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## Conception and Misconceptions the Case of Structuralism in Architecture

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**Abstract:** Structuralism developed in linguistics and was transferred to numerous fields, like anthropology. Strauss searched for the underlying shared patterns of human thinking, the universal structures of thought. Secondly, the binary character of phonemes in language influenced him. The third aspect that influenced him was semiology, or semiotics the science of signs. This is called semiotic structuralism, where elements could change, but in such a way that the meaning is retained. Structuralism in architecture and planning appeared between 1928 and 1959. the earliest Structuralists Architect did not directly used the word Structuralism as it is used in linguistics and anthropology. Therefore, this paper aims to clarify the underlying concepts and interpretations of structuralism in a simple and concise manner. This study used a descriptive and explorative technique as research method. Interpretations and counter arguments were combined together to derive the true meaning and clarity of the subject topic under study.

**Key Words:** Binary Pairs, Human Thoughts, Semiotics, Structuralism, Universal Structure

### Introduction

One of the principal aspects of the Post-modern rejection of the modernist point of view was the shift from social theory to literary theory as the paradigm for architectural theory. In the book "Complexity and Contradiction in Architecture", Robert Venturi used the literary criticism of T. S. Eliot as a framework for analyzing architecture. Eliot had pointed out that poetry is captivating because it is not univalent and clear but multivalent and layered, filled with many possible readings and interpretations, i.e. "complex and contradictory." Literary criticism, however, was not the only source of new architectural thinking in the 1970s and 1980s. Linguistic theory also rose to prominence as an apparatus for

understanding architecture. Prominent among the linguistic theories that architects, and architectural theorists considered were structuralism and semiotics, both of which were also related to anthropology. The idea of rationalism by CIAM-Functionalism led architecture and Planning to a lifeless expression and it ignored the urban form and the identity of inhabitants. In reaction to Rationalism, Structuralism may be a theoretical archetype emphasis that components of culture should be understood in terms of their relationship to a bigger, overarching system or structure. In architecture, different interpretations have created different forms which may occur sometimes in combination. Structuralism developed in linguistics and was transferred

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to numerous fields, like anthropology where Claude Lévi-Strauss of France was one of the best advocates of the movement (Van Eyck, 1947). Strauss searched for the underlying shared patterns of human thinking, the universal structures of thought. Secondly, the binary character of phonemes in language influenced him. In mathematics a binary relation is either odd or even while in logics it is simply true or false. The third aspect that influenced him was semiology, or semiotics the science of signs. This is called semiotic structuralism, where elements could change, but in such a way that the meaning is retained. The elements can be altered, but the relationships remain the same (Valena et al., 2011).

Structuralism in architecture and planning appeared between 1928 and 1959. It was initiated by members of the Team 10. Herman Hertzberg called himself "the product of the Team 10" which explains the impact of the team. (Martin, 2007). Team 10, being the group of avant-garde architects, was active during the phase of 1953 to 1981, which led to the emergence of two different movements: One was the "New Brutalism" which was initiated by the members; Peter Smithson and Alison. "Structuralism" movement was founded by Aldo van Eyck and Jacob Bakema (Dutch members). The idea of rationalism by CIAM-Functionalism led architecture and Planning to a lifeless expression and it ignored the urban form and the identity of inhabitants (Van Eyck, 1947). In reaction to Rationalism, Structuralism may be a theoretical archetype emphasis that components of culture should be understood in terms of their relationship to a bigger, overarching system or structure. In architecture, different interpretations have created different forms which may occur sometimes in combination. For instance, Strauss declared that he didn't believe that we tend to might still speak of one structuralism as there were a whole lot of movements that claimed to be structuralist (Martin, 2007). The same diverse nature of structuralism is true for structuralism in architecture as well. However, in architecture, it is independent and does not match all conditions of structuralism in other fields. Kenzo Tange, a Japanese architect designed the famous

Tokyo Bay Plan in 1960. Later on, while speaking about the preliminary stage of the project, the architect said that around 1959-60 what he started to think about was later called Structuralism. In an article with the name "Function, Structure and image, 1966", he justified the evolution of a functional to a structural approach in inception stage. Structuralism in Europe is considered as a similar movement to American Postmodern Architecture. The earliest comprehensive book "Structuralism Reloaded" published in 2011 containing articles of forty-seven different authors about different aspects of the movement. Surprisingly after a few months the Royal institute of British architects (RIBA) deliberated on the possible candidate for the RIBA Gold Medal 2012. It was surprising as RIBA committee awarded Hertzberger for his structuralism design and his theoretical contributions to the structuralism rather than Robert Venturis for his postmodern approach. Later on, the president of RIBA Jack Pringle expressed that The RIBA Gold medal was the foremost prestigious award in UK awarded to an architect that would lead forward, not backward.

### Statement of the Problem

Structuralism appeared in architecture in the year 1970, however the era of adaptation of the term in architecture is still under debate. In fact, the earliest Structuralists Architect did not directly used the word Structuralism as it is used in linguistics and anthropology. Later on, the term Structuralism was borrowed from linguistic and Anthropology as a trend in Architecture and Planning during the same period. Due to this most of the architectural historians declared the label "description of an architectural movement" inapt. Different authors interpret structuralism in architecture in differently but with the common factor of changeability, except Erik Nygaard who regarded user democracy or freedom a central factor of structuralism.<sup>[17] [15]</sup> Furthermore, some authors consider flexible architecture as advocated by Archigram and others in the category of architectural structuralism (Nygaard & Anthonsen, 1996). Today's definition of structuralism is founded on a transference in

meaning of the concept which includes both an invariant meaningful structure and other variant structures. In earlier era the current concept of Structuralism in Architecture was called as "open form".

### Methodology

This research used descriptive explorative technique as research method. The Primary data used for the study is has been extracted from authentic published resources. Interpretations and counter arguments are put together to derive the true meaning and clarity of the subject topic under study.

### Primary Aspects of Structuralism

#### The Invariant and Universal Structures

One of the principal aspects of structuralist architecture the presence of an organizing route or street which are termed as the "universal and invariant structures" as in human cognition. In structuralist architecture, Buildings are organized based on circulation routes. for instance, the Stockholm university as shown below the buildings are connected to the internal street designed by David Hellden. Most of the structuralists thought of this street as an indication of the invariant, collective and universal structure, which represents human thinking and social patterns as shown in figure 1.



**Figure 1:** Stockholm University Internal Street. Source: (Söderqvist, 2011).

#### Binary Pairs

The binary pairs in architecture could be found in the municipal children's home in

Amsterdam, designed by Aldo van Eyck, who focused on 'the "intermediary elements"'. According to him, those elements were the integrating elements. To fade way borders, raw concrete, and brick, with outdoor lighting fittings are used in the interior.



**Figure 2:** The Municipal Children's Home, Amsterdam 1960 by Architect Aldo van Eyck. Source: (Strauven, 1998).

While in the interior indoor streets and squares were created, a character associated with exterior, thus making the building both in and out. Although the architect never made direct reference to structuralism for this project. According to Strauven, van Eyck was not influenced by structuralism, but his thinking about architecture and structuralism was very similar. Another example of this is a library by Ralph Erskine in Stockholm University. The hall at the entrance was created with a glass wall with flooring of natural stones representing binary character of structuralism. The material used in the interior are those which are normally used in exteriors.



**Figure 3:** Main Entrance of Stockholm University, Architect: Ralph Erskine. Source: (Söderqvist, 2011).

## Semiology/Semiotics

Alison and Peter Smithson published several texts disseminating their views that claimed that physical structure must be the representation of the mental pattern and they called this phenomenon as the "patterns of association". However, the social patterns, which they called as "life on the street" created a never changing, meaningful structure. This term was explored further in a book named as "the image of the City" by Kevin Lynch. Literary criticism, however, was not the only source of new architectural thinking in the 1970s and 1980s. Linguistic theory also rose to prominence as an apparatus for understanding architecture. Prominent among the linguistic theories that architects and architectural theorists considered were structuralism and semiotics, both of which were also related to anthropology. According to Structuralist standpoint meaning in language generates from the formal relationships and internal

logic of words. We can say, "I see the dog," but we can't say, "Dog see I the," without leaving a listener clueless as to what we mean, even though each word is understandable and familiar. The order of the words and their relationship to one another, i.e. *the structure of the sentence*, conveys the meaning. While Semiotics, on the other side, express that language is a system of signs. These signs could be comprehended for a specific meaning by the convention of social acceptance. The sign (or signifier) is not the meaning (the signified) but conveys meaning. The word "cat" is formed by two consonants and a vowel. It has a sound that has nothing to do with a furry domestic animal that purrs. Yet, we agree that when we say "cat," we intend to refer to the category of animal that falls within the feline genus. The city serves as a tool of communication, full of signs. These signs explain the central core of structuralism, a meaningful structure, which are universal, invariant and unconscious. It is expressed as semiotic structuralism (Smithson, 1967).

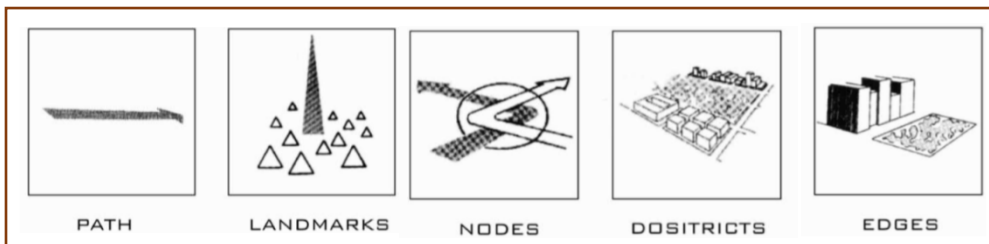


Figure 4: Individual Elements of the City Adopted from Bptwina & Botwina (2012).

## Structuralism in Architecture, a Critical Review

Although the term structuralism was introduced in architecture in the seventies, however the term structuralism adopted in architectonic discourse has not however been settled. It appears that during that period the structuralistically active architects had not cited a direct reference to the structuralism as used in linguistics and social science. Although it had been very acquainted, notably in such circles as Forum and Team ten members who adopted the essential tenets of structuralism. In any case, it is evident that "structuralism" in architecture and design was at the start not the name referred to by representatives of the

movement, however was introduced later and from the outside as a general label. This is conjointly one reason that majority of architectural critics (particularly in the Netherlands) are fighting this "label" as an inappropriate (Valena, Avermaete & Vrachliotis, 2011).

## Changeable/ Flexible Structure

many texts of the period suggest structuralism in architecture somewhat different, however with the common denominator of changeability and flexibility at the center (Lund, 2003). The extreme variants of flexible architecture by Archigram and science-fiction architecture are thought to be structuralism by many authors (Ekholm,

1980). Theirs' definition is based on a shift of the meaning of the concept. The architect Arnold Lu Chinger was one amongst the advocates, who wrote in the Seventies and afterward in 1981 wrote a book on the subject, claimed that changeability is a central characteristic of structuralist architecture (Strauven, 1998).

### **Structuralism as Open Form**

Many critics consider structuralism in architecture during its heyday as "open form". For instance Kenneth Frampton, mentioned the 1972 office block in Apeldoorn by Herman Hertzberger, and stresses that how the architect in places left incompleteness the work for encouraging contributions from the users. he claims that the office block contained some quite integral openness for future changes, an expression of structuralist architecture (Frampton, 1998). Hertzberger's office block usually recurs within the literature once structuralism in architecture is mentioned.



**Figure 5:** Office Building by Herman Hertzberger in Apeldoorn 1972.

### **Structuralism as Configurative Design**

Francis Strauven, who had written extensively, suggests that the concept of structuralism is not an appropriate for Hertzberger's office building. Strauven termed "configurative design" for this type of architectural work. he further mentioned that structuralism was a trendy concept having positive implications and was implemented by many architects of the time, regardless of the fact that the projects they designed could not be termed as structuralistic in the true meaning of the term (Strauven, 1998).

### **Structuralism Not a Style But a Tool For Critique**

Hertzberger was the only architect among the Dutch structuralists to declared explicit relations to the anthropologist Claude Lévi-Strauss and French linguist Ferdinand de Saussure. For instance, referring to the Strauss's distinction between *langue* and *parole*. however, the application of Structuralism ideas is much wider than any group of buildings or architects. The approach of analysis as used in structuralism is applicable to any text (a newspaper headline, a street sign, legal contract, report, or literary work), and any kind of building (a shed, an office block, a housing scheme, or an entire city (Raman & Coyne, 2000)). In the same fashion, Structuralism is not a movement as Expressionism or Surrealism are, with architects who wish to classify their works as, or who follow the procedures or methods of that movement. Structuralism is an approach of critique and analysis in literature, art, architecture, and beyond.

### **Conclusion and Discussion**

Structuralism was introduced in architecture in the year 1970. however, the era of adaptation of the term in architecture is still under debate. In fact, the earliest Structuralists Architect did not directly used the word Structuralism as it is used in linguistics and anthropology. although the term was very familiar especially in circles like Forum and Team 10 who were investigating the relation between social and built structure. Both the Team 10 and Forum adopted the basic doctrine of structuralism. Later on, the term Structuralism was borrowed from linguistic and Anthropology as a trend in Architecture and Planning during the same period. Because of this reason most of the architectural historians declared this label as a "description of an architectural movement" as inappropriate.

Different authors interpret structuralism in architecture in differently but with the common factor of changeability, except Erik Nygaard who regarded user democracy or freedom a central factor of structuralism. Today's definition of structuralism is founded on a transferal in meaning of the concept

which includes both an invariant meaningful structure and other variant structures. In earlier era the current concept of Structuralism in Architecture was called as "open form".

Based on the above detailed study of different accounts about structuralism in architecture, the following points could be concluded:

- Structuralism was never a direct movement or style in architecture.
- Structuralism was an applied or inspired concept in architecture and was later termed as structuralism.
- Open form and configurative designs being considered as structuralist by some authors.
- Changeability an aspect of many architectural style was one of the central component of structuralist architecture and design.
- As different architects share some common structuralist design elements therefore a critical analysis of the selected work is essential.

## References

- Bptwina, R., & Botwina, J. (2012). Looking for meaning in architecture: getting closer to landscape semantics. *Studies in Logic, Grammar and Rhetoric*, 28(41), 83-102. <https://doi.org/10.1080/13264820009478390>
- Ekholm, A. (1980). *Utvecklingen mot strukturalism i arkitekturen*. Byggnadsnämnden. [Development towards structuralism in architecture]. (Stockholm: 1980).
- Frampton, K. (1998). *Modern Architecture: A Critical History* (London, 1992).
- Lüchinger, A. (1981). *Structuralism in architecture and urban planning* (Vol. 14). Krämer.
- Lund, N. O. (2003). *Arkitekturteorier siden 1945*.
- Martin, L. (2007). *Team 10, 1953-1981: In Search of a Utopia of the Present*.
- Nygaard, E., & Anthonsen, J. (1996). *Arkitektur i en forvirret tid*. Danmarks Blindbibliotek.
- Raman, P., & Coyne, R. (2000). The production of architectural criticism. *Architectural Theory Review*, 5(1), 83-102.
- Smithson, A. M. (1967). *Urban Structuring: Studies of Alison & Peter Smithson*. London: Studio Vista; New York: Reinhold.
- Söderqvist, L. (2011). Structuralism in architecture: a definition. *Journal of Aesthetics & Culture*, 3(1), 1-6. <https://doi.org/10.3402/jac.v3i0.5414>
- Strauven, F. (1998). *Aldo van Eyck-The Shape of Relativity*. Architectura & Natura.
- Tange, K. (1966). Function, structure and symbol. *Kultermann, ed., Kenzo Tange, 240*.
- Van Eyck, A. (1947). Statement against rationalism. *écrit pour le Ciam VI en*.
- Van Eyck, A. (1959, September). Het verhaal van een andere gedachte. In *La historia de otro pensamiento*. *En Forum* (Vol. 7).
- Valena, T., Avermaete, T., & Vrachliotis, G. (2011). *Structuralism reloaded: rule-based design in architecture and urbanism*. Edition Axel Menges.