background of perfection to provide information about perfection and their terms that assist to create the research question (what is Architectural perfection according to modern and postmodern styles?) and search it in the literature review.

Perfection according to the Cambridge dictionary is the case of being correct and complete in everything. If something is done to perfection; it should be done: very well, happens precisely as arranged without blame, or at the highest imaginable (Walter, E., 2008). While perfection according to the Merriam dictionary consists of perfect, entire, whole, and intact terms. Also, the term is used in the sense of utter

or complete. The term is appropriate; when there is no more definite test or measure than the agreement to the highest standard of excellence (Merriam-Webster, Inc ed., 1984).

Perfection as a terminology comes from two Latin words that are, “per” mean thoroughly or completely and, “fect” mean to make or do (Danner, H.G., 2014). Thus the study collected other terms for perfection as shown in Fig. (1).

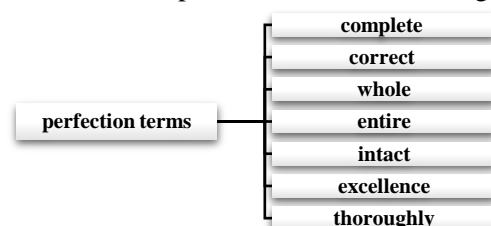


Fig. (1): Terms of perfection Source: Researcher

In Greece, perfectionism is most frequently

associated with a notion of human nature or essence (Anagnostopoulos, G., 1999). In Islamic thought, the study discusses the precise issue of human perfection, which consists of three pillars: The first is, the requirement of the assertion of divine unity (everything originates from God and returns to Him). Islam's second doctrine is prophecy, who (the prophet) lay down the way by which perfection could be attained, God's instructions were delivered to humans in the form of the Qur'an. And the third belief of Islam is concerned with the real means of the return to God (Chittick, W.C., 1994).

In ancient philosophy, Plato makes the argument that because God is already perfect, He must not change. If God needs to transform in any manner, it would imply that He is not perfect and whole. A changing God would indicate that God requires some process of reform, which in turn would imply that God is weak in some form (Etter, C.E., 2008).

In modern philosophy, perfection is represented by Thomas Hurka (a Canadian philosopher who was born in 1952) calls moral philosophy perfectionism and the concept of human perfection. Theoretically includes additional words: "naturalism", "humanism", and "eudaimonism"; while for idealism, it includes "flourishing" and "self-realization". He (Thomas Hurka) uses a more limited definition of perfection depending on historical motivations. He best corresponds with the usage of thinkers like Aristotle, Aquinas, Spinoza, and Leibniz; For them, perfection refers to excellence that is determined by human nature instead of pure excellence (Hurka, T., 1996).

There are two distinct ideas of aesthetic perfection that Kant held during his pre-critical and critical stages: The first idea is metaphysical which is concerned with the perfection of beautiful objects, the second idea is epistemic which is concerned with the perfection of beautiful knowledge (Gregory, M.L., 2020). Thus by corresponding with the introduction's information, the study creates a research question (what is Architectural perfection according to modern and postmodern styles?) to search it in previous studies.

2. PREVIOUS STUDIES

Buni, L.K.'s study depended on the selection of seven essential principles of perfection were Unity, Unbroken broken, Clarity, Spiritual Dimensions, Respect of Nature, Meaningful with

Meaningless, and Anti-Fanaticism; based on some letters from biblical texts (Buni, L.K., 2016). Thus this study combines seven essential godly keys toward architectural perfection very well. but it isn't determined how these seven keys have a relationship with architectural styles.

Coulson, J., Roberts, P. and Taylor's study searched the perfection that existed in the educational universities from (1088 to 2010). The study analyzed some case studies related to international universities. Also, the study directly referred that collecting of all activities under one roof soon established a model for the perfect collegiate building. The University of Virginia as a product of an Age of Enlightenment achieved the perfection of proportions. However, the study indirectly referred that nature was one of the elements of perfection in the 19th century (Coulson, J., Roberts, P. and Taylor, I., 2015). Thus this study discussed architectural perfection in different eras. Some eras connected art and nature with architecture that achieved perfection's meanings. The study problem was minimal of information about the relationships with architectural styles.

Tallon, A.'s study concentrated on the perfection in the Measure of Man and Heaven, specifically focused on the perfection of gothic cathedrals. Furthermore, the study directly referred that perfect verticality existed in the construction of the gothic cathedrals (Tallon, A., 2013). Thus this paper discusses the perfection of gothic architecture very well especially one of their perfection's meaning is guidance depending on the biblical text. But the problem of this source it was not spoken about the perfection of modern and postmodern styles.

Mallgrave, H.F.'s study conducted a historical survey from 1673 to 1968 and referred to some architectural styles as historicism, neoclassical, and modernism. The study directly referred that perfection achieved through harmonizing of musicals as musicologist Rene Ouvrard confirmed. Laugier also expressed that, "Architecture owes all that is perfect from the Greeks". Indirectly referred that perfection principles of modern architecture were simplicity, organic, and structural perfection as confirmed by Wright and Kahn (Mallgrave, H.F., 2009). Thus this study discussed many meanings of architectural perfection of a different era but it wasn't determining how these meanings had a relationship with different architectural styles.

Mallgrave, H.F. ed.'s study conducted a historical survey from the Vitruvius era to 1970 and referred to some architectural styles as a classical, renaissance, and neoclassical. The study directly referred to Vitruvius; who confirmed that perfection of style was achieved by Propriety and depended on nature. The renaissance style confirmed that nature and the human body were basic elements of perfection. ROLAND selected Doric, Ionic, and Corinthian columns as the perfection of the Orders (Mallgrave, H.F. ed., 2005). Thus this study discussed the architectural perfection of classical style and Renaissance style but did not give information about modern and postmodern style.

Legh, P.'s study focused on principles of beauty and perfection in classical architecture, especially, at Vitruvius architect. The study analyzed several essays on the topic. Furthermore, the study directly referred that imitation of nature was an element of perfection in classical architecture. While Vitruvius confirmed that the perfect building should not and naturally cannot be divided into more than three parts: foundation, support, and shelter. Also, Corinthian and Doric columns were perfect elements of Greek architecture (Legh, P., 1831). Thus this study discussed the perfection of classical architecture and Vitruvius's meanings of perfection sufficiently while determined some principles of moral criticism's school like imitation of nature. But it wasn't referring to the perfection of modern and postmodern styles.

3. RESEARCH GAP

After analysis of previous studies, it turns out that there is minimal information about the relationship between modern and postmodern style with architectural perfection's meanings. So this study will combine the perfection's meanings of modern and postmodern styles in one study.

4. RESEARCH AIM

The research aims to collect perfection's meanings of modern and postmodern style, also knowing which perfection's meaning is more important among the perfection's meanings of one style and which one is less.

5. RESEARCH STRUCTURE

The research Structure will follow these steps:

- 5.1. Create a theoretical framework based on the following: -
 - 5.1.1. Style, the purpose of this paragraph is to know the style and identify the modern and postmodern style to study the meanings of perfection for each of them.
 - 5.1.2. Perfection, the purpose of this paragraph is to define the meanings of perfection for modern and postmodern style.
- 5.2. Making a practical study depends on choosing three-building samples from modern and postmodern style and applying perfection's meanings of each of them.
- 5.3. Analyzing the results of the practical study to find out which perfection's meanings are more important among the perfection's meanings of one style and which one is less.
- 5.4. Extract final results and conclusion related to the research topic.

6. THEORETICAL FRAMEWORK

In this part, the article will deal with two main terms that are style and perfection, the style part of the study gives definitions and identify the modern and postmodern style. while the second part of the study determines meanings of perfection in modern and postmodern style.

6.1. style

Style according to the Cambridge dictionary is a form of doing something, the type of an individual, group of people, location, duration, and a special form and designs like a person's coat, clothes, piece of furnishings, and a formal style of cap (Walter, E., 2008). Style in art is a model generated for classifying art and exploring creative artefacts (Chan, C.S., 2015).

6.1.1. Modern style

In the first decades of the 20th century, modernism emerged. It might be stated that it started with the Bauhaus movement in Germany, Le Corbusier in France, or Frank Lloyd Wright in the United States. The modern approaches took a highly rationalized position in the design process; were critically dependent on the link between industrial production and product design (Daudén, Julia, 2018).

6.1.2. Postmodern style

A chain of criticism of modern architecture started in 1929 with the start of the Great Depression and continued until the late 1970s in

both discourse and physical works. Postmodern architecture explored some of Modernism's core ideas from a new historical and compositional viewpoint. Furthermore, several question techniques were used; sometimes used irony and having a keen interest in popular culture. One of the key texts in postmodern philosophy was the book of "Learning from Las Vegas" (Daudén, Julia, 2018).

6.2. Meanings of perfection in modern and postmodern style

In the Modernism style, simplicity is one of the primary meanings of perfection as Wright said, "One must achieve simplicity as a perfectly discovered part of some organic whole" (Chan, C.S., 2015). In his search for the perfect shape, Mies van der Rohe proposed buildings with open and elastic spaces proper for different usages and a particular purpose. While the best modernist design exposed a consideration for proportion; Le Corbusier used his own techniques to establish aesthetically attractive proportions in the basic shapes of his buildings; to evaluate the building compositional ideas, he (Le Corbusier) examined both gothic and classical structures. (Conway, H. and Roenisch, R., 2005).

The measure of building's excellence or perfection is determined by its utility and fitness; while for functionalists who pursue this direction, the idea of "form follows function" becomes the essential requirement of beauty. The mechanic analogy is based on the idea that the most perfect mechanical's efficiency produces beauty (or at least a certain level of formal perfection), and perfectly builds objects that achieve beauty without actively seeking it. Therefore, advanced devices are a fantastic source of inspiration for architects (Zucker, P., 1958). Boullée determines cube, pyramid, cylinder, and sphere, as perfect forms (Tobolczyk, M., 2021).

Frank Lloyd Wright (a prominent leader in 20th-century architecture) claims that nature and natural processes are the guiding principles and the fundamental metaphors for his design approach; based on the ideals of aesthetic philosophy. Wright identifies the unity and order in nature. Moreover, natural things populated a big area in his Oak Park's studio library; and he likely profited from it to discover the primary idea of his designs. Wright attempted to find the natural structures form and the mysteries of nature's order (Ayiran, N., 2012). So meanings of perfection in the modern style become: Function, Openness, Nature (which consists of

proportion), and Simplicity.

In the Postmodern style, Eisenman claims; it is not perfection which demands our deepest emotions; while perfection can only exist via which is imperfect (fragment) (Heynen, H., 2000). The notion of symbolism in the architecture of Venturi and Rauch achieved a better complete description with the publication of Knowing from Las Vegas (Brush, M.B., 1991).

Jencks noted, "Postmodernism is an eclectic mix of all traditions and all apparent history". The ideal projects of postmodernism are clearly associated with double coding. The diversity of postmodernism style is in contrast to the late modern minimalism principles (Atani, S.R., Raeisi, I. and Bazrafkan, K., 2018). In his book, "Complexity and Contradiction in Architecture", Venturi appointed a series of observable choices in opposition to Modernism: complexity and contradiction vs simplification, doubly-functioning features instead of singly functional ones, mixture instead of pure components, and the complicated whole instead of clear unity (Jencks, C.A., 1978). So Meanings of perfection in the postmodern style become: Fragmentation, Symbolism, Historicism, and Complexity. Historicism, and Complexity are mentioned by Jencks. Thus Table 1 showing summary of perfection's meanings of modern and postmodern style.

Table (1): Summary of perfection's meanings of modern and postmodern style Source:

Researcher	
Styles	Meanings of perfection
Modern	Simplicity
	Openness
	Functionalism
	Nature
Postmodern	Symbolism
	Fragmentation
	Complexity
	Historicism

6.3. Connection of meanings of perfection with architecture

Perfection can be seen in various apparent fields that could run from math to the human spirit and physical bodies (proportion and symmetry) as shown in figure 2 (Carreiro, M.B.T., 2020). The movement of organic architectural shapes with its soft harmonious volumes, texture, natural environment and benefit of natural materials was founded by

Gaudi (the architect of Modern style). The directions of organic architecture were developed in the 19th century by L. Sullivan (Kazantseva, T., & Myhal, S.,2014).

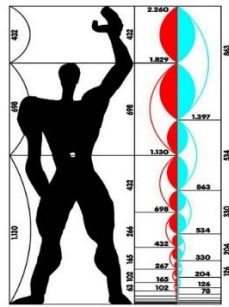


Fig. (2): Human proportions Source: i.pining.com

Simplicity deletes everything that is repetitive and abstracts it to the simplest geometric forms with minimal lines and zones (Hamdy, N.M., Tantawy, D. and Awad, I.A., 2021). Less complex is understood sufficiently and more respected than what is more complicated. Simplicity is preferable to complexity (Surbhi Porwall SS, 2020). Openness plan can be

determined as: a closed plan, half-open or open plan (Alfirević, Đ. and Simonović-Alfirević, S., 2016). The basic assumption of “form should follow function” becomes a guiding method for the architects (De Zurko, E.R., 1957). The primary idea of the functionalist imposes that ornaments should explain its presence by means of some actual or applicable functions. Modern architects should manipulate the potentialities of recent materials and techniques of building to solve the latest architectural difficulties. (De Zurko, E.R., 1957). Generality seeks a shared resolution that unifies dissimilarities; whereas simplicity pursues to remove dissimilarities which are unneeded as shown in figure 3 (Turner, K.J., 1997). Direct historicism is the method which duplicates the historical vocabulary precisely in the same form; while indirect historicism is the method which analyses the historical styles and synthesizes them avoiding direct replication (Karasozen, R., 2016).

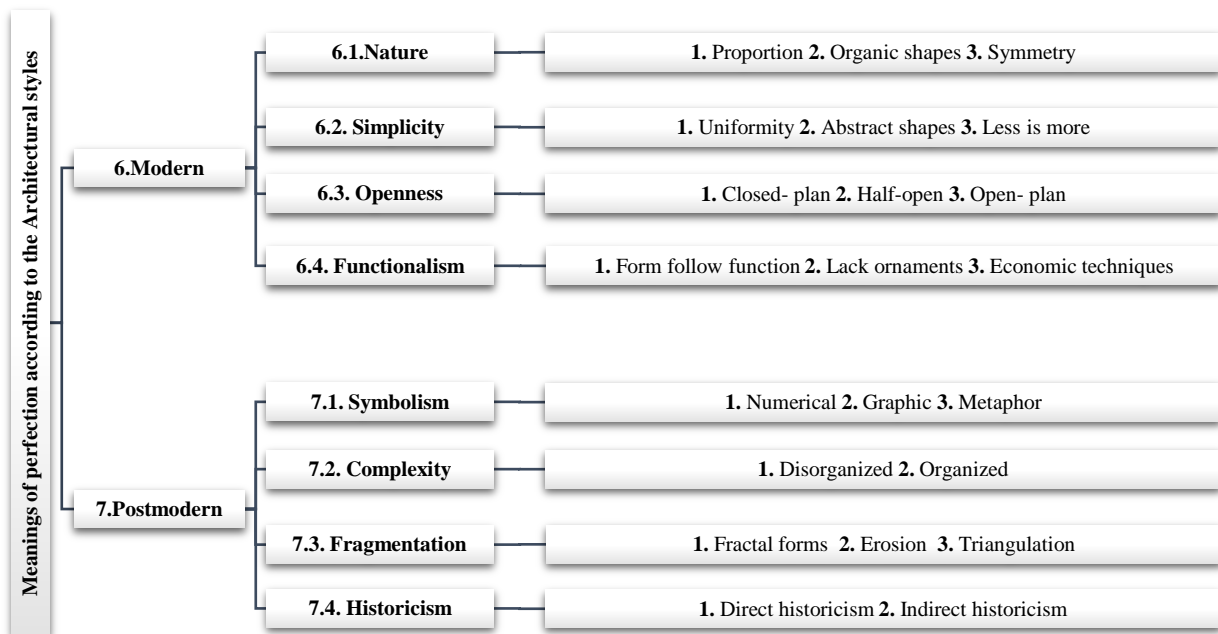


Fig. (5): Final scheme of meanings of perfection according to modern and postmodern Style Source: Researcher

The symbolism of the architectural shape determines at several levels: Numerical Symbols, Graphic symbols, and Metaphor symbolism (Astakhova, E., 2020). There are two completely different types of complexity: disorganized and organized as shown in figure 4

(Salingaros, N.A., 2014). Fragmentation forms characterize by fractal geometric forms that can be divided into pieces, Erosion that largely clarifies as a group of functions of eroding, also, triangulation (Ismail Hassan Soliman et al, 2020). Thus summary of the theoretical frame

work showed in the figure 5.

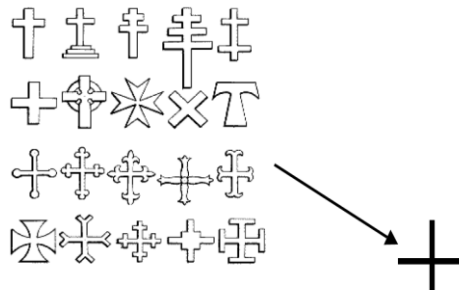


Fig. (3): The Principle of Simplicity Source: Turner, K.J., 1997

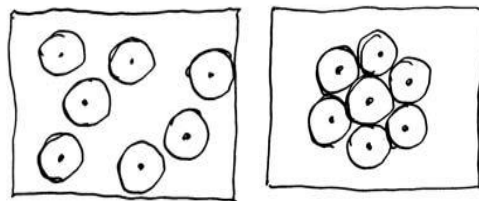


Fig. (4): Disorganized versus organized complexity Source: Salingaros, N.A., 2014

7. PRACTICAL STUDY

7.1. Research Methodology

The methodology of this study is an

Analytical study (a study that gathers data from the theoretical framework) that depends on a qualitative method, as shown in figure (6).

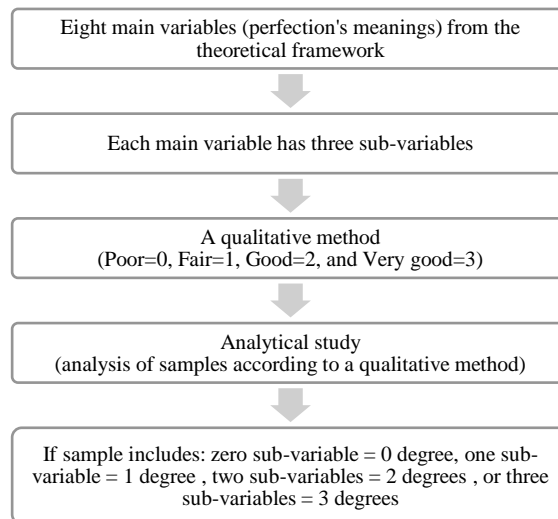


Fig. (6): Research methodology Source: Researcher

7.2. Research Measurements

7.2. Research Measurements

This study determined eight variables from the theoretical framework; while the method of

measurement of these variables will depend on the qualitative measurement that every variable has four levels of quality which are Poor, Fair,

Table (2): Method of distribution degrees on variables Source: Researcher

Variables	0	1	2	3
Nature	No items	proportion or organic shapes or symmetry	Two items	proportion + organic shapes + symmetry
Simplicity	No items	Uniformity or abstract shapes or less is more	Two items	Uniformity + abstract shapes + less is more
Openness	No items	closed-plan	half-open	open-plan
Functionalism	No items	form follow function or lack ornaments or new techniques	Two items	form follow function + lack ornaments + new techniques
Historicism	No items	Indirect historicism	Direct historicism	Direct historicism + Indirect historicism
Symbolism	No items	Numerical or graphic or metaphor	Two items	Numerical + graphic + metaphor
Fragmentation	No items	triangulation	Erosion	Fractal forms
Complexity	No items	Organized	Disorganized	Disorganized + Organized

7.3. Case Study

7.3.1. Samples criteria:

The study's criteria to determine samples is selection of the most important buildings of modern and postmodern style depending on the selection of the Unesco world heritage sites that select some important buildings around the world to conserve it. So the study neglected the function because of differentiation of buildings function (some of them were houses and others were commercial and etc.). Also neglected the geographical location of samples because the style spread in more than one place.

Good, and Very good. Every level arranged by a numerical scale as shown in table 2 (Poor=0, Fair=1, Good=2, and Very good=3). In the below, the study will define the qualitative measurement in detail depending on the Mohajan source and Miller, Emma, and Ellen Daly source.

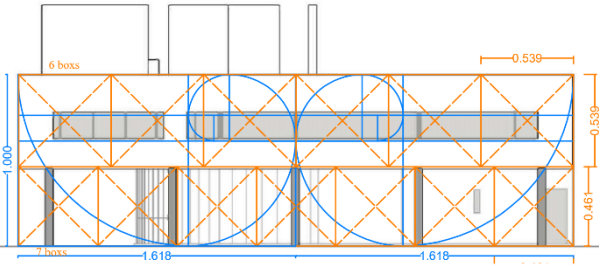
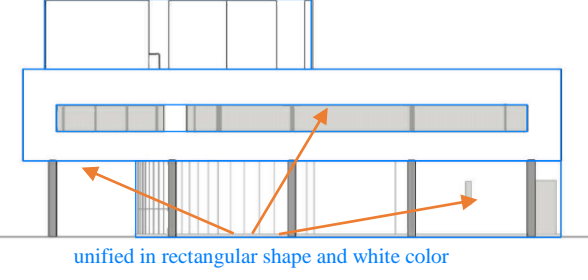
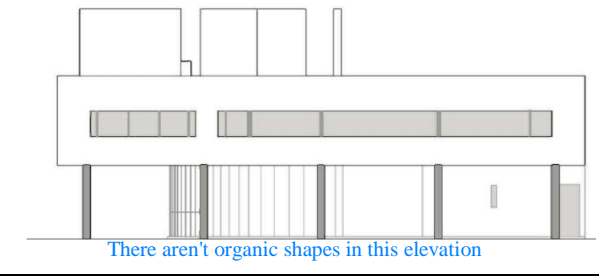
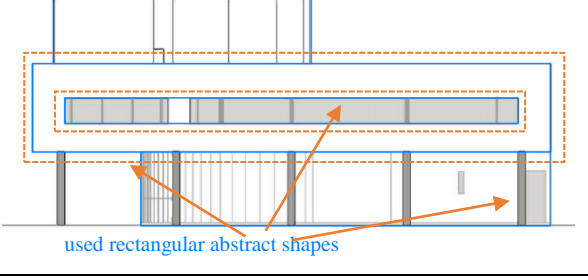
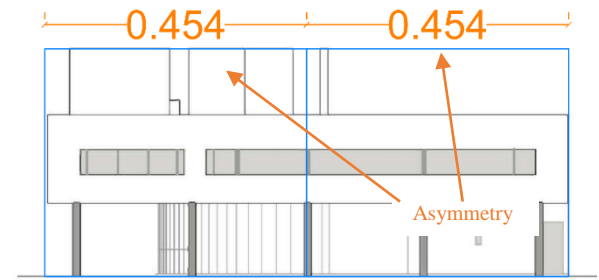
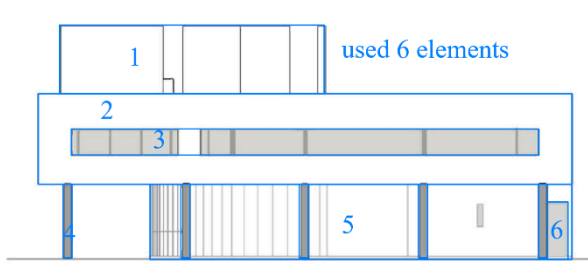

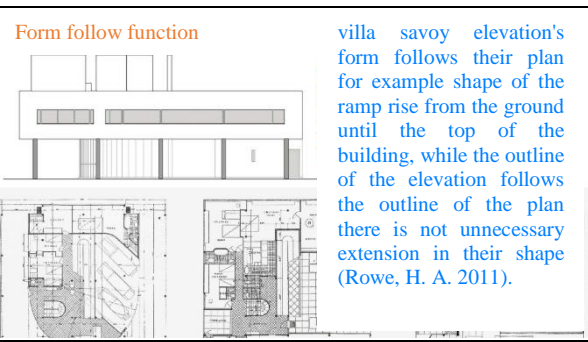

The qualitative research data are descriptive. Qualitative research methods normally contain: interviews, observations, case studies, surveys, historical, and manuscript analyses. Commonly, the findings are in the shape of words, themes,

classes, and ideas. (Mohajan, H.K., 2018). Some tools consist of scale measurement data which graphically shows improvement in results over time. A scale measure contains a number of tick boxes to determine how important a topic or results and to grade themselves from one to five or one to ten. Other scale measures use words to organize a problem or results; the person might be requests to choice depending on their belief (no improvement, some improvement, or a lot of improvement) (Miller, E. and Daly, E., 2013).

7.3.2. Description of samples:

This article took six samples from Modern and Postmodern styles; each style had three samples. Samples are arranged according to the year of construction from older to newest. Samples of modern were: Villa Savoy, villa tugendhat, and Falling water. However, samples of postmodernism were: The Vanna Venturi House, Portland Building, and Guggenheim Museum Bilbao. Villa Savoy analysis is shown in table 3, while, Vanna house analysis is shown in table 4, and analysis of all other samples are shown in the appendix.

Table (3): Villa Savoy (Modern) Source: Researcher

Villa Savoy (Modern)			
Nature (proportion)	Yes	Simplicity (Uniformity)	Yes
			
Nature (organic shapes)	No	Simplicity (abstract shapes)	Yes
			
Nature (symmetry)	No	Simplicity (less is more)	No
			
Nature degree	1	Simplicity degree	2
It isn't closed-plan	(closed-plan)	Functionalism (form follow function)	Yes
			
Openness (half-open)	Yes	Functionalism (Lack ornaments)	Yes
			


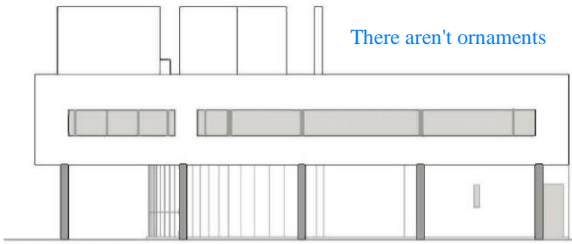

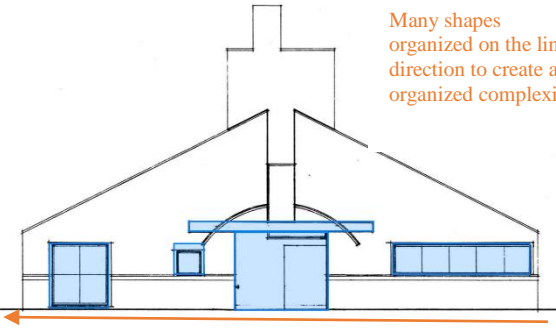
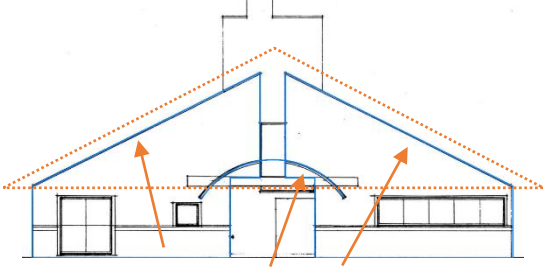
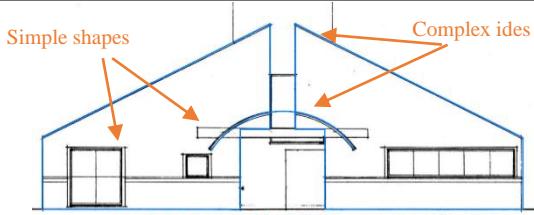
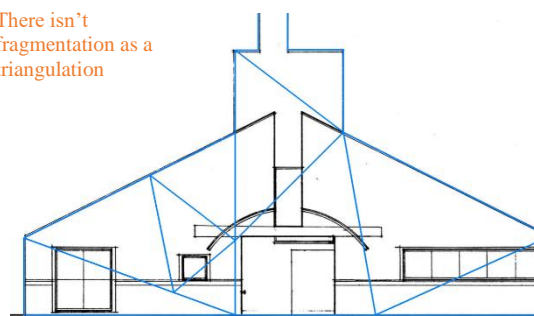
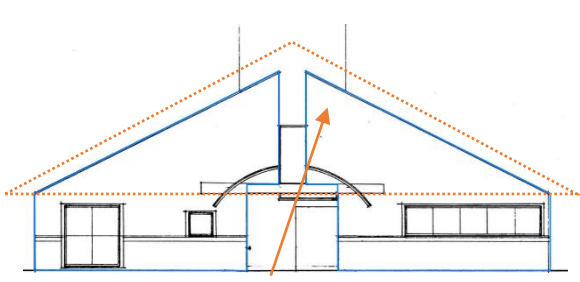
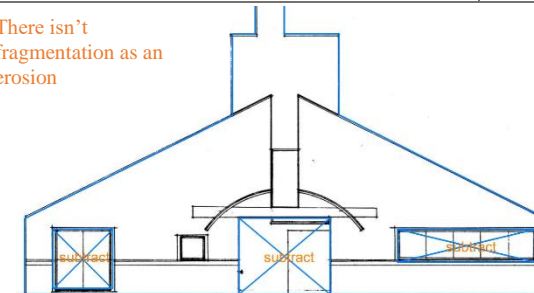
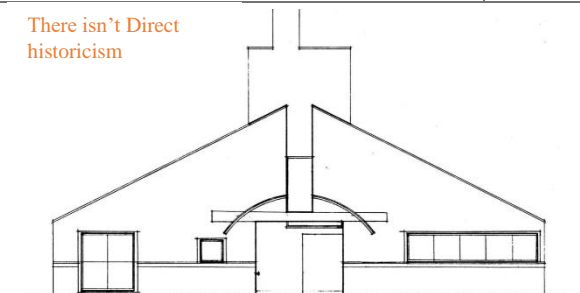
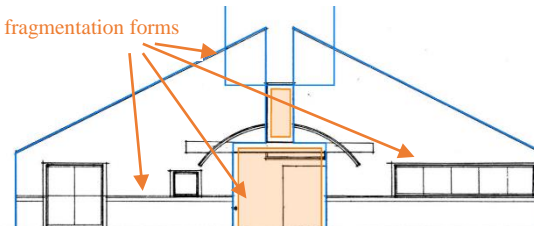
			 <p>There aren't ornaments</p>	
It isn't open-plan	(open-plan)	-	Functionalism (Economic technique)	Yes
			<p>Used economic technique</p> <p>used concrete and glass materials instead of marble that was used in former styles as an economic material (Bataille, C. 2020). And used the concrete frame as an economic system (Goodchild, C. H., Webster, R. M., & Elliott, K. S. 2009).</p>	
Openness degree			Functionalism degree	
2			3	

Table (4): Vanna Venturi House (Postmodern) Source: Researcher

Vanna Venturi House (Postmodern)			
Symbolism (Numerical)	No	Complexity (Organized)	Yes
There isn't numerical symbolism		 <p>Many shapes organized on the line direction to create an organized complexity</p>	
Symbolism (graphic)	Yes	Complexity (Disorganized)	-
 <p>used triangular shape and arch-framed entrance as graphic symbolism relative to the classical elements (Venturi, R. 1961).</p>		There isn't disorganized complexity	
Symbolism (metaphor)	Yes	Complexity (Disorganized+ Organized)	-

 <p>Venturi wants to create contradiction by using complex ideas with simple shapes as metaphor symbolism (Venturi, R. 1961).</p>		<p>-----</p>			
Symbolism degree		2	Complexity degree		1
Fragmentation (triangulation)		-	Historicism (Indirect historicism)		Yes
<p>There isn't fragmentation as a triangulation</p> 		 <p>took pediment indirectly from classical style (Venturi, R. 1961).</p>			
Fragmentation (Erosion)		-	Historicism (Direct historicism)		-
<p>There isn't fragmentation as an erosion</p> 		<p>There isn't Direct historicism</p> 			
Fragmentation (Fractal forms)		Yes	Historicism (Direct + Indirect historicism)		-
<p>fragmentation forms</p> 		<p>-----</p>			
Fragmentation degree		3	Historicism degree		1

8. RESULTS

In the Modern style sample one reached 33% for nature, 67% for simplicity with openness, and 100% for functionalism. Sample two got 0% for nature, 67% for simplicity with openness, and 100% for functionalism. Sample three reached 0% for nature, and 67% for simplicity,

openness and functionalism. Thus the total results of all four variables in Modern style reached 11% for nature, 67% for simplicity with openness, and 89% for functionalism as shown in the figure 6. However, in the Postmodern style sample four

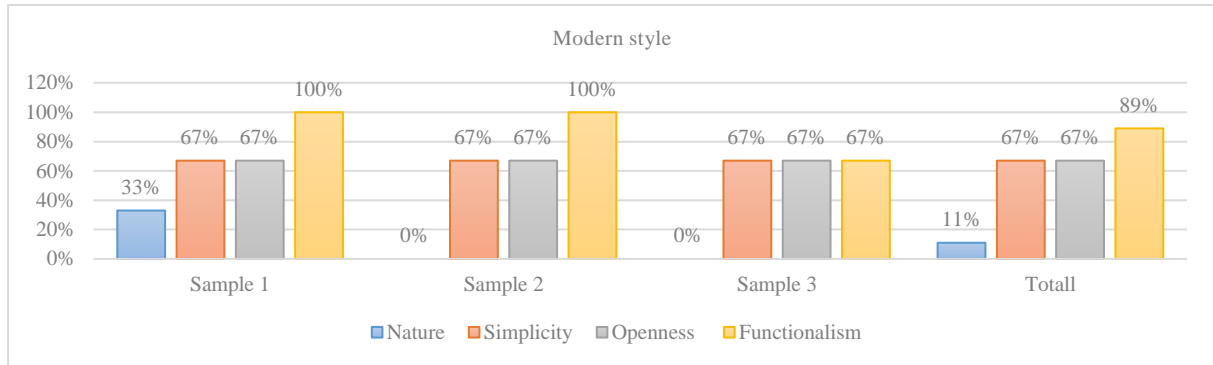


Fig. (6): Modern style results of analytical study Source: Researcher

reached 67% for symbolism, 33% for complexity with historicism, and 100% for fragmentation. Sample five got 100% for symbolism with complexity, 0% for fragmentation, and 33% for historicism. Sample six reached 33% for symbolism, 100% for

complexity with fragmentation, and 0% for historicism. Thus the total results of all four variables in Postmodern style reached 67% for symbolism with fragmentation, 78% for complexity, and 22% for historicism as shown in the figure 7.

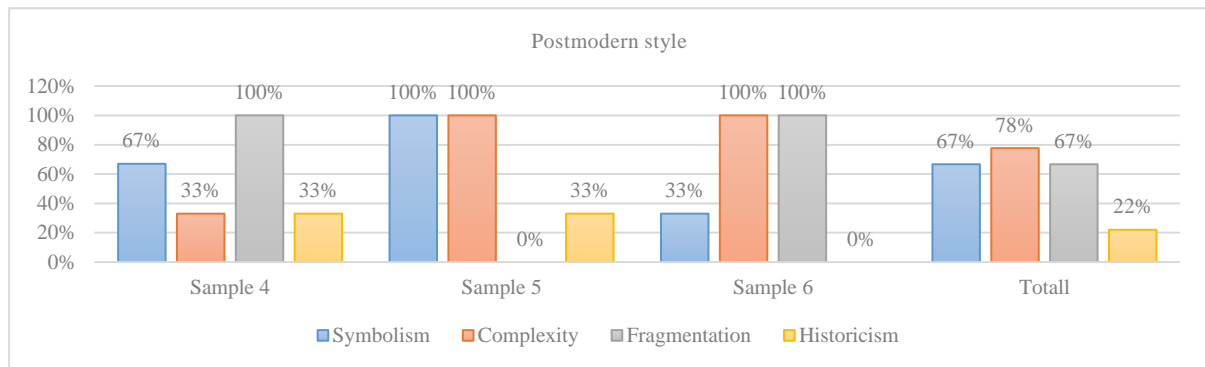


Fig. (7): Postmodern style results of analytical Source: Researcher

9. RESULTS DISCUSSION

This study intended to achieve perfection's meanings of modern and postmodern styles and determine which perfection's meaning is more important than the others in a comprehensive study. Similar to Buni, Mallgrave, and Legh's studies, this study also found nature as a perfection's meaning, especially in the modern style. However, nature got a low grade (11%) compared to other meanings; perhaps a group of

modern architects want to react against the 19th-century styles, which Coulson's study considered nature as one of the elements of perfection in the 19th century. Also, simplicity is a perfection principle of modern architecture as stated by Mallgrave's study.

Buni's study stated, "Perfection (depending on the Bible text) is in the broken body not in the physically ideal body and in the Spiritual Dimensions". This article developed former ideas to fragmentation-meaning and symbolism-

meaning; both got 67% in the postmodern style. On the other hand, this study conflicted with Laugier's idea when said: "Architecture carries all that is perfect from the Greeks"; which appeared in this article; modern and postmodern styles took some of the perfection's meanings away from Greek ideas like simplicity.

Finally, this article explored some new and important perfection's meanings: openness-meaning got 67%, functionalism-meaning got 1st place (89%) in the modern style; because of the world wars that destroyed many cities; architects tried to achieve human needs and depended on the function of the buildings instead of form, on the other hand, complexity-meaning got 1st place (78%) in the postmodernism's style perhaps due to the reaction of postmodern architects to the modernism ideas and their quotes like "less is more" and replaced it by "less is a bore".

10. CONCLUSIONS

In conclusion, this study deals with meanings and principles of perfection of two important architectural styles that are modern and postmodern styles. While the research aims to: find high-level beauty principles in modern and postmodern styles called perfection's meanings, determines which perfection's meaning is more important among the perfection's meanings of one style and which one is less, also assist students and architects in designing their projects. To achieve the research aim and answer the research question; the study built a theoretical framework that confirmed perfection's meanings in the modern style were: Nature, Simplicity, Openness, and Functionalism, on the other hand, perfection's meanings in the postmodern style were: Symbolism, Fragmentation, Complexity, and Historicism. In the modern style nature consists of proportion, organic shapes, and symmetry. Simplicity consists of Uniformity, abstract shapes, and less is more. Openness consists of closed-plan, half-open, and open-plan. Functionalism consists of Form follow function, lack of ornaments and economic technique. On the other hand, in the postmodern style symbolism consists of Numerical, graphic and metaphor. Fragmentation consists of Disorganized and organized. Complexity consists of Fractal forms, Erosion, and triangulation. Historicism consists of Direct historicism and indirect historicism. Finally, the

study collected statistical information; by applying determined perfection's meanings to samples of modern and postmodern styles. In the modern style functionalism was in the 1st place got 89%, simplicity with openness were in the 2nd place got 67%, and nature was in the 3rd place got 11%. However, in the postmodern style complexity was in the 1st place got 78%, symbolism with fragmentation were in the 2nd place got 67%, and historicism was in the 3rd place got 22%.

11. RECOMMENDATIONS

Modern and postmodern style have many secondary directions (trends) like the expressionist direction in the modern style and Free-Style Classicism in the postmodern style. So this article recommends future studies about the relationship between perfection's meanings determined in this study with modern and postmodern directions and find perfection's meanings in each of these directions in detail.

REFERENCES

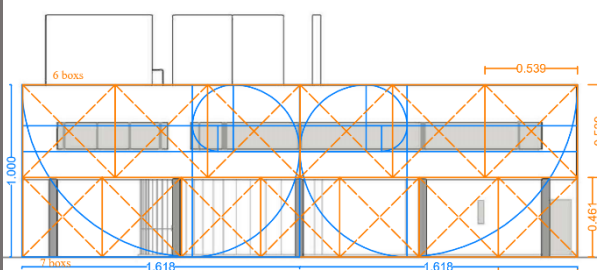
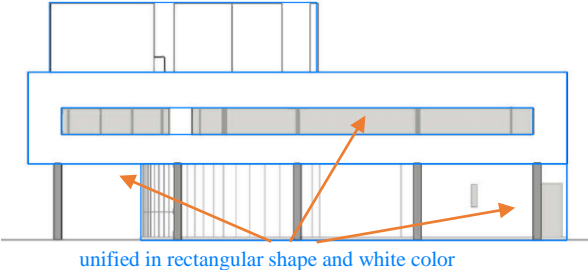
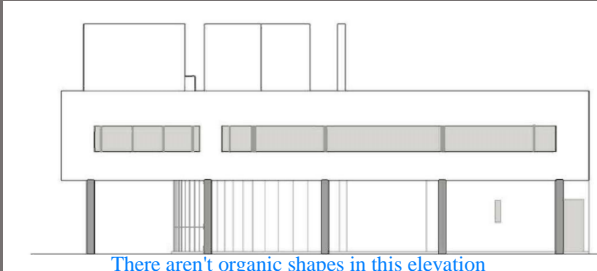
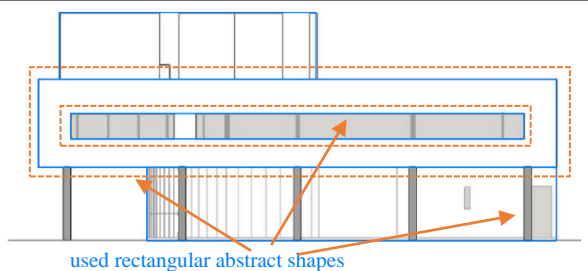
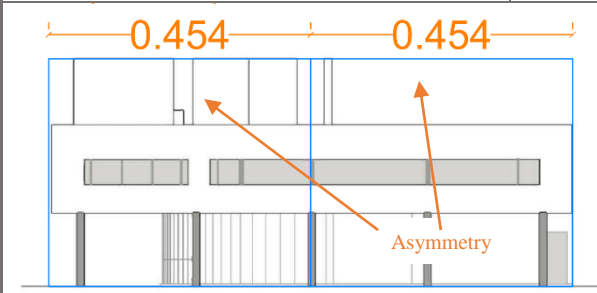
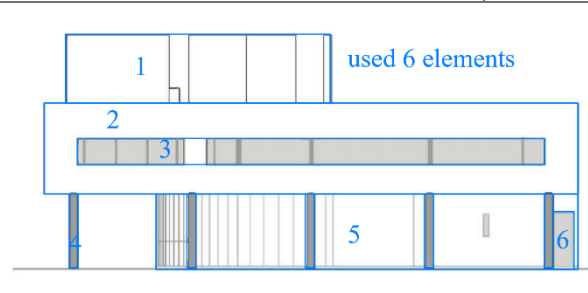
- Alan G Brake. (2015). Postmodern architecture: The Portland Municipal Services Building, Oregon, by Michael Graves. URL:<https://www.dezeen.com/2015/09/12/postmodernism-architecture-portland-municipal-services-building-michael-graves/>. [Date last accessed: 27th July 2022.]
- Alfirević, Đ., & Simonović-Alfirević, S. (2016). Open-plan in housing architecture: Origin, development and design approaches for spatial integration. *Arhitektura i urbanizam*, (43), 45-60.
- Alyn Griffiths. (2022). Frank Gehry's Guggenheim Museum Bilbao is "the greatest building of our time". URL: <https://www.dezeen.com/2022/05/18/frank-gehry-guggenheim-museum-bilbao-deconstructivism/>. [Date last accessed: 27th July 2022.]
- Astakhova, E. (2020, August). Architectural symbolism in tradition and modernity. In *IOP Conference Series: Materials Science and Engineering* (Vol. 913, No. 3, p. 032024). IOP Publishing.
- Atani, S. R., Raeisi, I., & Bazrafkan, K. (2018). *Intertextual Reading of Postmodern Architecture (Based on Historicist Postmodern*


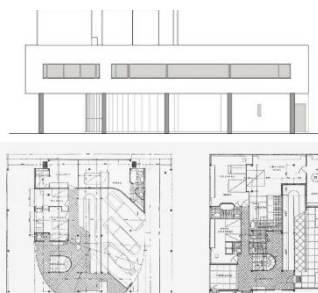



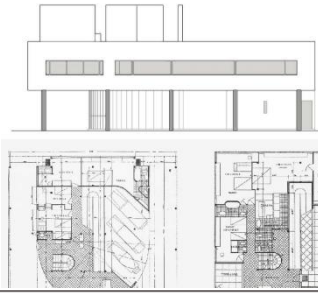
- Architecture and Deconstruction). *Int. J. Architect. Eng. Urban Plan*, 28(1), 15-24.
- Ayiran, N. (2012). The role of metaphors in the formation of architectural identity. *ITU A*, (9), 2.
- Bataille, C. (2020). Low and zero emissions in the steel and cement industries: Barriers, technologies and policies.
- Brant, J., & Cavallaro, F. (2018). The characteristics of 12 architectural styles from antiquity to the present day. *ArchDaily*.
- Brush, M. B. (1991). *The Role of Historical Elements in Postmodernism: An Attempt to Converge Through Keystones*.
- Buni, L. K. (2016). *The Seven Godly Keys Towards Perfection: A Biblical Eternal Vision to Guide Achieving Permanent Meanings in Architecture and Worldview Exploring a Symbolism to be Achieved in Canada and the Whole Globe*. Xlibris Corporation.
- Chan, C. S. (2015). *Style and creativity in design* (pp. 114-115). Cham: Springer International Publishing.
- Chittick, W. C. (1994). The Islamic Concept of Human Perfection. *Jung and the Monotheisms: Judaism, Christianity and Islam*, 154-65.
- Conway, H., & Roenisch, R. (2005). *Understanding architecture: an introduction to architecture and architectural history*. Routledge.
- Coulson, J., Roberts, P., & Taylor, I. (2015). *University planning and architecture: The search for perfection*. Routledge.
- Danner, H. G. (2014). *A thesaurus of English word roots*. Rowman & Littlefield.
- De Zurko, E. R. (1957). Alberti's theory of form and function. *The Art Bulletin*, 39(2), 142-145.
- Duraj, M., Cheng, X., Niemiec, D., Montero, O. A., & Durdák, J. (2017, October). Functional Villa Tugendhat and its Geological Subsoil-Design of a New Geotourism Place. In *IOP Conference Series: Materials Science and Engineering* (Vol. 245, No. 4, p. 042089). IOP Publishing.
- Etter, C. E. (2008). *Perfection/Immutability, Omnipotence and Omniscience: The Refutation of the Christianization of Greek Philosophy by Process Theology*.
- Goodchild, C. H., Webster, R. M., & Elliott, K. S. (2009). *Economic concrete frame elements to Eurocode 2*. The Concrete Centre, Camberley, Surrey, UK.
- Gregory, M. L. (2020). *Kant and his German contemporaries, volume II: aesthetics, history, politics, religion*: edited by Daniel O. Dahlstrom, Cambridge, Cambridge University Press, 2018, pp. xii+ 286, £ 75.00 (hb), ISBN: 978-1-10717-816-8.
- Hamdy, N. M., Tantawy, D., & Awad, I. A. (2021). The concept of complexity and simplicity in interior design. *International Design Journal*, 11(1), 299-302.
- Heynen, H. (2000). *Architecture and modernity: a critique*. MIT press.
- Hurka, T. (1996). *Perfectionism*. Oxford University Press on Demand.
- Idle, P. Keynote address-Phoenix. *TRANSITIONS*18, 35.
- Ismail Hassan Soliman, S., Alaa Mandour, M., & Adeeb, H. (2020). Fragmenting Techniques through Form Finding Process Towards New Architectural Form. *Engineering Research Journal*, 166, 105-118.
- Jencks, C. A. (1978). The language of post-modern architecture. *Journal of Aesthetics and Art Criticism*, 37(2).
- Karasozen, R. (2016). Experience of Post-Modern Historicist Architecture in Turkey. *Procedia engineering*, 161, 1763-1767.
- Kazantseva, T., & Myhal, S. (2014). Aesthetic tendencies in the architectural and landscape design driven by natural shapes. *Przestrzeń i Forma*, (22/1), 91-104.
- Legh, P. (1831). *The Music of the Eye: Or, Essays on the Principles of the Beauty and Perfection of Architecture, as Founded on and Deduced from Reason and Analogy, and Adapted to what May Be Traced of the Ancient Theories of Taste, in the Three First Chapters of Vitruvius...* W. Walker.
- Mallgrave, H. F. (2009). *Modern architectural theory: A historical survey, 1673–1968*. Cambridge University Press.
- Mallgrave, H. F. (Ed.). (2005). *An anthology from Vitruvius to 1870*. Blackwell.
- Merriam-Webster, Inc (Ed.). (1984). *Merriam-Webster's Dictionary of Synonyms*. Merriam-Webster.
- Miller, E., & Daly, E. (2013). *Understanding and measuring outcomes: the role of qualitative data*. IRISS (Institute for Research and

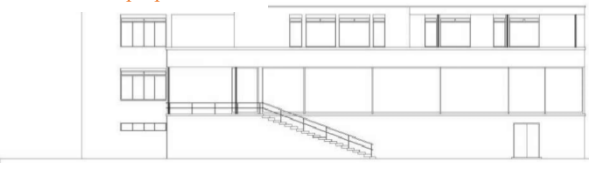
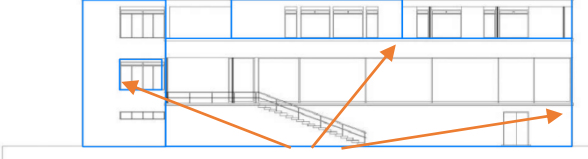
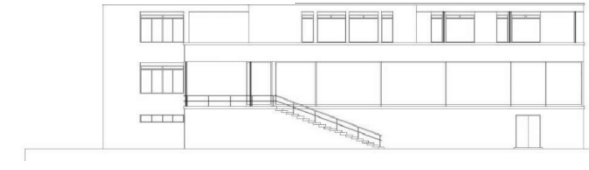
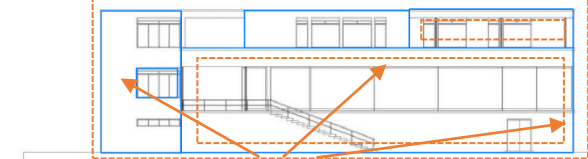
Innovation in Social Serv.)
 Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, 7(1), 23-48.
 Rowe, H. A. (2011). The rise and fall of modernist architecture. *Inquiries Journal*, 3(04).
 Salingaros, N. A. (2014). Complexity in architecture and design. *Oz Journal*, 36(1), 18-25.
 Surbhi Porwal1 SS. (2020). Impact of Less is More in Present Time. *International Journal of Science and Research (IJSR)*. Volume 9(Issue 12).
 Tallon, A. (2013). An Architecture of Perfection. *Journal of the Society of Architectural Historians*, 72(4), 530-554.
 Tobolczyk, M. (2021). Contemporary Architecture: The Genesis and Characteristics of Leading

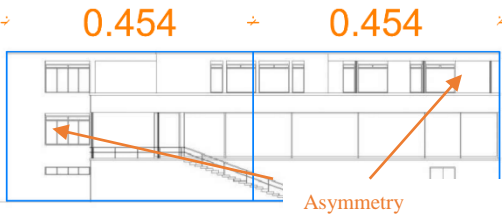
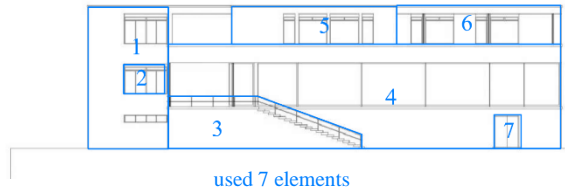
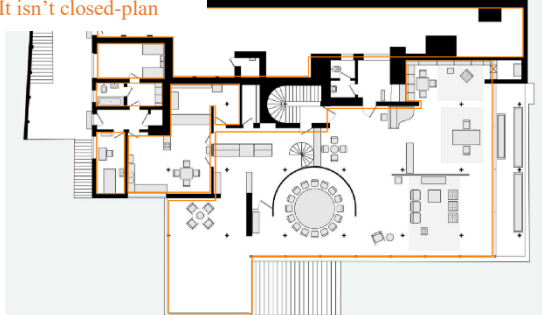
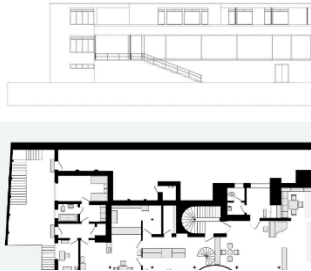
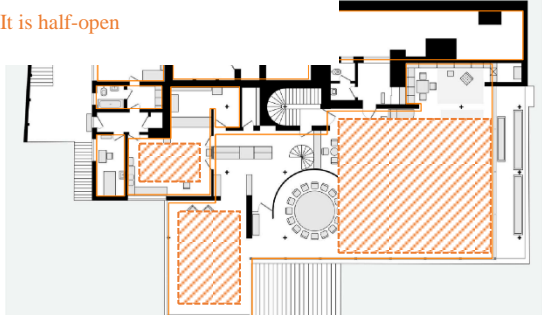
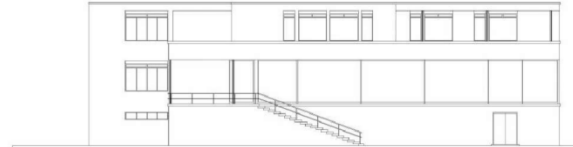
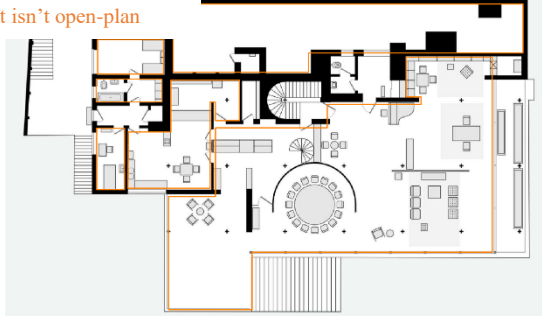
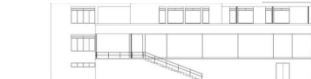
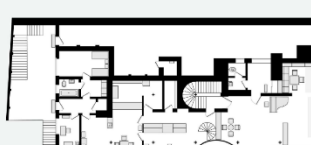
Trends. Cambridge Scholars Publishing.
 Turner, K. J. (1997). Specification architecture illustrated in a communications context. *Computer Networks and ISDN Systems*, 29(4), 397-411.
 UNESCO World Heritage Centre. (2022). World Heritage List. URL: <https://whc.unesco.org/en/list/>. [Date last accessed: 20th July 2022.]
 Venturi, R. (1961). Vanna Venturi House. Chestnut Hill, Pennsylvania, 65.
 Walter, E. (Ed.). (2008). Cambridge advanced learner's dictionary. Cambridge university press.
 Zucker, P. (1958). Origins of functionalist theory. *Journal of Aesthetics and Art Criticism*, 16(4).

Appendix (Analytical study of samples)
 Modern samples

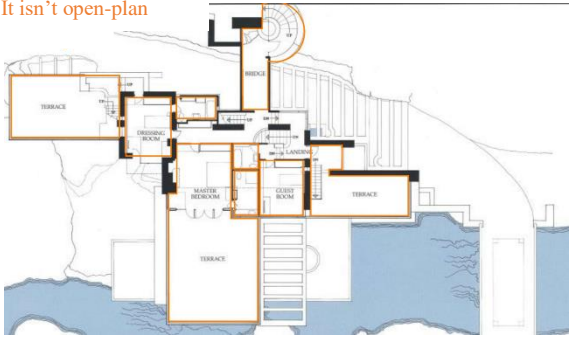
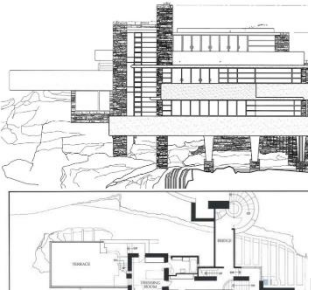
Sample 1 (Modern): Villa Savoy			
Nature (proportion)	Yes	Simplicity (Uniformity)	Yes
			
Nature (organic shapes)	No	Simplicity (abstract shapes)	Yes
			
Nature (symmetry)	No	Simplicity (less is more)	No
			
Nature degree	1	Simplicity degree	2

<p>(closed-plan)</p> <p>It isn't closed-plan</p>  <p>organic shapes</p>	-	<p>Functionalism (form follow function)</p> <p>Form follow function</p>  <p>villa savoy elevation's form follows their plan for example shape of the ramp rise from the ground until the top of the building, while the outline of the elevation follows the outline of the plan there is not unnecessary extension in their shape (Rowe, H. A. 2011).</p>	Yes
<p>Openness (half-open)</p> <p>It is half-open</p> 	Yes	<p>Functionalism (Lack ornaments)</p> <p>There aren't ornaments</p> 	Yes
<p>Openness (open-plan)</p> <p>It isn't open-plan</p> 	-	<p>Functionalism (Economic technique)</p> <p>Used economic technique</p>  <p>used concrete and glass materials instead of marble that was used in former styles as an economic material (Bataille, C. 2020). And used the concrete frame as an economic system (Goodchild, C. H., Webster, R. M., & Elliott, K. S. 2009).</p>	Yes
Openness degree	2	Functionalism degree	3

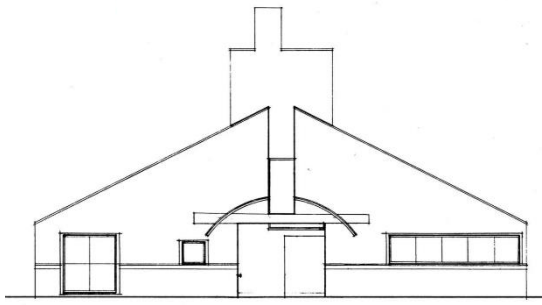
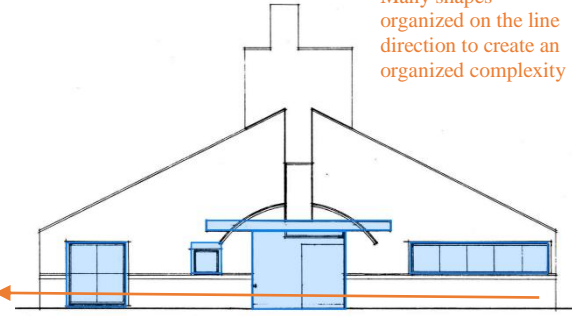
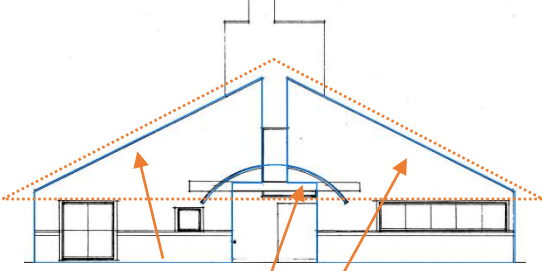
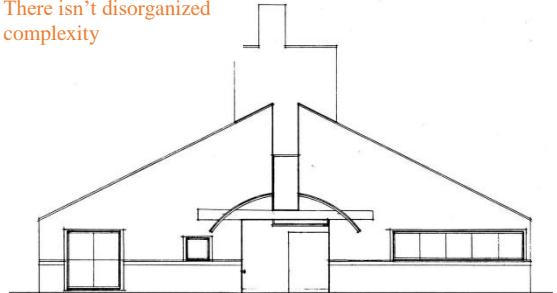
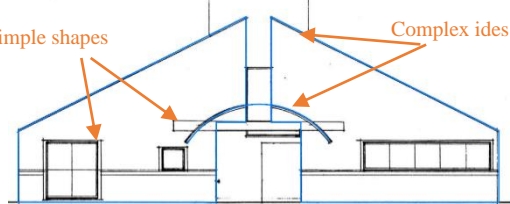
Sample 2 (Modern): villa tugendhat			
<p>Nature (proportion)</p> <p>There isn't proportion</p> 	No	<p>Simplicity (Uniformity)</p>  <p>unified in rectangular shape and white color</p>	Yes
<p>Nature (organic shapes)</p> <p>There aren't organic shapes</p> 	No	<p>Simplicity (abstract shapes)</p>  <p>used rectangular abstract shapes</p>	Yes
Nature (symmetry)	No	Simplicity (less is more)	No

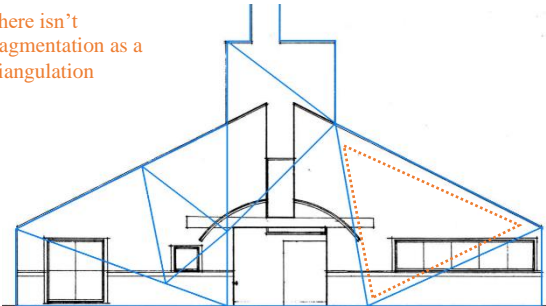
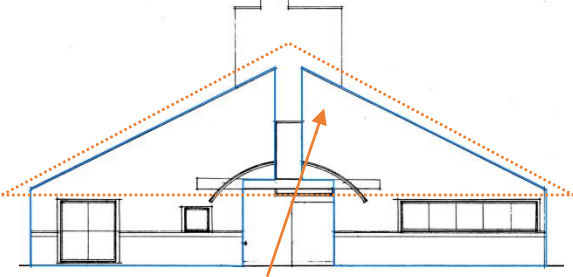
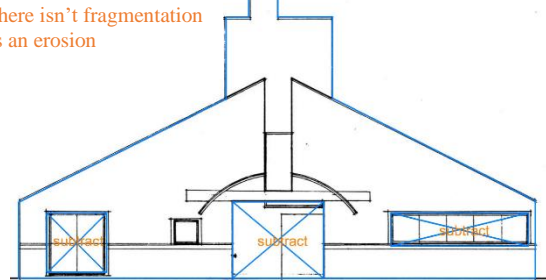
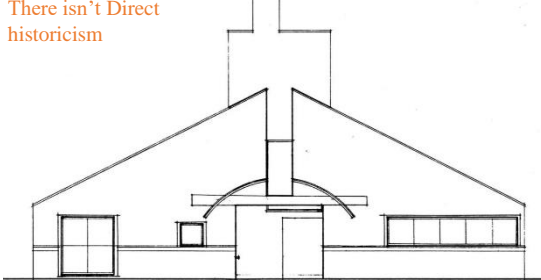
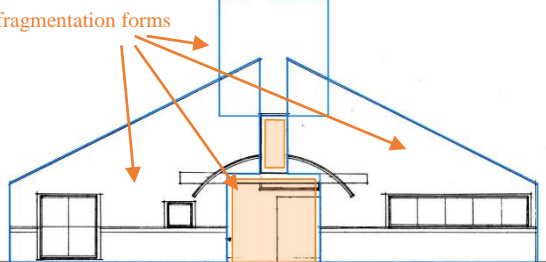

			
<p>Nature degree 0</p>		<p>Simplicity degree 2</p>	
<p>Openness (closed-plan) -</p>		<p>Functionalism (form follow function) Yes</p>	
<p>It isn't closed-plan</p> 		<p>Form follow function</p>  <p>villa tugendhat elevation's form follows their plan for example the outline of the elevation follows the outline of the plan there is not unnecessary extension in their shape (Duraj, M., Cheng, X., Niemiec, D., Montero, O. A., & Durđák, J. 2017, October).</p>	
<p>Openness (half-open) Yes</p>		<p>Functionalism (Lack ornaments) Yes</p>	
<p>It is half-open</p> 		 <p>There aren't ornaments</p>	
<p>Openness (open-plan) -</p>		<p>Functionalism (Economic technique) Yes</p>	
<p>It isn't open-plan</p> 		<p>Used economic technique</p>   <p>used concrete and glass materials instead of marble that was used in former styles as an economic material (Bataille, C. 2020). And used the concrete frame as an economic system (Goodchild, C. H., Webster, R. M., & Elliott, K. S. 2009).</p>	
<p>Openness degree 2</p>		<p>Functionalism degree 3</p>	

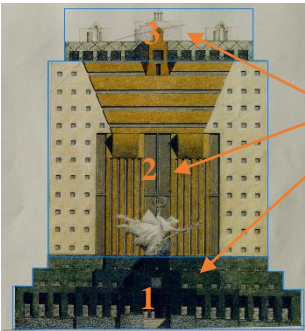
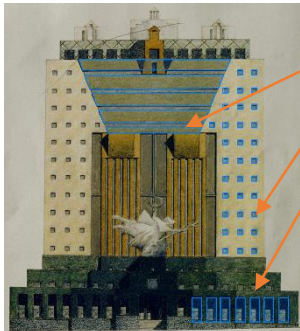
Sample 3 (Modern): Falling water			
Nature (proportion)	No	Simplicity (Uniformity)	Yes
Nature (organic shapes)	No	Simplicity (abstract shapes)	Yes
Nature (symmetry)	No	Simplicity (less is more)	No
Nature degree	0	Simplicity degree	2
Openness (closed-plan)	-	Functionalism (form follow function)	No
		 <p>Fallingwater's elevation form does not follow their plan, however, Fallingwater form follows Frank Lloyd wright's style, to Wright Form and function are one (Idle, P.).</p>	
Openness (half-open)	Yes	Functionalism (Lack ornaments)	Yes
Openness (open-plan)	-	Functionalism (Economic technique)	Yes

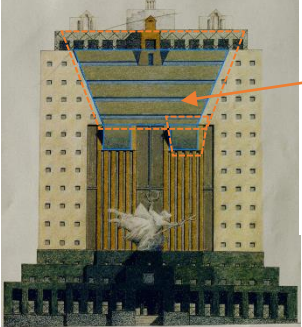
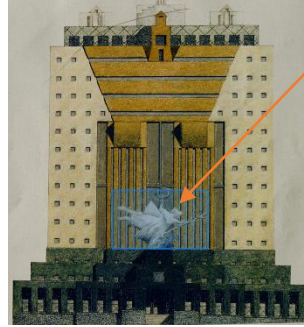
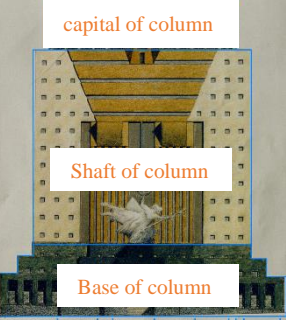
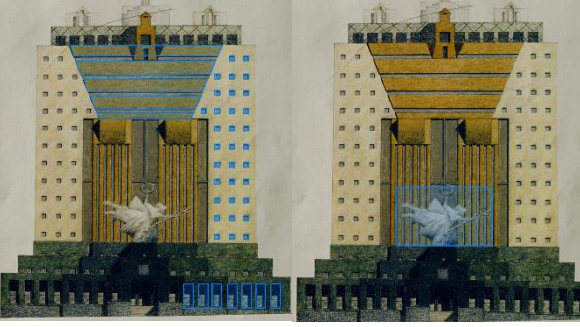
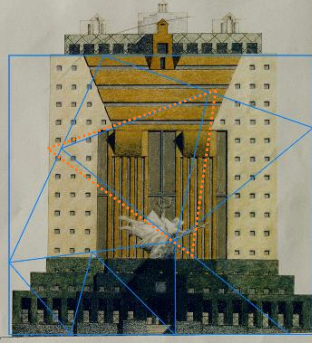
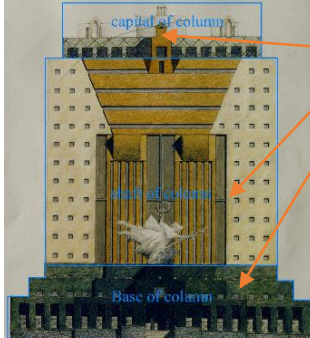
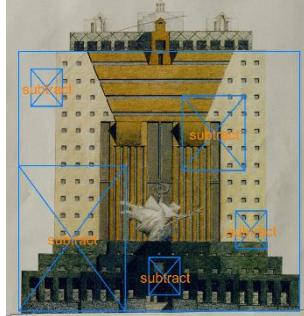

<p>It isn't open-plan</p> 	<p>Used economic technique</p> <p>used concrete, rough stone, local stone, wood and steel materials as an economic material in comparison to marble that was used in former styles (Bataille, C. 2020).</p> 
<p>Openness degree 2</p>	<p>Functionalism degree 2</p>

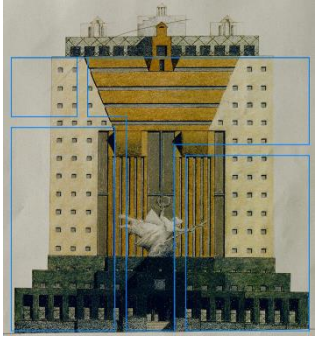
Postmodern samples

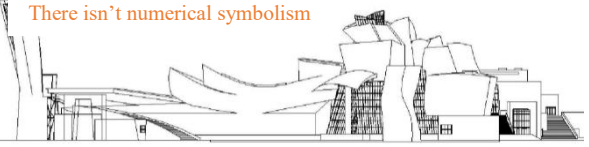
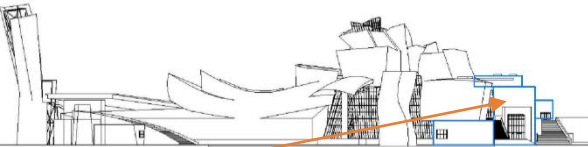

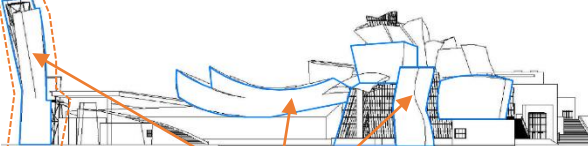
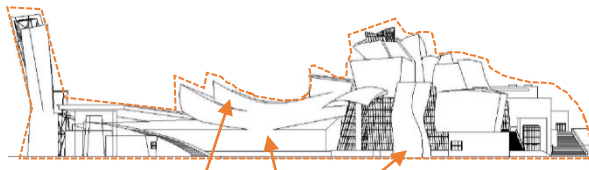
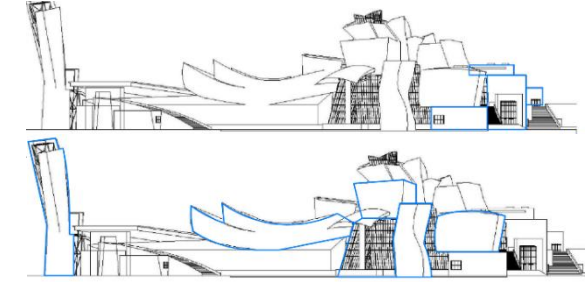
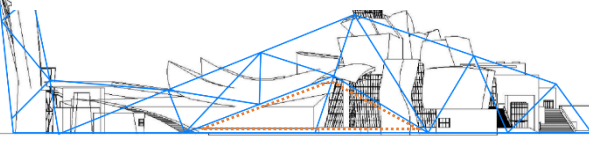
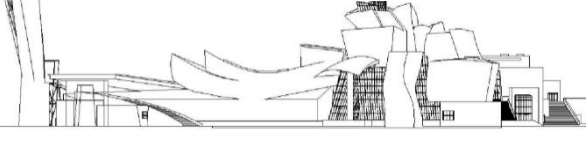
Sample 4 (Postmodern): Vanna Venturi House			
<p>Symbolism (Numerical)</p>	<p>No</p>	<p>Complexity (Organized)</p>	<p>Yes</p>
<p>There isn't numerical symbolism</p> 		<p>Many shapes organized on the line direction to create an organized complexity</p> 	
<p>Symbolism (graphic)</p>	<p>Yes</p>	<p>Complexity (Disorganized)</p>	<p>-</p>
<p>used triangular shape and arch-framed entrance as graphic symbolism relative to the classical elements (Venturi, R. 1961).</p> 		<p>There isn't disorganized complexity</p> 	
<p>Symbolism (metaphor)</p>	<p>Yes</p>	<p>Complexity (Disorganized+ Organized)</p>	<p>-</p>
<p>Simple shapes Complex ideas</p>  <p>Venturi wants to create contradiction by using complex ideas with simple shapes as metaphor symbolism (Venturi, R. 1961).</p>		<p>-----</p>	
<p>Symbolism degree</p>	<p>2</p>	<p>Complexity degree</p>	<p>1</p>
<p>Fragmentation (triangulation)</p>	<p>-</p>	<p>Historicism (Indirect historicism)</p>	<p>Yes</p>

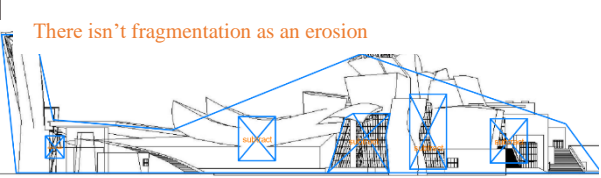
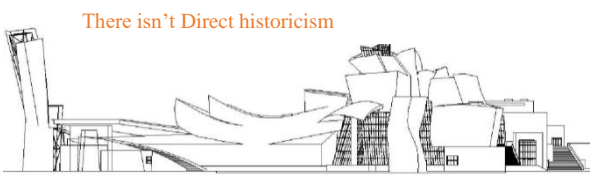
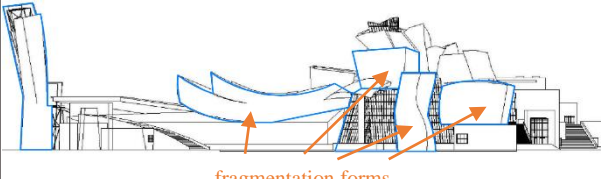

<p>There isn't fragmentation as a triangulation</p> 	 <p>took pediment indirectly from classical style (Venturi, R. 1961).</p>
<p>Fragmentation (Erosion)</p>	<p>Historicism (Direct historicism)</p>
<p>There isn't fragmentation as an erosion</p> 	<p>There isn't Direct historicism</p> 
<p>Fragmentation (Fractal forms)</p>	<p>Historicism (Direct + Indirect historicism)</p>
<p>fragmentation forms</p> 	
<p>Fragmentation degree</p>	<p>Historicism degree</p>
<p>3</p>	<p>1</p>

<p>Sample 5 (Postmodern): Portland Building</p>			
<p>Symbolism (Numerical)</p>	<p>Complexity (Organized)</p>		
 <p>It is divided into three parts as a symbol of number three (Alan G Brake, 2015).</p>	 <p>Used organized complexity</p>		
<p>Symbolism (graphic)</p>	<p>Complexity (Disorganized)</p>		
<p>Yes</p>	<p>-</p>		

 <p>used over-scaled keystone shapes represented Classical elements (Alan G Brake, 2015).</p>	 <p>Used disorganized complexity</p>		
<p>Symbolism (metaphor)</p>	<p>Yes</p>	<p>Complexity (Disorganized+ Organized)</p>	<p>Yes</p>
 <p>used green color relative to the earth, and blue color relative to the sky, while dividing the building into three parts as a classical column, which is a metaphor symbolism (Alan G Brake, 2015).</p>			
<p>Symbolism degree</p>	<p>3</p>	<p>Complexity degree</p>	<p>3</p>
<p>Fragmentation (triangulation)</p>	<p>No</p>	<p>Historicism (Indirect historicism)</p>	<p>Yes</p>
<p>There isn't fragmentation as a triangulation</p> 	 <p>took column idea indirectly from classical style (Alan G Brake, 2015).</p>		
<p>Fragmentation (Erosion)</p>	<p>No</p>	<p>Historicism (Direct historicism)</p>	<p>-</p>
<p>There isn't fragmentation as an erosion</p> 	<p>There isn't Direct historicism</p> 		
<p>Fragmentation (Fractal forms)</p>	<p>No</p>	<p>Historicism (Direct + Indirect historicism)</p>	<p>-</p>

<p>There isn't fragmentation as a fractal forms</p> 	<p>-----</p>
<p>Fragmentation degree 0</p>	<p>Historicism degree 1</p>

Sample 6 (Postmodern): Guggenheim Museum Bilbao			
<p>Symbolism (Numerical)</p>	<p>No</p>	<p>Complexity (Organized)</p>	<p>yes</p>
<p>There isn't numerical symbolism</p> 		 <p>used organized complexity</p>	
<p>Symbolism (graphic)</p>	<p>No</p>	<p>Complexity (Disorganized)</p>	<p>yes</p>
<p>There isn't graphic symbolism</p> 		 <p>used disorganized complexity</p>	
<p>Symbolism (metaphor)</p>	<p>Yes</p>	<p>Complexity (Disorganized+ Organized)</p>	<p>Yes</p>
 <p>used some organic shapes to represent fish body shape, as a metaphor symbolism (Alyn Griffiths, 2022).</p>			
<p>Symbolism degree</p>	<p>1</p>	<p>Complexity degree</p>	<p>3</p>
<p>Fragmentation (triangulation)</p>	<p>-</p>	<p>Historicism (Indirect historicism)</p>	<p>No</p>
<p>There isn't fragmentation as a triangulation</p> 		<p>There isn't Indirect historicism</p> 	
<p>Fragmentation (Erosion)</p>	<p>-</p>	<p>Historicism (Direct historicism)</p>	<p>No</p>

			
Fragmentation (Fractal forms)	Yes	Historicism (Direct + Indirect historicism)	No
			
Fragmentation degree	3	Historicism degree	0