

Postnonclassical Practices in the Content of Higher Art Education

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The study of the phenomenon of transdisciplinarity in scientific discourse indicates the emergence of a new strategy for solving real practical problems. A new image of post-non-classical science is being formed. However, there are difficulties with the introduction of a transdisciplinary approach into the methodology of musical pedagogical research and with the practical implementation of the methods and techniques of transdisciplinarity. In order to solve this problem, the narrative “We grieved with one grief and rejoiced with one happiness”, based on the life and work of Boris Grinchenko, is presented and analyzed. Pedagogical observations prove that the form of narration created an open atmosphere for the transdisciplinary transfer of pedagogical skills, united the intellectual and creative potential of teachers and students, and proved the expediency of reorienting the musical and pedagogical processes in the context of postnonclassics. Due to a wide inter- and transdisciplinary synthesis, it has become possible to synergistically combine different ways of perceiving and comprehending the unstable and complex world of art.

Keywords: inter- and transdisciplinary approaches, metaphorization of the educational process, transdisciplinary engineering methods

INTRODUCTION

Since the late 20th century and in the first two decades of the 21st century, humanity has been experiencing another transition period in its development. This is due to the radical transformation of ideas about cognition of the world under the influence of scientific and technological advances, the emergence of “virtual reality”, development of the concepts of information and network society, development of convergent NBICS-technologies, the introduction of the interdisciplinary methodology, transdisciplinary norms and values, etc. As a result, a new picture of the world is formed – postnonclassical (synergetic),

which is based on such worldview concepts as complexity, unpredictability, nonlinearity, variability, risk, uncertainty, etc.

The modern postnonclassical stage of scientific cognition development is fundamentally changing due to the emergence in the postnonclassics of the new objects of study – complex systems, that are self-developing and human-centred. Given this circumstance, the characteristic feature of postnonclassics, which in scientific circulation is defined by the term “humanity”, becomes interesting. The semantic load of this concept is justified by the increasing role of the subject of cognition process, while the object of science includes problems directly related to man and human activity, based on the “postnonclassical understanding of man as a subject of practical attitude to the world” (Telizhenko, 2012). It is manifested in practices, where an important place is occupied not only by human values and norms but also by unconscious, manifested through faith, cultural traditions, and spiritual practices, the “synergy of postnonclassical triad: subject – environment – object” is revealed (Budanov, 2015).

It is common knowledge that among the various types of spiritual practices of mankind, art is a particularly unique product, which concentrates centuries of experience of discovering the world around the individual. The scientific and pedagogical thought is increasingly aware of the need for a new look at the educational and upbringing potential of art, actualising the search for philosophical and cultural foundations for building a new postnonclassical educational model.

In this regard, inter- and transdisciplinary cognitive and communicative strategies are becoming increasingly important in the content of higher art education. They are aimed at overcoming the limitations of disciplinary organised knowledge and formation of a kind of “meta-knowledge” (Piaget, 1972), in which the integrity of cognition appears as an open and dynamic systemic unity in the diversity of forms that reflect it. This necessitates universalisation of education, abandonment of its narrow specialisation, inclusion of informal factor in the musical and pedagogical processes of higher school, transition to inter- and transdisciplinary positions, search for innovative methodology from the standpoint of postnonclassical rationality. Meanwhile, as practice shows, there is a range of objective and subjective difficulties in implementing a transdisciplinary approach in the educational process of both higher education and art institutions and also in the methodology of scientific musical and pedagogical research.

The *aim* of the article is to reveal the specifics of postnonclassical practices and prove their importance to overcome the limitations of traditional methodology of anthropological rationality in the content of higher art education in connection with transition to inter- and transdisciplinary cognitive and communicative strategies. *The research methodology* is complex and is based on inter- and transdisciplinary approaches and theoretical and empirical methods, in particular, systems analysis, synthesis, comparison, generalisation, pedagogical observation, methods of transdisciplinary engineering.

ANALYSIS OF THE PREVIOUS RESEARCH ON THE TOPIC

Since the 1970s and during two decades of the 20th century, the phenomenon of transdisciplinarity has been fruitfully reconceptualised in the Western European scientific discourse as a research strategy, a new direction in the development of the philosophy of science (Piaget, 1972; Jantsch, 1972; Judge, 1994; Gibbons et al., 1994; Nicolescu, 2006; 2014; Scholz, 2015). The emergence of the transdisciplinarity phenomenon is largely connected not only to the integration of knowledge and synergies that arise between disciplines, but also to different ways of acquiring knowledge, focused primarily on solving real-world problems. Interaction and mutual enrichment of knowledge between science and society is a fundamental principle on which the phenomenon of transdisciplinarity is based (Scholz, 2015). The term “transdisciplinarity” was introduced by Swiss scientist Jean Piaget in 1970 in his discussions with the Austrian astrophysicist Erich Jantsch (1972), one of the founders of the Club of Rome. According to Piaget (1972), “we hope that in the end, we will move from an interdisciplinary level to a higher level of “transdisciplinarity”, which not only recognises the interconnection or interaction between special studies, but also these “ties will enter into some general system in which there are no permanent boundaries between disciplines”. Erich Jantsch (1972) supported Piaget’s idea and began developing it. According to the scientist, transdisciplinarity, as a new space without stable boundaries between disciplines, should become

the coordinator of all disciplinary and interdisciplinary systems of learning and innovation on the basis of a common “axiomatic approach”.

The importance of the widespread application of a transdisciplinary approach, both in solving complex societal problems and in conducting research, is demonstrated by the holding of an international conference on higher education in October 1998 at UNESCO Headquarters. The findings and recommendations of the World Declaration on Higher Education for the Twenty-first Century: Vision and Action have received widespread support from higher education experts in many countries around the world. Most of them acknowledged that one of the main world-class trends is preparation of the competitive youth for future employment in the labour market, which will be characterised by a high level of technology, speed, and transdisciplinarity. Prospects for the development of the transdisciplinarity in the world science were clearly outlined in the Report of the American Academy of Arts and Sciences (ARISE, 2013). It has been determined that the main task in the American scientific discourse is to make the transition from interdisciplinarity to transdisciplinarity and to create on this basis conditions for qualitatively new research strategies.

The idea of a new, “higher” level of science, a kind of “science of science”, in particular, transdisciplinarity – is discussed in the works of Romanian physicist B. Nicolescu (2006; 2014), who is considered one of the leaders of the transdisciplinary movement. The scientist substantiates the variant of transdisciplinarity, which has a somewhat “hidden” dimension – the biophysical world, which complements abiotic and biotic matter and is a spiritual (meta) level capable of ensuring the unity of the universe (Nicolescu, 2014). According to Nicolescu (2006), transdisciplinarity is not opposed to interdisciplinarity; on the contrary, it complements and deepens it, combining disparate fragments of reality into a universal picture; transdisciplinarity justifies the logic of including a “hidden third”; only transdisciplinary research can cover the whole complexity of the world in terms of its understanding, description, etc. Nicolescu’s approach to a non-mechanical understanding of the ontological foundations of transdisciplinarity enables reflection in the context of a holistic worldview in an era of new phenomena in science, culture, and practice. This significantly expands the horizon for further research on the phenomenon and methodology of transdisciplinarity and gives a new format to postnonclassical science.

Postnonclassics, formed as a logical movement in the history of science from the classics to the nonclassics and, consequently, to “postnonclassics as a new type of rationality”, affirms fundamentally different values, goals, spiritual orientations, and criteria of rationality. According to Scholz et al. (2015), the postnonclassics offer a special solution to the question of the relationship between tradition and innovation. It sets new communicative strategies for the cognising subject, and the integrity of cognition emerges as an open, systematic, and dynamic unity in the diversity of forms that express it. “... At the same time, new resources for alternative ontologies appear and a special experience of transdisciplinarity is formed on the border of the disciplinary worlds and human life world (in the sense of E. Husserl)” (Scholz et al., 2015).

Hence, as noted by L. Kyiashchenko (2015), the phenomenon of transdisciplinarity seems a logical continuation in the Russian scientific discourse and at the same time concretisation and philosophical generalisation of such a direction of modern philosophy of science as postnonclassics (p. 42). The study of this phenomenon takes place in different aspects, including substantiation of the approach to defining the philosophy of transdisciplinarity; identifying the connection between transdisciplinarity and postnonclassical discourses (Budanov, 2015); determining the role of transdisciplinarity in the synthesis of modern scientific knowledge; understanding of transdisciplinarity in the context of transscience formation, etc.

Modern Ukrainian scientific thought at the theoretical and practical levels recognises the urgent need to form a new worldview paradigm in the context of postnonclassical rationality, which would significantly deepen the worldview of postnonclassical people from rationally pragmatic interest to spiritual and transcendent meanings. Several well-known Ukrainian scientists have considered this problem, including Huberskyi et al. (2002), Tabachkovskyi (2005), Kremen (2007; 2019), Sydorenko (2011), Dobronravova (2017), Saukh (2019), Oleksiuk (2019; 2021), Bystrytskyi et al. (2020), and others. Transdisciplinary discourses of postnonclassics create preconditions for understanding the nature of postnonclassical

knowledge, in which the process of creating “human” in person is observed. As V. Kremen (2019) points out, “the 21st century should become the “age of person”, in which the priority of the spiritual prevails over the material. In order to overcome the spiritual value crisis and preserve one’s essence, a new philosophy is needed – the philosophy of anthropocentrism, when the main parameter of existence is the human dimension”.

Revealing the axiological dimension of postnonclassical science, L. Sydorenko (2011) thoroughly describes the essential features of postnonclassical knowledge: “first, this knowledge is on the border of natural sciences and humanities. The second feature of postnonclassical knowledge is the transdisciplinarity of knowledge. The need to solve research and practical tasks from the standpoint of transdisciplinarity creates an “ethos of transdisciplinarity”, which acquires the features of an open system that focuses on real problems of life that need concrete solutions. The third characteristic of postnonclassical knowledge is that knowledge and practice interact in a new way. Knowledge as an ability to practice involves the moment of design, projectivity, and technology. Thus, there emerges an understanding of the objectivity of scientific knowledge as an opportunity to predict the success of our practices”.

A team of Ukrainian scientists in the field of post-classical art education (Oleksiuk et al., 2019) thoroughly studied the problem of forming students' readiness to implement musical and pedagogical technologies. This confirms the previous opinion of L. Sydorenko (2011) that knowledge and practice in the context of post-classical knowledge interact in a new way, anticipating moments of projectivity, manufacturability, etc.

THE CONCEPT OF TRANSDISCIPLINARITY AND ITS USE IN HIGHER ART EDUCATION

The study of scientific and philosophical works on the given problem shows that modern scientific knowledge is becoming more and more inter- and transdisciplinary. The study of the phenomenon of transdisciplinarity in Western philosophy of science reveals the emergence of a new strategy for solving real practical problems, which correlates with fundamental theoretical principles, thinking styles, and value priorities of postnonclassical science, which has powerful heuristic potential. As a result of these changes, a new image of postnonclassical science is formed, in which transdisciplinarity acquires an independent methodological significance.

It should be noted that in the foreign academic tradition, the term “transdisciplinarity”, due to its semantic potential, has not yet received an unambiguous interpretation. Currently, several interpretations of this concept coexist, as like the distinction between types of transdisciplinarity. The classification of directions or types of transdisciplinarity proposed by the Belgian researcher E. Judge (1994) is considered the most widespread and frequently used in the scientific literature. According to E. Judge, there are four types of transdisciplinarity. The original form of transdisciplinarity (Transdisciplinarity-0) uses the illustrative potential of metaphor and figurative language and is most often used in such forms of human spiritual practices, as philosophy, art, religion, etc. The general form is Transdisciplinarity-1, which is based on the efforts of formal interconnection of individual disciplines and provides formation of such logical meta-frameworks, through which their knowledge is integrated at a higher level of abstraction than at the level of interdisciplinarity. The example of the Transdisciplinarity-1 development includes the Swiss School of Transdisciplinarity (Network for Transdisciplinary..., 2021).

Instead, Transdisciplinarity-2, combining theory and practice, provides a kind of meta-level or meta-structure that overcomes the limitations of disciplinary science and combines different cognitive strategies and ways of thinking. Transdisciplinarity-2 provides a closer connection with the personal experience of the researcher, including meditation. Transdisciplinarity-3 uses general metaphors that have a fundamental cognitive value and contributes to the formation and conceptualisation of a systems approach. The French School of Transdisciplinarity prefers Transdisciplinarity-2 and Transdisciplinarity-3 types in its research (International Centre for Transdisciplinary Research).

The methodological basis for Transdisciplinarity-4 is a transdisciplinary (universal) picture of the world. It creates conditions for the study of each object at any level of reality and ensures coordination of disciplinary knowledge based on a common “axiomatic approach”, as understood by the creators of

transdisciplinarity Jean Piaget and Erich Jantsch. This type of transdisciplinarity development as an independent scientific discipline and as a new space without stable boundaries between disciplines, is developed by the Russian School of Transdisciplinarity.

In light of the above, it can be argued that postnonclassical philosophy of science explores modern science through the prism of transdisciplinarity, which genetically grows out of interdisciplinarity, filling it with new senses and meanings as a special region of its existence. Meanwhile, these concepts as key in modern science and philosophy of science are interrelated categories. The origins of interdisciplinarity can be found in the classical understanding of scientific rationality, according to which it determines the interaction of disciplines, which leads to the expansion of their subject area, heuristic support of other disciplines, use of their concepts, methods, analogies and so on. If interdisciplinarity is an important factor determining the transition of science from classical to non-classical, then transdisciplinarity characterizes science in the postnonclassical period of its development. Losing direct dependence on its interdisciplinary origins, transdisciplinarity acts as a mediator between culture and postnonclassical science and determines a special style of “postnonclassical philosophising”. Transdisciplinarity links not only sciences and humanities, but also arts and other spheres of human spiritual experience.

According to L. Kyiashchenko (2015), the term transdisciplinarity, in contrast to interdisciplinarity, will be used to describe such cognitive situations in which for various reasons scientific mind (both in science and philosophy) is forced in search of integrity and self-validity to carry out a transcendent shift to a sphere bordering on the world of life”. It goes about transscience in the context of the interaction of the cognitive process with the world of life, because the object of study in the postnonclassical world is the inner world of human, or culture, history, society, etc. Therefore, the ontologies of human nature that are outside our mental sphere (intuition, coherence, etc.) are becoming popular, forming spaces of trust, understanding, and empathy, which “in some respects are already transpersonal” (Budanov, 2015). This transforms the idea not only of the nature and boundaries of human, his/her anthropological integrity, but also of his/her activities as the basis of any practice.

As it is known from reference sources, practice (from Greek – action, activity, deed) is “a determined by the specifics of social life purposeful human activity, the content of which is transformation of nature and society, specifically human life, human life in the world” (Honcharenko, 1997). In contrast to classical and non-classical practices aimed at destroying the “human in man” (practices of manipulating consciousness, “dirty” political technologies, etc.) in postnonclassical practices, the key is not the external but the internal world of human. As V. Budanov (2015) notes, these are “... practices of choice, decision-making, creativity, and in general any cognitive practices that do not decompose into activity components that cannot be postponed, as it is impossible to dance or sing. It is also the practice of self-composition of the author in the process of creativity, learning or performance; synesthesia of the perception channels in spiritual practices and in the perception of art...”. In this dimension, it becomes possible not only to comprehend the practice, but also to live it in real time – “here and now”, which is clearly reflected in post-classical practices.

Analysing the synergetic perspective on the conceptualisation of postnonclassical practices, I. Dobronravov (2017) notes that “we have to recognise our life as a set of practices. And given their postnonclassical nature, it becomes obvious to turn to the experience of irrational spiritual, religious, mystical practices to realise and preserve one’s own identity”. According to the researcher, this “makes it possible to consider the actions of scientists and their communities in the unity of conscious and unconscious, rational and irrational, spiritual and corporeal, and individual and social”. It is the postnonclassics in its practices, in which the sacred and the rational are not opposed, but only complement each other, create a space of coherence, trust, and empathy, in which professionals find mutual understanding and respect.

The discourse on the relationship between goals and values in postnonclassical practices, with its defining features that include humanity, reflexivity, creativity, innovation, etc., lays the theoretical and methodological basis for building a new postnonclassical educational model. It is known that a traditional educational model is based primarily on the transfer of knowledge of each subject separately. At the same time, the disciplines do not complement each other, each of them offers its own vision of reality, which in

the end will never be complete and holistic. In order to overcome the limitations of the traditional methodology of anthropological rationality, it is important, in authors' opinion, to introduce a transdisciplinary approach in the content of higher art education. Meanwhile, as practice shows, the complexity of implementing a transdisciplinary approach is related not only to the development of the methodology of musical and pedagogical research, but also to the practical implementation of the methods and tools of transdisciplinarity. However, several problems appear here, as people immerse themselves in a field that is little studied in the domestic scientific tradition. This is the field of transdisciplinary engineering, on the development of which Western researchers mostly focus their attention.

According to O. Kniazeva (2015; 2019), "engineering of transdisciplinarity is a new scientific rationalism or paradigm of the open mind, in which thoughts are inseparable from actions, and all knowledge is based on "such a wonderful ability of the mind to connect". It is about the ability to link different disciplinary knowledge, as well as knowledge and activities, traditions and innovations. The procedure of discovering a complex world is replaced by the technique of design, embodiment of what we imagine, and construction of what we want". As S. Dinaburg (2016) notes, "this is a world of mediation, facilitation, cross-fertilization using open-minding and grass-rooting in team building".

The problem of implementing a transdisciplinary approach, in authors' opinion, is directly related to the actualisation of postnonclassical practices in the content of higher art education. Methods and techniques of transdisciplinary engineering can be a tool for their implementation. This is mediation as interposition; facilitation as a tool to make the task easier; cross-fertilisation as an exchange of productive ideas; case method as a learning technique on the example of describing real situations, as a complex system in which simpler methods are integrated (modelling, systems analysis, problem-based method, game methods, etc.); grass-rooting, etc. The new pedagogical reality raises the status of informal pedagogical practices that correlate with individual, existentially oriented values of postnonclassical science and culture, which is plural in its meanings, strives for openness, inexhaustibility, and freedom of choice. After all, a characteristic feature of the postnonclassical culture is its formation, which is associated with the construction of reality in the human dimension.

Thus, transdisciplinary understanding of the music and pedagogical process creates synergies between the individual disciplines, considering them as a whole, and lays the foundation for didactic innovations in the content of higher art education. In particular, the reliance on metaphor in educational discourse is considered by authors as an alternative to traditional pedagogy in order to reorient it to human focus. In authors' opinion, "it is metaphor that often determines transition to new knowledge, expands the semantic space mastered by human, acts as a tool for semantic transmission and exchange of personal experience" (Oleksiuk, 2021). The methodological basis for the metaphorisation of the educational process in the content of higher art education are such types of transdisciplinary matrix as Transdisciplinarity-0, 2, and 3.

As a universal phenomenon, metaphor models and interprets both human himself, the community, and the world as a whole. Metaphor is of great importance in the communicative process. According to such Ukrainian philosophers, as Bystrytskyi, Zymovets, and Proleiev (2020), "... communication is not only a mediator of human interaction... communication is a way of human existence, or an ontological characteristic of human existence". People successfully communicate with each other through various language tools, including metaphor. Through the process of metaphorisation, participants in communication can go beyond everyday thinking to a level that requires active co-creation. Recourse to metaphor as a nonlinear form creates conditions for building a holistic educational process, avoiding its fragmentation and division into separate segments.

Metaphor as a communicative action is a complex unity. The structural components of metaphor are world sensation, world perception, and world understanding, which form a kind of metaphorical worldview of the individual, through which a person thinks in metaphors and learns about the world. In authors' opinion, "metaphorisation in pedagogical discourse as an artistic construction ensures functioning of an important mechanism of human thinking". Since "metaphor is an important part of cognitive processes", it is impossible to "pass the path from the perception of the subject image to the concept formation, bypassing the stage of metaphorisation" (Oleksiuk, 2021). One can agree with L. Kyiashchenko's (2006) opinion that implementation of the transdisciplinary approach involves relying on the concept as a "result of joint

activities of at least two individuals”, a form of “dialogic language that preserves open space for others as fundamentally new” (p. 30).

A bright example of introducing metaphorisation in the educational process of the Institute of Arts of Borys Hrinchenko Kyiv University was the interdepartmental project – storytelling “We both grieved with one grief and rejoiced with one happiness” (Oleksiuk, 2021). The form of storytelling – telling stories related to a common topic, was optimal for the embodiment of many facets of the lyrical world of Borys Hrinchenko – a Ukrainian writer, teacher, and public figure. The first part (musical and poetic) of the storytelling is the love story of the Hrinchenkos, which is revealed in biographical facts, epistolary heritage, and poetry of the writer. The second part (musical and theatrical) is staging of a fragment of Mykola Leontovych’s opera “On Mermaid’s Easter” based on the eponymous fairy tale by Borys Hrinchenko, which also describes the love of the main characters (Kozak and Mermaid). The form of storytelling in the context of postnonclassical practices created an open and favorable atmosphere for transdisciplinary transfer of pedagogical skills, which enabled synergy of intellectual and creative potential of teachers and students from 4 departments of the Institute of Arts of Borys Hrinchenko Kyiv University: Department of Musicology and Music Education, Department of Instrumental Performance Skills, Department of Academic and Pop Vocal, Department of Choreography.

Pedagogical observations conducted during preparation and conducting of the art event proved that in the professional activity the teacher needs to form a space of trust, empathy, and understanding, create a favorable and open creative atmosphere in the team, using methods and techniques of transdisciplinary engineering (mediation, facilitation, cross-fertilisation, etc.). An analysis of the completed tasks after storytelling has shown the expediency of reorienting the music and pedagogical process in connection with transition to inter- and transdisciplinary cognitive and communicative strategies. Due to a wide inter- and transdisciplinary synthesis, it has become possible to synergistically combine different ways of perceiving and comprehending the unstable and complex world of art, creative rethinking of known images, symbols, and values. Guided by a nonlinear logic, as a result one gets the main product of the student’s work – their personality, with which one move along the route: “artistic image – metaphor – symbol – concept” (Oleksiuk, 2021).

Summarising the above reflections on the outlined problem, it is important to emphasise that when introducing any transformational changes in the development of infrastructure elements of scientific and music and pedagogical activities, one must be guided by the logic of sustainable development and take into consideration the optimal balance between tradition and innovation.

CONCLUSIONS

The current postnonclassical stage in the development of scientific cognition actualises the need for a new look at the educational and upbringing potential of art. Philosophical search for universality, re-actualisation of philosophical knowledge as a worldview-scientific basis in the content of higher art education, raising the status of informal pedagogical practices actualise the search for innovative methodology in the context of postnonclassics.

Transdisciplinary understanding of the music and pedagogical processes strengthens the synergy between the individual disciplines and creates conditions for didactic innovations in the content of higher art education, in particular – introduction of metaphorisation in the educational process. However, as practice shows, there are currently objective and subjective difficulties both with introduction of a transdisciplinary approach in the methodology of music and pedagogical research, and practical implementation of the methodological techniques and tools of transdisciplinarity.

The study considers proving efficiency of the postnonclassical practices in the content of higher art education that correlate with the values of postnonclassical science and culture to be a promising direction in solving this problem. Methods and techniques of transdisciplinary engineering (mediation, facilitation, cross-fertilisation, grass-rooting, etc.) can be a tool for their implementation. As an example of introducing metaphorisation in the educational process, the storytelling “We both grieved with one grief and rejoiced with one happiness”, based on the life and work of Borys Hrinchenko, was given. The form of storytelling

in the context of postnonclassical practices created an open atmosphere for transdisciplinary transfer of pedagogical skills, which combined the intellectual and creative potential of teachers and students of the Institute of Arts of Borys Hrinchenko Kyiv University and proved the expediency of reorienting the music and pedagogical process in connection with transition to inter- and transdisciplinary cognitive and communicative strategies.

The outlined problem and the complexity of its implementation in practice cannot be solved within one article. It needs further study and will be explored in the further works.

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