

Multiplicity of Interpreting Theoretical Knowledge of the Phenomenon of Education

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Abstract—In the article, the author carries out a discourse concerning a great deal of different-format theoretical information about such a multifaceted phenomenon as education which exists in the scientific sphere. The author makes an attempt to correlate this array of information with the concept of "theoretical image of the phenomenon of education". In this article, the author also considers the causes of many heterogeneous reflections of the phenomenon of education and naturally raises the question: whether they are a consequence of the scientific thesaurus of the researcher and their methods of interpreting the results in the course of scientific research. The author hypothesizes that the emergence of such fragmentation of theoretical knowledge about the phenomenon of education in the scientific sphere is a consequence of the diversity of researchers' "lexical repository". The author proposes to implement the concept of "theoretical image of the phenomenon of education" as a generalizing cognitive mechanism and, in so doing, eliminate the fragmentation of the theorization of the phenomenon of education.

Keywords—theoretical image, researcher's thesaurus, interpretation, phenomenon of education, attribute matrix

I. INTRODUCTION

The author starts the discourse with the fact that in the scientific sphere, there is a lot of theoretical data about the phenomenon of education which are due to its multiplicity and transdisciplinarity. Here the questions arise. Can the subjective theoretical interpretations of the phenomenon of education formed in the scientific research field be considered as its theoretical images? What are we dealing with basically? Is it a theoretical way of describing the phenomenon of education or a fragment of its essential characteristics? It should be reminded that the subject of knowledge of the phenomenon of education, or rather its theorization, is carried out through the so-called theoretical image of the phenomenon of education [1].

In a general sense, the "theoretical image of the phenomenon of education" is a hypothetical construct reflecting the main attributes of the phenomenon under study, which is expressed in the relationship of abstract objects of the idealtypical nature, semantically-graphically constructed, methodologically-based in the process of its scientific cognition.

The logic of the emergence of this set of theoretical ideas about the phenomenon of education leads to the idea that the reasons for this, or rather the origins, lie in the understanding of the concept of the researcher's thesaurus. In this case, the discussion around the researcher's thesaurus and his or her ways of interpreting the results serves as a kind of "guiding star". Not analyzing the notion of "thesaurus" in the historical aspect, we will consider its apparent and essential characteristic and the dependence of researchers' "lexical storage" diversity on the results of research.

Val. A. Lukov and Vl. A. Lukov in their research work on the thesaurus wrote that it is a "subjectively organized humanitarian knowledge" [2]. Of course, every scientist has their own language dictionary (vocabulary, concepts, and connections between them) which is peculiar only to him or her. It is known that the researcher doing scientific studies usually refers to common vocabulary. In addition, the terminological components and "words-organizers of scientific thought" inherent in this person are also embedded in the lexical composition of the scientific work. The authors put forward the thesis that "the thesaurus is an individual configuration of orientation information (knowledge, attitudes) which is formed under the influence of macro- and micro-social factors and provides human orientation in different situations...". In other words, the thesauruses of scientists are able not only to change the course of the research process, but, what is most important, to influence its effectiveness expressed in subjective interpretation.

The thesaurus of a personality and its theoretical basis of formation is studied by I. R. Abdulmyanova. She interprets it as "a complex multilevel system including concepts, words that recall these concepts from the memory of a person, as well as the connections between them which are characterized by open, hierarchical and dynamic structuring, and it serves both for the storage of existing knowledge and experience of a person, and for obtaining new ones" [3].

According to O. V. Petunin, the thesaurus in general "is a fairly complete, detailed and systematic list (set, list, and dictionary) of terms, definitions, and characteristics that clarify and concretize any key concept or category". As for the scientific format of the thesaurus, O.V. Petunin writes that "the scientific thesaurus includes all aspects of scientific knowledge on any problem, mastering the entire arsenal of practical skills that ensure the development and improvement of psychophysical abilities and qualities of the individual" [4].

This once again confirms the subjective nature of the thesaurus. It is difficult to dispute the fact that the understanding in science is embodied "through abstracting activity of thinking, and the knowledge about the object is fixed in certain language forms — namely, concepts".



In his early works, L. Wittgenstein was the very researcher who "put a linguistic barrier which limits the completeness of knowledge: a person can only know what allows them to formulate the means of the language they use" [5]. Analyzing these postulates, we can put forward the thesis that when coming across the theoretical information or interpretation regarding the phenomenon of education in scientific reflection, we are dealing with its mere theoretical images formed within the framework of the subjective thesaurus of the researcher.

II. METHODS AND MATERIALS

Speaking about the thesaurus, we mentioned such concept as interpretation. The topic of interpretation of social and philosophical reflections in the context of theoretical knowledge is undoubtedly very interesting. However, despite the fact that it is not central to this study, it is of significant interest to us and is one of the methodological bases of the study.

First of all, we will turn to the fact that the theory of interpretation and the interpretation of texts, as a method of analysis of literary works, called hermeneutics, and to be more specific - philological hermeneutics, has matured in science. In addition, there are other forms of hermeneutics, such as theological (interpretation of the Bible), legal (interpretation of the legal meaning of laws), and philosophical ones. It is the lastnamed form of hermeneutics that is of interest to us, and we will consider it.

The understanding of hermeneutics as a general theory of interpretation, the philosophical doctrine of the method of interpretation and understanding, was originated by F. Schleiermacher.

In his works, V. Diltey described the development of hermeneutics in the context of methodological foundations of humanitarian knowledge and understanding of culture (for example, the interpretation of literary works). It is important to mention such philosophers as H. Gadamer [6] and M. Heidegger with their "ontological hermeneutics", "epistemological hermeneutics" of P. Ricoeur, and E. Betty as a supporter of "methodological hermeneutics".

In his methodological hermeneutics, E. Betty took to the forefront the so-called "semantic form" as a means through which "the spirit of the other person speaks" to us as an interpreter. According to E. Betty, "the meaningful form is a single structural relationship of many perceived elements, and this relationship should be fit for preserving the imprint of the spirit that created it or was embodied in it." Note that E. Betty gave this form a presentation status [7].

A. S. Gaponov [8] writes that "understanding, from the point of view of E. Betty, is a re-construction of the meaning conveyed to us by the "meaningful form". The interpreter goes the way of creativity in the opposite direction. Through the reconstruction of meaning, they must recreate in their mind the state of thinking that the author of the text had. Thus, the interpretation is not only a reconstruction of meaning, but also a reconstruction of the spirit that appeals to us. Trying not to get away from objectivity in interpretation, E. Betty proposed and introduced into scientific circulation four "hermeneutic canons". They are the following: the canon of the hermeneutical autonomy, the canon of totality and coherence of meaning of hermeneutical consideration, the canon of actuality of understanding, the canon of the hermeneutical meaning of conformity or meaningful adequacy of understanding, which, from his point of view, allows keeping the objectification of interpretation.

On the one hand, H. Gadamer shared his position (E. Betty) about the idea that the interpreter should understand the interpreted text in "its own sense". On the other hand, H. Gadamer put another meaning into the thesis "its own sense" and understood that it was not "what this author meant".

Adhering to E. Betty's position, we put forward the thesis that the theoretical image of the phenomenon of education as a (re-)presenting format is nothing but the very "sense-forming form" which, according to Betty's canons, is presented to the interpreter to understand the meaning inherent in it about the object of knowledge.

The interpretation of social phenomena through the construction of theoretical schemes (images) is very well developed in the works of H. Lenk, who is considered to be a representative of critical rationalism. It is H. Lenk who introduced the concept of "constructive interpretation" or "scheme of interpretation" [9].

Thus, interpretation (from the Latin word "interpretation" – mediation, explanation) is a general scientific method and the basic operation of social and humanitarian knowledge. Interpretation is presented as "interpretation of texts, meaning-setting operation; in natural sciences, it is a general scientific method with fixed rules of translation of formal symbols and concepts into the language of meaningful knowledge; in philosophy, along with methodological functions, the ontological meaning of interpretation is studied as a way of being that exists due to understanding"[9].

III. RESULTS

So, what do these very theoretical ideas (knowledge, data, statements, and reflections) about the phenomenon of education mean to us? What do we observe in the transdiciplinary scientific sphere? Social and human sciences have accumulated a sufficient pool of different names, different formats, different styles and types of description of theoretical information about the phenomenon of education. What makes up this or that theoretical understanding of the phenomenon of education, and what is it based on?

To answer such a simple question, we should think about how the theoretical statement itself is born. Any theoretical information about the phenomenon of education is nothing but the result of the theoretical reflection of the researcher who laid its foundation for his or her scientific experience in knowledge, including methodological preference in terms of scientific approaches, ideas of the essential characteristics of the phenomenon of education, his or her scientific thesaurus.

The result of this approach to the understanding of the phenomenon of education is a great number of author's theoretical statements about it. Which of the researchers is



right? What theoretical representation describes the phenomenon of education most accurately, holistically, and fully? We will try to understand and comprehend it.

First, we turn to the well-known theorem of incompleteness by K. Gödel and try to answer the question: "Is there such a theoretical understanding of the phenomenon of education which is able to claim a complete description of it?"

Here a short historical excursion is given. In 1931, K. Gödel put forward and proved the theorem of incompleteness which was of great interest to mathematicians. Without going into the details of mathematical syntax and logic of this scientific discovery, we say that Gödel's theorem has a heuristic potential and capacity for application in interdisciplinary research, for example, in socio-philosophical works.

The appeal to Gödel's incompleteness theorem and understanding of its philosophical heuristic potential in humanitarian cognition is not new. There are a number of Russian (V. A. Uspenskij [10], V. V. Tselishchev) and international scholars who deal with this problem. The main tendency is to try to address this very scientific work of Gödel.

V.V. Tselishchev [11] puts forward a postulate: "Accompanied by a large number of distortions and simplifications, philosophical interpretations of theorems remain one of the most discussed topics not only in the philosophy of mathematics itself, but also in the philosophy of mind and epistemology in general." A. N. Parshin wrote: "considering Gödel's theorem from this point of view, not as a forced restriction, but as a fundamental philosophical fact, it is possible to come to a much deeper development of psychology, logic and many other sciences" [12]. This once again confirms the unquenchable interest in the incompleteness theorem and the attempts of researchers to address it in order to transfer and interpret its considerations in the interdisciplinary scientific sphere.

Plunging into the logic of the theorem, we find out that any theoretical statement or idea about the phenomenon of education can be represented as a system with a set of statements formalized according to certain rules, connections and relations between them. Gödel's theorem proves that any formal system with its formal and inherent language cannot fully know itself, and, therefore, it is incomplete. Thus, any theoretical knowledge of the phenomenon of education based on this logic can not claim the completeness when describing the phenomenon of education. The question is how to overcome this state of incompleteness and what research "loophole" will help to reach a complete, holistic theoretical image of the phenomenon of education.

The hint is again given by K. Gödel and his incompleteness theorem. In our opinion, K. Gödel clearly pointed out a number of key "positions", such as "formalized system", "tools belonging to this system", "system with greater power", which give us the very "threads of Ariadne" leading to the complete theoretical knowledge about the phenomenon of education.

We formulate several theses based on the analysis of Gödel's theorem, or rather key phrases, on which we have placed the main emphasis.

These provisions are as follows:

"formalized system"

Reflexive comment: Certainly, any theoretical statement about the phenomenon of education is formalized within the framework of those statements that researchers form using their scientific and methodological preferences, experience, etc. and have all the characteristics inherent in the system;

• "tools belonging to this system"

Reflexive comment: Any theoretical representation is constructed with the help of conceptual-categorical apparatus to which the researcher refers. Therefore, within the framework of this theoretical representation, the method and set of application of this tool are exclusive.

In this regard, it is possible to obtain such a theoretical formalized representation of the phenomenon of education, which may have the completeness and integrity of our investigated phenomenon.

We see the way to such a theoretical representation in the following:

Despite a great number of theoretical statements concerning the phenomenon of education (theoretical systems), it is necessary to go beyond these systems (theoretical statements), to get away from the exclusive tools of description inherent only in them, and at the same time, to maintain the formalized structure and boundaries of the description of the phenomenon. In other words, to overcome the attraction of system localization, to get up on your system metaposition, to form a more powerful construction and introduce the standardized tools and a system of axioms (methodological reasons).

The overall result of this analysis is as follows.

Philosophical and methodological analysis of the hypothetical construct of *the theoretical image of the phenomenon of education* and our logical chain of reasoning based on the theorem of Gödel's incompleteness allow us to qualify it as a theoretical format of knowledge. It has the completeness and integrity of the study of the phenomenon of education.

The process of reflection on the interpretation of the results of theoretical knowledge about the social phenomenon we study – the phenomenon of education – is multiple depending on the scientific discipline considered and certainly the optics of the methodological approach used.

Scientific research of social phenomenon is always in close relationship with the theoretical and methodological basis within which it is (re-)constructed. Reflection on theoretical knowledge through the appeal to the (re-) construction of theoretical schemes (samples) is one of the leading topics not only in natural and technical sciences, but also in the social sciences and humanities.

We propose to overcome the fragmentation of the theorization of the phenomenon of education by fixing the structure of the theoretical image of the phenomenon of education, and we will try to implement it [13].

Attributive features	Meanings
EXTERNAL FEATURES	
Level 1	Public
Type of scientific	For example, Classical
rationality	
Type of society	For example, Industrial
Level 2	Theoretical and methodological
Scientific paradigm	For example, Normative (objectivism,
	macro-sociology,)
Main category	Social institution, structure, function,
	society, rules, social norms and patterns of
	behavior
Level of construction of	Macrolevel
social reality	(society)
Level 3	Positional
Position of "object",	Object dominates. The subject is determined
"subject"	by social conditions
Position of the social	Externally defined system for all participants
world	of social relations
Model	For example, classical, "conveyor"
Management	For example, vertical, hierarchical
INTERNAL FEATURES	
Level 4	Descriptive
Structural components of the theoretical image	
Target	The meaning is formed as a result of three-
Content-technological	component reflection (society, scientific
Value-functional	rationality, scientific approach)

TABLE I. ATTRIBUTE MATRIX OF "THE THEORETICAL IMAGE OF THE PHENOMENON OF EDUCATION"

We will formalize the procedure of (re-)construction of focal-paradigmatic theoretical images of the phenomenon of education by introducing an attributive matrix, which acts as its fixed structure, into the concept of the theoretical image of the phenomenon of education.

To do this, we fix the following provisions.

1. "A theoretical image of the phenomenon of education" (TIPE) is a hypothetical construct that is logically introduced as a format of reflection on the theoretical knowledge about the phenomenon of education. It is obtained by synthesizing the results of the interpretation of the phenomenon of education on the basis of scientific and paradigmatic approaches, the specifics of the types of scientific rationality expressed in its attribute characteristics. The TIPE structure (attribute matrix) contains generic and important ontological characteristics.

The appeal to the TIPE is an attempt to achieve a holistic theoretical universum within the framework of knowledge of the social phenomenon.

2. Focal-paradigmatic theoretical images of the phenomenon of education are (re-)constructed in the process of reflection on the theorization of the phenomenon under study through the conceptual and categorical apparatus of paradigmatic-methodical approaches to scientific knowledge. Each scientific paradigm uses its categorical and conceptual base, which allows one to build a focal-paradigm theoretical image of the phenomenon of education inherent only to this image.

3. The attributive matrix of the hypothetical TIPE acts as a generalizing interpretive structure used for ordering

theoretical ideas about the phenomenon of education in the course of its cognition.

The attributive matrix contains external and internal attributive features of (re-)construction of focal-paradigmatic theoretical images of the phenomenon of education, ranked by the following levels: social, methodological, positional, and descriptive ones.

Under the attributive features of the theoretical image of the phenomenon of education, we understand the objective characteristics or properties that determine the necessary and sufficient conditions for describing the procedure of reconstruction/construction of theoretical reflections of the object under study.

IV. CONCLUSION

The array of focal-paradigmatic theoretical images of the phenomenon of education as invariants of interpretation of theoretical reflections and ideas about the phenomenon of education appears to us as a structure endowed with "life", i.e. it is dynamic, filled with collisions, interactions, attractings and repulsions of various theoretical images, i.e. it is subject to figurative and theoretical transformations.

We see the further procedure for (re-)constructing focalparadigmatic theoretical images of the phenomenon of education in identifying such an interdisciplinary array of theoretical ideas about the phenomenon under study and "embedding" them in the TIPE, correlating the theoretical data with the selected attribute features of the phenomenon of education.

In the future, we will carry out a procedure for the typology of the obtained focal-paradigmatic theoretical images of the phenomenon of education with the determining of systemic features.

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