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## The Synthesis of Ethics and Aesthetics in Modern Movement of Architecture: 'Truth' Theory as an Assessment Tool

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### Abstract

Architects and designers are obligated to think comprehensively to create aesthetically pleasing buildings together with functional features. The modern movement of architecture represents a dramatic movement in the buildings design to create a different functional and new architecture. There is a debate about the priority of beauty (aesthetics) and functionality (ethics) in this architectural style and leads to ambiguity in evaluating ethics and aesthetics. Hence, the study aims to understand the relationship between ethics and aesthetics value in architecture's modern movement. This study hypothesizes that there is a significant relationship between ethical and aesthetical values through the functionality of modern architecture. The study has proposed a conceptual model to be applied in future studies on different case studies. This is through assessment tools to evaluate the presence of ethics and aesthetics in modern architectural style.

**Keywords:** Ethics; Aesthetics; Truth; Modern Movement of Architecture.

### 1. Introduction

Architecture has entered the 20th century with an inner conflict between its aesthetic, which claims full independence, and amoral, involved in a social purpose (Tatla, 2011). Indeed, Debates of ethics and aesthetics in architecture have been a main issue since the nineteenth century. Architects and architectural theorists, on the other hand, have always been attentive to the significance of achieving occupant's requirements concerning both ethics and aesthetics, according to accepted standards in their societies (Lagueux, 2004). One of the most important aspects of architecture is the aesthetics of a building. A building's appeal encompasses the combined effects of its form, size, texture, colour, culture, and context, among other factors (Pocock, 2002). Discussions of ethics as they relate to aesthetics continue to be the most important of the approaches to ethical theory, and the most open to debate over what is right or "True" and proper for a particular society made up of individuals with varying needs (Staub, 2017). Since the late eighteenth century, architectural intellectuals have been preoccupied with the question of 'Truth' (Forty, 2000). The Lamp of Truth by John Ruskin was instrumental in his promotion of the Gothic revival, while, Le Corbusier, Mies, and Kahn saw 'Truth' in aspects of modern architecture function and construction (Sharr, 2003). Moreover, since the 60s of the twentieth century, some saw truth manifest in vernacular architecture. Recent scholarship in architectural theory has found truth questions to be central to the debate, drawing from other academic disciplines' methodologies. There are debates about the beauty (aesthetics) and functionality (ethics) in the architecture of early modern architecture which is the concern of this paper. Early modern architecture is distinguished as functional, where "form follows function" (Muhy Al-Din, 2017). The architect's target is achieving good design, where the design should be beautiful and functional (Fisher, 2012). However, functionality is part of the well-being of the occupants, and it is part of the ethic in the design, it can be considered aesthetic in building design (Muhy Al-Din, and Ahmadnia, 2017).

The main aim of this paper is to reach an understanding of the relationship between ethics and aesthetics in modern architecture to make them measurable. Having a critical understanding and identification of these two common concepts 'ethics and aesthetics' and how could they interact with each other is an important issue. The theory of 'truth' has been investigated to be applied as a tool to evaluate the two main concepts of 'Ethic and aesthetics' in architecture. The paper tries to answer the following questions: 1) is there any credible tool to assess both ethics and aesthetics in architecture? 2) To what extent ethics and aesthetics have presented in modern architecture? For this purpose, a cross-disciplinary analysis is important to understand the nature of ethics and aesthetics. Moreover, understanding the main characteristics of modern architecture is a pivotal issue too. Therefore, the descriptive-analytical methodology has been approached in this paper, through reviewing the knowledge.

### 2. Ethics and Aesthetics

Architecture and urban planning started to give up the traditional styles and start to create further form in Ethics has been deeply rooted in philosophy since Aristotle, but it was not until the advent of philosophical aesthetics at

the end of the eighteenth century that the topic of the potential for conflict between aesthetics and ethics will occupy a central position in the considerations of architectural theorists. (Marbaniang, 2012). The main goal of ethics is to put the human at the priority of care and seek his greatest good. Society changes require that adopt rules of conduct. Social pressures for individual rights require balancing the interrelation between individual and collective rights. The term Moral (Ethic) refers to the ensemble of the rules governing human actions and values and which function as the norm in society. The morals are prescriptive when misinterpreted is seen as negative and restrictive. It controls the behaviour to conform to society's rules (Phaneuf, 2009).

However, the term aesthetics is a Greek word meaning 'things perceptible to the sense'; or anything could have an aesthetic effect simply when being sensed and perceived (Kumar and Garg, 2010). In another hand, it can be defined as the study of beauty and taste. To understand aesthetics, it is necessary to define the concept of beauty. This what Samuel Alexander demonstrates in "Beauty and Illusion". The word "beauty" is generally projected the things that are giving pleasure, to the senses, to the imagination, or the understanding (Leder et al., 2004). Aesthetic in the view of old philosophers can make a sense of the word. Plato felt that beauty is incorporated proportion, harmony, and unity among their parts. Plato says "beauty is the eye of the beholder", however, "Socrates" clarified, that the aesthetic attitude was a derivative of the practical, useful value of an object Muhy Al-Din, and Ahmadnia, 2017). In Architecture, "Roger Scruton" says that to understand the true value of any building it is necessary to understand "utility" and aesthetic appreciation is a compound experience of thought and analysis (Douglass, 2008).

Aesthetic values relate to human perceptions and experiences of an environment surrounding them. It is known also (the aesthetic response) as derived from the experience of an environment or parts of an environment. Human senses (sight, touch, smell, sound,) are important tools in introducing humans to the environment and getting experiences. Either, culture, knowledge, experience mediates sensory perceptions and expectations (Johnston et al., 2013).

### 3. Truth

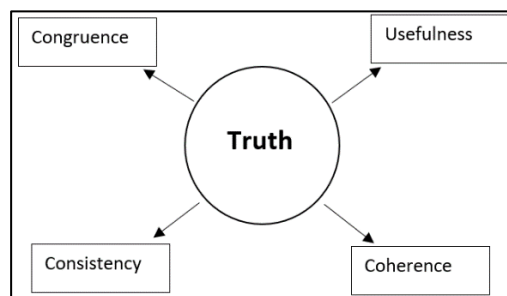
Truth is the characteristic of being in accordance with reality or fact (Merriam-Webster's, 2021). A true proposition is identical to a reality (Moore, 1899; Russell, 1904). However, falsehood is frequently seen as the polar opposite of 'truth'. Truth is discussed and debated in a variety of contexts, including philosophy, art, theology, and science (Stanford Encyclopedia of Philosophy, 2018). Four factors identify the truthfulness of a theory, which are: congruence, consistency, coherence, and usefulness (Kaprinis, 2011).

1) Congruence: A true theory is congruent with the observations which is reflecting reality. It is falsifiable in theory, but no evidence of falsification has been discovered. When what experiences is predictable from the theory, it can be inferred that the theory is congruent with the facts as it is experienced. However, truth is always provisional and never final. When it discovers new facts, it may need to revise the conclusions.

2) Consistency: Consistency characterizes a true theory. It contains no contradictions and fits together elegantly. The consistency principle of non-contradiction principle allows inferring things that are consistent with what is already known. This is not possible with an inconsistent theory, which contains contradictions.

3) Coherence: A 'True' theory is coherent with other things else believed to be true. It affirms, or at the very least does not contradict, the rest of the known Knowledge, where 'knowledge' refers to beliefs for which it can provide rigorous justification. The physical sciences like physics, geology, astronomy, etc., all strengthen one another.

4) Usefulness: A true theory is functional and useful, and the actions are successful when it is acting on the basis of a true theory or explanation. What are true works to organize thought and practice so that it can be both reasons logically to true conclusions and deal effectively with reality. Truth gives the ability to use the power, in the sense of getting things done correctly. It has explanatory power, allowing to make informed decisions about what is likely to happen. See figure '1'.

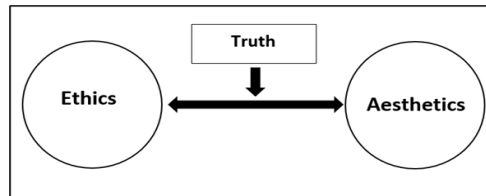


**Figure 1.** The four factors of Truth, from Kaprinis, 2011. (By Researcher).

The previous four factors can be a guidance indicator to evaluate the presence of truth in any issue. This is through formulating initial indicators to cooperate or interact with these factors.

#### 4. The Relation Between Ethics and Aesthetics in Architecture:

The intersections between architecture and ethics are manifold. Architects should be quite honest with clients by using standard building materials. They bear the responsibility for the safety and convenience of occupants in their buildings (Daugelaite, and Vileniske, 2021). The affordance of the structure is architects' ethical responsibility under predictable pressures. Architecture intersects so often with ethical issues there are more connections between architecture and morality than there are in the case of any other art form. The ethics here are derivative from the responsibilities in front of the clients (Carrol, 2015). John Ruskin, whose influence was undeniably greater, took a further step in this coalition of ethics and Aesthetics. The quasi-identity of these two fundamental values to a third, 'truth,' which, according to medieval thinkers, is the third member in a collection of three transcendental principles (along with the two formers) strengthened the relation between what is beautiful and what is good. (Lagueux, 2004). See figure '2'.



**Figure 2.** The assessment of ethics and aesthetics through Truth, according to John Ruskins (Lagueux, 2004).

According to Ruskin, "truth" is the central issue. Ruskin is indisputably and deeply committed to the truth because deception, as he conceives, is sinful in nature. Therefore, an architect who deliberately hides supporting elements of the building structure to show that the building stands alone when this is not the reality, or provides false supports that do not play their true role, deceives honest people, thus tarnishing the reputation of his profession (Lagueux, 2004).

#### 5. The Characteristics of Early Modern Architecture

In general, Modern Architecture is distinguished by some recognized elements, such as the refusal of past classical and historical styles as a source for architectural elements. Modern architecture is distinguished by a lack of ornamentation unless it demonstrates the building's functionality. It focuses on rectangular shapes as well as horizontal and vertical lines (Iranfar, 2018). The design has a simple and smooth form that eliminates unnecessary detail. Building shapes based on boxes or integrated boxes. Modern materials, such as steel columns and standard masonry units, are used by cutting-edge construction systems, in addition to flat roofs emphasizing uncovered structural elements like beams and columns. Moreover, building envelopes are characterized by plain glass and exposed concrete texture neglecting bearing walls as outer walls (Muhy Al-Din, 2017). The points delineate the character of early modern architecture in terms of innovation and aesthetics and concern architectural elements provided in this kind of architectural style, starting from the residential houses to luxurious palaces. However, five points that characterize modern Architecture are represented in the houses of Weissenhof settlement, Stuttgart, 1927, which is the designs by Le Corbusier (Monteaguda, 2013). The main five points are:

1. The supports (pilotis): means that the supporting and non-supporting elements of the buildings can be distinguished immediately. These supports are fixed at specific spaces, equal intervals, regardless of the building's interior layout. The floor is raised about 3 to 6 meters commonly, and elevates the ground floor, leaving the building plot to the garden, which passes beneath the house. Thus, the inner spaces have light and air (Iranfar, 2018).
2. The façade can be designed freely. The entire façade is extended beyond the supporting construction by projecting the floor beyond the supporting pillars, like a balcony all around the building. It loses its supportive quality as a result, and the windows can be widened to any length without regard for the interior division (Monteaguda, 2013).
3. The supports, along with the intermediate ceilings, form rectangular openings in the façade through which light and air flow freely. The window becomes horizontal as it extends from support to support. Rooms are equitably lit from wall to wall in this way, and the room has more lighting room than vertical windows with the same window area. The history of architecture focuses on aperture in walls. Reinforced concrete suddenly provides the possibility of maximum illumination through the use of the horizontal aperture. (Muhy Al-Din, 2017).
4. The ability to freely design the walls. The intermediate ceilings are carried by the support system, which rises to the roof. The interior walls can be placed wherever they are needed, with each floor completely independent of the others. There are no longer any supporting walls to refer to, only a diaphragm of any thickness that is needed. As a result, there is complete freedom in designing the ground plan; that is, free use of the available means, which makes it simple to offset the relatively high cost of reinforced concrete structures. (Iranfar, 2018).
5. The roof gardens. The flat roof necessitates systematic use for domestic purposes first and foremost: roof terrace, roof garden. The roof gardens will be filled with lush vegetation. Planting shrubs and even small trees up to 3 or 4

meters tall is permitted. As a result, the roof garden will become the most likable spot in the building. Roof gardens, in general, imply the restoration of a city's entire built-up areas. (Muhy Al-din, 2017). See figure '3'.

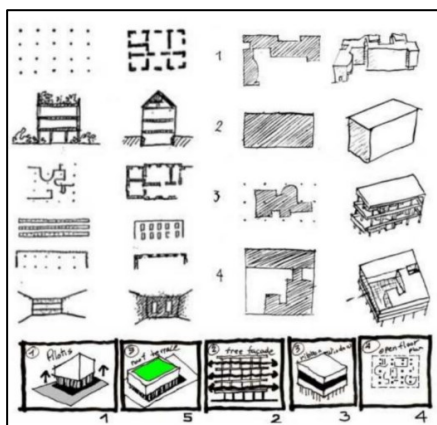


Figure 3 .The main points that characterize modern architecture style. (Monteaguda, 2013).

### 6. Methodology

It seems that the most of scholars which made the researches on connecting ethic and aesthetics has been reviewed. Truth is one of the strong tools to assess the validity of ethics and aesthetics in architecture. The paper tries to assess both ethics and aesthetics in modern architecture through the validity of 'truth' factors, which are; Congruence, consistency, coherence, and usefulness. Accordingly, a model has been suggested to evaluate ethics and aesthetics in modern architecture with the aid of the true factors as assessment tools. The main factors of the Truth, namely; congruence, coherence, consistency, and usefulness have been identified through the literature review. At the same time, the characteristics of early modern architecture have been delineated according to the literature which is: Pilotis or the support; free façade; horizontal windows; free walls design; and roof garden. The suggested model tries to find relationships among the factors of the truth and the characteristics of early modern architecture to reach an assessment of ethics and aesthetics in this style of architecture. This is through analysing the theoretical framework and review the literature. Hence, the methodology of the current paper is descriptive and analytical. The outline of the conceptual model has shown in figure '4'.

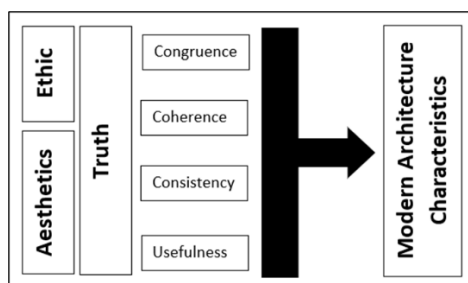


Figure 4. The primary concept of the proposed model. (Kaprinis, 2011; Lagueux, 2004; Monteaguda, 2013).

The primary concept of the model will be analysed based on the knowledge review and theoretical framework obtained from trustful resources and indexed journals.

### 7. Analysis for the Proposed Model

The main factors of the 'Truth' as explained in the literature will be interrelated to the characteristics of early modern architecture as follow:

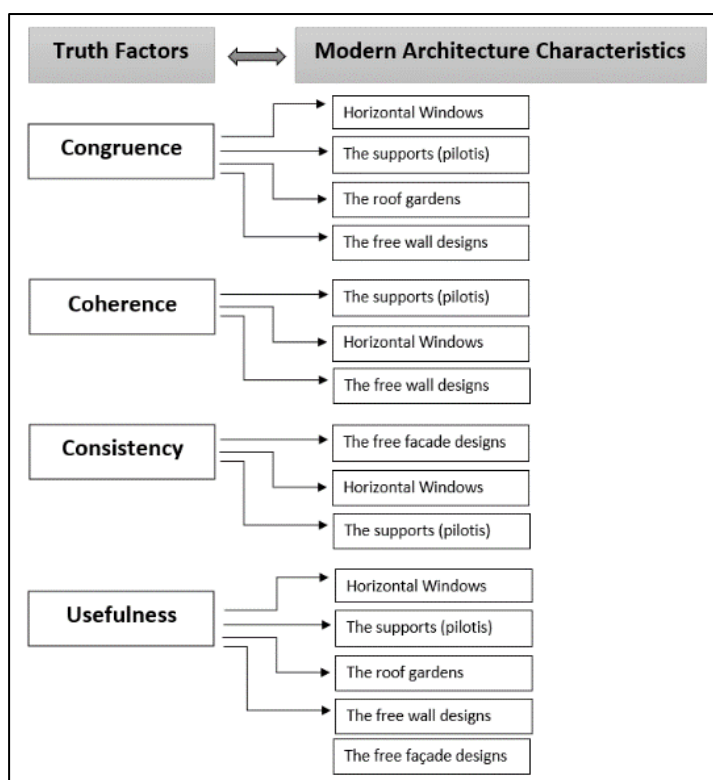
1. Congruence in Early modern architecture: the harmony or the relative impact of physical surroundings on the building is the core relationship in the issue of congruence (Lin, and Mattila, 2010). Accordingly, the remarkable congruence between modernity architecture and the surrounding nature is recognized by allowing the surrounding nature to penetrate inside the building (Bufquin, et al., 2017; Muhy Al-Din, 2017). This is through the vegetation or through the environmental factors as air ventilation and lighting, which is allowed by the following four features of modern architecture: support (pilotis), horizontal windows, free walls design, and roof garden (Monteaguda, 2013), where positively affects the congruence. Moreover, the remarkable match between modern architecture and surrounding nature improves the beholders' and occupants' congruence feeling to the building and nature (Muhy Al-Din, 2017). Accordingly, the design in early modern architecture is free from any contradiction with reality.
2. Coherence in Early modern architecture: Coherence is known as the condition of being consistent, logical, and forming a consolidated whole. Where the truth does not conflict with other types of knowledge like physics, geology,

mathematics (Bufquin, et al., 2017). The durability of early modern architecture is highly recognized through using new materials and new construction systems, which has led to having fixed and durable buildings (Muhy Al-Din, and Ahmadnia, 2017; Skelton, 2015). This indicates that the stability and durability of the building in early modern architecture were respecting physics, mathematics, geology, etc., to reach durability (Muhy Al-Din, 2017). Free walls, because of the roof building system, and the pilotis or support, in addition to window horizontal shape are affecting the coherence directly. All these features are part of the coherence which respect other knowledge like physics, and mathematics or geometry, through the visible structural elements, and they are logical, and consistent to formulate the total form (De Zurkon, 1957).

3. Consistency in Early modern architecture: Architecture consistency seeks to align achieved orders with their targeted architectures (Ali et al., 2017), which does not hold any contradiction. Thus, architectural consistency is the highest form of order. In early modern architecture, lack of ornament and plain facade in the building, and ordered forms like rectangular shapes and horizontal and vertical lines, with eliminates the excessive detail, gives high consistency to this style (Calinescu, 1987). Therefore, the most correlated features of early modern architecture with truth factor 'consistency' are; free façade designs; horizontal windows, and the supports (pilotis).

4. Usefulness in Early modern architecture: Usefulness deals with effectiveness in the reality (Kaprinis, 2011). Usefulness or functionality is one of the most remarkable distinctions in early modern architecture. This is because of the philosophy of early modern architecture which calls for functionality 'form follow function' and rationalism in design (Bletter, 1996). In the 1920s and 1930s terms like "function", was used always to describe an objective analysis and design process—with architectural movements being labeled "functionalism". one of the ways to achieve functionality and usefulness in practice is by resorting to ideal geometric forms. in addition to this, the relationship among the spaces, taking into consideration the accessibility (Seelow, 2017). Accordingly, whole the five mentioned features of early modern architecture are serving the usefulness or the functionality because it is the main target of the design. Hence, the usefulness is strongly correlated with 'pilotis' or (the supports), free façade design, free walls, horizontal windows, and the roof gardens.

Based on the previous analysis the findings refer that there are strong relationships among the factors of the theory of truth and the early modern architecture characteristics. This indicates that the early modern architecture holds all the factors of 'Truth', which is a tool to assess the presence of ethics and aesthetics in the design in this style of architecture which became later to movement in architecture. The following figure '5' shows the type of connections among the factors of 'Truth' and the features of modern architecture style, according to the previous analysis that was carried out in the current paper.

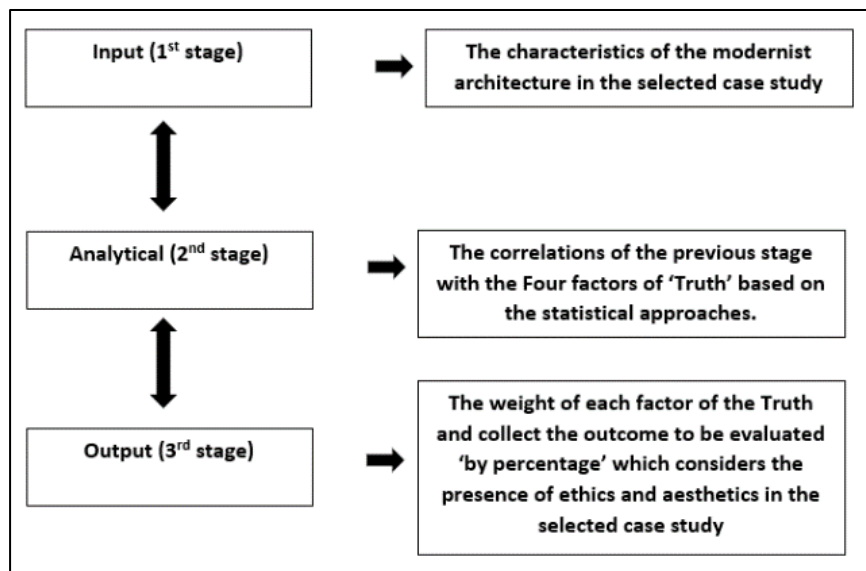


**Figure 5.** The correlations among the factors of "Truth" theory and the characteristics of Early modern architecture. (By Researcher).

The correlations among the truth factors and the modern architecture characteristics are the identification elements to assess the truth in the design, and consequently, to evaluate ethics and aesthetics in modern architecture. This is through the quest of the presence or absence of these correlations when it applies to case study buildings.

### 7.1. Empirical Method to Apply the Model

The main aim of the proposed model is to evaluate ethics and aesthetics in modern architecture depending on 'Truth' as a tool. The analysis of the input data based on the interrelationships between the factors of truth theory and the features of modernity architecture will depend on statistical principles. Determining the level of relationships for each of the factors of truth will be done by examining the presence or absence of features of modern architecture in any case study building, and all of these factors fall under the evaluation of the selected case study, as a first stage (input). In the second stage (analytical) which weights are given to each of the four factors of the theory of 'truth' by 25%, and the most weighted factors will be evaluated according to their correlation with the five features of modernity architecture, which depends heavily on the design form of the selected case study. In the third stage (the result), the model in this stage evaluates the presence of aesthetic and ethical values in the selected case study and according to the output results, as seen in figure '6'.



**Figure 6.** The empirical process to evaluate aesthetics and ethic through the proposed model. (By Researcher).

### 8. Conclusion

The tool of assessment for ethics and aesthetics in the modern movement of architecture that was used in this paper according to the knowledge review was the theory of 'Truth'. The framework represents 'truth' as multi-concepts which is introduced through the main four factors. Therefore, the conceptual model that evaluates ethics and aesthetics in modern architecture through the theory of 'Truth' has been introduced. Strong relations among the factors of truth and features of modern architecture have been found. By using a descriptive-analytical method based on the review of literature, the paper has revealed that there is a multi-level of relations among the factors of 'truth' as a tool for the ethic and aesthetic, and modern architecture characteristics. The most correlated factor of truth was 'usefulness', which demonstrated the interaction with all the features of the modern movement of architecture. This is because of the core philosophical characteristic of functionality in the modern architectural movement. However, 'congruence' as the second intercorrelated factor of the theory of truth has shown a very good correlation with the features of modern architecture. The reason goes back to the international and standardized character of the modern movement in architecture, which demonstrates similarity in the principles of the design, regardless of the location, climate, culture, etc. in the same context, 'consistency and coherence' also have demonstrated good correlation. Figure '7' shows the complete evaluation model of ethics and aesthetics in the modern movement of architecture through the truth tool, including all the assessment factors and features.

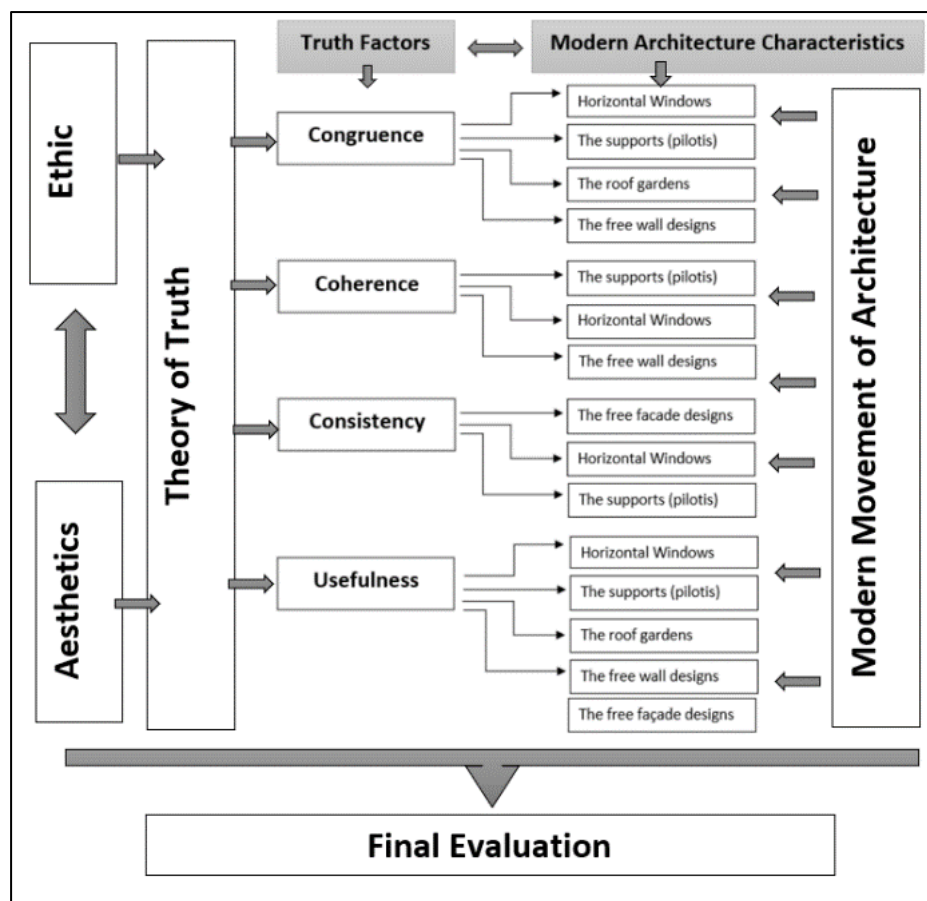


Figure 7. The model for assessment of ethic and aesthetics in the modern movement in architecture. (By Researcher).

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### Conflict of Interests

The authors declare no conflict of interest.

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