



THE CONCEPT OF THE INFINITE SPACE CONCEPT ON THE CHAOS THEORY IN POSTMODERN SOCIETIES

Mehmet Burak KONKAN^{1*}

Arzu ÖZEN YAVUZ²

^{1,2} Gazi University, Faculty of Architecture, Department of Architecture, Ankara, Turkey

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Abstract

Chaos theory which first appeared in physics and mathematics, was developed to understand the forms of nature that cannot be understood by a Euclidean relationship. If a more comprehensible recognition is reduced; defined as an irregularity pattern. Since chaos theory has been introduced, chaotic readings and analyzes have been started in many fields such as sociology, psychology and architecture. The concept of infinite space is an evaluation criterion for understanding and interpreting the whole of the understanding of architecture from Vitruvius. Architecture is basically the art of designing space. Qualified architectural work is the whole of the qualified designed spaces. The space concept mentioned here is independent of a dimension or geometry. Because many criteria at the same time in the design of space. In this context, architectural space; structural and functional requirements, is more than the sum of abstract and concrete reference. The needs and requirements of today's modern society; has undergone several changes from past to present. These changes are directly related to the changes brought by technology, as well as the way people change their lifestyles and standards. As a result of this situation, the problems of today's architecture show differences and confusion. As a result, when we look at today's postmodern society structure; It is obvious that the chaotic order cannot be read by an Euclidean relationship. In this study, in the light of the reasons mentioned above, it is aimed to explain the present value of postmodern architecture by means of chaos theory to explain chaotic architectural space design and to reconsider the concept of infinite space for post modern societies.

INTRODUCTION

Chaos theory which first appeared in physics and mathematics, was developed to understand the forms of nature that cannot be understood by a Euclidean relationship. The word chaos evokes the excursiveness in our language. But since no form of nature is formed by an excursiveness flow, it cannot be said that this theory, which works to make sense of these forms, has a lack of context and relation (Yurtsever, 2014). With a more comprehensible definition, it can be defined as the order of the disorder. Since chaos theory has been introduced, chaotic readings and analyzes have been started in many fields such as sociology, psychology and architecture. At the basis of these analyzes, two basic approaches of physics in chaos theory are considered. The first of these is the unpredictable consequences of perfectly functioning events in chaos theory. It is mainly explained on the basis of the disconnection of causality; its essence is not that the events happen by chance, but the effects of the definite definable goals cannot be predicted. (Turan, 2008) This is the theory that certain events, most commonly known as butterfly effects, are channeled to a different result with a small change. Another approach is the chaotic consequences arising from the imperfection of the assessment. This is explained as follows; when the same data was repeatedly processed by the same computer program, the results were obtained in a radically different way each time. This situation cannot be measured in the smallest data differences ultimately create huge differences. (Turan, 2008) In this respect, it can be said that chaos theory has emerged from the defect of the unit of measurement. As it is mentioned in the first sight of the study of Chaos Theory through

Corresponding author, e-mail arzuozen@gazi.edu.tr

architecture; the spatial differences needed in the formation of the postmodern society will be effected by the influence of the postmodern society. In this way, it will be tried to reach today's perception as a result of these small changes in the concept of infinite space.

INFINITE SPACE

The concept of infinite space is an evaluation criterion for understanding and interpreting the whole of the understanding of architecture from Vitruvius. Vitruvius concept of space; defines the elements of the space under the name of architectural principles. According to Vitruvius; the details are placed in the composition and the composition of the structure in accordance with the quality, is to gain an aesthetic expression. (Vitruvius, 2017). Architecture is basically the art of designing space. Qualified architectural work is the whole of the qualified designed spaces. Qualified spaces before postmodern society and chaos theory are understood as physical equivalents. These provisions are explained by the main elements of the space from the ancient Greek to the present. With the discovery of the fire, the oldest element of architecture is the quarry. These are the three elements surrounding the quarry; the roof is the surrounding walls and masonry. (Semper, 2015) Although the space elements mentioned here differ between cultures; mainly responds to the need for shelter. The concept of space for postmodern societies in this research is independent of a dimension or geometry. Because in today's space design many criteria are considered at the same time except traditional items of space. For example, the requirements of physical life conditions, cultural backgrounds, functional requirements etc. In this context, architectural space, structural and functional requirements; the sum of abstract and concrete references. According to Heidegger, architectural space is only possible with dwelling. As we built, we do not settle, on the contrary, we build and build, because we are the inhabitants. (Heidegger, 2008) In this sense, the concept of infinite space coincides with Heidegger's dwelling concept. Acceptance of a place in every period; it is possible with the concept of dwelling. Because according to Heidegger to reach the silence, in which everything is kept in its essence in the free space to stay calm means "eingefriedet" [surround]. The main distinguishing feature of housing is this reserve. It penetrates the entire area of settlement. (Heidegger, 2008) With this definition, the concept of dwelling consists of the components of a structure; it is also possible to create a sense of belonging on the building. This difference can be handled as the difference between house and home. In the light of these meanings, the concept of infinite space is a problem of resettlement rather than building a home.

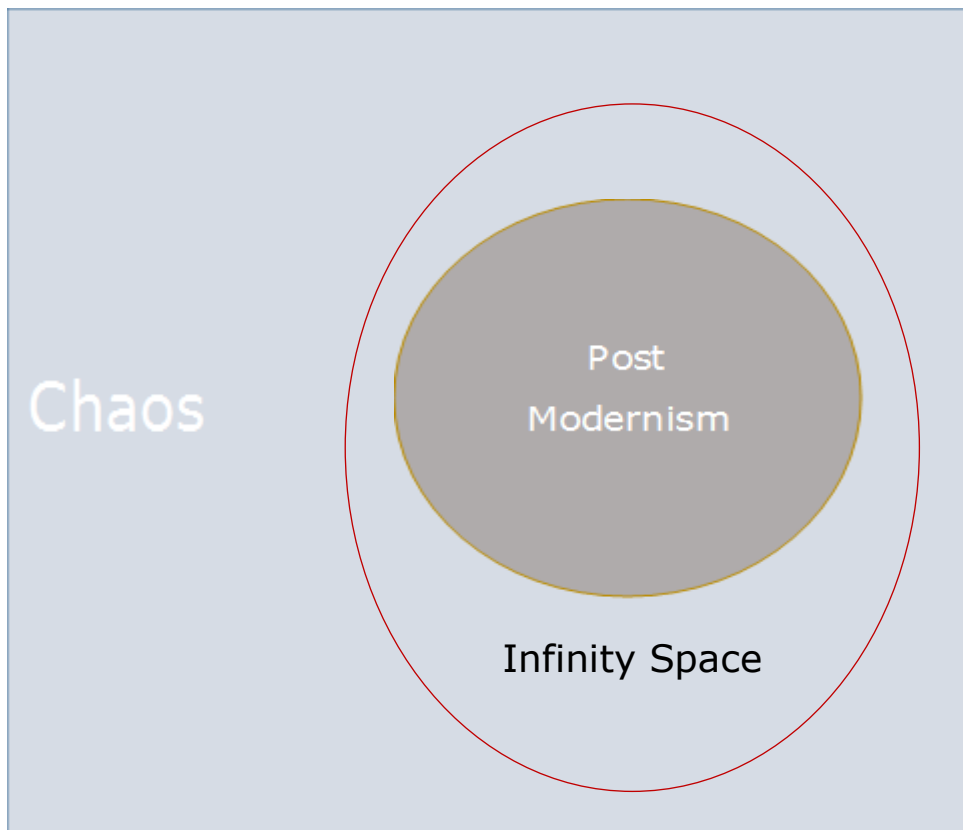
POST MODERNISM

The needs and requirements of today's modern society; has undergone various changes from past to present. These changes are directly related to the changes brought by technology, as well as the way people change their lifestyles and standards. In order to understand postmodernism, design criteria of Modernism should be put forward. In the 19th century, especially with the industrial revolution, architecture was under pressure with technology. As a result of this pressure, a modern architectural approach has developed with its own rules and criteria. The criteria of modernist ideology are very clear. While the designer focuses on optimal solutions with an objective point of view, possible social problems appear very far away from them. Most of them think that the interior design will be solved or even never formed as long as they create their own space and provide flexibility to spaces. (Aras, 2014) But in postmodern societies there is a life cycle different from the needs of modernism. The linearity that modernism tries to break with the perception of flexible interiors; it has spread throughout the life of the postmodern society. For postmodern societies, this flexibility is synonymous with freedom. The postmodern society symbolizes the world of illusions, chaos and hyper-reality. This perspective which continues its ideology with the motto "Everything is possible"; gives freedom, comfort and right to make mistakes. (Aras, 2014) In this context, today's architectural problems show differences and confusion compared to previous periods. Small differences mentioned here; there is a need for a new perspective in

order to determine the impact on the future of social life and architecture. The concept of infinite space, from the ancient horizon to the present, has been tried to be understood by Euclidean relations and geometric forms. However, the descriptions of nature and the abstractions of these descriptions are used in analogies; the goal here is to imitate the observable geometry of nature rather than a correlation. Modernism is the concept of infinite space tries to explain through the rules. Therefore, more than the results of the rules; prioritizes the implementation of the rules. But the demolition of the Pruitt Igoe residences, which are declared as symbolic deaths of modern architecture, symbolizes the transition **to a** different period. (Aras, 2014) The place that will be produced for the society which has a dynamic structure within itself and all within the error that is caused by this transition, necessitates the creation of new approaches.

RESULT

As a result, when we look at today's postmodern society structure; it is obvious that the chaotic order cannot be read by a Euclidean relationship. The concept of freedom brought by postmodernism should be considered not only on the individual scale but also on the scale of society. It is clear that modern urban schemes designed with modern architecture are not valid today.



The use of space in postmodern societies is home, office etc. the distinctions have almost disappeared. Architectural spaces built for the last quarter of a century, where the spaces of housing, work and shopping are intertwined with the concept of “mall”, the demand for it shows that the new social order must be built on the constant mobility. The disappearance of the concept of belonging in cities and especially societies, and the idea of globalization (being a citizen of the world) is an indicator of the idea of freedom in the postmodern societies. But the culture of the individual, geography etc. differentiation with each other describes the difference in chaos theory. The chaotic reading in this case is not an

individual's pluralism with different cultural riches; it shows that it has gone into nothingness in chaotic movements. Technological developments and hyper-realities presented as freedom; it threatens to destroy vital origin. One of the most important reasons for this is the contrast of an individual's hyper-reality with the space he lives. The differentiated functions alone do not provide spatial freedoms; on the contrary, it ignores postmodern realities and leads to alienation of the individual. Here's what needs to be done; the space must not be planar but perceptual. Rather than saying that different functions attempted to be transferred by perceptual fiction are brought together by living together, with perceptual continuity of spaces; to ensure special public distinction. This distinction consists of a stretchable abstract trace. In this way, mobility can take place in the architectural space, such as the hyper-reality of the individual, and an infinite space for postmodern societies can be designed.



Figure 2 Conceptual Study of Chaotic Space

REFERENCES

Adam, S. (2010). Mimarlar İçin Heidegger. İstanbul: Yem Yayınları.

Aras, L. (2014). Bir Mimarlık Bilinmeyi: Postmodern Gündelik Yaşamda 'Konut' Tükendi mi? Megaron, 103-112.

Bilgin, İ. (2016). Mimarın Soluğu. İstanbul: Metis Yayınları.

Heidegger, M. (2008). Düşüncenin Çağrısı. İstanbul: Say Yayıncılık.

Semper, G. (2015). Mimarlığın Dört Ögesi Ve İki Konferans. İstanbul: Janus Yayıncılık.

Sevinç, M. (1999, Ağustos). Postmodernizm ve Kent. Birikim Dergisi.

Turan, M. (2008). Kaos Teorisi: Bauman ve Bakhtin. Araştırma Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Felsefe Bölümü Dergisi, 45-66.

Vitruvius. (2017). Mimarlık Üzerin. İstanbul: Alfa Basım Yayım Dağıtım.

Yurtsever, H. (2014). Kozmoz-Kaos-Kübizm. Ankara: Detay Yayıncılık.

Figure 1 relationship scheme

Figure 2 Conceptual Study of Chaotic Space