

Ecological Consciousness and Involvement in Cultural and Productive Labor in the Context of Interaction of a Person with the Nature

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Abstract — Under the conditions of economic changes and transformation of social processes, modern society, entered on the path of sustainable development, has a special purpose - the organization of such a way of life, in which the preservation and enhancement of natural diversity will become an objective need of the improvement of the quality of life. The improvement of the quality of life of population is impossible without harmonious interaction and human existence with the environment. Modern scientists emphasize the special significance of the investigation of ecological consciousness of a person as a factor that is of decisive importance in the formation of the interaction between a person and natural environment. The article highlights the results of an empirical study conducted in the Chuvash Republic (Russian Federation), in which 460 employees of industrial organizations took part.

The study showed that environmental consciousness for the majority of respondents is characterized by a high degree of awareness of the importance of the role and place of nature in human life. But the coherent concept of “nature” is perceived as more valuable than its individual elements. The study of such components of environmental awareness as a degree of social activity and readiness for environmental activities showed that, despite a high degree of concern about environmental issues, the level of environmental activity remains rather low. Most of the respondents show a high degree of passivity and social unpreparedness for active environmental activities. The results obtained act as an indicator of a rather low environmental competence and environmental awareness of respondents due to the relatively low status of environmental education and the low social significance of environmental knowledge in high school and pre-university training of specialists. Environmental passivity in this case can act as a kind of protective mechanism,

starting to work due to lack of resources or the necessary knowledge in order to realize its potential in the field of environmental protection.

The study revealed that the way of life of population, characterized by a high degree of the involvement in cultural and productive labor in nature, determines the content of ecological consciousness, transforming its inner direction in favor of increasing the importance of nature in human life.

The analysis of the research results revealed the problem of the need to make specialists engaged in various systems of industrial relations green-minded. Based on the results of the study, a system of psychological support measures was developed in order to improve the skills in the field of greening consciousness.

Keywords — *ecology- consciousness, involvement in the activities, ecological values, dominance of the subjective attitude to nature, value orientation*

I. INTRODUCTION

Modern society, which has entered on the path of sustainable development, has set itself a special purpose - to organize such a lifestyle, under which the preservation and enhancement of natural diversity will become an objective need in order to improve the quality of life in the context of economic changes and transformation of social processes. Sustainable development involves the implementation of tasks in order to improve social and economic indicators while maintaining environmental well-being and improving the quality of life of population [14]. The improvement of the

quality of life of population is impossible without harmonious interaction and human existence with the natural environment, within which the natural environment itself is a necessary condition for the natural life support and existence of both a person and the whole society.

Under modern conditions of industrial development, improving the quality of life of population and maintaining environmental conditions of life is impossible without rethinking the role of nature in society. Nowadays, there is a controversial situation where the interests of individual consciousness may conflict with the interests of public consciousness. According to the authors it could become the main reason for the slow transition and implementation of a sustainable development strategy in the course of natural resources development. Under the conditions of the loss of traditional mechanisms of formation of social values, bearing deep significance of the successive understanding of the experience of previous generations, the interaction with nature, the transition to a sustainable development strategy requires much more effort from an individual within the framework of individual consciousness and building a worldview.

Modern Russian scientists emphasize the special significance of studying the ecological consciousness of an individual as a factor that is of decisive importance in the sphere of the formation of the interaction between a person and the nature (I.V. Lavvygina, 2015) [6]. According to I.V. Tsvetkova and T.N. Ivanova the formation of environmental responsibility is closely related to ensuring national environmental security and the implementation of the tasks of sustainable development of society [15]. A.V. Kaverin, D.A. Masserov [8] believe that the role of environmental education in the sustainable development of society is especially important and it is environmental education that will become the basis of a new educational system model as a necessary element of the transition of modern civilization to sustainable development. The resolution of environmental problems of society depends on the level of ecological-legal culture, environmental competence and education of population [12].

A number of studies devoted to the research of environmental consciousness (A. N. Autleva [1], S. D. Deryabo [3], V. I. Medvedev [7], V. I. Panov [10], N. V. Ulyanova [16], V.A. Yasvin [17]) show that the investigation of this phenomenon is impossible without an understanding of the in-depth analysis of the essence of the formation of this phenomenon. If all existing forms of social consciousness are somehow connected with the reality created by a person himself, then ecological consciousness has a slightly different nature. Ecological consciousness as a form of social consciousness, from an evolutionary point of view, acts as a form of reflection, within which a person initially acts as a biological species, being a part of nature, and only then, a social being included in the diversity of social, cultural and social processes. Accordingly, environmental consciousness has several forms of reflection: mental, psychological and social. Consequently, it appears not quite as a form of social consciousness, but rather as the highest, integrating form of the psyche, subject to the active transformation of its internal content, due to the intense transformation of social processes.

If we consider environmental consciousness as a form of public consciousness apart from the underlying mechanisms of its formation, at the level of ontogenesis, the nature of this phenomenon is considered by various researchers as a controversial organization [7]. And vice versa, if we include it in the content of its fullness, the entire history of the formation and development of mankind, the answers to all questions related to his controversial organization are revealed. It is quite simple to understand the essence of ecological consciousness through the prism of phylogenetic development, as the process of the formation of social consciousness, in which nature is considered as the primary value of being.

The whole culture and its internal content (conscious and unconscious) of a particular people carried a huge legacy of traditions and rituals cultivating the value of nature in the system of actual values of society. Such an understanding of the essential nature of ecological consciousness in the context of its phylogenetic development helps to uncover some phenotypic mechanisms of its internal nature and organization. However, in the process of the entry of our society into the era of industrialization, there was a reorientation of values, in which traditional values, handed down from generation to generation, came into conflict with the values of industrial society dictated during social transformations. Under these conditions, the internal content of environmental consciousness, as well as the process of its formation and orientation, came into deep contradiction with the content of values of public consciousness, which has not yet been fully resolved.

In this connection, several researchers began to consider this phenomenon as an eco-oriented (biocentric) ecological creation and an anthropocentric (egocentric) ecological consciousness [10]. The product of the last is presented by the values of individual consciousness of a person included in the production process of industrial society, which, have their influence on the content of the values of public consciousness, is not yet at a deep level. According to the authors the study of the internal organization and content of environmental consciousness as an actual state of reflection of objective reality at the level of individual consciousness will allow the study of its orientation, as a property, of the active involvement of a person in activity.

It is the activity that allows individuals to become involved in the process of awareness of their willingness to act, taking into account a variety of factors, especially those related to the environmental component. Such an attitude to reality requires the disclosure of the whole nature of the functioning of the modern individual consciousness, the main task of which becomes the expansion of modern social ideas about the mechanisms of its organization under the conditions of economic reality, which require constant improvement of economic indicators with maximum preservation of the natural habitat of a person.

The important condition for the involvement in the work of consciousness of specific analytical processes, as a process of understanding reality, through the prism of the environmental component, is activity. Activity in psychology is understood very broadly; it is not only objective activity, but also mental

activity itself, where the personality itself is the subject of activity. In this connection, the degree of activity of the person himself, included in various spheres of social reality and the degree of involvement in various activities becomes involved, according to B.D. Parygina, is one of the most important elements of psychological readiness for effective activity [11]. Under these conditions, the understanding of the mechanisms of functioning of individual and social consciousness, in which the priorities of one become an important component of the priorities of the other, acquires particular importance. Nowadays a controversial situation has developed in the society when the interests of individual consciousness may conflict with the interests of public consciousness.

In this regard during the course of the study, an attempt will be made to study the influence of activity on the substantive indicators of ecological consciousness. Within the framework of the proposed approach, the considered characteristic of the “degree of inclusion in the cultural-productive labor in nature” will act as an important component that determines the direction of ecological consciousness of population, still retaining the traditional forms of interaction with the natural environment.

During the course of the study, a hypothesis was put forward, according to which a high degree of personal involvement in cultural productive labor in “human – nature” system is an important indicator determining the direction of ecological consciousness.

II. RESULTS AND DISCUSSION

The study was conducted in the Chuvash Republic (Russian Federation). The Chuvash Republic is of particular interest for the conducting of this kind of research, since according to the 2018 data, the rural population was 37.5%, and the urban population was 62.5% [13]. A rather high proportion of rural population shows that various forms of interaction with the natural environment and agricultural activities present an integral part of the way of life of population, which creates additional opportunities for conducting this kind of research.

In the course of the investigation of this problem, the following techniques were used in order to study the substantive characteristics of ecological consciousness (S.D. Deryabo, 1995) [2]:

- The methodology “the study of value orientations” of M. Rokich. The study used a modified version of the methodology, where the terminal value of “favorable environmental conditions” was additionally introduced. Purity of nature”;
- The methodology “Determination of the dominance of the subjective attitude to nature” by S.D. Deryabo, V.A. Yasvin;
- The method of “studying the intensity of the subjective attitude towards nature” by S.D. Deryabo, V.A. Yasvina;
- The methods for the study of environmental values of T.V. Ivanova [5]. According to this method, the subject

ranks two groups of statements according to the degree of their relevance at the present time. In the first group, the statements in which the aspects of human interaction with the environment were revealed are formulated on the basis of anthropocentrism positions.

In this case, the nature is understood as a space of human social activity, namely, as: a part of national wealth; source of resources for economy and industry; ecological human environment; sample to create new technology. In the other group there are statements based on the positions of ecocentrism, i.e. the orientations reflecting the understanding of nature as: a source of knowledge of the laws of the world, the condition of human moral development, the mastermind of art, a necessary condition for the harmonious development of a person.

- The questionnaire for the study of the structural components of environmental consciousness (emotional, cognitive and behavioral).

The methods of statistical processing of information included: comparative (Student's t-test), correlation (according to Pearson) analysis.

The study involved 460 people, employees of industrial organizations, including the agricultural sector, living in the Chuvash Republic, 180 of them were women and 280 were men.

According to the analysis of the sample, 37% of the respondents grew and continue to live in rural conditions, and 63% of the respondents are residents of the city.

Important characteristics of the environmental awareness of specialists are self-assessment of environmental competence and professional competence. To the following question: “Do you personally have enough knowledge to make competent decisions in the field of “a person-the nature”?” 55.8% of respondents answered that they did not; 20.5% of respondents were not sure that they possess such knowledge, and only 19.8% of respondents believe that they had such knowledge. Perhaps such a response from respondents is associated with the fear of making them too responsible for making environmentally sound decisions, as well as a relative lack of understanding of possible solutions to environmental problems.

To the next question: “Are you familiar with environmental legislation and federal laws on the rights and obligations of citizens to protect the environment?” 14.3% of specialists answered that they were familiar, 35.9% - answered that they had superficial knowledge; 47.6% honestly answered that they were not; 6.6% answered that they had not heard about the existence of such legislation before.

The study of some aspects of environmental consciousness has shown that with respect to subjective imaginations of the perception of nature and natural objects, most experts have rather contradictory positions. Thus, we have established that, with regard to nature, most of the specialists have ecocentric attitudes: 58.4% assert that both a person and nature have “equal rights to existence”; 34.8% believe that “nature has more rights”, and only 5.1% of respondents have obvious

egocentric attitudes, they agreed with the statement that “nature is a human slave”.

However, asking a similar question to the respondents regarding individual objects of nature (animals, plants), we saw that the attitudes of the respondents changed to some extent. Thus, according to 24.1% of respondents, “animals have fewer rights to exist”; 23% of respondents believe that “more rights”; and 31% - “equal rights”. The views on plants were distributed as follows: “more rights” (9.2%), “less rights” (34.8%) and “equal rights” (36.9%). With respect to objects of inanimate nature, the results were as follows: “more rights” (10.2%), “less rights” (30.2%) and “equal rights” (38.4%). Such a distribution of objects indicates that a general question about the perception of nature causes one reaction of respondents, and a specific question regarding the perception of individual objects of nature often cause another reaction, sometimes quite the opposite.

The distribution of answers to the question: “Do you agree that a person should bear the same measure of responsibility for the harm done to nature, just as if he caused harm to a person?” 46.1% answered: “yes, I fully agree”; 8.7% disagreed and 29.4% agreed, but under the condition that this plant belongs to the endangered rare species.

In order to assess the degree of awareness of ecological situation and environmental responsibility, the respondents were asked the following question: “When making a decision what principle do you follow in your work?” Two variants of the dominant priority were proposed: “protection of ecology” and “economic growth”. Thus, 61.2% of respondents answered that environmental protection should be preferred, even if this may lead to a decrease in economic indicators. Economic growth is of interest to specialists who adhere to anthropocentric ideas, who believe that a person has more rights in relation to nature, while the protection of ecology, on the contrary, presents interest to specialists who believe that nature has equal rights with a person ($r = -0.17$; $p \leq 0.05$).

Professional competence is often associated with the degree of awareness, which also act as important characteristics of environmental consciousness (its cognitive component). To the question “How aware are you of the specifics of environmental problems in the region?” 64.2% of the respondents answered that “they are completely unaware” and 35.7% answered that “they are sufficiently informed”. This indicator, in our opinion is a sign of passivity and deformation of ecological consciousness due to its low awareness.

During the research the authors also tried to find out whether the research participants show a personal interest in reliable knowledge regarding the environmental situation in the region. It turned out that 27.1% of the respondents certainly showed such interest, 41.5% did not show, although they were interested in such information, 32.1% were never specifically interested in such information.

As a result 38.3% of respondents expressed a desire to personally participate in environmental activities, 34.8% would refuse politely, 16.5% would agree, but within the company’s working time and 11% found it difficult to answer.

The respondents practically do not realize the degree of significance of personal activity in environmental activities.

Then the answers of the respondents were analyzed in accordance with the degree of their involvement in cultural and productive labor in nature.

The basis for the division of the participants into two groups was the answers to the questions: “Do you currently have a place of constant contact with nature (a summer cottage, a countryside house)?” “Do you grow something personally?”, “Is it a pleasure for you?”, “Does this kind of work present a significant spiritual necessity for you?” The obtained data allowed distributing the respondents into two groups according to the degree of their involvement in cultural and productive labor in nature:

- a high degree of inclusion - these are the respondents who were most often born and raised in the countryside, they retain a direct connection with nature through cultural and productive labor in it. They have a plot of land on which they independently grow various agricultural crops for personal use. It brings them high pleasure;
- low degree of involvement - these are people who, like the representatives of the first group, have a positive attitude to nature, most often they are city dwellers who do not have the desire or ability to constantly and directly contact with nature, to interact with it in the process of cultural- productive labor due to lack of time or other objective reasons.

During the course of the study it was found that in the quantitative ratio the respondents, having a high degree of involvement in cultural and productive labor in nature constitute 55%, and the respondents with a low degree of inclusion constitute 45% of the total sample.

According to the results of the study of value orientations, the influence of a high degree of inclusion of investigated people in cultural and productive labor on the value of “purity” and “beauty of nature” in the system of terminal values was determined. Thus, the degree of involvement of the respondents in cultural and productive labor in nature levels up the rating of nature as an ethical and aesthetic value. High involvement in productive activities levels up the “purity of nature” rating from 9.5 (average) to 11.9 in the system of terminal values.

The influence of a high degree of involvement in cultural and productive labor in nature on the dominance of a subjective attitude to nature also made it possible to establish a pattern of increasing the importance of nature in the group of subjects with a high degree of involvement in work in nature and reducing its importance among the respondents with a low degree of inclusion (TABLE I).

TABLE I. THE DOMINANCE OF SUBJECTIVE ATTITUDE OF THE RESPONDENTS WITH DIFFERENT DEGREE OF INVOLVEMENT IN CULTURAL AND PRODUCTIVE LABOR IN NATURE

	DEGREE OF INVOLVEMENT	
	High degree of involvement, %	Low degree of involvement, %
Nature as the most important value		
1st place	15.7	9.8
2nd place	12.9	4.4
3rd place	14.5	6.5
Nature as the least important value		
1st place	3.7	10
2nd place	4.6	15
3rd place	9.8	25.5

15.7% of respondents put “the nature” on the first place; 12.9% of respondents put it on the second place, 14.5% put it on the third place of those studied with a high degree of involvement. At the same time, in the group with a low degree of involvement: the nature was put on the first place - 9.8%; on the second - 4.4%, on the third place - 6.5% of the subjects.

The same dependence is observed of relatively low dominant significance. In the ranking of the least important dominants in the group of respondents with a high degree of involvement, the nature was put on the first place 3, .7%; on the second - 4.6%; on the third - 9.8% of the respondents.

In the group of respondents with a low degree of involvement in cultural and productive labor in nature: put “nature and animals” on the first place 10%, 14.5% put it on the second place and 25.5% of the respondents put it on the third place. Thus, in the ranking of the least important dominants “nature and animals” in the group of the respondents with a high degree of involvement in cultural and productive labor in nature, the nature moves from the group with low dominant significance to the group with moderate dominant significance.

The attempt to study the distribution of value orientations among the subjects with varying degrees of involvement in cultural productive labor in nature allowed establishing the nature of the orientation of ecological values.

TABLE II. ENVIRONMENTAL ORIENTATIONS IN GROUPS WITH DIFFERENT DEGREE OF INVOLVEMENT

Environmental orientations	degree of involvement	
	High	Low
Nature is part of national wealth	3.18	2.94
Nature - a source of resources for the development of economy and industry	4.64	4.19
Nature is an ecological human environment	1.41	2.95
Nature is a model for creating new equipment and technology	5.79	5.67
Nature - the source of knowledge of the laws of the world	3.35	4.54
Nature is a moral condition of human development	5.01	5.07
Nature is the mastermind of art	6.13	6.00
Nature is a condition of harmonious human development	4.55	4.77

The study showed that the degree of involvement in a certain way affects the increasing importance of the role of individual biocentric orientations and reducing the importance

of the role of individual anthropocentric orientations, but under the existing socio-economic conditions the degree of this influence remains insufficiently strong. Significant differences between the compared groups were found in the perception of nature as an ecological environment ($t = 1.96$; $p \leq 0.05$) and a source of knowledge of the laws of the surrounding world ($t = 1.62$; $p \leq 0.05$).

The study of the intensity of subjective attitude to nature in groups with different degrees of involvement in cultural and productive labor in nature was based on the analysis of the overall intensity parameter of the subjective attitude to the nature of non-pragmatic modality, which also revealed significant differences ($t = 1.97$; $p \leq 0.05$).

The results of the survey showed that in the group with a high degree of involvement in cultural productive labor in nature, biocentric orientations are more pronounced. Thus, the nature “as a slave” is perceived by a minority ($r = 0.11$; $p \leq 0.05$); at the same time, the important role of its objects is recognized: plants ($r = 0.11$; $p \leq 0.05$); animals ($r = 0.14$; $p \leq 0.05$). These respondents believe that the main principle in the conditions of production development is “the goal determines the means” and, therefore, it is necessary to give preference to the protection of the environment, even if it entails a decrease in economic indicators ($r = 0.19$; $p \leq 0.05$). At the same time, the respondents with a high degree of inclusion react less emotionally to the need to destroy an insect or animal, since they are most often perceived as pests ($r = -0.13$; $p \leq 0.05$), i.e. such respondents are characterized by greater pragmatism in the perception of natural objects.

The study revealed the following significant correlations between the studied variables:

The high degree of involvement in cultural and productive labor in nature is interconnected with an increase in the “purity of nature” rating in the system of terminal values studied ($p \leq 0.05$).

The analysis of the dominance of the subjective attitude to nature showed that a high degree of inclusion is associated with a high dominant significance of nature ($p \leq 0.001$), while the respondents with a low degree of inclusion in “nature and animals” are in the group with medium ($p \leq 0.05$) and low dominant significance ($p \leq 0.001$).

In the system of ecological values, a high degree of inclusion increases the status of individual rationalistic and biocentric orientations of nature, such as: ecological human environment ($p \leq 0.05$) and a source of knowledge of the laws of the surrounding world ($p \leq 0.01$).

The intensity of the subjective attitude to nature of non-pragmatic modality in the subjects with a high degree of involvement in creative labor in nature is higher than of those respondents with a low degree of involvement ($p \leq 0.05$). For such respondents, the nature is not just a way of practical survival, but also a way of life that carries a charge of morality and spirituality.

III. CONCLUSION

The important component of the quality of life of the region population under modern social, economic and environmental conditions is the high practical importance of the role of environmental factors for the inhabitants of the region themselves [4]. Under such conditions, the improvement of environmental indicators of the increase of the quality of life will directly depend on personal concern and high personal involvement in objective lifestyle conditions that preserve the value and significance of nature in society.

The current study showed that the degree of awareness of the place and the role of a person in the life of nature among the majority of respondents is quite high. Ecological consciousness is characterized by a high degree of awareness of the importance of the role of nature in human life, but a lack of understanding of the importance and significance of the fact that all objects of animate and inanimate nature are part of this nature, and therefore the cohesive concept of “the nature” is perceived as more valuable than its elements separately.

The study of such components of environmental awareness as the degree of social activity and readiness for environmental activities showed that, despite the high degree of concern and importance of the role of nature in human life, the level of activity is still quite low. Most of the subjects show a high degree of passivity and social unpreparedness for dynamic environmental activities.

During the study it was revealed that the way of life of the population, characterized by a high degree of involvement in cultural and productive labor in nature, determines the content of ecological consciousness, transforming its inner direction in favor of increasing the importance of nature in human life.

The results obtained during the research are an indicator of a rather low environmental competence and awareness of respondents due to the relatively low status of environmental education and the low social significance of environmental knowledge in high school and pre-university training of specialists. Environmental passivity in this case can act as a kind of protective mechanism, starting to work due to the lack of resources or the necessary knowledge to realize its potential in the field of environmental protection.

The study allowed finding out that the comprehension of reality through productive activity in nature makes it possible to form the direction of the content of environmental consciousness. It also can be assumed that if an activity is also a product of social labor associated with the traditional way of life, the values formed in it become a part of public consciousness, within which the attitude to natural environment becomes a part of the successive transfer of strategies inherent in this society by nature.

The analysis of the research results revealed the problem of the need to make specialists green-minded and involved in various systems of production relations. Based on the results of the study, a system of psychological support measures was developed in order to improve the skills in the field of green-consciousness of various specialists. The objectives of such psychological support are: the formation of a person's ability

to feel as a part of nature; the formation of a positive outlook on other people and the world around them; the adjustment and formation of goals of human interaction with natural objects; the adjustment, formation and development of ecological attitudes of an individual; the adjustment of the goals of interaction of a person with natural objects; the development of human perceptual abilities during his contacts with natural objects; the installation of a sense of responsibility to their descendants for what is happening in nature, ecology; development of environmental thinking, prognostic abilities of environmental awareness.

In the system of psychological support measures, the training of ecological and psychological competence was used. The monitoring of the effectiveness of the work [9] showed that environmental-psychological training has a corrective effect on the development of intensity and dominance of the subjective attitude to nature and can act as an effective method of psychological support for the measures to increase the ecological competence of specialists, along with the main pedagogical forms of traditional character.

The improvement of the quality of life of the population, preserving ecological environment is impossible without the deep introduction of ecological knowledge into the deep processes of understanding the reality of human psychology itself. Any productive activity in nature should become a part of the culture and traditions of modern society, setting the goal of transition to the concept of sustainable development.

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