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SCIENTIFIC SCHOOL AS SYMBIOS OF THE VARIATIVE AND INNOVATIVE COMPONENTS IN THE MODERN MODEL OF PROFESSIONAL AND PEDAGOGICAL ACTIVITY

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INTRODUCTION

Since the end of the 1980s, Ukraine has emerged as one of the major European political and socio-economic trials and transformations. Declaring independence and liberation from ideological dogmas, Ukraine has developed not simply as a democratic state, but has declared itself as a well-developed civilization that is significant on a world scale. During this transitional period, the need for objective and complete knowledge of the social assets of the Ukrainian people in various fields of human activity, which has been carefully and carefully neglected for a long time, is particularly acute.

At this stage, a number of studies that focus on the present, development trends and source heritage of Ukrainian science are extremely relevant, because science is an important value of any society, the foundation and the main spring of socio-economic development.

Through direct communication, the education system and the media science, based on rationality and humanism, forms the basis of human thinking, its outlook, perception of reality and the form of reaction to change.

The state of development of science in the country is combined and correlated with the development of scientific schools, called to perform their functions. In addition to the production of knowledge

(research), their dissemination (educational and communicative activities), the urgent appointment of scientific schools is the formation of future researchers, scientists. In view of this, we can state that these scientific education exist as a whole organism, functionally capable of self-renewal, involving gifted youth people in research activities.

This scientific and social phenomenon has been paid attention by many philosophers, scholars, historians of the different times, who are investigating the diverse areas of the evolution of science – a significant sphere of society. Significant intelligence in this direction belongs to V. Vernadsky, S. Mikulinsky, M. Yaroshevsky, G. Krebrero, G. Steiner, J. Khramov, P. Kapitache and others.

With the aim of identifying powerful levers for the further development of scientific knowledge, most of them agree that science school is an efficient and effective link of the scientific and technological progress. They indicate the relevance of the study of such associations. The analysis proves the diversity of the goals set in the study of many features and problematic issues of scientific co-operatives. The material of research of this phenomenon are philosophical, scientific, psychological, pedagogical, historic-memoir and journalistic works of Ukrainian and foreign authors.

1. Scientific school as procedurally-innovative, progressively oriented form of socio-cultural development

In the history and theory of performing arts, the term “scientific school” is used infrequently, unlike other scientific fields. Musicologists predominantly use the term “performing school”, which characterizes a separate generic education (this institution) in musical art on many objective and subjective grounds, but this does not mean that science is bypassing this branch.

The explosive growth of communicative and integrated technologies with the complication of the social structure of modern

society, the key role played by networks, the unification of people and organizations, contributed to the rapid development of economics, culture and science. These processes have also had a positive impact on the development of musical methodology.

The past century can be called a landmark in enriching the scientific and theoretical basis of musical art. After all, the erosion of cross-sectoral facets mutually induces the decision of important tasks, both in the sphere of social life and in music.

Modern musicologists increasingly use the achievements and experience of other sciences (philosophy, psychology, pedagogy, physiology, aesthetics, etc.) in solving professional art problems. M. Rzhevskaya[1] emphasizes the promise of interdisciplinary thinking in the musical field. She points that the peculiar process of revision and clarification of the essential principles on which musicology is based, connected on the one hand, with the need to revise the main methodological positions that "gradually diversified and enriched (to a large extent due to influences on music science" from the "outside", a changing socio-cultural situation), but on the other hand – with the inherent features of the very history of music as a science and the absence of hermeticism in it, unlocked outside of the character, which allows "to fit" the studied musical movement into broad textual fields and, in addition, use the best practices of other human (and other) sciences". The author reasonably notes that when closer examination of various research areas, they are manifested by the laws of paradox, if not parallel, then unidirectional, aimed at comprehending the rich facets of scientific truth, regardless of the importance of micro-macro problems.

[1] Ржевська М. Ю. Історичне музикознавство та теорія динаміки культури: перспективи міждисциплінарних досліджень. Науковий вісник НМАУ ім. П. І. Чайковського. Культорологічні проблеми української музики (наукові дискурси памяті академіка І.Ф.Ляшенка). К.: НМАУ ім. П.І. Чайковського, 2002. С. 107–113.

This may be related to both the history of music, the logic of the artistic process, the formation and formulation of new concepts, and the solution of more narrow, but not less significant (as, for example, clarification of the conceptual-categorical apparatus of science, its terminology base, etc.).

A significant increase in interdisciplinary research in the humanities is observed in the second half of the XX century. At the same time, musicology began intensively to apply methods of semiotics (works by M. Aranovsky, V. Medushevsky, S. Rappoport, etc.). It was through the semiotics (in particular, J. Lotman's research) that a path to biology and neurophysiology was made, which led to the application in the theory of music of the doctrine of the functional asymmetry of the cerebral hemispheres, the presence of which V. Medushevsky linked not only the peculiarities of creativity of various composers, but also changes in epoch-making styles, proving that public neuropsychology is one of the factors of the dynamics of culture, and, consequently, should be taken into account in musicology studies.

Over time, the influence on the art and the application in the musicology of theoretical concepts, practical experience, terminology apparatus of the scientists of other branches of world science, become more influential, and at the intersection of the sciences there arise and operate musical pedagogy, musical acoustics, musical psychology, etc. These facts suggest a remarkable prospect of interdisciplinary research, which results in the unification of scientists working in various spheres of human activity into scientific and creative teams to achieve significant and sometimes unpredictably significant results. It is invaluable and enrichment of knowledge and experience during the period of their joint activity. Moreover, the communication of scientists is not limited to the exchange of information. With regard to the prerogative of the exchange of ideas in comparison with the exchange of material things, Bernard Shaw said bluntly: “If you have

an apple and I have an apple and we exchange them, then we remain with ourselves – each with an apple. But if each one of us has one idea and we pass it on to each other, then the situation becomes different. Each of us becomes more richer, namely, an owner of two ideas"[2]. It's hard not to agree with this idea. But regarding the advantages of intellectual and creative communication, the author does not consider, perhaps, the main communicative value of the direct communication of scientists in science as an emotional and creative process, in which, as a result of the metamorphosis of ideas, there is, so to speak, the "third apple", and it seems so simple at first glance, an operation can lead to revolutionary discoveries. "If communication acts as an indispensable factor in cognition" – writes M. Yaroshevsky, – "the information that arose in scientific communication can not be interpreted only as a product of the efforts of the individual mind. It is generated by crossing the lines of thought coming from many sources"[3]. The real movement of scientific knowledge acts in the form of dialogues, sometimes very intense, such as those, that extend in time and space. After all, the researcher poses questions not only to nature, but also to other testers, seeking in their responses acceptable information, without which its own decision can not arise.

In keeping with our opinion on the prospect of merging scientists, we note that it is the scientific schools, that go to the socio-cultural outskin, as highly effective educational systems and progressive engines of scientific and technological progress.

In this way, the formation of new scientific communities in the field of musical art, as well as in many other spheres of human activity is the right choice way for further development and strengthening of the professional scientific and theoretical basis.

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[2] Цитати відомих людей: [Електронний ресурс]. Домівка – український форум. Режим доступу: http://domivka.net/forum/showthread.php

[3] Ярошевский М. Г. История психологии от античности до середины XX в. [Электронный ресурс] М., 1996. – Режим доступа: http://psylib.org.ua/books/yaros01/txt01.htm

The famous scholars of art (B. Yavorsky, I. Lyashenko, I. Kotlyarevsky, V. Moskalenko, M. Davydov, etc.), who made a significant contribution to the development of the national musical science, appear in the Ukrainian musical art. Their scientific and creative work attracts the attention of many researchers, who emphasize the importance of the scientific schools created in the field of musical art created by them (works by A. Beregova, A. Laschenko, I. Pyaskovsky, O. Sokol, M. Kopyts, etc.).

Consideration of studies in this direction leads to the conclusion that the term "scientific school" with the increasing use of musicologists has not been yet considered sufficiently musical science as a structured mechanism in musical pedagogy and did not appear in it as a separate subject of research. It should also be noted, that the most researchers focus on highlighting activities of only the founders of scientific schools and their achievements, which is, of course, valuable, but can not fully satisfy the urgent need for systematic knowledge of the mechanisms and specificity of the effectiveness of this phenomenon in the field of musical pedagogy . In view of this, we consider it expedient to consider the functioning of scientific schools in the musical sphere in order to identify as separate specific differences from similar schools, existing in other branches of society activity, as well as their qualitative structural effective features.

An important concept in the system of scientific use is scientific cooperation, which actually denotes one of the structural units of science and which we more often call scientific science school.

After all, the progress of science is characterized not only by the flashes of the mind of such famous geniuses as G. Galilei, A. Einstein, D. Mendeleyev, I. Newton, M. Faraday, T. Jung, etc., but also by specific informal associations of scientists, made up of prominent scholars. For example, famous scientific schools: V. Vernadsky, an outstanding Ukrainian scientist, founder of geochemistry, biogeochemistry, radio geology, cosmic science; N. Bohr – Danish

physicist, founder of quantum mechanics, founder of the Institute of Theoretical Physics in Copenhagen (one of the defining world scientific centers); Y. Liebig is a German chemist, one of the founders of agrochemistry, the author of the theory of fermentation and mineral nutrition of plants, and many others. As we see, the intensity of the development of science, above all, is characterized by the presence of bright personalities in this field, regardless of whether their activities are individual or collective. This explains the considerable interest of the researchers in analyzing scientific achievements and activities (mostly in scientific research leaders'), by leading scientists, as one of the ways to study the stages of advancement of scientific thought in various spheres of human activity.

The most valuable assets of modern scientific and technological development are human resources, which are involved in the field of development of high technologies, in carrying out unique scientific researches and being carriers and creators of intellectual capital. The latter acts as an important component and a necessary condition for the effective development of modern society, an essential imperative of its existence. In our opinion, intellectual capital as an accumulation of scientific and practical knowledge combines intellectual work and intellectual property, saves talents and accumulated experience, certifies the quality of the use of tools, determines professional image, social recognition and the content of scientific and commercial activity. The problems of creating, accumulation, preservation and ensuring the dynamic development of intellectual capital – are not the most urgent for humanity at the beginning of the third millennium.

The perspectives of science have always been determined by the prospects of leading scientific schools. This is especially true in recent decades, when all the branches of world science have reached outstanding heights, and any scientific problems require the pooling of efforts and the formation of teams of scientists. In the conditions of the development and branching of sciences and their simultaneous

interweaving, it becomes more difficult to obtain significant results on their own, or even to the professional community of scientists. Already becoming a regularity of co-operation of researchers who work in different spheres to solve a specific narrow-minded scientific problem.

In these conditions, the importance of scientific schools is increasing, which is one of the most important forms of scientific cooperation of scientists. If the formal labor attachment to the scientific community for civil society is not so great, then the scientific school is its essential element. Being the main lever of progress, schools play a special role in shaping a civilized society. This motivates the need for thorough research of scientists in the direction of studying: the genesis of scientific ideas; scientific directions; the mechanism for the creation and formation of scientific associations, the specifics of their existence and prospects for the future. "Organizations of science can not be given spontaneous development, it is necessary to study the patterns of development of collective scientific work, we must be able to select creatively talented people..."[4] – says Nobel Prize winner in the field of physics P. Kapitza. In fact, comprehensive detailed analysis and exhaustive knowledge of this phenomenon undeniably serve the development of science and no less significant than the "derivation", or the study of scientific concepts, hypotheses, theories, ideas.

Research of scientific associations, first of all, should be done on the basis of studying the experience of the great scientists and major organizers of scientific work, since they (the organizers) are the founders of the school, the main generators of ideas, spiritual mentors, and its leaders.

A detailed and comprehensive consideration of the scientific, creative, public and organizational work of the well-known leaders of

[4] Капица П. Л. Эксперимент. Теория. Практика. М.: Наука, 1974. 246 с.

science is the main method of studying the structure, the specifics of the functioning, the direction of scientific schools. And it has already become a historical tradition to name their schools based on their names. This direction of research contributes to a clearer definition of the essence of their theories created and their significance.

Errors in assessing the usefulness of science (both during the crisis period and in stable periods) are generated by the fact that many of its important functions fall into sight, which are simply not noticeable, and not the lack of good measurement methodologies. The music industry is no exception.

Many skeptics believe, that science and performance, or a scientific school and a performing school are absolutely divergent concepts that can, without integrating, exist and develop in parallel, and there is nothing in common between them. This interpretation of the school is generated, most likely, by ignorance and lack of understanding of the very purpose of science and schools in the arts. It is known that the primary function of any school is the transfer of knowledge and ideas from generation to generation – from teacher to student, and the scientific school from this position is the higher form of not only the training of highly skilled specialists and scientists, but also the transfer of information in the form of scientific -theoretical thinking. From history, it is known that scholarly schools arose even in ancient Greece; were initiated as pedagogical and solved the tasks of education and education (the Academy of Plato, the Pythagorean school, the school of Hippocrates, Aristotle, etc.). At the beginning of evolution, a science school united scholar-follower scholars who imitated his ideas, preserved, crystallized and sacralized them. But over time, the status of scientific schools gradually changed. First, the primary purpose is not only the storage, transfer of knowledge, but also their further development. Then gradually, there are new functions of the school: they solve tasks that require the unification of scientists and not capable of a single scientist, no matter how he was

gifted. And although the students united around the complex of ideas of a distinguished thinker, at times they were by no means inferior to the mentor. Consequently, for the mentor, school leadership became more and more associated with the support of not so much intellectual authority as moral and ethical, which allowed consistently balance the ambitions of their talented pupils and educate them in the need for serving ideas beyond personal subjective interests. In our time, such civic cooperatives are formed more often in research institutions and become real research and production associations.

The review of works focused on this phenomenon gives grounds to note that in the most of the phenomenon of scientific schools the subject of studying science of science, philosophy, social psychology, science of science, history of science and, unfortunately, in essence, is not the subject of pedagogical mastery. Sometimes there is a somewhat anecdotal situation. From the history of science it is known that many future Nobel laureates studied and worked at Nobel laureates; that is, direct communication, namely education and specially constructed educational system allow people to maximally develop their abilities and scientific thinking. It can not be denied that it is most successfully implemented in scientific schools. On the one hand, it is recognized that scientific schools as pedagogical centers are directed-operational educational systems of a special kind and differ little from other pedagogical systems. There is also no doubt the high effectiveness of their effectiveness in training young scientists and in forming them as individuals. At the same time, we see that the development of civilization, computer technology, the growth of the complexity of technology, which should be used by people of different professions, as well as the development of information space, with acuity requires from each person the presence of scientific style of thinking. According to V. Onoprienko: “The main characteristics of a society based on knowledge is the ability to create and effectively use scientific knowledge, turn it into a source of profit, which is crucial for

sustainable economic development and raising the standard of living of the country's population. High technologies that determine the nature of such a society require mutual adaptation, balance with the perfection of the human person. A multidimensional man of a knowledgeable society displaces from the scene of history the economic man of the industrial age. Present requires radical changes in the education system, so that there was an opportunity to vary the types of activities, change the professions, improve their qualifications, the level of adaptation to new technology and technology. This, in essence, should be a continuous, lifelong education"[5].

The above circumstances push for a comprehensive meaningful consideration of the phenomenon of the school as a progressive educational system in contemporary musical pedagogy.

State support of scientific and creative schools was considered at the symposium as a decisive condition for qualitative and technological improvement of vocational education. The theme of the issues raised revealed a growing interest in the study of the problems of scientific schools and indicates their significance in the life of society. On the other hand, no one of the speakers paid attention to the actual absence of research on the pedagogical process of scientific schools. For this circumstance, O. Grezneva[6] also paid attention to his scientific works.

She makes a fair observation that the practice of pedagogy of a school of science has existed since the time of the appearance of science itself. But the researchers of pedagogy, with rare exceptions, did not pay attention to her. Although, if there is a pedagogy of preschool education, school, high school, etc., it is natural to assume that there should be a pedagogy of scientific schools. Considering

[5] Онопрієнко В. Магістральні напрями інтеграції науки і освіти [Електронний ресурс]. Національна бібліотека України імені В. І. Вернадського. Вісник НАН України. 2007. № 11. С. 10–17. Режим доступу: http://www.nbuv.gov.ua/portal/All/herald/2007–11/a4–07.pdf

[6] Грезнева О. Ю. Научные школы (педагогический аспект) М., 2003. 69 с.

scientific education as a specific branch of industry, supporting in the context of relations with general and vocational education, V. Landov substantiates the need for special pedagogical training of scientific leaders. In his work «Scientific education: development of abilities for scientific creativity»[7], considering this aspect of the problem, he relates guidance to the thesis to the most difficult kind of pedagogical activity. At the same time, almost all, with the exception of pedagogy, in the branches of science in practice, often engaged in this task by scientists who do not have special pedagogical training. There are many examples when prominent scholars became prominent teachers in the absence of a pedagogical education, relying solely on their own, acquired in practice pedagogical experience (schools of N. Bohr, A. Butlerova, L. Vygotsky, Y. Liebig, I. Pavlova, E. Rutherford, S. Freud, etc.). That is why V. Ledniv reasonably proposes, in the process of studying scientific schools, to consider not only the ideas, the directions of scientific research they are developing (the scientists – the leaders of the school), but also the organization of scientific work and the system of preparation of scientists for the purpose of a special theoretical generalization, where the main goal is its dissemination in the system of scientific education.

Our attention to scientific schools in the field of musical pedagogy is motivated, in fact, by the same factors, which fully correlate with general pedagogy.

First of all, the model of a scientific school is probably one of the very effective models of the educational complex – such as broadcasts, knowledge, experience, traditions, ideologies, cultural norms and values developed by the scientific community in the process of joint activity, from the older generation to the younger. Such a position is intended to establish how legitimate it is to speak of the existence of this pedagogical phenomenon in the field of music

[7] Леднев В. С. Научное образование: развитие способностей к научному творчеству М.: МГАУ, 2001. 120 с.

performing education, its mass, and which forms of educational activity are in line with the models of the scientific school. In the light of this, we will see the promise of implementing elements of the model of the scientific school in musical pedagogy.

It should be noted that this aspect is in the plane of scientific and educational function of the school, as a universal tool for the development of a research style of thinking.

Also important is the prospect of analyzing the specifics of the existence of scientific schools in musical arts and revealing the general patterns of their formation and development. Unlike general theoretical science, where each school, which to some extent contributed to the development of new ideas, knowledge, ideas, technologies, has unquestionable value; the requirements of pedagogy include fairly wide reproduction-the use of declared and achieved results in practice.

Taking into account the above facts, it is possible to note that such scientific schools are rightfully called scientific and practical, since their central function is the realization of educational technologies by those who were designed and developed.

That is why, in our opinion, a comprehensive analysis of the mechanisms of origin, development, dissemination, mutual influence, management of scientific and practical schools can be the basis for the construction of new and the development of existing innovative and effective educational networks, which is very relevant for modern pedagogy as a platform for integration scientific and educational processes.

The stated principle of unity of educational and research functions of a school of sciences in general is similar to the idea of a developing and developing educational environment, put forward by V. Zaretsky[8].

[8] Зарецкий В. К. О двух подходах к проектированию образовательных. Проектирование в образовании: проблемы, поиски, решения. Ин-т. педагогических инноваций РАО. М., 1994. 120 с.

In his work, he emphasizes the fact that the development of each student and teacher in an educational organization becomes possible only through the development of the whole of the educational environment itself; and vice versa, its (educational environment) elevation is ensured by the development of each individual operating in this organizational structure. And this means that the educational function of the school naturally determines the mutual development of each member of the team and its internal scientific and creative environment.

From the history of science it is known that the birth of scientific schools occurs mainly in the field of education and on the basis of higher educational institutions, which in turn naturally distinguishes them among other invariants clearly represented pedagogical, educational function. It is the differentiation of such features as organic unity of scientific and educational processes, purpose-oriented guidance on the production of knowledge about knowledge, training and education of highly skilled scientific and pedagogical personnel, to consider the activities of such organizational structures as a metamodel of the integration of science and education.

2. Identification of the scientific schools

Any corporate community requires full self-identification. This is due to many objective reasons, but first of all, it is done with the aim of self-determination, the establishment of boundaries and the way of existence with respect to other social groups, as a means of self-preservation and self-reproduction. There are also scientific communities such as a science school.

What is a “scholarly school”? What are her signs? By what parameters it is characterized and specified? What are the criteria for determining its performance? What is the leader's function? What are the preconditions for the emergence and what role do they play in society? For these questions, for centuries, the philosophers, science

scientists, sociologists, and historians of science are looking for answers.

The term itself has long come to life in the scientific world and has been used for many centuries for whole strata of science, as well as for separate, different in scope and results of activity, scientific formations. It should be noted that, despite its increasing use in scientific circles, most scholars do not disclose neither their essence nor the very concept. In addition, they are sometimes confused with other similar forms of co-operation.

Recently, the problem of identifying scientific schools has become extremely important. Among the reasons that stimulate her staging, we distinguish the following:

– efficiency of the activity of the scientific school in the context of the evolution of scientific and technological progress;

– management of scientific and creative process as a key factor in the growth of scientific achievements;

– the desire to reproduce the scientific culture in the next generations of scientists, because it is scientific schools, being multi-purpose associations, provide, together with the acquisition of new knowledge, experience, transfer to their next generation of researchers.

That is why, for a long time, a number of scholars are engaged in in-depth research of this structured unit of science.

It must be admitted that in the diversity of approaches to defining the concept of “scientific school”, in the system of criteria proposed by their authors, no one, in principle, denies the very fact of the existence of this phenomenon in science and its significance in the development of scientific knowledge. Therefore, in the future considerations, we proceed from the fact that scientific schools function effectively in the field of science and try to isolate the most generalized regularities, that establish the peculiarity of this phenomenon, as well as find some differences that characterize the specifics of their being in the field of musical art.

In order to define the concept of “scientific school” and to explain the specifics of the functioning of this phenomenon in the context of musical pedagogy, it is necessary to first separately consider the terms “science” and “school”, since they together use the notion “scientific school”.

In encyclopedic dictionary the definition of science as a sphere of human activity, “whose function is the development and the theoretical systematization of objective knowledge of reality; one of the forms of social consciousness; includes both activities for obtaining new knowledge, as well as its result – the amount of knowledge that make up the basis of the scientific picture of the world; specificity of specific branches of scientific knowledge. The immediate goals of science are the description, explanation and forecast of processes and phenomena of reality, the study of the components of the latter on the basis of open laws, that is, in the broadest sense, the theoretical reflection of reality”[9].

In the dictionary-directory of a novice scientist, science is defined as a socially significant sphere of society, whose purpose is to identify the objective laws of nature and society with the aim of their creative use. Science is a component of the spiritual culture of mankind. As a system of knowledge, it covers not only actual data about objects of the surrounding world, human thoughts and actions, not only laws and principles of studying objects, but also certain forms and methods of their awareness. In the same way, science acts as a form of social consciousness.

The origins of science originate from the practice of early human societies, where cognitive and production moments were inextricably linked. The production of ideas, representations, and consciousness is initially directly intertwined with material activity and the material

[9] Советский Советский энциклопедический словарь. Научн.-ред. совет: А. М. Прохоров (пред.). М.: Советская Энциклопедия, 1981. 1600 с.

communication of people into the language of real life. Creation of representations, comprehension, spiritual communication of people here is a direct product of their material actions. Primary knowledge was practical, performing the role of methodological management of specific types of human activity. In the modern world, "science" began to act as the highest cultural value, which somehow began to navigate overwhelming majority of philosophical schools and directions. F. Engels gave such a definition of this situation – "The thinking mind has become the only measure of all that exists"[10].

The concept of "school" in the last two millennia is widely used in all branches of human activity. Despite the fact that it migrates strongly from one branch to another, and the limits of its application are very diverse, the concept works wherever it is used. Historically, the concept of "school" has several inventions, depending on the scope of application.

The very word "school" arose from the Greek "schole" [schola], which means – leisure, liberation from physical labor.

The following definition of the term "School" is given in the Soviet encyclopedic dictionary:

"1)Educational institution.

2) System of education, study, acquired experience.

3) Direction in science, literature, art, etc., connected with the unity of views, the commonality or continuity of principles and methods"[11].

In fact, the essence of the definition of the concept of "school" M. Dubinin[12], although it highlights only two key values:

[10] Маркс К. Сочинения. Изд. 2-е [в 50 т.]. М.: Издательство политической литературы, 1961. Т. 20. 827 с.

[11] Советский Советский энциклопедический словарь. Научн.-ред. совет: А. М. Прохоров (пред.). М.: Советская Энциклопедия, 1981. 1600 с.

[12] Школы в науке: Сборник. М.: Наука, 1977. 523 с.

1) an educational institution that provides systematic training and education in accordance with the needs of society;

2) direction in philosophy, science, art.

In our opinion, the most meaningful characterizes the notion of "school" D. Guzevich in the publication "Scientific school as a form of activity"[13]. For his definition, the author suggests to comprehend in stages, why it is "school" called the set, at first glance, of various phenomena, that is, to identify the causes of polyfunctionality of the term; to isolate all possible invariants; analyze them; find system-generating features of the whole class of objects and use them to select subclasses. On the basis of the study, he distinguishes between schools as educational institutions and schools as forms of activity.

On the basis of the discovered invariants D. Guzevich offers a unifying and intrinsically consistent typology and systematization of phenomena to which the term "school" is used.

The researcher concludes that there are five invariants of elementary signs that can be considered universally accepted. The following definitions will be relevant to our work:

1) school is an association of people (community);

2) each school belongs to a certain field of human activity, and this is why it is about people engaged in this activity;

3) the question of a school arises, as a rule, when a set of people produces something that allows it to be distinguished from a set of similar communities, or its designation, the concept of the epistemological system, which covers the whole «know-how» complex, defines human activity and reflects on products, that is, all conceivable variants of this one;

4) the school is where the succession of this thing is secured;

5) continuity is possible only in the presence of at least two generations within the framework of this community.

[13] Гузевич Д. Ю. Школа как форма деятельности. Вопросы истории естествознания и техники. 2003. № 1. С. 64–93.

In solidarity with the proposed ideas, we emphasize, that there is a close link between the goals of science and school. Science and school are “living” systems, in the middle of which are constantly invisible work on training personnel studying, capable of solving the growing problems of society.

It should be noted that for some differences in the definition of concepts science and school researchers reveal their main general features. The same situation we observe in the formulation of the concept of scientific school. Given the variety of views, scientists at the same time say unanimously that there are a number of criteria by which schools are identified in science.

Elements of the collective form of creativity and the scientific school in relation to the interaction of “teacher – students or followers” (elementary structure of the school) arose even in the ancient era (schools: Plato, Milesian, Pythagorean, etc.). Scientific schools in the modern sense arose in the XIX century, as a consequence of the effect of socio-economic factors and the convergence of science with production. This led to the fact that the form of collective creativity was the dominant and necessary for the further progress of science.

Consequently, school as a unity of research, communication and teaching of scientific creativity, is one of the main forms of scientific and social associations, in addition to the most ancient form, characteristic of knowledge at all levels of human evolution.

In the theory of science, as already noted, the concept of «scientific school» is multi-valued and has different, sometimes divergent semantic shades, but basically all researchers point out that this is one of the types of scientific community and, in the opinion of many scholars, is the most optimal feature of organizational forms of cooperation research and scientific activity. In addition, the school of science is essentially an effective model of education as a translation of visual content, cultural norms and traditions from the older

generation to the younger and is an instrument for the upbringing of a research style of thinking.

CONCLUSIONS

The union of invariants of the emergence and use in scientific use of the concept of scientific school gives us the opportunity to draw the following conclusions:

1. Being the main lever of progress, scientific cooperation plays a special role in the formation of a civilized society. In these conditions, the importance of scientific schools is growing, which is one of the most significant forms of scientific cooperation of scientists. If the formal labor attachment to the scientific community for civil society is not so significant, then the scientific school is its essential element. This motivates the need for thorough research of scientists in the direction of studying: the genesis of scientific ideas; scientific directions; the mechanism for the creation and formation of scientific associations, the specifics of their existence and prospects for the future.
2. Scientific schools are the most effective educational systems, where the scientific type of thinking is naturally formed.
3. Differentiation of such features as the organic unity of scientific and educational processes, purpose-oriented guidance on the production of knowledge about knowledge, training and education of highly skilled scientific and pedagogical personnel, allows us to consider the activities of such organizational structures as a metamodel of the integration of science and education.
4. The phenomenon of scientific schools becomes the subject of study mainly in science of science, philosophy, social psychology, science of science, history of science and, in fact, is not the object of pedagogical research.
5. The three categories of the term «scientific school» appear most often:

– a scientific and educational organization of various status, designed to form future researchers;

– a team that jointly develops a research program selected or created by the leader, which does not necessarily have a formal affiliation to any institution;

– the direction in science that encompasses the group (groups) of scientists that emerges due to the establishment of certain traditions.

6. Significant increase in interdisciplinary research in the humanities is observed in the second half of the twentieth century.

SUMMARY

In the history and theory of performing arts, the term «scientific school» is used infrequently, unlike other scientific fields. There is a large number of interpretations of the very concept of «scientific school», which is caused by a variety of approaches to the study of this phenomenon. Each school belongs to a certain field of human activity, and this is why it is about people engaged in this activity. The school as the unity of research, communication and teaching of scientific creativity, is one of the main forms of scientific and social associations, in addition to the most recent form characteristic of knowledge in all levels of evolution of mankind. The current state of study of this phenomenon can not fully satisfy the urgent need for systematic knowledge of the mechanisms and specificity of its effectiveness in the field of musical pedagogy. In view of this, we see the expedient consideration of the functioning of scientific schools in the music field in order to identify as separate specific differences from similar schools existing in other sectors of society, as well as their qualitative structural effective and effective features. The phenomenon of scientific schools becomes the subject of study mainly in science of science, philosophy, social psychology, science of science, history of science and, in fact, is not the object of pedagogical research. In the conditions of scientific and technological progress, the

performing school, in order to maintain its progressive character, must be equipped with advanced methodology and have professional mobility, which are formed and provided by activating the scientists to understand the acquired experience and knowledge, professional problems, the origins of musical pedagogy in order to accumulate scientific-theoretical basis and formation of professional education on a scientific basis.

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