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ENVIRONMENT IN THE HUMAN PERCEPTION: GEOGRAPHICAL ASPECTS

ABSTRACT. The present work highlights the different aspects of human perception of environment, specific characteristics of the subjective estimation of its state and attitudes to environmental quality. The authors claim more scientific awareness for the understanding of the motivations determining human behavior during interaction with the environment and knowledge about the objective functional system “perception – action” as part of complex geoecological analyses. Furthermore the populations view on the further development of the landscape to improve its living conditions etc. is a crucial part of this concept.

KEY WORDS: human perception of environment, state of the environment, “human-environment” interactions, complex geoecological analysis.

INTRODUCTION

Environmental problems and difficulties in protecting landscapes are widely discussed and studied by various academic institutions, universities and other scientific organizations. Many books and articles are published and international conferences are held on these problems. However, wide part of this discussion is driven by positions

which can be called technocratic or “top down” while there is a lack in studies on the human perception of environment. The attitude of local populations to different types of their land-use, the meaning of their territory to them and their participation in managing and developing should be of particular interest [Dushkova et. al., 2010].

The aim of the paper is to evaluate the perception and assessment of the environment by the population and to promote research approaches which focus on the analysis of the human perception of the landscape as a part of the interaction between humans and the environment, especially in a comparative perspective in Russia and Germany

RESULTS AND DISCUSSION

The first analysis of current geoecological methods to assess the geo-ecological state of territories shows a wide variety of approaches to tackle problems which are situated in ecology or the safety of a territory. Most of them do not take into account the opinions and attitudes of the local population to the environmental state or its changes. Of great importance is the evaluation of the human perception (including people from various social and

professional groups) of appropriate living conditions, ecological risk factors and connected to them people's choices of where to live, make a living etc.

The term "environment" is widespread in scientific literature, official papers of Russia, Germany and international organizations – the United Nations organization, UNESCO, etc. This term was introduced by the German-speaking Estonian-Russian biologist J. von Uexkuell [1921], who analyzed the interdependence and united system of organisms and their habitat. He considered the environment itself as part of the area, where organisms live and which is perceived by their receptors. Through adaptation the organisms and environment undergo mutual changes sharing chemical agents, energy and information.

Since the 1960s and 1970s, when the state of the natural environment was identified as endangered, this term has been used in nature protection legislation in developed countries (the USA, Japan, Great Britain, Germany, France, etc.). In Russia this term started to be used later, with the acceptance of the Federal Law "About preservation of the environment" [1991].

According to the classical Russian geographical definition of N. Rejmers [1992], the environment is a complex system of biotic and abiotic components, e.g. the combination of natural and anthropogenic factors, which influences humans and their economy.

Thus the environment where humans live and act consists both of natural and man-made materials, includes natural and technogenic environment, e.g. elements made from natural materials by man and having no analogues in nature (artifacts like buildings, constructions etc.).

Environmental quality, then, is defined by objective measurement of environmental parameters (i.e. compliance with guidelines like they are fixed for protection of nature

reserves) and subjective estimation as well, which are both of a special interest in this research. Commonly, if the mainly quantitative results for the parameters which describe the state of the environment match with values determined by humans and other species' needs, the environment is considered as positive, recognized by people as satisfactory for their needs, although some subjective assessments of the human population do not confirm this fact.

Human influence on the environment is not one-sided; people are also affected by external factors. Transformation of the environment is connected to the organization of the territory and the formation of new spatial forms of nature management.

Nowadays almost all environment which usually is considered as "natural" has undergone direct or indirect influence from human activity [Matthiesen et. al., 2006]. On the basis of a constructivist perspective, every landscape as a part of the human environment is a culturally and subjectively defined object of perception and estimation [Tzschaschel, Micheel, 2007]. An essential part of this concept is made up by the attitudes of acting persons (actors, agents) since they constitute and create "their" environment as landscape by conferring meaning to the natural conditions of which they are surrounded [Lentz, 2001; Matthiesen et.al., 2006]. So, Landscape is thought of as an area and as well as the appearance of an area, which has both material and representational aspects.

Following the reflections of I. Kant [Kant, 1786], actors assess and define landscape in many cases through their own perception of beauty and aesthetics. Kant declared nature as an unquenchable source of emotional wealth as well as physical and mental human health. F. Hegel also studied landscape aesthetics and considered, contrary to Kant, that nature cannot be called beautiful without man – the subject of perception. In other words Kant claimed beauty in nature as an immanent universal truth, whereas

Hegel perceived it as the subjective human feeling.

The main principles of the ecological and technical perception of environment as a spatial subject were developed by A. Humboldt, who was influenced by German classical philosophy (especially by the philosophy of I. Kant, 1786). According to A. Humboldt [1808] the understanding of integrity of nature is an important aesthetic principal. According to his thinking nature "... is unity in multiplicity, combination of diverse in the form and blending, is the concept of natural things and forces as the idea of a living whole" [Nikolajev, 2005].

The term "perception" is wide spread in German-language geography and connected to the works of Reiner Krueger [Krueger, 1987] who started researching perception in geography in the 1980s. Environmental (landscape) perception as an important geographical point was stated in Russia by W. Semjenov-Tjan-Shanskij [1928]. He discussed the phenomenon of the landscape and interactions between art and geography, because geography is based on a viewer's impressions and "permeated" by them. In the 1960s D. Armand [1975] referred to the aesthetic values of the natural environment, returning to the ancient idea of the utility of the beautiful (and the beauty of the rational) and appealing to keep the beauty of nature. Following him, A. Issatschenko [1953] marked the aesthetic points of the landscape as an important characteristic of the territory.

Perception of the environment depends on the employment of its parts. There is a connection between the function of the territory and the images produced by that territory; every function produces its own landscape. It was shown by G. Isatchenko [1988] that territories can have symbolic meaning: every nation has its own landscapes-symbols, recognized by their population.

From a philosophical point of view one might ask if the ontological starting point

of mankind was the distinction of man from nature. Before, mankind as a part of the environment completely adapted to it and perceived it as a continuation of itself. Thus perception of the environment developed as a result of centuries of adaptation to it, reflecting the complicated system of human attitudes to the visual manifestations of the natural processes. It was detected in the form of the subconscious (instincts).

So, environment becomes a historical base which has formed human perception, including aesthetic perception. W.N. Nevsky [2007] contended that mentality is fed by the environment. The way of life, the character and the appearance of humans are then influenced by the environment. Ju. N. Golubchikov [2003] discussed the examples of relativity and (dependence) of aesthetic perception.

Perception depends on a person's qualification through his cultural and educational traits and associative thinking as he interacts with a landscape. The process of perception includes the intussusceptions/inversion of material forms and the measurable processes of a human activity as well as meanings and symbols given to the territory by a human consciousness [Lavrenova, 1998].

Man as a part of a created cultural landscape identified himself with it and thought of it as home (rodina/Heimat). Home (rodina/Heimat) and self-identification of a man with a certain territory are determinant categories of connections between them [Krueger, 1987; Hasse, 1999; Nohl, 2006]. Yet, the interaction of agents in the process of identification has not become fully clear.

Aesthetics, symbols and emotional content of the human environment have been studied from the 1980s. Yi Fu Tuan [1984] in his work «Topophilia» marked diverse emotional attitudes of humans to landscape as his environment. Simultaneously P. Juengst [1984] studied symbolic meanings and emotional definitions of a landscape.

A person identifies a territory through symbols not only as a result of co-interacting with significant events, but also with his assumptions of the objects which obtain the definite character of relations in the process of socialization.

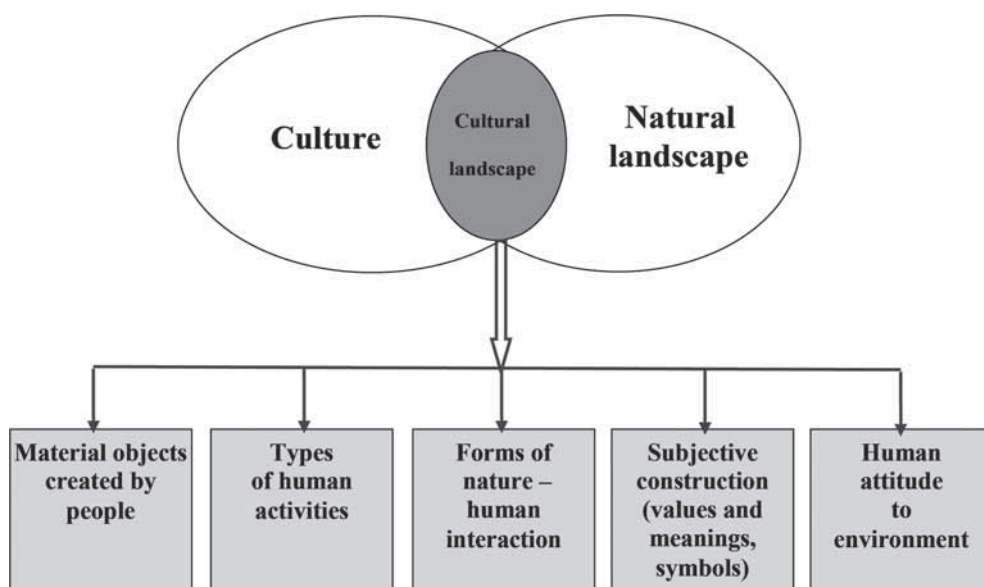
New approaches to the investigation of territory have been developed in world geography from the end of the 1990s, its symbolic content and obtained meanings are the most important. The estimation of the territory from the position of a subject (representative of population) has become popular world-wide [Kemper, 2003; Mitchell, 2000; Robertson and Richards, 2003; Tilley, 1994]. German studies concentrate on the role of the cultural environment in the formation of national, regional and transnational identification, where the construction of mental maps takes place [Natter, Wardenga 2003].

The territory is understood as a precondition and a result of intentions and results of actors' everyday activity [Werlen, 1997]. Therefore territory coding is produced by social actions or, relating to a landscape, forming cultural landscape elements. Formerly the

territory was interpreted as an outer field of human activity, but the main idea of Werlen's work states that the territory (landscape) is constructed by the subjects through action.

On this basis cultural landscapes are not considered to be only a summary of material artifacts, but are also studied on their social meaning and function (Figure).

In a co-operative research project the Leibniz-Institute for Regional Geography in Leipzig [Tzschaschel, Bode, Micheel, 1998; Tzschaschel, Micheel, 2007] together with other research institutes and universities is currently analyzing the subjective constitution of cultural landscape (Kulturlandschaft). Cultural landscapes are regarded as socially defined verbal expressions which characterize the human attitude to their environmental. Approaches of studying elements determining this perception have been developed in recent research on territories, which are in different stages of formation, changing functional status, content and environmental management (including biosphere reservations, significantly changed landscapes as a result of intensive technical activity (i.e. extracting industries, mining), and



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so-called constructed landscapes, formed in the process of contemporary territorial planning). The research is based on the hypothesis that significant changes do not affect the perception of and attitude towards landscape in everyday life. The survey's results show that (structural) alterations in the appearance which challenge the meanings of the landscape might lead to irritation and disagreement, but not to a different attitude towards traditional values and meanings. Furthermore, the results show that a perceived territory is reflected in a person's mind as an image, contained in each culture. This image is no less important a component of the environment as climate, water resources, the landscape's relief, terrain and vegetation. The human perception of environment is carried out through a system of interdependent signs and symbols, referring to the territory. All this forms the human subjective mental environment, in which we exist.

The results of the study are in accordance with the socio-ecological study in Northern Russian regions held at the Faculty of Geography of Moscow State University [Krasovskaja, 2008; Evseev, Krasovskaya, 1996, 2004; Dushkova, Evseev et.al., 2010; Vorobjevskaja, Sedova, 2008; Kosenkova et.al., 2005]. In particular one of the aims of this study was to assess self-identification of the population with their territory (how local people treat native land – from temporary position or not). Also analyzed was the level of awareness of respondents of ecological problems in their region and the state of local landscapes, knowledge about regional culture and traditions and significant territories (landscapes). The results showed two main trends of perception: The first trend belongs to the newly arrived people, who moved to the region with the beginning of industrial development (1930s), and characterizes from temporary position (the respondents wanted to move to other regions with a more appropriate ecological state after finishing their employment contracts or retirement). This perception can be summarized as “man – conqueror

of nature”. The second trend belongs to the indigenous (aboriginal) population of the North, who has lived in the territory for many centuries, and has come to the conception “man is a part of nature”. The native population has generated images of the environment for centuries, significant places, self-identification with the territory and a feeling of being a part of it (feeling of home). An important fact, worth mentioning is that the ecological conditions do not mean much to the newly arrived people; they perceive mine-workings as an opportunity to earn money but not as an ecological problem, and therefore reinforce technical activity. On the contrary the majority of the native population wants to assert their rights to have an appropriate environment and to discuss projects on regional development.

CONCLUSIONS

At the moment the approaches for geoecological estimation of the territory are very well developed according to the economical aspects of social activity, attention to the research of the objective features of environment-forming landscape ability. However, subjective human perception of the environment quality needs further investigation. The complicated character of all interactions and development of the system “human – environment” supposes new interesting results in further complex work aimed at the human environment perception. The understanding of human motivations determining their behavior during interaction with the environment and knowledge about the system “perception – action” becomes more important for sustainable land use, improving environment quality as well as conditions of living.

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