Music Computer Technologies in Formation of Virtual Values in Creative Work and Copyright Problems

Irina B. Gorbunova and Maxim I. Karpets

***Abstract*—** The progression of science and the arts nowadays has been largely influenced our understanding of the universum around us, and been formed a novel instrumentarium, including a virtual "organum" for its comprehension. In this context, virtuality could act as a new ontological hypothesis of artistic reality. Moreover, the tendencies of virtualization of artistic phonographic contexture can be considered as a specific characteristic of an aesthetical landscape, which in its evolution, gradually departing from such original basic values inherent in it as the orderliness of the whole system, the immanence of the means and mechanisms for its functioning, the idea of the presuppositional unpreconditional givenness of artistic creativity as a phenomenon itself. The authors of the article touch upon the issues of copyright, regulating legal relations related to the creation and use (publication, performance, demonstration, etc.) of works of art as objective results of creative activity of people in music and musical education.

***Keywords*—** audial aesthetics, copyright, creative work, music computer technologies, perceptual analysis, psychoacoustics, sound object.

I. Introduction

Copyright — in the objective sense — the institute of civil law, regulating legal relations associated with the creation and use (publication, performance, display, etc.) of works of science, literature or art, that is, the objective results of creative activity of people in these areas.

Legal aspects and copyright protection of music prohibit the use of other people's copyright objects that do not belong to this person, regardless of the volume. That is, it is enough to use one or two seconds of someone else's music to make it a violation of copyright. It is forbidden to use other people's works even for informational purposes that do not carry commercial benefits. In this case, the music copyright holder may claim monetary compensation. It is prohibited to use strangers with musical works to change them by mounting and overlay your own sound and get your own unique piece of music.

It is also prohibited to write remixes without the written consent of the owner of the copyright to the music. Upon receipt of such consent, the remixer receives his own unique right to his remade music with the possibility of receiving income from his musical work.

Also, the copyright law prohibits the use of classical works in any desired volume without the consent of the copyright holder on them, despite the fact that the copyright to classical music has passed into the public domain. That is, the finished product cannot be used, and take notes from classical music and in their own way they can be performed.

The author has two main tasks in copyright protection:

•preserve evidence of creative activity (working materials, including "rejected" versions of the copyright object, source materials, information collected for the purpose of creating your work, etc.).);

•fix the time priority for the possession of a particular object of copyright at a particular time. There are a number of ways to fix the priority on the text, composition and other work, thus providing proof of authorship and copyright.

It makes sense to take measures to protect copyright before using the work (before transferring it to third parties, before its publication, etc.). Violation of the author's rights, unfortunately, is not uncommon. Illegal distribution of music in the world wide web, sale of counterfeit products lead to violation of property and moral rights of creative people.

Research in the field of musicology, based on a number of interdisciplinary connections (philosophy, aesthetics, psychology, acoustics, neurology, semiotics, etc.) are directed today, on the one hand, to the study of culture, centuries formed in the history of mankind, on the other hand, to the study of the specifics of contemporary perception of music.

The authors see one of the main tasks of pedagogical research in revealing the didactic features of the use of music computer technologies (MCT), the possibility of their application in the musical education and education of the younger generation on the basis of classical music, traditional approaches to the methods of transmission the products centuries-old musical culture. It is important that the passion for external, new digital effects and opportunities not only contributed to the bright and colorful "hot" impressions in communication with the art of music, but also developed critical thinking, worked on the development of intellectual and cultural growth of students, including the use of MCT.

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II. Virtuality

A. Review Stage

Virtuality - is one example of the terminology of the new era thesaurus, such a fashionable definition, used nowadays everywhere with respect to a variety of phenomena, often of different nature. This term is considered by researchers and philosophers either as a metaphor or as a synonym for concepts: "imaginary reality" [1], "cyberspace". In this context, virtuality can act as a new ontological hypothesis of artistic reality. However, it is the metaphorical aspect of this phenomenon that is of special interest to us.

The process of transformation of cultural and social reality into an everchanging, unstable, sometimes imaginary, elusive form of existence, actualized the emergence of the role of various images of reality replacing the reality itself. And such processes have strengthening and growth in the artist's consciousness, as well as in the public consciousness. As a result, artistic processes in a wide range of creative directions began to acquire features whose definition of essence leads us to introduce the concept of virtual reality into creative practice. And this context presupposes interaction and operation of the artist not with specific semantic elements, for example, musical textology, but with simulations of the latter, a kind of virtual metaphors. Being fully aware of all the terminological fuzziness and the broadest range of interpretations of the definition of "virtuality", we will nevertheless allow ourselves, for the particular purposes of simplification, to apply such a generalizing term, since in the broad public consciousness, the latter has long been associated with the basic images of those phenomena of contemporary musical practice that or otherwise coming into contact with electronic audio technologies, use the latter as the main tool for their own implementation. This factor, being one of the fundamental aspects of the aesthetic symbols both in the field of organology and in the art of music in general, in essence, delineates the final point of the evolution of the creative model in the contemporary art process.

Considering the nature of virtuality in the context of audial art, we can identify two polar approaches. They are from a different angle, therefore, one - on formal, another - on essential degree, describe the given phenomenon. At the same time, both, in their binary nature, are based on the principle of contraposition. On the one hand, the ephemeralities of infinitely small, unstable quantities, having infinitesimal periods of their existence, both in structural and in qualitative units, have contrasted to the stability of the spatio-temporal properties and meanings of the semantic elements of the traditional auditory aesthetics. Another approach suggests the opposition to the practice of using computer simulations, to the illusory image of phonographic entities, - the objects created by means of computer synthesis, the "living" reality of "material" objects of traditional auditory practice. The abstractness of the symbolic levels of the semantic formulas of musical culture postulates the genesis of the audial artistic space as immanently a virtual sphere. Accordingly, the elements of the musical text, being the oldest forms of substitution of "real", "living" mental phenomena [2], are the main instrument for the virtualization of artistic space. This circumstance, at one time, gave grounds to Yu.M. Lothman to write about the virtuality, openness, incompleteness, non-incarnation of the creative image in the mind of an author dealing with some sort artistic text [3]. Nowadays, this context is expanding due to virtualization, specific forms of representation of immanent musical ideas in a particular timbre, pitch, dynamics, agogics, specific acoustic space properties, i.e. both in the structural and in the qualitative properties of the audial environment, with the help of the technique of replacing them with virtual symbolic abstractions. The macroalgorithm of the artistic process have been reproduces itself, its own forms of existence by recreating the archetypes already established in practice, but on fundamentally different - a virtual levels of their realization. Wherein, virtualization of the space of audiovisual art unfolds both in the form of electronic substitution of key components of text facture for their virtual counterparts, metaphors, and in the form of simulations of the artistic objects themselves, practices, styles [4]. The general idea for the phenomenon of replacing the semantics of the reality of the auditory space with its virtual images allows one to look at the problem from a different "higher" perspective: not the computerization of the instrumental stuff virtualizes the fabric of the artistic space, but the virtualization of art itself in the phenomenological significance of the nature of this process gives rise to the ideology of computerization of creative techniques and means. In many respects, such processes taking place in the artistic space have been inspired by aspirations to compensate by means of computer simulations the process of stagnation, degradation of the structure of the social-artistic reality dualism. The virtual synthesis tools (VST and such), software acoustic signal processing, sequencing, are nowadays a comprehensive tool for modeling virtual values, the artistic paradigm of a new nature, which have might been called the "organum de poetica nova". In this case, the postulate of the artist individual autonomy in the circumstances of the "organum novum", the instrumental tools which are invade with a completely new origin to the basics of the art inner nature has been found to be very consistent reflection in the structure of the virtual values [5]. The very term virtual values are considered from the point of view of phenomenology of facts, which are not simply actualized by means of so-called "Virtual reality» but are the basic to the nature of its essential content, generated by interactions in a virtual environment, reflect the value structure of the artistic space of the contemporary media landscape as an immanently virtual category.

III. Information

Information, being a semantic element of the virtual values phenomenon, has been a basic element of the new artistic paradigm as well, - an inalienable aspect of the new audial culture ontology, symbolizing a significant modulation of the value structure of contemporary art space. The development of science and the arts largely influenced our understanding of the world around us, as well as formed a new, a virtual

instrumentarium for its comprehension. Musical art, while evolving in its forms, has offered its own tools for its presentation. The impact and correlation of these paradigms in the formation of the artistic landscape of today, however, is not at all unprecedented, but has a profound history. From Pythagoras to contemporary theories and realities in the field of musical acoustics, psychoacoustics, musical analysis - all this was fueled by inspiration proceeding from the most immanent nature of musical art. The vital needs of musical art have largely inspired and outlined the forms of existence and progress in virtual reality technologies. Today, research in the field of digital technologies, inspired and driven by the potential of scientific, intellectual work, creates the foundation for the formulation of the thesaurus and syntax expansion in the artistic sphere on global scale. This process has already significantly changed the status of the phonography of today's media landscape, it led to the birth of fundamentally new forms and types of art [6]. As a result, the transformation of the so-called "Objective reality" aestheticization algorithm itself with the help of new virtual tools, led to a gradual departure from the postulate of the presuppositional unpreconditional givenness of artistic creativity act as a phenomenon, from the need in its "legalization" through extrapolar interpretation of the latter. It also led to the emergence as a scientific tool of ideas borrowed from the technological spheres to forming a system of interdisciplinary concepts, to the emergence and affirmation in the system of art the very instrument of interdisciplinarity, as a phenomenon claiming the status of a new fastening vector of development, - those power that can present the mechanisms for overcoming entropy and retaining the linearity of the development of the entire system. However, only due to the powerful integration processes in art and science, due to social changes and requests in the public consciousness, it became possible for the emergence, formation and successful development by the artists of an electronic audio technologies, which are instruments of the highest intellectual level of complexity. The creative realization of artistic issues with their help became possible.

IV. Music Computer Technologies as New Creative Educational Medium

MCT as a part of this process. The development of computer technology in the late 20s – early 21st centuries has significantly expanded the ways of obtaining information. High-tech information educational environment requires the search for new approaches and fundamentally new systems of education in the School of the Digital Age.

MCT as New Creative Educational Medium. The authors were guided by the general principles that had been developed at the Educational and Methodical Laboratory 'Music Computer Technologies', the Herzen State Pedagogical University of Russia (Saint Petersburg). Sphere of interests of its members includes the problems of interrelation of natural and technical sciences and humanities, as well as the possibilities of applying the results of such interrelation for the purposes of music education and upbringing. Scientific group of the Laboratory also take part in working out the specialized software for computer music devices and in application of this software in pedagogical processes.

Research activities of the members of Laboratory including such directions as:

- MCT in professional musical education (as a means to expand creative opportunities),
- MCT in general musical education (as one of the means of education),
- MCT as a means of rehabilitation of people with disabilities,
- MCT as the new direction in preparation of specialists of humanitarian and techno-logical profile,
- MCT in the field of digital arts,
- MCT in information technology, psychoacoustics and musical acoustics (see: [7; 8; 9; 10; 11; 12]).

Developments and researches in the field of musical pedagogics and musicology, music computer science (musical informatics), computer modeling of processes of musical creativity, timbre programming, art of performing skill and arrangement on electronic musical instruments, creative work in the field of computer music, mathematical methods in musicology, etc. (see, for example: [13;14; 15; 16]). All these directions in its totality allow to work up the methodological principles and pedagogical approaches to the use of MCT in inclusive education (as part of eInclusion) for children with profound visual impairment (see: [17; 18]).

V. Conclusion

It should be especially noted that the musical work used in the process of learning as an object of copyright should be primarily the result of creative activity. In the history of copyright the concept of "creativity" was not clearly defined neither in the legislation nor in the legal literature. Often creativity is revealed through various features in its content, such as originality, uniqueness, originality of human activity. When understanding the content of the concept of creativity in copyright, it is important to take into account, firstly, that creativity is primarily an intellectual rather than physical activity of a person and, secondly, that this activity should lead to a result that did not exist before. For copyright is not so much important that the process of creating a work was inspiring, but that the results achieved were something special, original.

Signs of creativity include the characteristic of novelty, since in the field of copyright novelty - an inevitable consequence of creative work.

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