

**"ECOLOGY OF CONSCIOUSNESS" PROJECT
AS A RESOURCE OF APPLICATION OF METROLOGICAL
METHODOLOGY
IN SOCIO-HUMANITARIAN KNOWLEDGE**

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Abstract: The article considers the concept of the project "Ecology of Consciousness" oriented at research and social-and-educational practices of formation of the ecological culture space. The project is also designed to include it in the training of specialists in the form of project education. It is supposed to use empirical studies based on methodological approaches of metrology in this field. Special attention in the consideration of the problems of "environmental consciousness" is paid to the futurological mode as the adaptation of a modern person to the future.

Keywords: ecology of consciousness, integrity of consciousness, holistic paradigm, transdisciplinarity, empirical research, metrological measurements, futurology, chronotope, postmodernity.

Formulation of the Problem

The specifics of the development of philosophical knowledge in the modern world is determined by the crisis of the classical picture of the world, and the trends in science itself point to the need to create an integral picture of the world. Today, as never before, a holistic, transdisciplinary view of the world at the level of the consciousness of the majority of citizens is needed, otherwise the society will not have an adequate understanding of global problems and ways to solve them. In this connection, at the present time, a paradigm is formed in scientific cognition, identified as an integral, holistic, systemic or ecological paradigm [1]. That is why modern scientific cognition is oriented at various ontologies of reality, and raises questions about a new scientific rationality based on the holistic worldview. The required type of rationality is focused on new syntheses of knowledge, interdisciplinary and transdisciplinary studies that discover adequate ways to cognize the dynamic reality and reveal ways to solve the most acute problems of our time. The concept "Ecology of Consciousness", initiated by the Department of Philosophy at South Ural State University, has a high degree of relevance, international support for the problematics, as well as the theoretical resource of the Department itself (the availability of defended dissertations and correlating theses being worked on). In this regard, the concept of the project is built on the following constructs: theoretical grounds (the development of the problem and the theoretical basis of the Department); empirical research (methodological approaches and

metrological research projects of the Department); social and educational practices (forming of the information space of ecological culture).

The integrating idea of the project has a knowledge-intensive semantic field, according to which "ecology of consciousness" is understood as the "integrity of consciousness". The "integrity" of the individual's consciousness implies its regulatory capacity – from the normative-stimulating to the value-oriented unity of the individual, the non-splitting of the biological, intellectual and spiritual dimensions of a person, the coherence of body, mind and soul in the diversity of practical activities. Therefore, the research formulation of the problem of the project is worded as follows: how the "integrity of consciousness" is possible in its own foundations and in the modern world? How is it destroyed in cultural and historical modern practices? What simulative forms does it acquire in postmodernity? Moreover, the initial setting has also the research aspects of its expression: external conditions for determining the "integrity of consciousness"; internal intentions of the subject; variety of forms of interaction of subjects.

The project's objective and tasks include understanding the stressful factors of fragmented existence, searching for effective transdisciplinary methods aimed at their overcoming, the practical formation of informational culture of the public consciousness of "Holistic Human" through the use of effective procedures and methods of existential and phenomenological practices.

Modes of Project Implementation

The holistic paradigm stipulates the

transdisciplinary specifics of the project, which guides project participants to interuniversity and international cooperation, where the inclusion of quantitative research is unquestionable.

Project-based learning assumes that the project's original foundations are educational, that is, oriented towards the formation of the information space of ecological culture and environmental responsibility in the world outlook of the students of the project form of education. In addition, it is part of the auditor training process and the implementation of the educational course "Social Ecosofia / Social Ecology" in the framework of "Social Engineering". The significance of concrete evidence for these purposes is quite obvious.

The scientific-applied form of the project makes it useful for metrological research. Empirical studies, proposed in the project (metrological methods, methods and procedures) pose a challenge for researchers to define research hypotheses within their philosophical problems, on the basis of which metrological microprojects can be formed. And these forms of research, their analysis and inclusion in the general field of philosophical work are extremely important at the present stage of the development of knowledge, when the question of the proof of knowledge in the overabundance of information of the digital age rises most sharply.

The futurological modus of the project "ecology of consciousness" is related to the thematic adaptation of the individual to the future. The integrity of human consciousness (personality) is not a static phenomenon, it is a dynamic dimension, because it either "gathers", or "collapses" (is alienated), or "restored". The conditions of both the acquisition of integrity and its alienation include: biological (in the dichotomy of life-death), economic (material and technical) in the labor-result dichotomy, religious in the dichotomy "soul-body" as well as the chronotope of postmodernity in the present-future dichotomies (actual-potential). In addition, the modes of alienation (destruction of integrity) of the chronotope of postmodernity are singled out: firstly, by "time": "present-future" ("future in present", "future threatening future", "future, not accepted in present", "future, indistinguishable in present", "future preferred by present", etc.); secondly, by "space": "surface-depth" (nomadism and loss of rooting, manifestation of thinking, etc.). Therefore, from the point of view of the authors of the project "Adaptation to the Future" implies, on

the one hand, the creation of an information space for ecological culture ("greening consciousness") as an adaptation to the future in the system of coordinates of environmental sensitivity (topos of the eco-space of the university and the academic campus), environmental responsibility (formation of worldview values of students), ecological correctness (intellectual and psychological attitudes and practices of caring for the future generation); on the other hand, a complex of scientific and research activities, as well as applied practice corresponding to the abovementioned aspects and modes of the claimed topic.

Thematic of the Project Measurements

Here the authors of the project include: "reference points of the generation Z"; "Futurophobia and the fear of the digital era"; measurements and modes of empirical research (physical, intellectual, spiritual, communicative); Experience in student design projects.

"Landmarks of generation Z" (professional orientation, value, epistemological). According to the generation theory, sociologists distinguish generations X, Y and Z [2]. Generation Z are people born in the early 1990s and in the 2000s, whose social and philosophical worldview was influenced by the global economic crisis, the development of mobile technologies, Web 2.0. Now this group makes about a quarter of the population, and by 2020 about 40% of consumers will fall namely in this category, therefore for all spheres of life (but first of all for education) it is extremely important to understand this generation right now. The fundamental feature of the new generation is their susceptibility to high technologies. In addition, since this generation was born in the era of postmodernism and globalization, it is characterized by work aimed at public benefit and creative pleasure. However, negative scenarios are also possible for generation Z: "shield dependence", as well as poor concentration of attention, the duration of which reduced to 8 seconds (the so-called "eight-second filters"). Because the representatives of this generation have grown up in a world of "limitless possibilities" and a total lack of time, they are adapted to the need to quickly assess and sift through huge amounts of information, relying on sections and tabs in mobile applications and Internet that provide the most fresh and popular content. The most characteristic features of "Z's" include "following the curators" (competent persons who are "trusted" in the choice of adequate information

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and entertainment); aspiration on a personal level to be immediately accepted and approved through social media (where important conversations take place and a worldview is formed); aspiration with the help of social media to control several individuals in order to be able to satisfy each of the audiences, and also reduce the risk of conflict; the desire to be between two forces: social media (the desire to build and manage personal brands) and "real life"; the desire to build their start-ups, and not be immersed in a corporate routine ("entrepreneurial generation", for which the entrepreneurial spirit is a kind of a survival mechanism, rather than idealistic pursuit of wealth or status); aspiration to avoid risk, pragmatism and practicality, planning for a long time ahead, development of spare options in case there are changes in the labor market. In general, the representatives of generation Z start with the stressful problems that arise at a certain stage in life for all people: separation from parents, beginning of a career, formation of personal identity, but their fundamental feature is that they have to do and experience all of this in the rush of the technological era.

"Futurophobias and stress of the future in the digital era" are caused by these rapid technological changes. They include: fear of the future, incomplete adaptation of a modern person to the technological achievements of the "future", refusal to recognize achievements, "the future that has come true", incomplete adaptation to "letting go of the past" in the context of the newest achievements, resistance to changes, desire to "preserve the past". Futurophobia is in the literal sense a fear of the future, which brings anxiety and nervousness, which has reached the mass level, and has become a global problem in recent years. The objective basis of futurophobia is the instability of the global world, its socio-economic and political processes, the real situation of the ecological and financial-economic crisis, local armed conflicts and wars, humanitarian catastrophes, as well as an acute phase of global problems and their growth. The reasons for futurophobia are: negative impact of the media speculating mainly on negative facts; activation of extremist ideologies, radical religious and political movements cultivating the values of war and violence in the name of their goals; superstition, primitive occultism and confidence in paranormal phenomena; low level of general knowledge and literacy along with an overabundance of information; high level of stress and chronic fatigue syndrome; conflict of expectations and reality in the human

psyche. The causes of the spread of futurophobia are: the absence of objectives and tasks unifying people because for a full-fledged existence a person needs a meaning based on values, and categorized in the form of goals. Thus, the solution of the global problem of futurophobia lies in the field of values and goals, which today can be formulated in terms of holistic and ecological understanding and in the broadest sense of the planetary project: saving the biosphere, preserving and improving natural environment for those living today and for the future generations, universal integration and construction of a noospheric civilization capable of implementing the principles of justice, humanism and harmonious development [1].

Empirical research in the topic. The research undertaken by the Department in this direction includes four mini-projects that can be fulfilled simultaneously in both topics mentioned above: 1) anthropomorphization of robotics as a professional orientation resource and as a source of futurophobia (physical dimension), 2) epistemological cohesiveness of "cultural nomadism" of postmodernity (intellectual dimension), 3) cathartic art practices in contemporary theatrical action (spiritual dimension), 4) self-branding as the management of an individual trajectory of personal development (communicative dimension).

Metrological Problems in the Social and Humanitarian Sphere of the University

The theoretical assimilation of metrological problems in the social and humanitarian sphere was undertaken in the form of preparation and holding of the student conference on "Cognition as Measurement: Prospects of Metrology in the Social and Humanitarian Sphere" with subsequent publication of student materials and essays on the stated topic. The problematics of the event and publications was proposed by the authors of the project following the logic based on the classical philosophical discourse and emerging into the modern cultural and historical field of scientific knowledge: "Knowledge as Measurement Practice"; "Metrology as a Theory of Measurement"; "Metrology in the Socio-humanitarian Sphere in the Context of the Practice of "Taking Care of the Self"".

1. *"Cognition as a practice of measurement"* includes the consideration of the sources of the "measure of all measures" that originated in Antiquity, where the dimension is represented as the basic ordering principle of the correlation of "words" and "things" in M. Foucault's epistemas: Renaissance

(16th century), classical (rationalism of the 17th-18th centuries) and modern (from the late 18th -early 19th century to the present) [3].

The practice of measurement in its self-development appears as the original identity, correlativity and interchangeability of words and things to each other in Antiquity and Renaissance.

In the experience of classical science, the elimination of direct similarity of words and things, as an indirect relation between them through thinking in the space of representation, as the construction of a universal science of order (the mathematics of knowledge, "universal grammar", "natural history", "analysis of wealth", the introduction of knowledge of probability, combinatorics, calculus, tables).

Finally, modernity and post-modernity as the mediation of words and things by "language", "life", "labor", which went beyond the space of representation, where language already has its own being and history, self-contained, where a person is placed in the space of "the disintegration of the connection between being and representation" and where a person "is close to extinction" (Foucault).

2. *Metrology as a theory of measurement is represented by the following aspects.*

"Metrological consistency" as an indicator of modern science: as the identification of objective qualitative-quantitative determinateness, objects of phenomena, as an expression of an identified set of attributes accessible to people's perception, as a description of the identified features and models, as well as an expression of their attitude to the phenomenon (ignoring, adaptation, management).

"Metrology as a science about the future: a futurological perspective": as a study of the existing technological, economic or social trends for prediction of the future trends; the search for analogies of the future with the existing systems and the composition of future scenarios; as the possibility of using role games, simulations, negotiations and other methods of group work on planning and predicting the future; as studies of scenarios of the predicted future (ecological catastrophes, utopian future, the transformation of mankind into a posthuman life form, the destruction of all life on Earth in a nanotechnological catastrophe, etc.).

"Transdisciplinary resource of metrology": as a condition for expanding the scientific worldview in the consideration of a phenomenon outside the framework of any scientific discipline; as a "rule of investigation of the surrounding world"

in the form of research problems at once in several levels (at the physical and mental levels, globally and locally, etc.); as the "principle of the organization of scientific knowledge," which opens up broad opportunities for the interaction of many disciplines in solving complex problems of nature and society, as an official way out of their disciplinary situation, freeing from accusations of amateurism, as an opportunity for multi-discipline, pluridisciplinarity and interdisciplinarity, as the main meta-methodology implying the possibility of "transforming" and the ability to "surpass" the simple "borrowing" of techniques and methods from other fields of science that are inherent in interdisciplinary research, as a resource of "functional-phase synthesis methodologies" and creation of completely new research concepts based on them.

3. *Metrology in the socio-humanitarian sphere in the context of the practices of "taking care of the self". This includes issues of social and humanitarian specifics, which are, perhaps, the most problematized.*

"Self-knowledge and reliability of knowledge: is it possible to measure self transcending?" as "self-measurement" in the practice of transcending, as self-evidence of the way out of the immersed consciousness into everyday life in order to acquire the truth and meaning of being, as a measure of "transcending to the outside" (the exit of the individual soul beyond the limits of its subjectivity to the "Other") and as a measure of "transcending inward" (deep down, into the spirit realm, for rooting in a spirit-based life, which provides an objective reality and genuine support of the individual spiritual); as the overcoming of the dichotomy of the subjective and objective in the experience of cognition, as the transformation of the essential evaluations of the ontological and epistemological aspects of the being of the subject; as a special method of cognition, applicable to the phenomenon of corporeality allowing the subject and object to overcome the dichotomy of concealment and openness.

"The role of the mediator in the process of self-knowledge: the criteria for the measure of evidence", where the mediator (Other) appears as a condition for self-fulfillment of the "I" of subject, as a condition for achieving that "I", to which self-realization is on-the-goal, as a "measure" of the designated goal; as a condition for the formation of the subject, as a "measure" of the correctness of the path (in exhortation by example, in the instruction by

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knowledge, in instruction in case of difficulties); as a condition for the transformation of the individual in his/her formation as a subject, as a "measure" of the accomplishments of the subject; as one who is neither a mentor, nor a teacher, but "leads out", serves as a guide for all people, as a "measure" of the correspondence of things to their nature.

"Between the metaphysics of cogito and bodily practice: the organoleptic methods of research and their role in the comprehension of worldview problems" is an aspect that involves the examination of the organoleptic method of cognition: as a method of determining indicators based on the analysis of perceptions of the senses (vision, smell, touch, taste); as a generalized result of the evaluation of the quality of things performed only with the help of the senses of person; as assessments in various fields (insurance in assessing damage, in printing for rapid assessment of the quality of a printed impression, etc.) in terms of reliability criteria; as studies that do not have objective registration of results using measuring instruments or means of fixing results (with the assumption of such simple technical means as a magnifying glass (magnifier), a microscope, a stethoscope, a mirror, a lamp, tweezers, etc.), as methods and forms of determining indicators for understanding the role of a socially understandable norm, a pattern in the formation of the degree of reliability of organoleptic research.

Experience in Student Design Projects: Desing Measurements

Within the framework of the general project, the author organized and implemented an educational interuniversity project "Desing Measurements". This is an attempt by students to look at the prospects of metrology in social and humanitarian knowledge in the perspective of design thinking. The posters created within the framework of the project demonstrated the existence of theories and measurements that allowed scientists to model theoretical and empirical systems of being. Monads, atoms, contextual and dialectical units – all these categories made it possible to solve the most complicated scientific problems, became sources of new knowledge and reflected a priori opinion of the researcher. So, for example, when creating musical rhythm, dance geometry, architectural ensemble, design composition, as is well-known, you cannot do without metrological accuracy and unity. This experience has made it possible to identify the heuristic potential of innovative educational strategies that resonate

with modern visualized methods of cognition and information processing. In this experience, there occurred a fruitful meeting of ancient knowledge and modern technological thinking.

Conclusion

In practical terms, the project "Ecology of Consciousness" assumes the creation of a scientific platform for interdisciplinary and transdisciplinary research; creation of an educational theoretical basis for project learning; and also creation of information media space of ecological culture.

That is, in essence, it is the goal-oriented formation of ecological culture, eco-patterns, environmental sensitivity, environmental responsibility, ecological correctness in the value system of future professionals of the post-modern industry and the digital technosphere oriented at the criteria of the moral economy, ethical consumption and sparing environmental loads on the natural reality.

Therefore, the measure and measurements as a category of scientific and philosophical discourse, generalizing and fixing the results of understanding the existence, qualitative and quantitative determinateness of objects and processes of their interrelationships, standards and ideals that exist not only in mind, but also in the material world, become here relevant to scientific interests and needs of the present.

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