



OPPOSITIONS

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ABSTRACT:

Public domain represents social condenser where all changes emerge in their immanent way.

When we speak about state of changes certain notions transgress in their meaning. Therefore to be able to understand these states of changes we shall try to describe these emerging oppositions in public realm (objective reality).

Transformation of existing public buildings is obvious in post socialist countries in this period of transition from social toward capitalist society. The new concept of proprietary is obvious immediately and adjacent to and within existing buildings. Transformations are usually expressive in architectural form or repressive in their program. Beside that transformations could be with same or disparate program. Several oppositions could be recognize in these emerging pre-condition in public realm:

Formal vs. Informal; Conventional typology becomes over determinate versus adaptable concept;



Same function vs. disparate program; Paradigm of modernity “form follows function” transgresses toward social logic of space;

Expected vs. Unexpected encounter; Homogeneity and coherence vs. Emerging events;

Contextual vs. Difference; Perfectly balanced vs. Adjacency and co-presence;

Border vs. Boundary; Separate entities vs. Active line of interchange

Key words: Adjacency, co-presence, border, informal



1. INTRODUCTION

The objective reality is a “condenser” where social and spatial changes emerge in its own immanent manner. The transformation of public space and architecture where everything changes, manifest themselves in a dialectical relation with the perception and lifestyle of a cultural community at present time.

The Republic of Macedonia is an example where social transformation is in correlation with the previous socialist system as well as the global changes. The social, political and cultural situation in society as objective factors are part of the previous period, but are strongly influenced by the subjective traditional, cultural identity and the global impacts. Every culture has its own specific way that develops the rules and forms of cultural heritage. They depend on the past and tradition as well as on cultural relations and communication with other cultures. In consideration of these continuous changes, certain concepts in the field of architectural research and theory transgress its own significance. Changes that occur within the existential space are immanent to the changes emerging in the objective reality and often exceed the human perception/understanding of the environment.

Architecture as a social communication system comprised of morphosyntax and semantic principles expressed through its form. For the individual architecture is an abstract phenomenon that has meaning depending on his/her perception and mental image of it.

Sociolects in the spoken language, for instance, suggests the emergence of new concepts in the communication process. The occurrence of new human existential needs or the obvious change of content of the existing buildings indicates the change of lifestyle. Human needs, conveyed through its program, require an additional functionality of the architectural building. The realization of the new program has been prevented in the existing buildings due to the fact that the function has been captivated in the established typology. Therefore the conventional typologies of the modernism can no longer accommodate the latest human needs.



The research presented in this paper originates from the system theory. Architecture as a specific social system of communication correlates with the environment. The system theory is of great significance because its theoretic vocabulary explains the phenomena and enables to deontologise the humanism dichotomies of modernism through the functional distinctions of architecture as a system in relation to the environment and the objective reality. For that purpose the theoretical basis of this research is founded on Bill Hillier's sociological logic of space and Niklas Luhman's sociological system theory. The aspect of persistence through repetitions in N. Luhman's autopoietic social system has also been reviewed in relation to the Christopher Alexander's pattern language as well as Umberto Eco's semiology-architecture as a communication.

2. SOCIAL TRANSFORMATION AND IMPACT ON ARCHITECTURE

The emergence of new lifestyles influenced by the socio economic and cultural changes in society, create new program demands or change the existing ones in the present buildings. The research problem presented in this paper is the inadequacy of the established modernist paradigms to define the terms of the latest existential emergence, as well as the functional typologies to accommodate the new human needs. Therefore the established design paradigms and knowledge are no longer applicable and require further elaboration.

The research presented in this paper is to redefine architectural phenomenology related the new cultural presence in comparison with the established architectural paradigms relating to the existential space.

The purpose of this paper is to present architectural research regarding the possibility of architectural concept to face the unexpected encounter of new human needs identified in the new objective reality. The research attempts to define new concepts and prequalify existing architectural topics in the form of oppositions, in relation to existing ones that are relevant to the emerging changes. The paper presents research of design tactics of accepting the new situation, as well as development of possible architectural concepts that have social significance for the cultural context out of which they emerge.¹ The

¹ Nikolaj Hartman, *Estetika* (Beograd: Dereta, 2004), 250-260.



architectural projects as a result of the research presented in this paper, are possible concepts in existing and empty spaces that are adaptable to the transformation emerging from the new social and economic needs.

3. AUTOPOIETIC OF THE SOCIAL SYSTEMS

Nicklas Luhman's theory of social systems represents a self-referent concept grounded within the complexity of the objective reality and natural sciences. The social system is founded on autopoietic or self-referent closed systems based on inherent codes. The term "Autopoiesis" has Greek origins and refers to self-production or self-creation.

Luhman's social system is based on the Maturana and Varela differential approach and the operative closure. As Maturana and Varela argue: "Operative closure is a precondition for interactional openness. On the level of its operations the autopoietic system does not receive any inputs from the environment but only perturbations (or irritations), which then might trigger internal operations in the system. In other words, external events may trigger internal processes but they cannot determine those processes."² Each system is operatively closed and is differentiated from the other communication systems. The system closure enables a higher level of development than the rest of the environment. The development itself increases the sensitivity to initiate greater complexity of the system without disrupting it – system of autopoietics.³

The concept of structural coupling is the central element of the autopoietics theory. It refers to the relation between system and the environment. The events happening in the environment-objective reality can trigger processes in the autopoietic system determined by the internal structure of the system elements.⁴

The internal processes represent a motion from reproduction of relatively stable elements towards production of current contingencies. Luhman radicalizes the concept of autopoietics. Despite the fact that the system elements do not last (event feature), it is

² David Seidl, "Luhmann's theory of autopoietic social systems" (paper done for Munich Business Research, Ludwig-maximilians-Universität München, Munich School of Management, Munich, Germany, February, 2004), 3.

³ Ibid., 4.

⁴ David Seidl, "Luhmann's theory of autopoietic social systems" (paper done for Munich Business Research, Ludwig-maximilians-Universität München, Munich School of Management, Munich, Germany, February, 2004), 4.



forced to constantly produce new elements. If the autopoietics stops, the system immediately disappears. The element becomes one not just by existing or system application, but only if it is applied in correlation to other elements. The element is created as a result of its application.⁵ This kind of system autonomy within its boundaries, implies unconditional function of autopoietics, the only alternative for the system to exist.

4. AUTOPOIETICS OF ARCHITECTURE AS A COMMUNICATION SYSTEM

Luhman insists on the non-equivalence of psychological systems (perception) and social systems (communication). Architecture, according to its semantic code, is a separate type of communication social system that applies perception as a vocabulary instead of spoken language. Architecture acts upon the boundary/border between a social system and consciousness/psychological system and in its own particular manner initiates communication while the social remains inherent.

Architecture as an autopoietic communication system has been structurally determined by the semantic code of denote and connote.⁶ All social systems use communication, architecture as well as a way of autopoietic reproduction. Architectural elements represent communication, that recursively reproduce and produce themselves from the communication system and cannot exist outside of that system.⁷

The communication system, according to Luhman, has been determined exclusively through understanding. Similar to this conclusion, architecture is a communication system because through the connotation capacity of the architectural code it possesses social significance. The meaning in the communication process has been determined by the understanding, not by the information of utterance.

Information – repertoire of possibilities;

⁵ Ibid., 5,6.

⁶ Umberto Eco, *Kultura, informacija, komunikacija* (Beograd: Nolit, 1973).

⁷ David Seidl, "Luhmann's theory of autopoietic social systems" (paper done for Munich Business Research, Ludwig-maximilians-Universitat Munchen, Munich School of Management, Munich, Germany, February, 2004), 7.



Utterance – the form and reason for communication: how and why something is expressed;

Understanding – difference between Information and Utterance.

This has been known as the principle of hermeneutics where not the speaker, but the listener is the one who determines the meaning of the message, regardless of what the speaker intended to declare. The meaning of architectural elements/semantic system has been explained by Nikolaj Hartman. He elaborates that every culture has its own specific development of rules and patterns of the cultural heritage meaning. It is dependent on the past and tradition usually through communication with other cultures.⁸ Each society has its own individual development process and creates individual methods of visual presentation of material culture.

As an autopoietic communication system, architecture realizes message meaning through adaptation and transformation of program and form by applying the principle of recursive morphosyntax rules re-established in the new spatial concept. This way only, the future architectural concept will have social significance for the cultural context out of which it emerges.

5. VERTICAL GYM

Oppositions: co-presence and adjacency vs. coherence

5.1. Autopoietics of co-presence

Using the vertical aggregation of a similar program, the design project researches the phenomenology of the architectural building as a result of the new cultural presence in the objective reality. The objective reality represents the operative closure in which the new spatial architectural autopoietic system has been defined by the terms “co-presence” in the first example and “adjacent” with the environment in the second example. (Fig. 1-2)

⁸ Nikolaj Hartman, *Estetika* (Beograd: Dereta, 2004), 258-260.

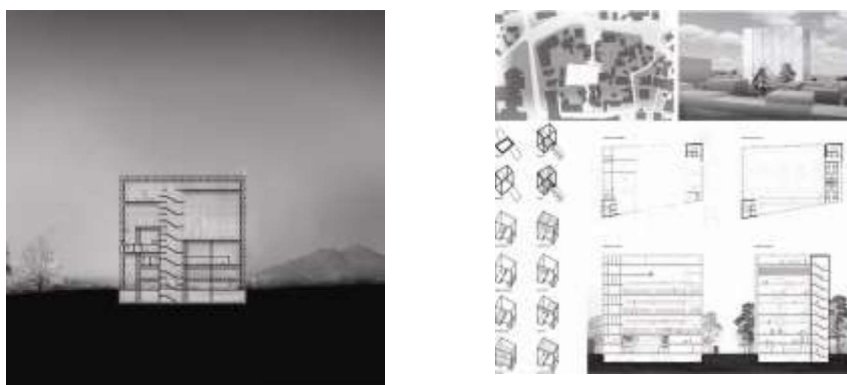


Figure 1-2. Vertical gym, architecture of co-presence and adjacency vs. Coherence
 (Architecture studio 8 semester, students: Edita Vinca, Kristina Radevska, Tina Neshkovic and Mija Petrevska, 2015)

The purpose of the architectural research “Vertical gym” is to present the possibilities of the architectural concept facing unexpected encounters emerged from human modern lifestyle needs. Human needs emerge from operative closure that trigger the autopoietic architectural system. The internal system processes have been determined by the structural morphosyntax patterns of this kind of buildings. The buildings for sport and recreation used to promote gymnastics as a primary sport discipline. “Sokolski dom” was the name of the sports facilities on whose location in city of Prilep, one of the new architectural concepts has been proposed. Nowadays, buildings of this characteristics can be located in a new area with no similar competition or the opposite, location with the exact same functions in order to attract and have an inherited and functional meaning for existing users.⁹ The research intention is the future architectural concept to belong to the cultural context out of which it actually emerges. The conceptual distinction of the architectural autopoietic system in relation to the operative closure is a result of its functional application (denotation). The building does not intent to become a part of a coherent typo-morphological entity – part of the context without disruption of the past, it intends to become the opposite, a building immanent to its functional differentiation of the environment (principle of autopoietics).

The phenomenon feature of public recreation facilities is their “functional consumerism”. The purpose of the building is, by its program multiplication of related

⁹ Bill Hillier, *The social logic of space* (Cambridge: Cambridge University Press, 1988).

functions, to “stimulate” the consumerism effect that remains economically stable in the course of its changes. Related programs aggregate vertically in order to be cooperative instead of competitive.¹⁰ The architectural concept is characterized with semantic features of non-distribution and disparity of its form and program. With reference to the context where it exists, the building should present a non-substitutable element of the environment. (Fig. 3)

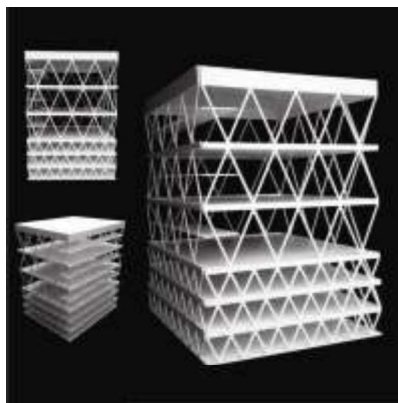


Figure 3. Vertical gym, architecture of co-presence vs. Coherence
(Architecture studio 8 semester, students: Dorotea Petkovska, David Risteski, 2015)

5.2. Vertical gym

The architectural concept represents a self-referent spatial system intended to create events in certain time. If we use the vocabulary of architecture as an autopoietic communication system, the concept is intended not only to denote possible events and functions, but to convey meaning which leads to the application of that function.¹¹ The architectural form through its own structural composition denotes meaning – a building as a possibility for sport and recreation.

Within this specific architectural concept, the semiotic meaning of architectural symbol is in fact the presence of the notion “vertical gym” which is referenced by the function of vertical multiplication of multiple sports fields that the building accommodates. The autopoietic system of meaning in this case “acts” according to the principle of usability provided by the building itself. The term “vertical gym” is meaningful only if the elements have been vertically multiplied i.e. they are in correlation to all the other

¹⁰ Christopher Alexander, *A Pattern Language* (New York: Oxford University Press, 1977), 104-109.

¹¹ Umberto Eco, *Kultura, informacija, komunikacija* (Beograd: Nolit, 1973), 212

elements. In this disposition, the element becomes an element only if it is in correlation to other elements. The architectural building through the element/program is realized as a result of its own application. (Fig. 4-5)

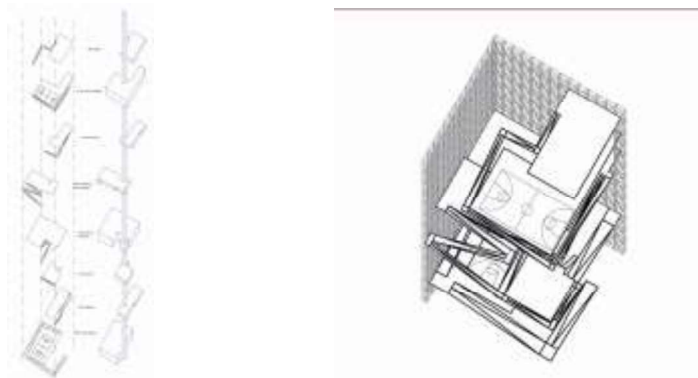


Figure 4-5. Vertical gym, architecture of co-presence vs. Coherence
(Architecture studio 8 semester, students: Edita Vinca and Kristina Radevska, 2015)

6. ARCHITECTURE ON THE BOUNDARY

Oppositions: Boundary and border vs. over determinate

6.1. Autopoietics of the border

The problem area of the architectural research “Architecture on the boundary” has been the present transformation of certain planned regional centers in the city of Skopje. The urban area and the regional centers completely exceed the planned program capacity and space perimeter. Regional centers, according to the consumerism principle, agglomerate and exceed their own planned capacities, territorial zoning and structural hierarchy. The structure disruption of the regional center system and their content results in quality deterioration of urban life and is contrary to the meaning of the “city” concept.

The research purpose is to redefine the “city” concept using the possibilities of the architectural concept for open interaction with operative closure. An attempt has been made to use the architectural concept in order to define the borders of the architectural autopoietic system.



Key assumption of the research is: The “border” between the autopoietic system and the operative closure is possible only in the case of system differentiation and structural hierarchy of the processes within the city. The term “border” is defined as a “boundary” of the system with its closure where their interaction occurs. There is a distinction between the terms “boundary” and “border”. “Boundary” is the ultimate line where something ends, there is no further. Unlike the boundary, “Border” is a territory where different entities: the system and the operative closure are interacting.¹²

The situation of closure changes cannot provide information of the functioning of (architectural) autopoietic system. If the system is directly influenced by external changes, it can be disrupted. In the autopoietics, the external influence can only trigger the system processes that have been determined by its internal structure. The “border” is exactly the territory where the most intensive interaction occurs between the autopoietic system and its operative closure. The interaction defines the ambiguous edges of the term “border”.

6.2. Architecture on the boundary

The principle of structural hierarchy of city processes is evident in Kenzo Tange’s 1960 plan of Tokyo. The plan is comprised of repetitive loops linearly stretched across the Tokyo Bay. Christopher Alexander’s description of the project: “There are four major loops, each of which contains three medium loops. In the second major loop, one medium loop is the railway station and another is the port. Otherwise, each medium loop contains three minor loops which are residential neighborhoods, except in the third major loop where one contains government offices and other industrial offices.”¹³

(Fig. 6)

¹² Richard Sennett, “The Open City” (paper presented at Harvard University, Graduate School of Design, Cambridge, Massachusetts, September 19, 2013).

¹³ Christopher. Alexander, “A City is not a Tree,” *Design* 206 (1966): 7.



Figure 6. Kenzo Tange, Plan for Tokyo 1960, Model view
(*Kenzo Tange and the metabolist movement*, New York: Routledge, 2010, 3)

Kenzo Tange's design project contains the principle of functional differentiation and therefore represents an example of autopoietic system in relation to the operative closure. The main infrastructure traffic routes form the separate parts of the city with certain functions-processes. This Tange's utopian design project, unlike the conventional professional planning methods, is characterized by a desire for social changes and acceptance of the emerging future tendencies.¹⁴

6.3. The city of Skopje case

After the disastrous earthquake in 1963 in the city of Skopje, a reconstruction study has been elaborated by the UN in 1966. In July 1966, the architect Kenzo Tange elaborated an urban plan for the central city area. The plan contains an architecture and urban design project for a residential block so called "city wall". The design project represents a linear structure that uses the term "wall" to denote border, a barrier that in a physical and symbolical way divides Skopje's central city ring from the rest part. "The city wall" is defined as an autopoietic system due to its residential character, i.e. the presence of program in this "superstructure". The ground floor of the "city wall" is filled with public and commercial content with sporadic corridors for pedestrian communication and air circulation. This project is another evident example of an "autopoietic system", within the border line between the system-the center of the city and the closure, the largest interaction occurs. (Fig. 7)

¹⁴ Zhongjie Lin, *Kenzo Tange and the Metabolist Movement: Urban Utopias of Modern Japan* (New York: Routledge, 2010), 3.

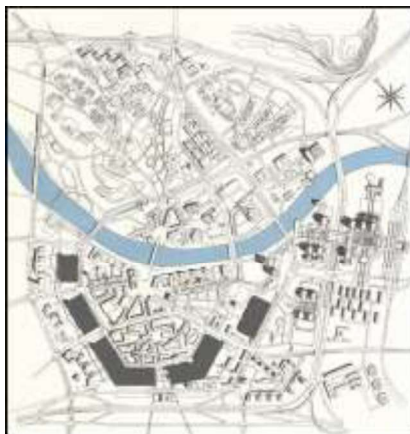


Figure 7. Kenzo Tange, City center plan of Skopje, July 1966
 (*Skopje Resurgent*, New York: United Nations, 1970, 331)

The architectural research “Architecture on the boundary” is based on the spatial and program zoning provided by the Ludek Kubesh’s 1948 General regulation plan and the Master plan study in 1964 after the earthquake. These plans, besides their features of program zoning, are of great significance for the city of Skopje because of the introduction of greenbelts in order to divide residential blocks and to allow air flow from the Vodno mountain. (Fig. 8-9)



Figure 8-9. 8. Green areas according to General regulatory Plan from Ludjek Kubes for Skopje from 1948; 9. Study for Master Plan for Skopje from 1964 (*Skopje Resurgent*, New York: United Nations, 1970, 184, 239)

From the 70s until today, this planning concept has been stopped and in the period 2000-2010 the greenbelts have been gradually built. (Fig. 10)



Figure 10. Plan for Skopje from 2000.

6.4. Architectural concept of “superstructure”

The research “Architecture on the boundary” elaborates an architectural concept that renews the linear zoning of areas along the axis east-west in the city of Skopje. The different functional elements: housing, recreation, public buildings and major pedestrian routes represent the operative closure around former greenbelts. (Fig. 11)

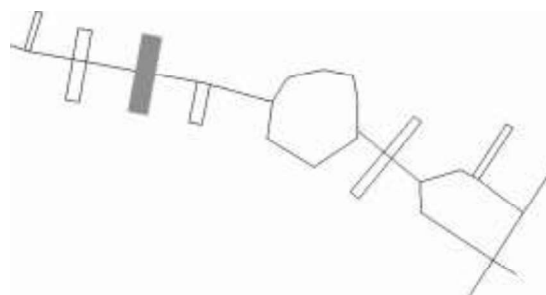


Figure 11. New East-West axis of city development 1963.

The major hypothesis of the research is that by redefinition of the concept “border” of a system, its autopoietic structure could be restored. The greenbelt is in fact a territory. Upon the boundary of that territory, the concept “border” is realized. The events happening in the operative closure have been influenced by the objective reality; a massive construction of public and residential buildings has emerged within the greenbelts.

The architectural-urban concept is based upon the principle of structural coupling between the autopoietic system and the operative closure. The external influences trigger internal processes determined by the structure of the autopoietic system. The internal processes initiate events of relatively stable elements; the greenbelt has only the function of air circulation and pedestrian movement and nothing more. The building is located on the urban block boundary and represents the concept of a “border” whose public content program allows most intense interaction. The functional “superstructure” of the building enables the emergence of current and unexpected encounters. (Fig. 12)

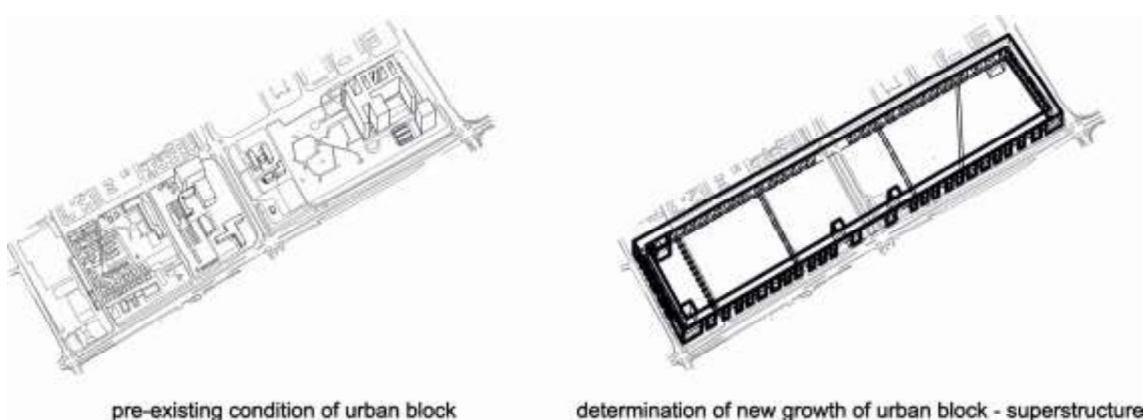


Figure 12. Architecture on the boundary vs. over determine, Architectural concept of “superstructure”, aerial view
 (Architecture Integrated Studio 9 semester, Aleksandra Hristoska, 2014)

The urban concept consists of three key assumptions. The first one refers to the urban block transformation in the modern lifestyle of a metropolis. The building structure in the central part of the city of Skopje is supposed to convey the transition of a small percentage of constructing capacity utilization and low density of individual housing towards collective housing in blocks with a higher density of residents. The second assumption is the restoration of the greenbelt. The process involves relocation of residential and public functions: the city hospital, elementary and high school, sports hall and commercial contents from the greenbelt toward the perimeter “superstructure”. The third assumption is that the urban block perimeter represents constructed “superstructure” determined by its program and is a complete entity in relation to the other neighboring blocks. (Fig. 13)

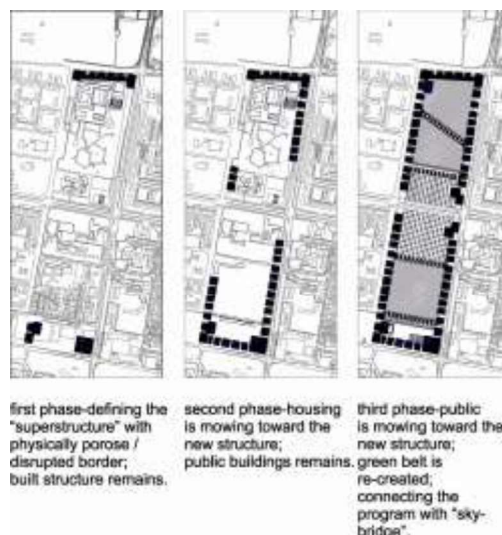


Figure 13. Architecture on the boundary vs. over determinate, Three phases of creating the “superstructure”, aerial view (Architecture Integrated Studio 9 semester, Aleksandra Hristoska, 2014)

The architectural concept is based upon the assumption that within a certain time interval the existing low residential structure and public buildings will be redesigned into a “superstructure”. The urban block will accommodate the existing programs within its perimeter, with respect to the concept of a vast green area presented in the former urban plans for the city of Skopje. For the city of Skopje this architectural concept has a particular quality of presenting a retro-utopian image of a city-metropolis. (Fig. 14)



Figure 14. Architecture on the boundary vs. over determinate, Architectural concept of “superstructure”, aerial view (Architecture Integrated Studio 9 semester, Aleksandra Hristoska, 2014)

The formation of border development with the “superstructure” includes public contents that complement its existing contents. The next step is the clearing of buildings in the greenbelt and their relocation in the perimeter “superstructure”. Public buildings remain



within the greenbelt until the moment when they are not integrated within the block perimeter growth. The central part of the urban block is set free and redefined into a vast green area within the perimeter of the “superstructure”. The block development should be realized in stages until the final realization of the suggested concept.

7. CONCLUSION

The conclusion can be drawn that the “oppositions” recognized in public domain introduces the self-referential concept rooted in objective reality not in ideology. Niclas Luhman describes this concept as autopoietic system of transformation in his social system theory.

Several architectural projects presented in the paper, researching the notions of co-presence and boundary of transforming society gives the possibilities of architecture to face the unexpected encounters of emerging spatial conditions.

New design tactics are introduced in this research considering the architecture as autopoietic communication system.

8. ACKNOWLEDGMENTS

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