

MUSICAL AND INSTRUMENTAL FOUNDATIONS OF MODERN COMPOSITION TECHNIQUES

The purpose of the work is to analyze the instrumental nature of modern composition techniques in the unity of their cognitive (performing and composing) and instrumental and sound parameters. **The methodology of the research** consists in application of aesthetic-cultural, comparative, theoretical and historical methods, as well as the analytical approach, which form a unified methodological basis. **The scientific novelty** of the work consists in expanding the notions about the genesis of musical art basing on the analysis of relations of the musical and instrumental principles and the nature of modern composition techniques. **Conclusions.** Instrumental nature of modern composition techniques is determined by the ongoing processes of individualization of composer's work in the areas of the author's vision of sound material, the relation to musical text, musical chronotopes, musical language, timbres, texture, shaping, etc. The factor of marginal diversity, technical complexity, and often the impossibility of the vocal embodiment of the sound material of compositions – not only sonorist, pointillist, aleatory, timbral-characteristic, etc., but also extramelodic (with a higher order melody consisting not of individual tones, but of the whole texture, when the entire texture becomes a melody) directly demonstrates the instrumental nature of the technique, reproduced in genres of music - mainly without the use of voices or their use in "unvocal", an instrumental sound format, often with the nonverbal meaning. Finally, the very musical thinking in modern composition techniques acquires the qualities of instrumentalization.

Keywords: musical instrument, musical instrumentalism, modern composition techniques, aleatory, sonoristics, musical thinking, sound, sound tools, texture.

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Музично-інструментальні засади сучасних технік композиції

Мета роботи. У статті здійснюється аналіз інструментальної природи сучасних технік композиції в єдності їх когнітивних (виконавських та композиторських) та інструментально-звукових параметрів. **Методологія дослідження** полягає в застосуванні естетико-культурологічного, компаративного, теоретичного та історичного методів, а також аналітичного підходу, які утворюють єдину методологічну основу. **Наукова новизна** роботи полягає в розширенні уявлень про генезис музичного мистецтва на основі аналізу співвідношень музично-інструментальних засад та природи сучасних технік композиції. **Висновки.** Інструментальна природа сучасних технік композиції зумовлюється триваючими процесами індивідуалізації композиторської творчості у сферах авторського бачення звукового матеріалу, відношення до нотного тексту, музичного хронотопу, музичної мови, тембрики, фактури, формотворення і т.д. Фактор граничної різноманітності, технічної складності, а часто і неможливості голосового втілення звукового матеріалу композицій – не тільки сонористичних, пуантилістичних, алеаторичних, тембрально-характерних, тощо, а й надмелодійних (з мелодією більш високого порядку, що складається не з окремих тонів, але з усієї тканини, коли вся тканина стає мелодією) прямо демонструє інструментальний характер відповідної техніки, що відтворюється у жанрових спрямуваннях музики – переважно, без використання голосів або з їх використанням у «невокальному», інструментальному форматі звучання, часто позавербального смислу. Нарешті, саме музичне мислення у сучасних техніках композиції набуває якості інструменталізації.

Ключові слова: музичний інструмент, музичний інструменталізм, сучасні техніки композиції, алеаторика, сонористика, музичне мислення, звук, звукові засоби, фактура.

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Музыкально-инструментальные основы современных техник композиции

Цель работы. В статье осуществляется анализ инструментальной природы современных техник композиции в единстве их когнитивных (исполнительских и композиторских) и инструментально-звуковых параметров. **Методология исследования** заключается в применении эстетико-культурологического, сравнительного, теоретического и исторического методов, а также аналитического подхода, которые образуют единую методологическую основу. **Научная новизна** работы заключается в расширении представлений о генезисе музыкального искусства на основе анализа соотношений музыкально-инструментальных основ и природы современных техник композиции. **Выводы.** Инструментальная природа современных техник композиции обусловлена текущими процессами индивидуализации композиторского творчества в сферах авторского видения звукового материала, отношении к нотному тексту, музыкальному хронотопу, музыкальному языку, тембрике, фактуре, формообразованию и т.д. Фактор предельного разнообразия, технической сложности, а часто и невозможности голосового воплощения звукового материала композиций – не только сонористических, пуантилистичных, алеаторичных, тембрально-характерных и т.д., но и сверхмелодических (с мелодией более высокого порядка, состоящей не из отдельных тонов, но из всей ткани, когда вся ткань становится мелодией) прямо демонстрирует инструментальный характер соответствующей техники, воспроизводимых в жанровых устремлениях музыки – в основном, без использования голосов или с их использованием в «невокальном», инструментальном формате звучания, часто невербального смысла. Наконец, именно музыкальное мышление в современных техниках композиции приобретает качества инструментализации.

Ключевые слова: музыкальный инструмент, музыкальный инструментализм, современные техники композиции, алеаторика, сонористика, музыкальное мышление, звук, звуковые средства, фактура.

Relevance of research topic. The musical art of the XX-XXI centuries is marked by a number of processes, which cause a new interest in theoretical generalizations in musical textures, forms, acoustics, timbres, harmonic and metro-rhythmic relations, genre-style parameters, which is related, first of all, to cognitive (performances and composers, including their synthesis, listening) processes, with the latest scientific and musical intentions. So recently, the idea, proclaimed by the composers of the Second Avant-garde, is being introduced now in an active way, it is impossible to study music in a different way from the point of view

of its separate traditional aspects – harmony, polyphony, melodies, forms, timbre, etc. The 21st century advanced even such an integrated scientific direction as intonology - that is an interdisciplinary field of knowledge "the formation of which is carried out in the process of integration of experience with the use of the intonological instrument for the purpose of knowing the nature of the thought existence" with the mixed combination and the intersection of scientific inventions of musicology, linguistics, literary criticism, philology, psychophysiology, history, aesthetics [1]. The object of this research is to present some of the modern techniques of composition which, being the core of the «new music», are «complex and belong "to all areas of musicology"» [9, 581], however, reveal the pronounced musical and instrumental foundations, which include a certain type of musical thinking, as well as a multitude of individual-variant timbre and sound manifestations of instrumental or instrumentalized type.

The purpose of the study. The article is envisaged to reveal the instrumental nature of modern composition techniques in the unity of their cognitive (performing and composing) and instrumental-sound parameters.

Presentation of the main material. From the second half of the twentieth century new ideological concepts logically lead to life and new forms of musical expression, which are gaining more and more intellectualized, simultaneously expressive, unusual sound parameters, even in the face of a denial of the next era of style guidance of the previous one. Thus, G. Koguuthek points out the regularity of musical and ideological evolution in a significant qualitative leap in the field of Arnold Schönberg's composition technique, which was once considered an opponent of any traditions, but did not consider himself a revolutionary, because his twelve-tone method «appeared when it was needed ..., to replace the structural differentiation, which was previously engaged in tonal harmony» [cit. for 5, 27]. Already in the second half of the twentieth century, Schönberg's path to the discovery of a new musical language and its organization was seen as a logical liberation from the strong influence of the neo-romantic tradition. The same happened half a century later with the new-modal, atonal, aleatory, specific and electronic music. Many did not consider them to be music at all or, on the contrary, exaggerated their significance, as they were talking about «a turning point in the history of musical development, as music of the future, which opens a completely new stage in musical history» [ibid].

To a certain extent, the latter has become a prophetic one - the musical art chooses two parallel vectors of its evolution in the future: continuity of traditions in the system of new pluralistic values of the late XX – early XXI centuries and the self-sufficiency of an alternative type of musical-conceptual systems, including in terms of the ability of music and art in as a whole, to the foremost fixation of the most subtle tendencies of the spiritual, mental, material life, which have not been brought to the conscious level yet. The first vector is necessarily connected with the gradual accumulation of changes in musical thinking and composing technique, which, while developing, themselves prepare a coup, the movement to new laws, which are approved and again undermined, defining «the direction of further efforts until the development does not outstrip them» [5, 27]. Regarding the absolutization of the innovation of the second vector, A. Iglamova rightly notes that culture, as universal human memory, "holds" the connection of times, lives with the past, present and future at the same time, forming a norm in a person - an attitude to traditions. As for musical art, this is of fundamental importance, since the language of a musical work can not be completely new, because of the peculiarities of the musical language meaningful components - a completely new thing can turn into a misunderstanding, "repulsion" both the listener and the performer [4, 134].

Thus, the last third of the twentieth century reveals «the beginning of new creative processes associated with the inclusion in the cultural use of alien in relation to the prevailing tradition of artistic consciousness» [3, 2], and at the crossroads of the XX – XXI centuries, scientists fix the period of change in musical paradigm, correlated with two (of such a scale) known earlier music histories: monophonic – polyphonic, polyphonic – homophonic. They «marked a complete reorganization of the entire system of its genre-compositional means. Today, there are prerequisites for the formation of a new normativity in the field of *instrumental* genres conceptuality (highlighted by me – A.C.) » [3, 6].

The change of sound symbology, texture-phonetic sound quality, the total volume of acoustic streams becomes an external reproduction of the mentioned above. But behind them there lies something more: another type of conceptualism, another artistic and intellectual fabric, another model of philosophizing. Today, the «new» is already called not simply acquired by instrumentalism at the end of the twentieth century and is associated with another technical or style reorientation of music, but that «points to the global nature of the processes reproduced inside this art: the change of musical conventions-paradigms» [ibid], alternative, including classics of the twentieth century, the type of new musical-conceptual systems. G. Demeshko implies, first of all, the genre and harmonious «program» of making sense. But, of course, these parameters of the paradigm level are reflected on the integral system of musical thinking and sound implementation.

The sphere of instrumental creativity emerges as a peculiar crossroads of these acute internal-musical problems, the conceptual and instrumental and technological origins of which reach Baroque culture with the autonomy of instrumental genres and sonata (first of all) the culture of the «brothers» with the crystallization and semantics of purely instrumental forms of expression, the birth of a super verbal type of thinking «Pure» meanings of «absolute» music – I will state it when other types of art and philosophy draw their ideas and technologies of their development into music. From the end of the seventeenth and during the nineteenth

centuries, the typical type of composer-performer was formed and successfully functioned and his art was not completely updated through the instrument.

The process of finding new techniques for playing the musical instruments, extending their timbre features, took place in European music throughout the New History. So, the tricks of pizzicato and col legno «are discovered» in the 17th century by T. Hume, G. Ignace, I. Bieber, K. Monteverdi (in the «Tankred and Kloorind duel» the tremolo was also used for the first time). M. Khrust even points out the contemporary performances of some of I. Bieber's works on the violins that have been prepared (with the paper under the strings), although without evidence of such in the author's time. In 1815 K.M. Weber uses multifunction (quasi-accordion) in horn solo at the Concertino e-moll op. 45. F.V. Rust, at the end of the 18th century, uses pizzicato and strike strings on the harpsichord [11, 8]. These cases of specific instrumental sounds were few. Already at the beginning of the XIX century actualization of the tone of individualization (as well as personal) does not simply acquire diversity, but also causes an explosion of instrumentation and technical improvement of instruments. New valve and ventilation systems for winding T. Bohm and G. Trierer were created, new kinds of instruments (double-bass oboe, "quint" bassoon), whole families (saxophones, saxogrons). Changes (chromatisation, range, loud-dynamic capabilities) were made into the construction of almost all musical instruments known at the time. The piano serves as a substitute for the orchestra and the founder of the new concert solo format of musical instrumentalism. The second such wave falls at the beginning of the twentieth century with the modification and subsequent academicization of folk instruments (accordion, domra, balalaika, bandura) in Slavic countries and drums. Orchestral, ensemble and solo productions formed in individual composer styles different concepts of sonorous images of instruments and their combinations.

Such an extensive character of timbre and instrumental development in the era of romanticism is changing to intense in the XX century. The update of the sound palette acquires a vertical vector - searches for the tomb variety at each instrument are «in-depth» (new sounds of sound production – prepared piano, strikes along its strings, strings on strikes, sonorous outputs, etc.). All this opens the way for differentiation in each tool of universal and specific («not translated» for other) means. The results of these intense composing and performing quests (here the composer can not get around when composing music with a universal piano or inner ear) of new timbres, including new instrumental techniques. It is instrumental because, on the one hand, the renewal of the musical thinking of the twentieth century «was accompanied by increased interest in technical innovations ... in this sense, both modern and postmodern, at first initially offered the artist an "exam" on technological universalism» [8, 70], on the other – sonorous, textual, characteristic, register, rhythmic, sound complication of the composer's language became or impossible in the performance of the voice, or required from the vocalist (chorister) instrumental means of embodiment (however, instrumentalization of vocal creativity started in opera singing, particularly in castrated almost parallel with studies «singing instrument»).

The phrase proclaimed by P. Bůlez «Lifting the technique to the level of the idea!» – actually points to the semantic cross-section of the method associated with certain types of thinking, and technology. It is in the sphere of the latter that the struggle for the championship (for example, dodecaphony technique) is being pursued; the technique appears as a marker of style and form. Among them, this author's technique, as in the «Polyphonic Concert» by Y. Butsko, with the paradoxical synthesis of dodecaphony and the system of pompous chanting, when the twelve-tone organization has characteristic epigraphs of different registers, dispersing them in an artificially designed space with polyphonic overlay, a comparison in a complex vertical, far from a clearly localized sound monody of a significant chant.

The mirror reproduction of serialism aroused the aleatory technique, "denying" the excessive structuring of the first (although both systems are equally directive-oriented). M. Pereverzeva emphasizes the priority of instrumental music in contemporary aleatonic compositions [6, 4] (which is confirmed by a significant quantitative predominance in favor of instrumental compositions), pointing to their instrumental roots from the times of the folklore improvisational tradition, and then composer opus with incomplete notation of preludes: «clavier and wider – instrumental improvisation, even before the Baroque era ... was one of the close predecessors of the aleatory music of the twentieth century, as the performer himself was the creator in the form of creativity. «Early instrumental music has advanced "free improvisation on the basis of the use of technical and textual methods specific to the given instrument ... which, in their totality, lead to the first independent forms of instrumental music - preludes, rocking, etc.» [6, 21]. One of the first in the European music of the aleatory opuses was «Piano Piece XI» by K. Stockhausen (1957), which is based on the author's «technique of groups», controlled by organizing numbers. This technique implies the differentiation of the material by a unique combination of tempo, articulation, dynamics, interval compositions, motives, timbre-register colors of figures and passages, as well as deployed groups called «moments». The pianist chooses one of 6 pace, 6 dynamic levels and 6 types of articulation with their modifications, and moving to the next group focuses on the tempo, dynamics and articulation written to the right of the musical systems and randomly moves to any other group, which is executed in accordance with these instructions. Stockhausen himself noted that «The Piano Piece XI» is nothing but sound, certain particles the components of which behave statistically» [6, 190]. The mobility of the shape and the texture, the speed of switching to the next part in the new formats and the special instrumentalism of the textual and articulation layout point to the textural sound system of the piano. The aleatory compositions can reproduce both the motive principle and the "ideas of static development" associated with the «philosophy of pure duration» (for example, by Feldman), which «entered the European

literature, giving birth to the drama of the flow" (James Joyce, Marcel Proust), which was reproduced in a stage drama, cinema, finally, *in instrumental music*» [10, 49].

The second half of the twentieth century allows us to speak about sonoristics not only as a concrete stylistic event, but also about «sonorist aesthetics», «sonorist listening» [7, 155]. Musical instrumentalism is also in the forefront of the reason for its consistent nature with the hypertrophic syndrome system of textures (compulsory multi-vocal vertical, longitudinal or strip of small lengths), their mobility, space, poly-plastic, penetration into the musical texture of graphic, mathematical techniques. With the emancipation of sound, the sonoristics released the element of its timbre, its energy, the ability to transform structures and their combinations, the combination of lines, layers, blocks that is to create a sound form, causing various types of relations to life, and a purely individual logic of structuring the whole. All this stimulates the peculiarities of the spatial-temporal continuum organization. So, K. Bolashvili analyzes the path of a new type of sonorous tissue structuring tendencies in such a historically instrumental genre as a symphony – from compromise variants of synthesis to a fundamental modernization under the influence of dwarfism. In the latter, the presence of conceptual, «difficultly constructed meaning» (Y. Lotman) with the opposition «action – contemplation» arises in forms more complex than in the traditional symphonic cycle. For example, in the symphony by S. Gubaidulina «I hear ... Silence ...» the opposition of the sonorous – the disappearing is realized not in the form of opposition, but as the faces of a single sound-image, which are constantly moving one to the other. That means that the idea develops on the basis of solving the problem of functioning of the sound, which symbolizes the personality in its various qualitative and quantitative manifestations. The symphony of thinking – in the through development of material, united by repeated structural elements, the only logic of dynamic development with the formation of a proportionally balanced structure of the whole. And in the last symphonies of A. Terterian, in the almost complete absence of any signs of a genre-structural canon in the center, appears the sound itself, as the embodiment of the universe, its micro-and macro levels, where the eternal problems of Birth, Life and Death are merged together.

The idea of the emancipation of sound as such lies at the heart of the philosophical and creative conception of minimalism. Minimalism brings the sound to the autonomy of the first element, freed from systemic connections and relations with the subjective world. The new perception of time – the immanent characteristic of music as an art, the development of musical thought in the composer's and performer's aspects - is added here - the time here is abstracted from the dynamic process, becoming vertical, both in the archaic and non-European consciousness. The method of functioning of archaic material is a repeat, therefore, minimalism is inevitably associated with rehearsals, as in its complicated forms, in particular, techniques of phase shift (S. Reich), addiction (F. Glass, N. Korndorf), augmentation (S. Reich), binary opposition and cyclic progression (A.Pyart), has an instrumental nature

The main principle of electronic music is the creation of sounds exclusively by means of electricity, the technical (today – digital) their transformation, finding new forms and their mechanical implementation, the discovery of previously unknown sound forms – it was originally directed to the instrumental world, even in the form of accompanying voices. Composers of electronic music came close to the «pre-principle» of music – the structure of the sound. A new qualitative stage in the development of electronic music was computer music.

Conclusions. New acoustic possibilities open up to the artist an unlimited «freedom of choice» means of embodiment of artistic designs and generate the same unprecedented difficulties. In the union of music and technology (composing, performing and engineering), the leading position has always occupied the first one. Music «order», the inventive idea «offers», but it has never been a «straight line». The point of attraction here is the artistic expressiveness of a particular medium and its aesthetic value.

The semantic and technical crossroads of the most acute internal-musical problems are the sphere of instrumental creativity, the conceptual and instrumental-technological origins of which reach the Baroque culture. The game with instrumental timbres and their combinations gives the composer much more timbre (including somnolent), range, dynamic, fine-rhythmic, macro-length variations. In addition, in the choir, for example, singing, which has more opportunities than solo-vocal, the system of regular choral order was built up for centuries, which became one of the main determinants of the cathedral and choral integrity, but today «interferes» with new techniques of composition. Musical instrumentalism is in the forefront of the reasons for the correspondence of its nature with the sonorist hyper developed system of textures (compulsory multi-voice vertical, ultra-longitudinal or strip of small lengths), their mobility, space, poly-plastic, penetration into the musical fabric of graphic, mathematical techniques. All this stimulates the peculiarities of organizing the musical space-time continuum as «diversity in unity», the delegation of multi-channel meanings.

As for the change in the musical-thought paradigm, it is interesting to trace the following dynamics of the role of instrumentalism in the defined by V. Konen's three stages of music. In folklore, vocal forms are most prevalent, most adapted for instant syncretic inclusion, although it is in this layer that the primary, including professional, instrumentalism is born. In academic music there is the autonomy of instrumental forms, some parity with the tendency to instrumentalize vocals and composers techniques, to the dynamics of the extension of timbral-instrumental means of expression, the loss of the opera – the queen of the XIX century their positions in the twentieth century, the actualization of instrumental genres. In the third layer there is the priority of instrumental sounds, the initial tendency to instrumentalize vocals in jazz and parity in mass genres, characteristic "stylistic" means of sound production, including electronic. But in the last two layers without tools

it is impossible to get around; they become the necessary base for the existence of the corresponding genres and forms (even in the accompanying function).

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