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## Ecological Thinking, Consciousness, Responsibility

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### Abstract

The article substantiates the need for revision in the context of sustainable development concepts such as ecological thinking, ecological consciousness, ecological culture and ecological education. The transcendental paradigm of ecological responsibility is formulated.

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### 1. Introduction

The ecological challenge of human civilization at the present stage of its development on the Earth due to the realization that the technological capabilities of mankind became comparable to the global processes of the planet. The result is that in the beginning of XXI century, humanity is on the brink of irreversible environmental crisis. This realization led to the understanding that:

- as predicted by Vernadsky [1], the noosphere becomes a leading factor of the planet;
- due to the global environmental crisis facing humanity again raises the question of maintaining ourselves as a species (*homo sapiens*) and, therefore, the preservation of the global ecosystem.

The latter led to the creation in the 80's. XX century, the international strategy of **sustainable development** of human society and the natural environment on the planet. However, even proponents of sustainable development strategies do not always fully aware that the implementation of this strategy requires the development of environmental responsibility in the general population.

Given half a century of experience in the environmental debate and research, as well as the experience of environmental education and awareness, we should recognize that the problems of environmental awareness

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and environmental responsibility is not new. What brings these problems to the new appearance of the Sustainable Development Strategy? How it changes (or does not change) our understanding of ecological thinking, consciousness and responsibility of humanity for their actions in relation to nature?

Before an audience of various ecologically concerned people, I put the same question: why denoting a particular ecological problem and the need to address it, we do not analyze **the way of thinking**, technological embodiment of which was the cause of an environmental problem? Moreover, why we hope that the application to the solution of environmental problems of the same way of thinking does not become again the reason for the emergence of a new, perhaps more dangerous environmental problem? After all, a way of thinking, as the cause of environmental problems, have remained the same?

So, first question: what should be the way of thinking that it be adequately strategic and tactical objectives set out in the concept of sustainable development? While it is clear only that thinking, built on the epistemological aspect, "the subject (person) - the object (nature)," make human and natural world opponents. It is this juxtaposition of man to his natural origins and development conditions is the cause of the anthropocentric type of environmental consciousness, which in turn is a psychological cause of the ecological crisis (S.D.Deryabo, V.A.Yasvin [2]). Therefore, should be an alternative way of thinking, which implements the "man as the subject of the planet (the noosphere) - the planet as a subject of natural development." This means that our thinking should not only take into account the "interests" of the natural world, and initially to build their arguments from the perspective of this ratio, ie, from the perspective of the total (one) of the subject of "man - the planet."

## 2. Ecological consciousness

The second question is what is meant by ecological consciousness in the context of sustainable development?

In general terms the *ecological consciousness* is understood as a reflection of the psyche of a variety of man's relationship with nature, which mediate its behavior in the "natural world", and express axiological position of the subject of consciousness in relation to the natural world. And studies show that environmental consciousness is a complex mental education, which includes cognitive, regulatory, emotional, ethical, and other aspects.

Despite the variety of approaches to the definition and study of environmental consciousness, they are united by their common methodological position. Specifically, the environmental consciousness initially explicated or as givens of individual consciousness (ie, the product of the individual), or in the form of consciousness, as it should be in accordance with ecological concepts. And then, depending on the preferences of a copyright examination and diagnosis of environmental consciousness are the some of the functions of consciousness (reflectivity, regulatory, reflective, productive), or its components, or the ratio of the conscious and the unconscious, etc.

Methodological premise of this approach to the problem of consciousness is the gnoseological relationship "subject - object", transformed in psychology at the logical relation "subject of consciousness - the object of consciousness." The result is that such an approach is referred to as an gnoseological paradigm studies of environmental consciousness. [7] Within this paradigm environmental problem posed ecological consciousness and still be put in the context of the opposition "ecologically favorable - ecologically unfavorable".

Indeed, despite the different approaches and definitions of environmental consciousness, the most important in this matter stands polarization of environmental consciousness to the anthropocentric and ecocentric types. As shown in studies S.D.Deryabo, V.A.Yasvin [2], the main feature of consciousness is anthropocentric pragmatic priority of human interests in its interaction with the natural world on their own patterns of development of natural ecosystems. In contrast, for the type of consciousness is characterized by ecocentric environmental priority-oriented values and meanings of human interaction with the natural world. Meanwhile, the real (actual) ecological consciousness includes both anthropocentric and ecocentric components. And the emphasis on one or the other of these components often depends on the specific situation of environmental risk, requiring the adoption of a decision.

In contrast to the gnoseological paradigm, for an ontological paradigm a presupposition is the system "man - the natural environment (planet)" and its development. System "man - the natural environment (planet)" means a holistic entity of joint development, formation of which is through the interaction between man and the environment on the basis of the universal principles of life. [4] This means that we are talking about such principles, which must have a *transcendental* character with respect to both "Man" and the "Environment" - as components of the system "man - environment (natural, social) environment." Ecological consciousness at this point appears as a systemic quality of the psyche (processes, states and structures of consciousness), which is created and developed in collaboration with the environment (social and natural), and that allows people to feel and experience directly the unity with nature and the world around her own nature [ibid.]

This question is closely related to the issue of environmental education, which is traditionally one of the main means of ecological consciousness and ecological awareness in preschool, general, higher and further education. So naturally, following the adoption of the UN Sustainable Development Strategy adopted the concept of education for sustainable development as a new stage in the development of environmental education as a common and necessary trend in the development of education in the developed countries of the world community. From a pedagogical point of view, the basic meaning of the concept is such ecologization of all levels of education, which would help to create an environmental culture of people at all age levels of personal and professional development as a priority for education in the near future. But the question arises whether the commonly used learning technologies to achieve the goals of education for sustainable development? The fact is that these technologies [4]:

1) reproduce its content and methods of environmental knowledge-skills-skills as a projection of a scientific discipline "Ecology" in the subject content of geography, biology, and other school subjects. The result is an environmentally-oriented cognitive sphere student, which is usually separate from his personal spiritual and moral (value) areas and therefore subjectively appears to him as an ecological imperative of perception, feeling, thinking and behavior;

2) traditionally reproduce his didactic basis of subject-object interaction type, characteristic of the natural science paradigm, where the role of the subject and, therefore, entitled to decide the fate of the Planet and Nature, of course, given to the person - which corresponds to the type of anthropocentric environmental consciousness.

Due to the analysis of these features it is clear that traditional learning technology education are not able to ensure the formation of environmental awareness ecocentric type, for ecological knowledge only become the basis of environmental consciousness, when they result in an environmentally correct actions.

So, another question and the problem: what should be learning technologies to create in students a subject, personal and cultural view readiness for successful implementation of the strategy of sustainable development? Now, at least, it is clear that in the context of sustainable development of natural ecosystems and human society, environmental education should change their social status - from the self-discipline of teaching it has become a widespread means of practical implementation of the concept of sustainable development. Moreover, education in general, should be subject to training for the implementation of sustainable development under environmental imperative. Under the environmental imperative is understood interaction with nature, according to which "the right and only allowed that does not violate the existing ecological balance in nature" [2, p.13].

Moreover, the issue is much broader. According to V. Vernadsky, "Man, as it is observed in nature, like all living organisms, and every living substance that is a definite function of the biosphere, in some of its space-time. Civilization of "cultural humanity" - as it is a form of organization of a new geological forces created in the biosphere - can break off and destroyed, as it has a great natural phenomenon, historically responsible rather geologically current organization of the biosphere. Forming noosphere, it all back links to this earthly shell" [1, p.40]. Which implies that the conservation of the environment of the planet and of the man himself can not be solved until humanity is not aware that it is both a product of nature (including human beings and the Earth), and a means natural development system "man - the planet". The latter means that a person should be treated as

subject\*, which implements the process of self-fulfillment (or rather, should realize) his vital functions universal (natural) the principles of self-development of nature (natural forms of life), including humans and the planet.

However, the actual understanding of the ecological imperative as a criterion for building education for sustainable development concept requires clarification of the concept of "Nature" as a component of the "man – Nature". The point is that according to the Encyclopedic Dictionary of Philosophy [5] the concept of "Nature" has three meanings are: 1) all things ..., 2) the object of the study of natural sciences ..., 3) environments for living here ... and discover the capabilities of different methodological approaches to understanding of environmental awareness and environmental responsibility, depending on the different meanings of the concept of "Nature":

1. Natural-scientific approach proceeds from the understanding of Nature as the object of the natural sciences" when "Man" (Humanity) and "Planet" (the world of animate and inanimate nature) are treated as such separate from each other objects of research, each of which has its nature and, accordingly, their patterns of development.

2. Ecological approach starts from the idea of nature as "environmental habitat" when addressing sustainable development is starting to take a leading role ecology and environmental performance. According to these ideas, "planet" is considered as an ecosystem, serving as a habitat for man (humanity in general). It is principal, what it is about the co-evolutionary development of "Humanity" and "the Planet", which are different forms of natural existence with its own nature and logic of development.

3. Transcendental approach is based on the idea of nature as omnipresent, ie this transcendental ground which makes the substantial character development (self) any natural forms of life, but not limited to its own laws of development of each of them individually. Relation to the concept of sustainable development, this means that "Humanity" and "Planet" is a distinct part of nature as a single being. And each of them: a) having its nature development can implement it only in an anisotropic interaction with the other part, and b) this interaction should be system-developing character, when the development of each is the condition and the result of the other.

4. Ontological approach is based on the basis of previous approaches, on the understanding that "Humanity" should be considered as an ontological formation of "mankind - planet" as a form of natural existence, which in the process of self-realization realizes (or rather, should realize) the universal principles self-nature, ie Natural forms of life, including the "Humanity" and "Planet." Accordingly, the "Humanity" as a component of "mankind-planet" should no longer act arbitrary in relation to the "Nature", but just following these universal principles and implementing them. In other words, the awareness and acceptance of the "Humanity" as the subject of development of "mankind-planet" means, and taking responsibility for the development of not only himself, but also "the world" as a component of this system.

It should be noted that in these positions (except the first) is supposed to overcome the limitations of the current existence and understanding of man as a phenomenon that is output (transcendence) beyond his comprehension as actual givens of "being in reality." In the second - through the exit at the base, allowing to consider environmental development of man as a product of the development of the "Humanity-Planet", in the third - through access to the ontological concept of man as a natural form of co-existence, and the subject of "Humanity-Planet" in the fourth - by entering the maximum level of abstraction "of nature as being" - the principles of form-generation, common to different forms of natural existence.

On this basis, I believe that the prospect of finding ways to implement sustainable development will depend on the extent to which the person will in itself the essence and principles of 'nature as being ". And then, in the words of Kipling, we must begin the interaction with the nature by the words: "We are one blood."

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\* The subject is the carrier material and practical activities and learning (individual or social group), the source of the activity directed to the object. The notion of 'subject' combined ontological aspect (the carrier material and practical activities, in our case - the process of development) and epistemological aspects (cognitive source and object-activity-activity directed at an object, in this case - the nature).

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