NEW MODELS OF URBANITY IN THE IN-BETWEEN CONDITION, VILLAGE OF CHUCHER, SKOPJE

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ABSTRACT: The doctrines of urban plans of the last century imposed on the territory of the city of Skopje have always insisted on a hierarchical and structured character of the city and its parts. The unattainability to establish one consistent urban model in this period leads us to a new reading of the relationship of the city and its territory, one that is a programmatic unity/difference of particularities and their power. This distinctiveness in its full capacity is most explicitly recognized in the contact of the city and its natural and built periphery. In the specific urban, economic, cultural, social and post-pandemic conditions of our cities, the landscape in its full productive and phenomenological scales can be a structural element for observation and intervention in the territory. Although similar processes affect the periphery, the issues related to its sustainable development are considered in terms of specific territorial scope, the village of Chucher in the area of Crnogorija as an example of a recontextualized environment on the outskirts of Skopje. Building on subjective and empirical research and documentation of the territory, we operationalize the landscape through its dominant element, the topography. The superposition of all this information generated positions of architectural, programmatic, infrastructural, the natural density that sometimes builds on the old position of the existing features and sometimes proposes new ones. These new models of urbanity that predetermine different cultural and social relationships provide forms and spatial structures that create neighborhoods and social relation in direct contact with the openness of the landscape. In the context that is subject to daily changes and transformations that cause dramatic spatial consequences, the aim of this paper promotes an interdisciplinary approach through the symbiosis between actors and structures of biodiversity, agriculture, industry, housing and work as a prerequisite for resilient city models.

KEYWORDS: *periphery, landscape, community, adaptive infrastructure, post-pandemic*

INTRODUCTION

This article for the periphery of the city derives from a territorial survey of the north-western parts of the Skopje region. Its proposed form has a dual purpose, on the one hand to present the elementary layers that emphasize the specificities of a part of the periphery, and on the other hand to confront and complement the found condition with processes and topics that are equally important for the subsequent goal of adapting sustainable regions. With this we set the framework for new models of urbanity that arise from the specificities of the case study and show the potential for interdisciplinary cooperation.

The doctrines of urban plans of the last century imposed on the territory of the city of Skopje have always insisted on a hierarchical and structuring character of the city and its parts. They represented a stable, homogeneous spatial and material organization. The unattainability to establish one consistent urban model in this period leads us to a new reading of the relationship of the city and its territory, between architecture and the ground, one that is a programmatic unity/difference of particularities and their power, particularities that exist in a space between city and nature.

The peculiarities in its full capacity are most explicitly recognized in the contact of the city and its periphery (natural and built) which we can see through the growth of the city predetermined by its main lines of direction, motion, growth, or extension. Their position is mainly determined by the topographic features and other natural elements that direct and limit them. This linear formation of the extension of the figure of the city is approaching the existing suburban settlements and intensive natural systems.

Historically, the intertwining of urbanity and rural areas as alternative models of the city can be observed through several concepts such as: Owen and Fourier's small communities of cooperative socialism, Ebenezer Howard's contact with nature, Frank Lloyd Wright's mobility, the productive relationships of Le Corbusier or the decentralization of Hilbersheimer in complete relation with the natural systems.

The new landscape of the city is made up of qualities, preconditions that architecture and urbanism continuously limit and obscure. Architect Francois Roche in his projects often refers to the culture of the place, the signs and "recommendations" of the landscape that are not immediately apparent, but they must be discovered in the observed context, in a position through which we assume their future development and capacity[30]. In the specific urban, economic, cultural and social situation in which our cities are developing, the complex remains (peculiarities) that we observe on the city territory have the capacity to be placed in a productive relationship. This relationship provokes the condition of something that is *in-between*, a form that can be seen in relation to the city of Skopje, but also a state that has regional specificities.

In this context, we refer to the definition of the *city in-between* of the Australian philosopher Elizabeth Groz, which clarifies the differences between the state of the *in-between* and the state of the suburbs. According to Groz, periphery always means a relation with only one dominant point (in our case it is the city, i.e. the border of the city), while *in-between* associates it with several relations, an entity in itself. An entity that has no exclusive purpose and is not dependent on the city.[31] We would say it is a com-

30 Roche, F., 1998. Villa Malraux Artists' Residences and studios, Maïdo Road, Reunion Island. Architectural Design, 9 November 1998. p.48.

31 Architectural Review. 2019. Interview with Elizabeth Grosz. [ONLINE] Available at: https://www.architectural-review.com/. [Accessed 10 March 2020].

bination of urban, suburban and rural, which creates or has the potential to create a relational architecture. *In-between*, like any other condition of the territory, should be seen as a specific project, with all its peculiarities. The *in-between* can generate various built forms, fragments, islands networked by the landscape and it is the landscape that represents the connective tissue of these autonomous, specific entities, that is, the existing capacities. Groz signifies the symbolic-practical structure around which a society can recognize itself: not only as a border area in a territorial sense, but also a field of cultural and disciplinary exchange, an attempt to reject the established mental and cultural systems.

Complex territories provoke us to reconsider the relations of the elements and thus the relation to the spatial concepts. Our intention is, through observations, to understand the depth of territorial structures (natural and human), the history of a place and its slow sedimentation, the morphology of a certain part of the territory that is visible through different relations: house - topography, houses that form different clusters, houses and public spaces, topography - hydrography, infrastructure and agriculture and their subsequent modifications that shape it.

PERIPHERY OF THE SKOPJE VALLEY

The current state of peripheral development in different parts of the world is subject to many different influences: the position of heavy and light industry, rural areas that support the city through their production facilities, investment in closed and exclusive housing zones, social housing which is predetermined as a position from the plots prices, movement of goods and services through a system of already built infrastructure, individual mobility, etc. With the ubiquity and intensity of these influences on the territory of the Skopje's valley, we do not see the peripheral growth of the city as a phase in its development but as a continuity that we should observe.

Pursuant to the Law for Regional Development ("Official Gazette of the Republic of Macedonia" No. 63/2007), eight planning regions have been identified: Vardar planning region; East planning region; Southwest planning region; Southeast planning region; Pelagonia planning region; Polog planning region; Northeast planning region and Skopje planning region.

The Skopje planning region covers the basin of the Skopje valley with a total area of 1,812 km^2 or 7.3% of the territory of the Republic of North Macedonia, has a very dense population of 319 inhabitants/km^2 and absorbs more than 1/4 of the total population. Rural municipalities are quite present in all planning regions, but most of the population lives in larger urban centers, which indicates the uneven concentration of the population within the regions.[32]

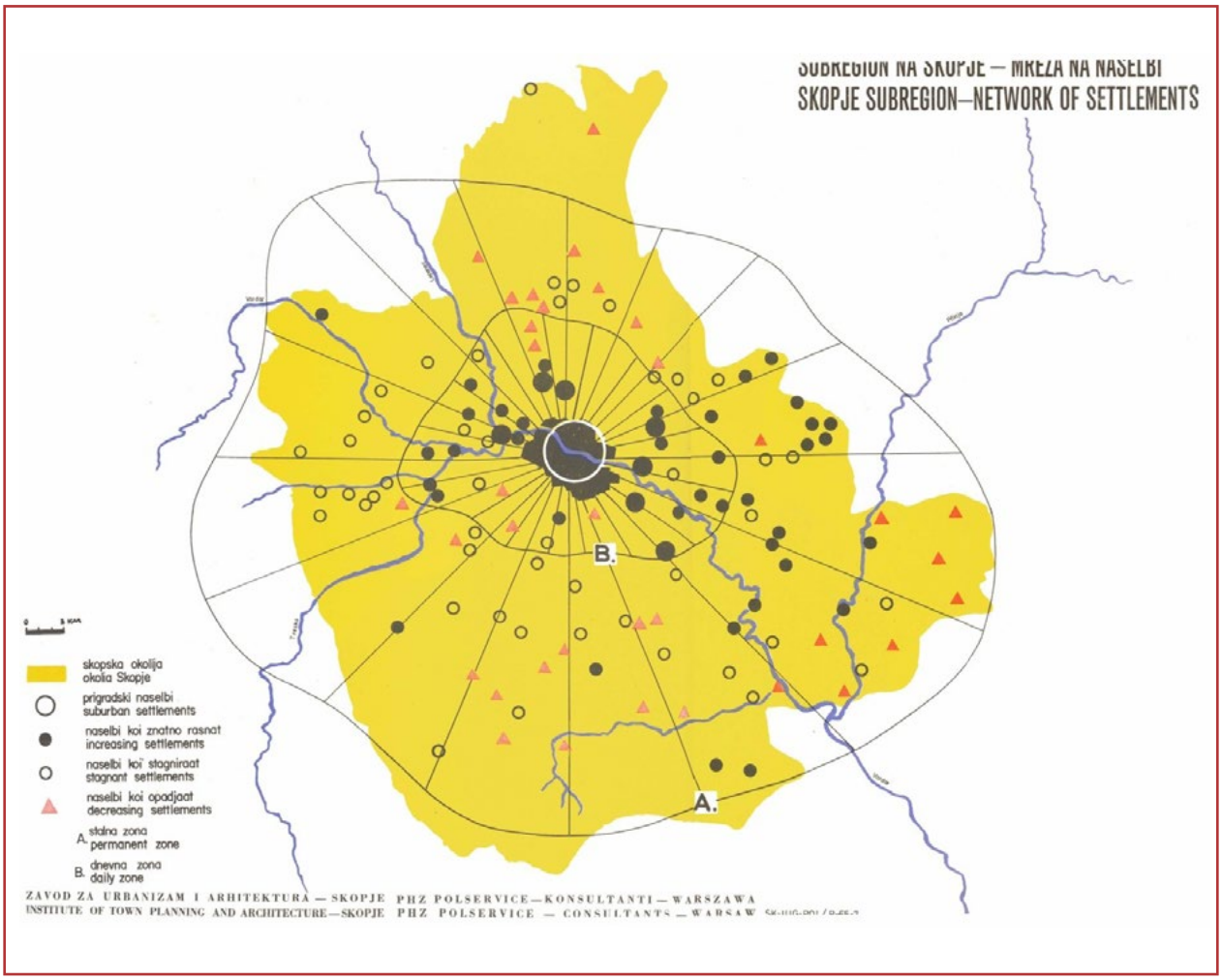
The basis for coherent rural development was laid out in April 1966 through a United Nations Suburban Zone report, approved by the city council and municipal councils. This report covers the specificities of the region and its relationship with the city of Skopje, primarily the need for food supply; zones for recreation, sports and tourism and positioning of these city functions in the suburban context. The document elaborates a hypothetical model derived from empirical observations and influences. The conclusions of these tests should lead to the concept, structure and distribution of functions for each peripheral entity separately.[33]

32 Sobranie na Republika Makedonija (2009) 'Strategija za regionalen razvoj na Republika Makedonija 2009-2019', Sluzben vesnik na R.M, 30 09, p. 1-2.

33 United Nations Development Programme (1970) *Skopje Resurgent. Story of a U.N. Special Fund Town Planning Project*, New York: H.M. Stationery Office

Fig.1

Skopje sub region – Network of settlements. United Nations Development Programme - Skopje Resurgent. 1970



PERIPHERAL ENTITIES

The 1966 report records 137 existing villages, with a population of 8 to 1,500 inhabitants and an average of about 500 inhabitants. From this number of villages in the Skopje planning region, 51 villages have a negative population growth and only 5 with a positive growth. Technological changes are cited as one of the reasons for the indicated difference in the density of settlements in the Skopje suburbs as well as encouraging movement from the periphery to the city. Given this trend, the report recommends that no new settlements should be identified and that energy be directed towards developing existing villages that have the potential for growth. This potential is analyzed primarily through the efficiency in food production and the position of production support functions is expressed through the optimal size of one soil cultivation unit which is 1000 hectares. Consequently, the land that is suitable and available for agriculture in the suburban areas has a capacity of fifty-four production units. One in five of these units should be equipped as "service villages", and four of them should be developed as "rural towns" to support the needs of production and service villages located within a radius of ten kilometers.

The rest of the territory on the outskirts of Skopje is expressed by a dominant topography overgrown with bushes, pastures and dense forests. Highlighted here are four areas with outstanding landscape values near rural towns that have the potential for intensive growth as recreation centers. The recommendation of the study is precisely the networking of these intense landscapes and access to their outstanding cultural – historical sights and natural elements such as the rivers Treska, Pchinja, Kadina, Lepenec, Ljuboten, Ljubenechka, etc.

SAMPLE

The idea of showing such samples or tests from the outskirts of Skopje is intended to build on the specificities, advantages and disadvantages of a future sustainable development of the territory characterized by its topography, existing infrastructure, agriculture, hydrography, cultural heritage, landscape, etc.

Although similar processes affect the periphery, the issues related to its sustainability in this case are discussed in terms of specific territorial scope. The village of Cucer in the area of Skopska Crna Gora is one such example of a recontextualized situation on the outskirts of Skopje. The village is located in the northern part of the Skopje Valley, i.e. in the south-western parts of the mountain Skopska Crna Gora. The village of Cucer is 15 km away from the city of Skopje. The village is hilly, at an altitude of 540 meters. It occupies an amphitheater position, located on the slopes of the hill Tromegja. The area of the village covers an area of 11 km2. The territory of the village is dominated by pastures occupying an area of 596 hectares, arable land accounts for 238 hectares, and forests for 114 hectares.[34]

In the Skopje region there are other examples that are predetermined by other features, and in relation to the new context of the city, they are worth rethinking and supplementing with new urban models.

THE IN-BETWEEN CONDITION: METHODS OF OBSERVATION AND INTERVENTION

The research was initiated through field observation applying two approaches. Subjective, by visiting and working on site as a necessary step in perceiving the phenomena that are a manifestation of the conditions of the city *in-between* and empirical, by analyzing the administrative characteristics, natural and built resources and graphically transferring their specificities in a synthesized operative map as a basis for further territorial considerations.

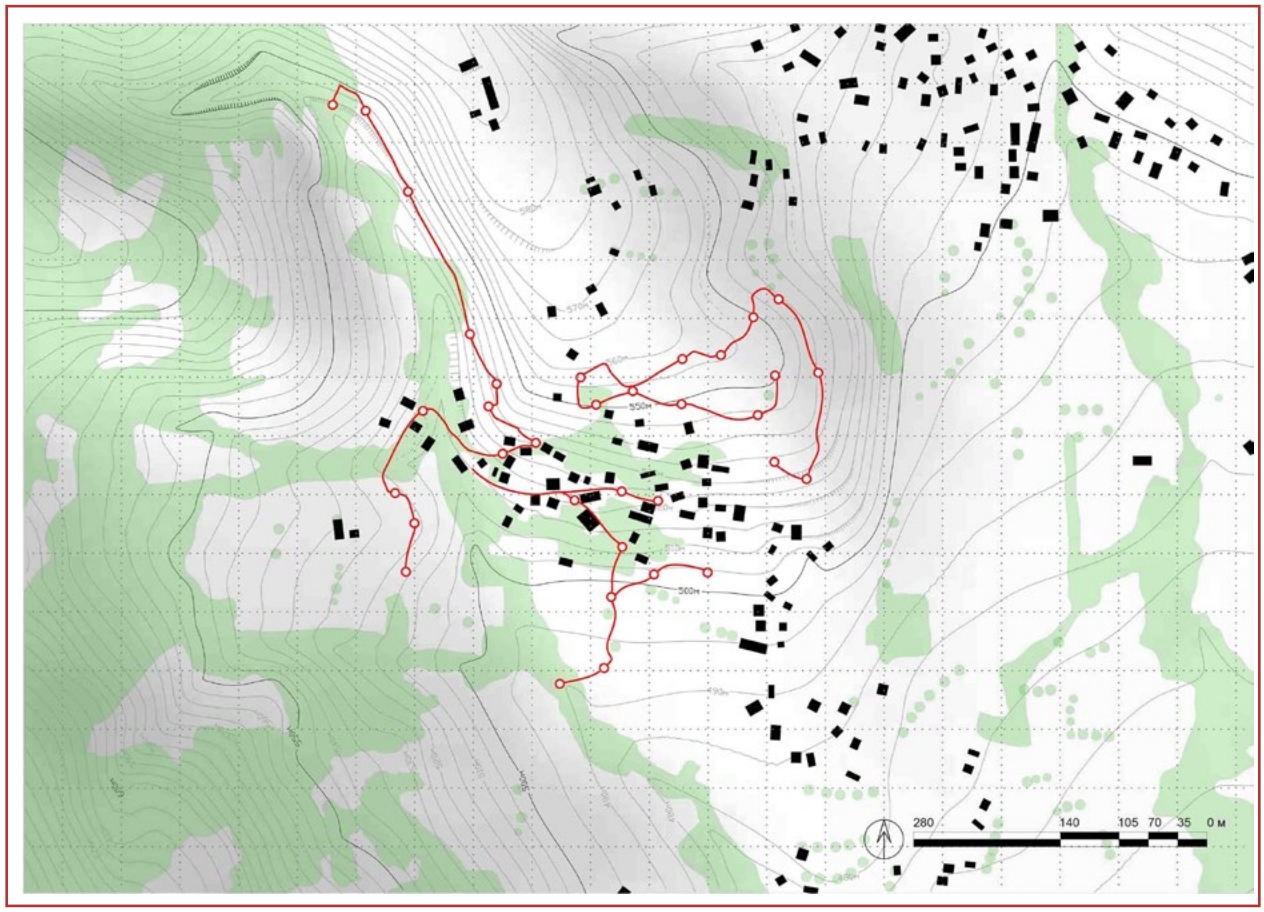
A series of documentary research visits were necessary to complete the impressions. The approach to the village can be different, but encountering layers upon layers of information in this rural context is the only way to get acquainted with the complexity and specificity of the place. The intertwined movements through the landscape began to reveal a meaningful story formed by fragments, directions and spatial incidents.[35] During these field activities, through the movement as an elementary form of experiencing the surroundings, we were directly confronted with the strong relation between the landscape and the village. We moved towards, we moved through, we moved along, we moved alongside, we went in, we went out (from the building, and from the village), from the inside of the village and its north-western edge to the center of the village and the transition to the functional agricultural zone in the southwest. Starting from the contact of the village with the intensive

34 Panov, M., 1998. Enciklopedija na selata vo Republika Makedonija. 1st ed. Skopje: Makedonska akademija na naukite i umetnostite.

35 Flam, J. (1996). *Robert Smithson: The Collected Writings*. University of California Press.

Fig.2

Map of the village of Chucher and its surroundings. On site movement recordings.



vegetation and zones suitable for recreation we moved towards the main hydrographic capacity of the village Chucher and the agricultural field. This stream, although with a small capacity, through its meandering and cutting of the topography creates a characteristic landscape with inaccessible slopes, penetrations overlooking the city of Skopje and alignments with arable land.

To discover the conditions and processes on the site it was necessary to create a frame, a photographic frame, images of old fountains, figures of abandoned buildings, vista points, untouched nature, agricultural areas, irrigation systems, telecommunication receivers, attractive landscapes that intertwine with varying intensity, sometimes directly and sometimes suggestively. The study visits resulted in the identification of elements and zones in the village with a cartographic recording superimposed on the map. The plots directly indicate the relationship with the substrate of the administrative organization of the area. We saw several characteristic zones, named as: nature, center, edge, landscape, social intensity, fertility, infrastructure, eco-systems.

The empirical approach is the analysis and documentation of all the elements that make up the geographical context, a kind of in-depth (vertical) analysis of the hidden aspects that will help to further clarify the character of the territory. On the one hand, the elements of the landscape are predominantly physically present and reveal the character of the place (the color of the soil reveals its support

Fig.3

Map of the village of Chucher and its surroundings. Cartographic inscriptions of identified elements and zones in the village.

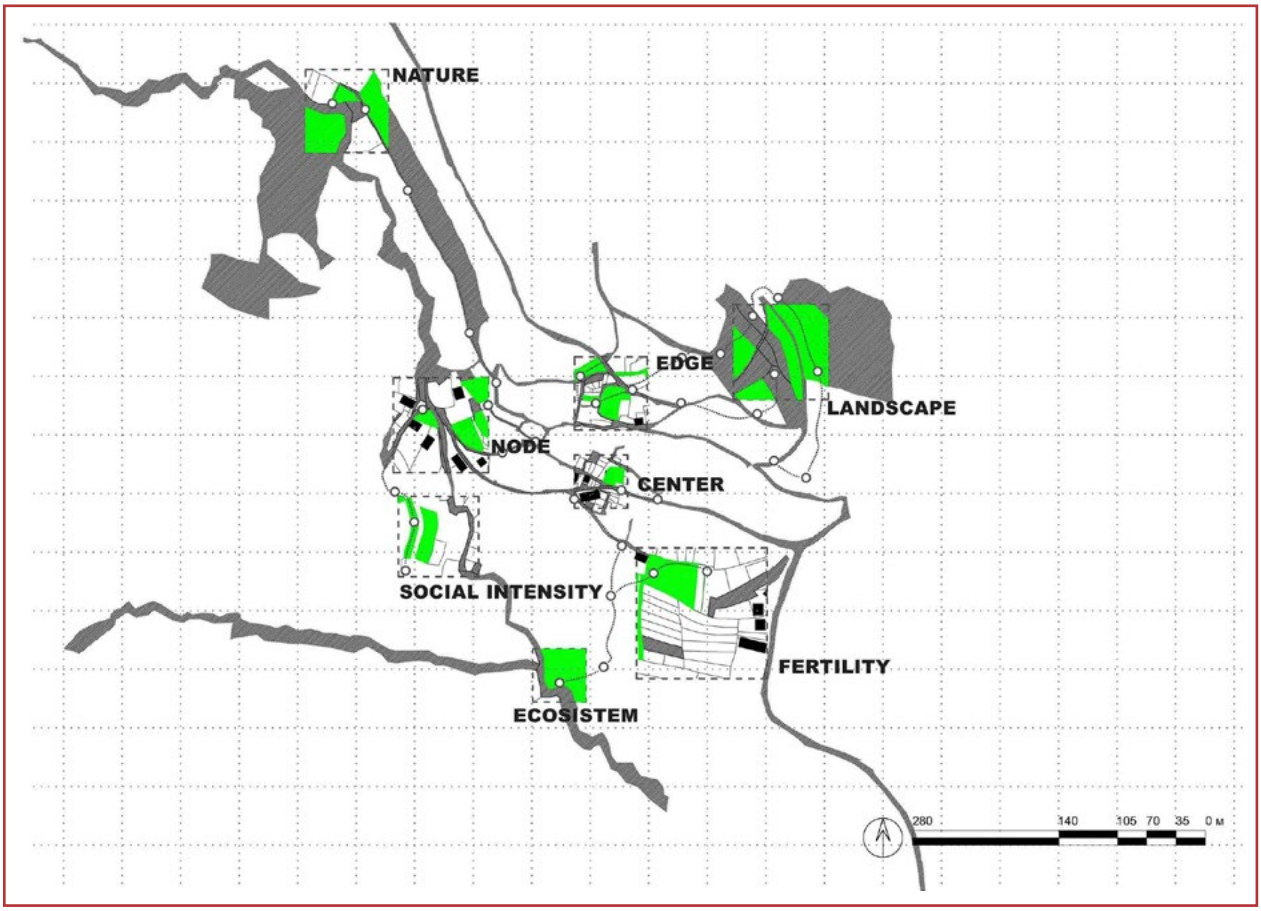


Fig.4

Photographic frame of the specificities of the village of Chucer

for biodiversity and production, the hills without vegetation show the intensity of the wind, the stone remains reveal purpose and program, the network of dense vegetation shows the hydrographic capacity, etc.). On the other hand, certain elements are inconspicuous yet important and relate to events and happenings, local stories, etc. From these complex layers information has been extracted that we consider crucial at this stage of the project in defining the physical entities of the landscape as the basic cartographic background: topography, wind flows, vegetation, sun analysis and hydrography. This synthetic substrate is set as an operative map that can be viewed synchronically.

Building up on these subjective and empirical research and documentation, specific methodologies were examined in order to find reference procedures in the cultivation of such landscapes.

CARTOGRAPHY – VISUAL RELATIONS BETWEEN THE POINTS OF A TOPOGRAPHY

This method[36] developed by the architect Didier Butro in the early 1970s largely demonstrates the proper position of physical structures in the landscape. These positions are generally determined by the visual relations in space. Individual appropriation of key points of topography by buildings inevitably leads to the disintegration of the initial topographic visual structures and degeneration of the landscape and therefore, applying this method of visual spatial planning can reduce the effects of this contradiction. The visual relation of the points from the topography emphasizes the essential vocabulary we used. It is necessary to recognize their unity, of the points and surfaces of the topography (through a simple geometric description) with the sole purpose of moving, monitoring, exposing, using, building, etc.

By placing points on each topographic refraction in order to geometrize the surfaces and by calculating each slope and its orientation, topographic characteristics can be determined, more specifically as convex, concave or flat surfaces. With determining the boundary between two different surfaces as horizontal or vertical the visual relation appears exactly at the moments when the border between the geometric surfaces does not appear. Those surfaces can visually communicate with each other. Horizontal borders, on the other hand, show the capacity of new positions or densities, while vertical boundaries represent axes of connection.

Through the application of this model we assume a new density, a new plan, which superimposed and adjusted to the synthesized operative map of the village of Cucer. It's crucial to underline that this new position does not represent only buildings, but they can be considered as infrastructure axes or public surfaces with the most diverse program, etc.

1.1. KEYLINE METHOD

The second reference method is a practical approach / model towards sustainable management of a productive rural landscape. The Keyline Plan[37] was developed in 1950 by Australian stockbreeder Percival Alfred Yeoman's and is a rational approach to arable land planning with a particular focus on water retention and distribution and land erosion control. This method envisages agro systems defined by eight levels of performance: climate, landscape shape, water capacity, streets, trees, buildings, fencing, soil; and their adaptation should lead to resistant horticulture.

METEOROGRAPHICA, OR METHODS OF MAPPING THE WEATHER

Francis Galton sets the modern system of graphical systematic representation of weather.[38] As the initiator of scientific meteorology, Galton devised the first weather map, and was the first to provide a complete record of the brief climatic phenomena occurring on the European continent. Visualizing such a huge amount of information in a schematic form indicates patterns, trends, anomalies, consistency, variation, in ways that cannot be presented in other forms such as text and tables and at the same time informs about interesting overlaps, relationships and capacities.

In the current state of this research, the application and analysis of the second

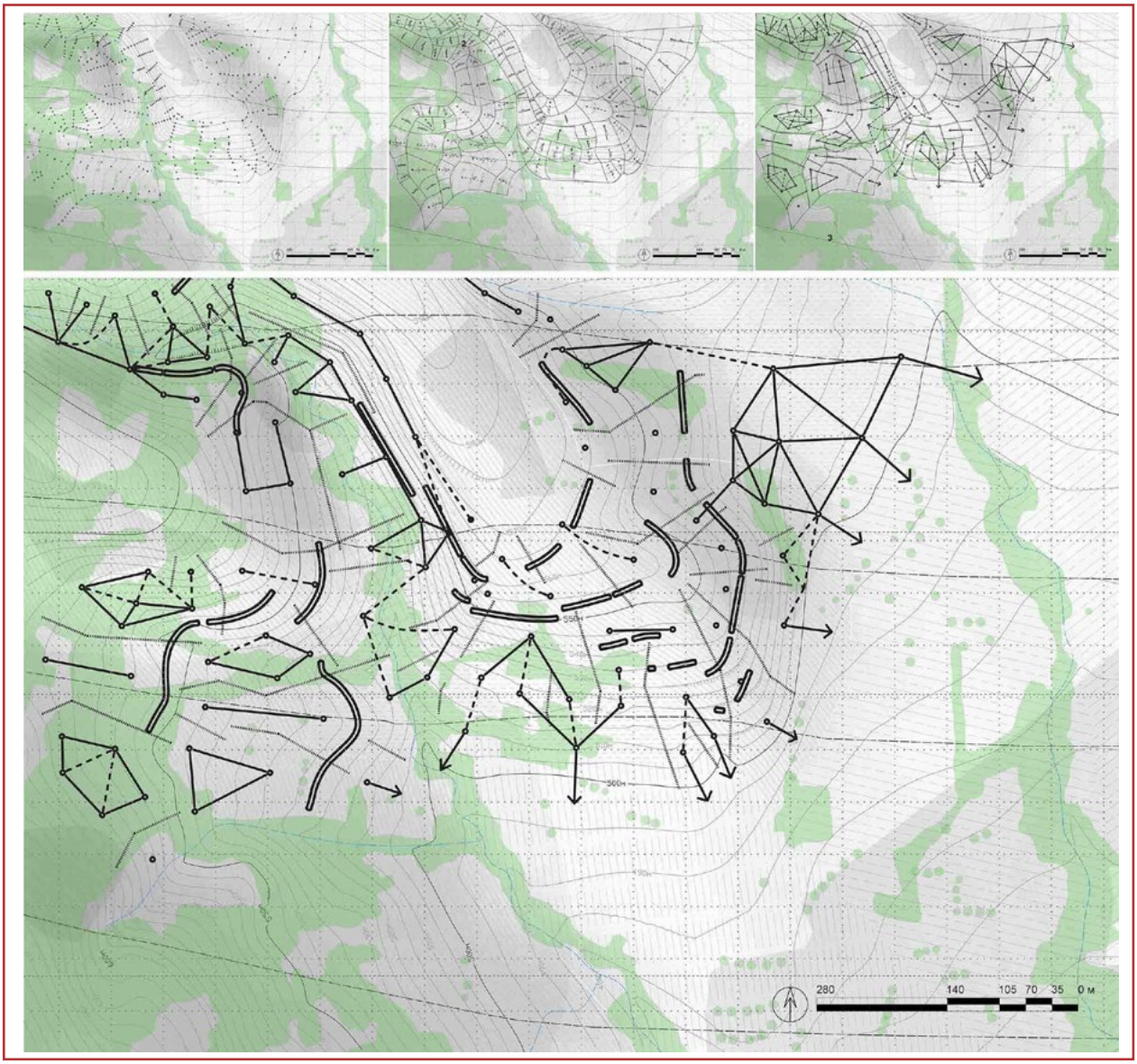
36 Boitreaud, D (1972) 'Cartographie des relations visuelles entre les points d'une topographie', L'architecture D'aujourd'hui, 1(164), pp. 17-22.

37 Yeomans,P.A (1981) Water for every farm using the keyline plan, 2nd edn., Adelaide: Second Back Row Press Pty Limited

38 Galton, F (1863) Meteorographica, Methods of Mapping the Weather, 1st edn., London: London and Cambridge: MACMILLAN AND Co.

Fig.5

Map of the village of Chucher and its surroundings. Application of the method in determining the visual relations between the points of a topography, positions and connections.



and third reference methods are in their infancy and therefore the conclusions from their application are not elaborated fully in this article.

When viewed as a synthesis, these cartographic inscriptions as territorial specificities should lead to balancing the resources and extremes of the territory through a system of spatial organization and use of architectural elements. The overlaying of all this information generates positions of possible density (architectural, programmatic, infrastructural, natural), which complements the village morphology and its individual form - the house, as an elementary structural unit in the village. This means change in scale from a territorial survey towards the immediate context of a house.

RESULTS IN AN INDIVIDUAL FORM – THE HOUSE

In the process of overlapping the operative map and connecting the visual relations of

Fig.6

Position of the individual form - house with the elements of the local context

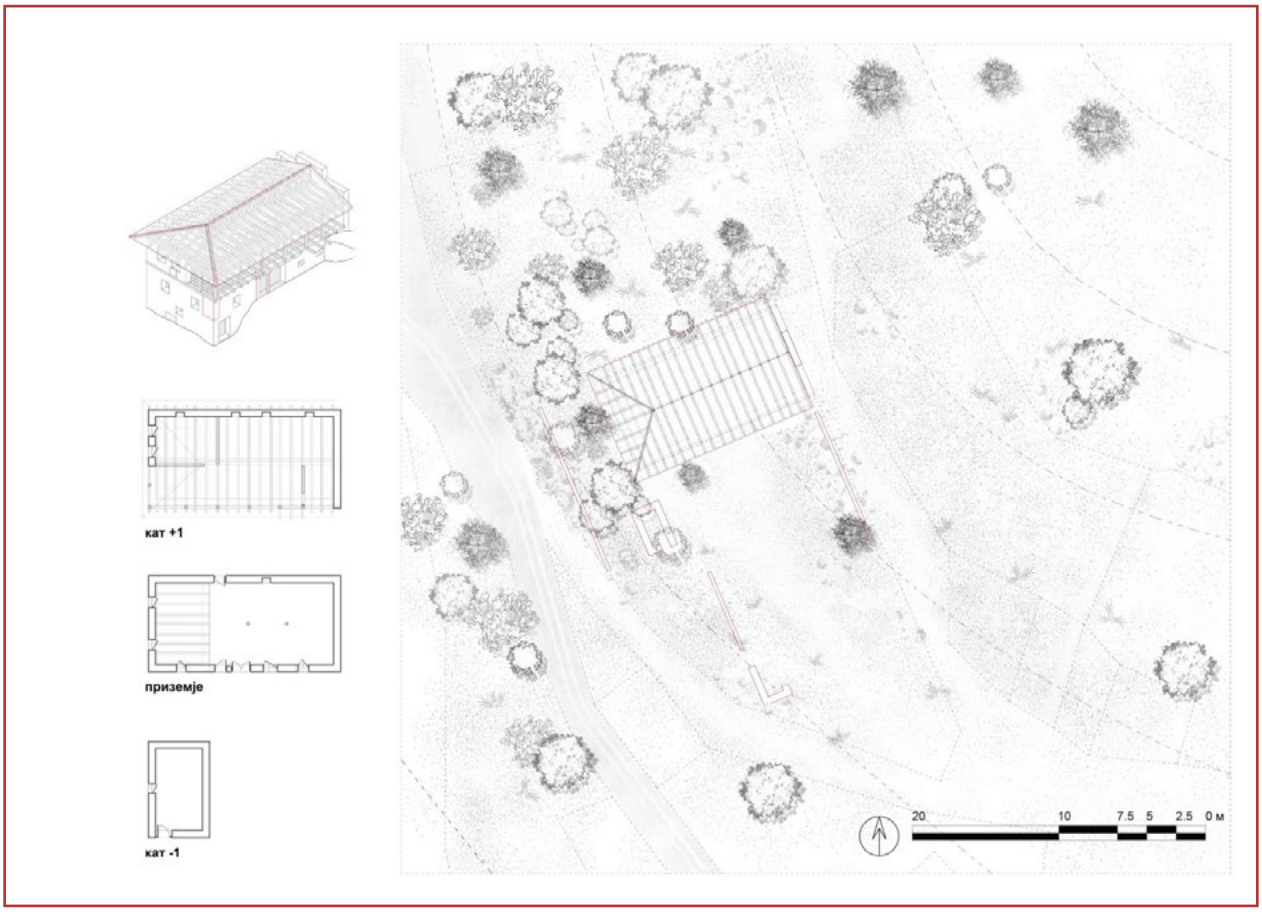


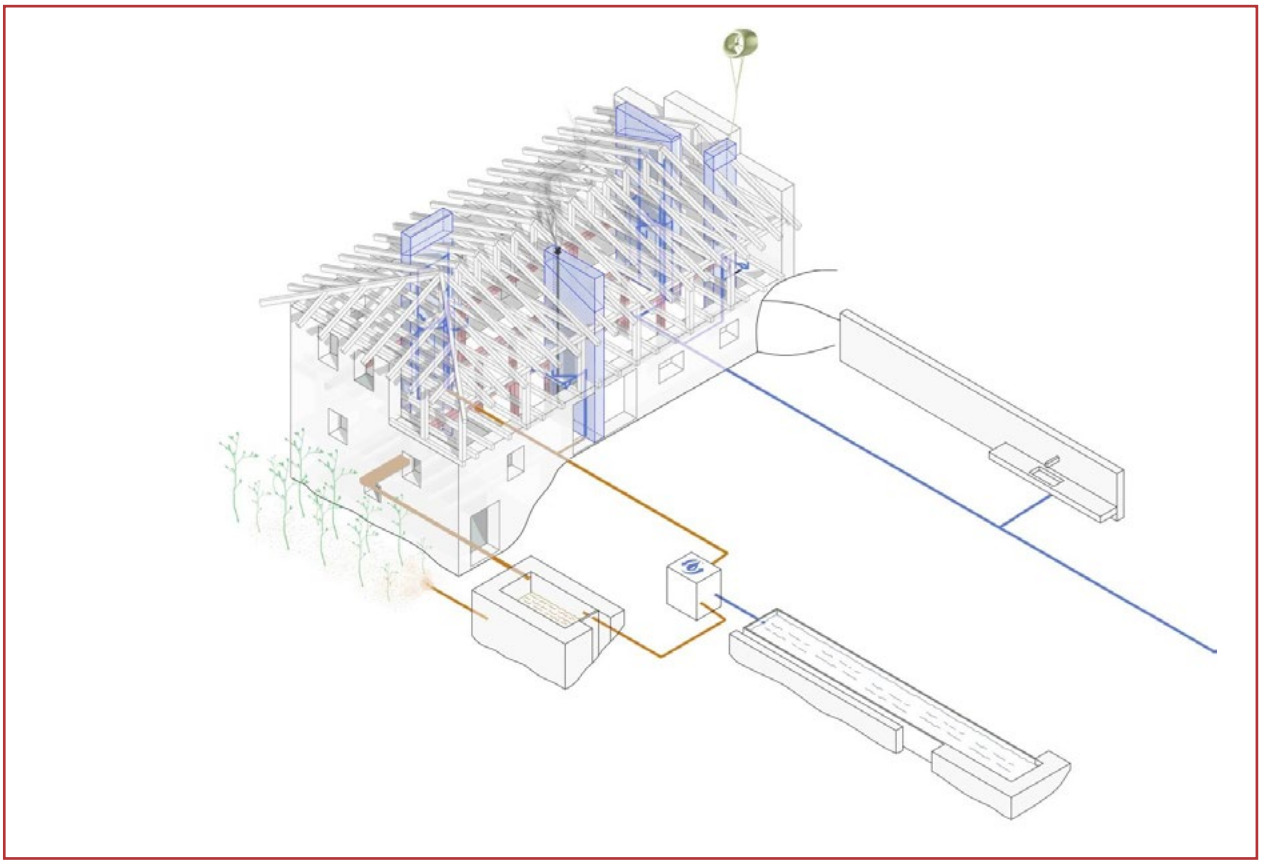
Fig.7

Clearing, cleaning and replacement

the topography with the existing spatial elements, the capacities tested in different scales were confirmed. New infrastructure positions, connections and networking on potential and existing public spaces (the plateau in front of the house) have strengthened the owners' program initiative - a hybrid program that intertwines housing and work. The plateau as a potential public space in this case would be followed by the public program on the ground floor of the building, and at the same time it becomes part of the program distribution and connection at the level of the entire settlement.

Fig.8

Networking the individual form - house with the territorial specificities



This example of traditional architecture - the house, with its spatial organization is causally related by the local climatic factors, its relation with the terrain and its materiality.

The balcony is a dominant multi-purpose semi-open architectural element with favorable orientation, communication and visual connection. The spatial movement, through stairs and a series of rooms adjust on the topographical differences inside the house. The stone wall as an infrastructural element becomes part of the program and the spatial sequences. Re-evaluating these architectural elements led to the first on site activities.

The rehabilitation process starts with cleaning, clearing and replacement of weak and damaged elements of the house after which the elementary structure could be observed in detail. This allowed for strategic placement of different vertical penetrations and promenades through the building that connect all the levels in a form of a dynamic movement.

The need to engage the architecture with the context imposed infrastructural and technological improvements of the building and its surroundings. Vertical cores that penetrate through the building were introduced, which on the one hand have a relation to the structure and strengthen the already damaged wooden pillars and beams, and on the other hand, they receive all additional infrastructure capacities such as electrical installations, water, mechanical elements, ventilation, flues, etc. The service functions such as toilet, kitchen, server room, machine room are always attached to the structural and infrastructural vertical cores. These elements tend to provide functional circulation by process in which we use and reuse available natural resources

The insertion of the program improves and enhances the relationship between the levels and the internal communication of the house. With the use of the vertical promenade, the utilitarian work spaces in the basement are connected with the ground floor and the housing program placed on the first floor. The rooms on the first floor have been left flexible and the balcony still represents the focal entrance point in the living quarters. The program on the ground floor as a semi-public space spreads into the area of the yard which is also a spatial capacity for public space at the level of the entire settlement. Consequently, the infrastructure and the programme of the house is connected to the positions of density and connections conducted in the research on a larger scale.

This traditional typology has the potential to be promoted as a prototype networked with the environment in relation to spatial and natural resources and, above all, it's potential for adaptation and re-use. This habitat as a case study examines the relationship between the building and the environment, to unravel the context and to reconsider a person's relationship with the territory.

CONCLUSION

The new landscape of the city, the state of the in-between can generate various built forms, fragments and islands networked by the landscape and it is the landscape that represents the connective tissue of these autonomous, specific entities, that is, the existing capacities. Field observations as well as specific methodologies were examined in order to find reference procedures in the cultivation of such conditions. From these complex layers information has been extracted and transformed into an operative map presupposing spatial organisation, new models of urbanity that adapt and enhance sustainable regions. This information was tested and overlapped through a constant change of scale.

We identified several key topics as a inevitable components of the contemporary surroundings:

The topic of **Urbanity** that predetermines daily cultural and social relations enabled by forms and spatial structures that create neighborhoods and interactions with the immediate neighbors. Hence, public space becomes a particularly important element in the new models.

The topic of **Social Relations** that embraces the idea of the density of urban functions, the movement of people and goods, the dynamics of the environment. In the fragments of this condition of the in-between it would mean to adjust the spatial conditions of each part of the territory and their connection.

The topic of **Technology**, in relation to architecture as a technological tool, that is to say architectural forms that don't have a passive presence in the territory but act as operative tools that produce things outside of themselves. Active architecture which is another type of project that involves the architect but also the engineer. An architecture that uses different technologies and facilitates the border between its elements and the exterior, i.e. bridges the distance between nature and the city.

Theme of **Ecology.** Because the new urban models of the in-between are surrounded by intensive natural systems. Territorial syntax is now becoming a structure of urban fragments. Resources and their potential to generate new structures, networked with the peculiarities of the territory.

The theme of **Landscape**, i.e. architecture that is well placed in the landscape with consideration for the integrity of the landscape and its beauty. Bogdan

Bogdanovich calls it the balance between the elements of architecture and the elements of the landscape that make them interdependent. This architecture balances the view of the landscape and the volume of the architecture, the light of the landscape and the color of the architecture.[39]

These topics are proposed to form the framework of the further research process which does not set an ultimate goal but promotes an open system that can have many unexpected directions. In contexts that are influenced by rapid changes and transformations that cause dramatic spatial consequences, this open interdisciplinary approach promotes the symbiosis/overlap between actors and structures of daily life, biodiversity, agriculture, industry and resources. Initiating a long process of adaptation and transformation of these systems and their overlap means setting up a resilient and self-sustaining model for the future of the city's periphery, strengthening its heterogeneity, polycentrism and relationship with the landscape.

39 Bogdanović, B., 1958. Mali Urbanizam. 1st ed. Sarajevo: Narodna Prosvjeta.

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