Вісник Національної академії керівних кадрів культури і мистецтв № 3'2019

7. Hensel M., Menges A., Weinstock, M. Emergence: Morphogenetic Design Strategies. Architectural Design. 2004. №3(74).

98 p.
8. Hensel M., Menges A., Weinstock, M. Emergent Technologies and Design: Towards a Biological Paradigm for Architecture. Oxon : Routledge, 2010. 256 p.

9. Hensel M., Menges A., Weinstock, M. Special issue: Techniques and Technologies in Morphogenetic Design. Architectural Design. 2006. №2(76). 127 p.

10. Innovation services. Biomimicry 3.8. URL: https://biomimicry.net/what-we-do/innovation-services/ (last accessed: 09.05.2018).

11. Projects. Mediated matter : веб-сайт. URL: https://mediatedmattergroup.com/ (last accessed: 21.02.2019).

12. Rotolo B. What Is an Emerging Technology? Research Policy. 2015. Vol. 44(10). P. 1827–1843. URL: https://ssrn.com/abstract=2564094 (last accessed: 21.02.2019).

13. Roudavski S. Towards Morphogenesis in Architecture. Melbourne: University of Melbourne, 2009. P. 347–373.

References

1. Verghunova, N. S. (2017). Concepts of digital morphogenesis in architecture and design. Komunaljne ghospodarstvo mist, 139, 206-208 [in Ukrainian].

2. Dobritsyna, I. A. (2004). From Postmodernism to Nonlinear Architecture: Architecture in the Context of Modern Philosophy and Science. Moskow : Progress-Traditsiya [in Russian].

3. Yelfimov, G. M. (2009). The concept of "new" in the theory of emergent evolution. Upravlencheskoe konsultirovanie, 1, 187-222 [in Russian].

4. Mironenko, V.P. (2009). Architecture, design, ergonomics: illustrated erminological dictionary. Belgorod : BGTU [in Russian].

5. Rudenko, A. P. (2013). Self-organization and synergy. Slozhnye sistemy, 2(7), 4-39 [in Russian].

6. Biomimicry? Biomimicry Europa: Retrieved from: http://www.biomimicry.eu/en/biomimicry/ (last accessed: 15.02.2019).

7. Hensel, M., Menges, A., Weinstock, M. (2004). Emergence: Morphogenetic Design Strategies. Architectural Design. №3(74). 98 p.

8. Hensel, M., Menges, A., Weinstock, M. (2010). Emergent Technologies and Design: Towards a Biological Paradigm for Architecture. Oxon: Routledge. 256 p.

9. Hensel, M., Menges, A., Weinstock, M. (2006). Special issue: Techniques and Technologies in Morphogenetic Design. Architectural Design. №2(76). 127 p.

10. Innovation services. (2019). Biomimicry 3.8. Retrieved from: https://biomimicry.net/what-we-do/innovation-services/ (last accessed: 09.05.2018).

11. Projects. (n. d.). Mediated matter: Retrieved from: https://mediatedmattergroup.com/

12. Rotolo, B. (2015). What Is an Emerging Technology? Research Policy. Vol. 44(10). P. 1827–1843. URL: https://ssrn.com/abstract=2564094 (last accessed: 21.02.2019).

13. Roudavski, S. (2009). Towards Morphogenesis in Architecture. Melbourne: University of Melbourne. P. 347-373.

Стаття надійшла до редакції 29.04.2019 р.

УДК 781.1

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ANALYSIS OF THE CONSTRUCTIVE-PROCEDURAL ELEMENTS OF THE MUSICAL MOVEMENT IN THE SCIENTIFIC CONCEPTUAL SYSTEM OF MUSICOLOGY

The purpose of the study is to highlight the constructive-procedural elements of the musical movement in the scientific conceptual system of musicology with the distinguishing and analysis of its smallest conventional conceptual unit, which is capable of displaying both the movement itself in its procedural (gesture-movement) and a "folded up" movement. The research **methodology** is based on the use of the functional approach, which has become necessary to substantiate and align the event series of each structural and semantic layer of the musical movement. The scientific novelty of the research lies in the development, introduction and definition of new musicological concepts that terminologically reflect an understanding of the continuity and discreteness of the musical movement. **Conclusions.** The result of the constructive-procedural elements of the musical movement consideration was the formation of a diagram that schematically represents the general understanding of the category of musical gesture existence in the scientific conceptual system of music.

Key words: musical movement, musical gesture, motor intoning, motor intonation, continuity, discreteness, cualmot.

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Аналіз конструктивно-процесуальних елементів музичного руху в науково-поняттєвій системі музикознавства

Метою дослідження є висвітлення конструктивно-процесуальних елементів музичного руху в науково-поняттєвій системі музикознавства з виокремленням та аналізом його найменшої умовної поняттєвої одиниці, що є спроможною позначати як сам рух в його процесуальності (жест-рух), так і «згорнутий» рух. Методологія дослідження ґрунтується на використанні функціонального підходу, який став необхідним для обґрунтування і вибудовування подієвого ряду кожного структурного та семантичного шару музичного руху. Наукова новизна дослідження полягає в розробці, введенні та визначенні нових музикознавчих понять, що термінологічно відображають розуміння континуальності та дискретності музичного руху. Висновки. Підсумком розгляду конструктивно-процесуальних елементів музичного руху стало складення діаграми, в котрій відображується загальне розуміння існування категорії музичного жесту у науково-поняттєвій системі музики. Ключові слова: музичний рух, музичний жест, моторне інтонування, моторна інтонація, континуальність, дискретність, квомота.

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Анализ конструктивно-процессуальных элементов музыкального движения в научно-понятийной системе музыковедения

Целью исследования является освещение конструктивно-процессуальных элементов музыкального движения в научно-понятийной системе музыковедения с вычленением и анализом его наименьшей условной понятийной единицы, способной отображать как само движение в его процессуальности (жест-движение), так и "свернутое" движение. Методология исследования основывается на использовании функционального подхода, который стал необходимым для обоснования и выстраивания событийного ряда каждого структурного и семантического слоя музыкального движения. Научная новизна исследования заключается в разработке, введении и определении новых музыковедческих понятий, которые терминологически отображают понимание континуальности и дискретности музыкального движения. Выводы. Итогом рассмотрения конструктивно-процессуальных элементов музыкального движения стало составление диаграммы, схематически отображающей общее понимание существования категории музыкального жеста в научно-понятийной системе музыки.

Ключевые слова: музыкальной движение, музыкальной жест, моторное интонирование, моторная интонация, континуальность, дискретность, квомота.

The relevance of the research topic. The problem of multiplicity of approaches, in the absence of a consensus in the understanding of many key elements - the notion of "movement" itself, research objectives, methodology, etc. - remains relevant to this day. However, an ever clearer awareness of the need for a single vision comes, taking into account the versatility of the concept of "movement". In addition, natural-scientific and information-technological approaches in the development of this problem are predominant over general humanitarian or traditional musicological approaches.

The purpose of the study is to highlight the constructive-procedural elements of the musical movement in the scientific conceptual system of musicology with the distinguishing and analysis of its smallest conventional conceptual unit which is capable of displaying both the movement itself in its procedural (gesture-movement) and a "folded up" movement.

Analysis of researches and publications. The tradition of comprehending musical phenomena through the prism of the theory of movement was founded in ancient philosophy. But the real "explosion" of research on the problems of the movement in art is marked at the beginning of the twenty-first century. The current state of development of the problem of movement in music is characterized by the emergence of many Western European, Russian and domestic public organizations and individual scientific studies. Thus, Issue No. 111 of the Scientific Herald of the NMAU named after P.I. Tchaikovsky is called "Principles of the organization of movement in a musical work" and contains studies on various aspects of the demonstration of movement in music: the musical vectors of a person's spiritual movement [V. Zharkova, 6]; thematic rhythm as a factor in the organization of the musical movement [N. Gnativ, 5]; movement as a factor in the organization of a musical whole [I. Karachevtseva, 7] and others. V.Vishinsky, studying the connections of D. Shostakovich and G. Maler's symphony, develops the concept of movement as a structuring and musical-dramatic factor in his dissertation research [4].

In contemporary Russian musicology the works by E. Ruchievskaya [10], Yu. Abdokov [1], T. Tsaregradskaya [11], M. Arkhipova [2], S. Chirkov [12] and others are devoted to the issues of movement in music. Presentation of basic material. As V. Medushevsky rightly considers, "figurative cultural languages taken together are like a unified language. Intonation and movement, that are two methods of communication initially given to man, lie in its base" [9, p. 43]. The meaning of the above statement goes deeper into consideration of the essence of human activity itself, an attribute of which is the transformation of natural and social existence.

Musical art can be represented as the ability of the artistic consciousness to embody the processes of social reality in their changes and development through persistent communicative-semantic intonational complexes. The infinity of the world movement is spiritualized by the musical consciousness. From these positions, the musical movement and the musical motority, that organizes it, turn out to be a qualitatively new, purely human, socially conditioned form of movement.

"The course of time is genetically determined by movement" [3, 75], that is, time is determined directly through movement. Musical time is also determined by movement, but the movement which is filled with sound-intonational artistic process. Time in music is incalculable with absolute immobility. However, the "empty" movement provides not much to sense time. Movement should be burdened with some essential attributes: change of direction, strength, character of movement, and so on.

In the 19th and the beginning of the 20th century scientists face an acute problem of dynamics, which further defines a number of theories that study the connection between movement and music and their interdependence. The human body is beginning to be more widely regarded as a means of artistic expression, which has been realized in some areas of dance and gymnastics. "Free dance" by Isadora Duncan, eurhythmy by Emile Jacques-Dalcroze and Rudolf Steiner discovered the connection between music and its direct demonstration in a human gesture.

The moving images of music, its procedural power, probably led Ernst Kurt when he developed his own vision of music. He understands music through such notions as force, flow, energy, space [8]. Musical

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processes are like energy flows, and images of movement give rise to an idea of Tonbahn (sound trajectory). We also find similar reasoning in B. Asafiev.

While agreeing with the fundamental value of intonation for the existence of music as a type of art, justified by B. Asafiev, we emphasize that the movement that organizes musical imagery does not exist in the middle of intonation (as subordinate to it), but in unbreakable unity with it, because human abilities for motor and comprehended linguistic manifestations lie in the basis of the whole human culture.

Another researcher, A. Truslit [15, 93], relied on the idea that the musical movement itself is the most profound, basic level of musical matter and that all music originates from the sensation and experience of the movement, which is common to all living beings. According to his views, movement can be transformed into sound, and sound phenomena (music) play the role of a "trigger" for our sensations. Since the movement is described by a trajectory, the music can be described in the same way. Dynamics produces a muscular reaction that can be used in composing various kinds of functional music.

If music can be understood as the unfolding of dynamic processes in time and space, then it is quite natural to assume that listeners also feel similar processes - sensations of movement or rather intention to the movement of their body, arising under the impression of the motor impulses of music. Thus, music induces action, induces gestures.

In order to be able to analyze the constructive-procedural elements of the musical movement in the scientific-conceptual system of musicology, we need to distinguish its conventional conceptual unit. To define a "fragment" of a musical movement that embodies any quality we propose to use the term "musical gesture". This concept is important for our research due to its ability to designate both the musical movement itself in its procedurality (gesture-movement) and the "folded up" movement. The need for this distribution is obvious. Since no point can be fixed in the process, in other words, it is only possible to "react synkinetically" to it (experience, feel), then it is appropriate to speak about the continuity of the musical gesture-movement. At the same time, the musical movement is a temporal organization that provides a certain structure to the artistic and intonation process, which means it can be presented as a series of successive stages and can be projected onto the "spatial axis" of music.

We consider it necessary for the further analysis of the constructive-procedural elements of the musical movement to propose two new concepts that terminologically reflect our understanding of the continuity of the musical movement and its discreteness. In the first case, it is "motor intoning," and in the second, it is "motor intonation".

Motor intoning is a system of musical-temporal movement as a process reflecting the continuous development of artistic consciousness. The term "motor intonation" is widely used in art history literature, but only as a metaphor - as a quick, energetic, assertive movement. Our definition of this concept will be as follows: motor intonation is a system of musical-temporal movement as a structure whose elements are tempo, meter, rhythm, and articulation.

Now we want to return to the discussion of our understanding of the concept "musical gesture".

In 2004 a fundamental study of R. Hatten [13] about the interpretation of musical gestures was published. Using concepts borrowed from linguistics to substantiate the projection of bodily movement onto musical material, the researcher proposes the following definition of a gesture: "I define a human gesture as any energetic shaping in time that can be interpreted as meaningful" [13, 1]. The scientist examines the basis for constructing a semiotic theory of musical gesture in detail, pointing out such characteristics as time communication (which includes meter, rhythm, melodic contour, dynamics), its inter-subjectivity, coherence, unity, kinship with gestalt, dependence from physical (gravity, vector) and psycho-physiological effects, the ability to form oppositions.

The gesture is realized in lines and contours in painting; in music - in rhythm-intonations. As there are not only lines and contours in painting but also background, color, texture, so there is not only linearism and more or less active motives in music, similar to volitional gestures, but also harmonic and timbre-textured fillings that create certain sound paints. Plastic signs that reproduce a particular gesture, a particular form of movement, carry a holistic characteristic of musical sound: pitch, duration, timbre, texture, articulation, etc. All this "sounds in a gesture" which is recreated in a musical work.

And if you imagine that every "folded up" gesture has its own "contour" (tempo, meter, rhythm, articulation), then all other means of musical expressiveness will be a "background". In general, abstracting from musical art, the realization of a gesture always occurs in the interaction of motor energy with the energy of the field, as a result of which the trajectory of movement or contour is formed. One is unthinkable without the other and does not exist. Therefore, even speaking of timbre, phonism, static sound figures, we are talking about gesturing, in which the "background" is dominant. After the art of painting we will call the unity of the contour and the background a "pattern", using this word as a term.

Thus, it can be stated that the musical "pattern" and its constituents "contour" and "background", that is, the actual structure of the musical gesture, this all is the motor intonation, in which its eidetic and logical aspects of understanding stand out. The logical aspect of motor intonation is its structuring, namely every-thing that can be described with the help of diagrams, formulas, numerical ratios. The eidetic aspect of motor intonation is the embodiment of its quality, which is understood as a kind of indivisible integrity, being based

on the structural framework, and is determined by what exactly is expressed in the gesture and what is the form of "lines of force", that is, the strength of the voltage of an invisible energetic field.

It has already been pointed out that any musical gesture can be considered as "folded up" and as a procedural gesture (gesture-movement).

With the development of the scientific method of structuralism, an opposition was formed. The scientists who focus on the procedural nature of music and on the non-analytic essence of integral units of musical text (in particular melodic and rhythmic gestures (R. Barth's soma themes), or dynamic contours of psychological processes (M. Klynes's essentic forms), which are embodied in music, appeared at the other pole.

It is interesting that such approaches can also be semiotic, but the syntactic links are in the background here, giving way to semantic and pragmatic links. In particular, in E. Tarasti's study [14] the opinions of W. Kouger, J. Stephane, E. Surye and C. Seeger are considered apart from the mentioned positions by R. Barth and M. Klynes. W. Kouger directly identifies a motive or "sound pattern" with a musical gesture. According to W. Kouger, the gesture like any sign has three semiotic functions: semantic, syntactic and pragmatic. "The gesture is endowed with its semantics; it allows a certain conversion technique - inversion, increase, decrease; it requires a listener's response — another gesture" [14, 24]. According to the idea of J. Stefane, the musical gesture is the essence of "performatives" (J.Ostin's term): they refer more to action than they say about it (the predominance of pragmatics over semantics).

In order to understand the procedural gesture in its logical aspect we suggest introducing the conditional term "articulated tempo-meter-rhythm" as the structure of motor intoning caused by the interaction and mutual influence. This phenomenon can still be called a more familiar term - a holistic articulatory-rhythmic formula.

Describing the procedural gesture for its quality (that is, in the eidetic aspect) we can use words straight, circular, winding, unsure, wavy, smooth, flowing, stable, and so on. Consequently, it can be assumed that in experiencing a musical gesture as a movement (that is, its procedural form), we discover its immediate-sensual and, accordingly, perceived quality.

As a working definition, we dare to call the qualitative distinctness of a musical gesture as a fragment of motor intoning with the foreign collective term "cualmot", which is the product of our conclusions. We declare at once that this word has not been used by anyone and, moreover, did not exist until now. In its creation we put the Latin root - cual (cualis - "which", cualitas - "quality") and mot (motus - "movement", which in turn is the terminological progenitor of our term "musical motority"). Thus, cualmot is the unit of musical motority that reveals a certain quality of musical movement, its energy and meaning in the process of music sounding.

The concept of "cualmot" makes it possible to verbally use the terms "musical movement", "musical motority", and "musical gesture" as a whole, without "removing" their procedural nature. It also makes it possible to call them engaging words from a general (but not from a special musical) thesaurus for this purpose. Strictly speaking, the cualmot comes into conceptual contradiction with the "pattern" (as a characteristic of the "folded up" gesture), however, the words we use to name cualmots refer to the gesture-movement in the unity of its procedural and structural aspects (movement creates quality, and the concept captures the already created quality and content).

There is a task for us - how to describe the qualitative certainty of the unfolded gesture-movement? What are the parameters to characterize it? To do this, we need to remember which types and forms of movements exist. In the most general terms all movements can be divided into natural (movements of the surrounding world and biological movements) and artificial movements (created by man - movements of technical equipment, electronic devices, etc.). In turn, human movements are divided into: vital movements, that is, physical actions; semantic movements which are closely associated with facial expressions and designed to directly replace the word; emotional movements that carry a purely emotional response to events. In addition, all movements are burdened with their essential attributes: direction, strength, speed, character.

Based on the fact that musical gestures are often like the bodily gestures (or can be understood in them and through them), we propose our own classification of cualmots, based on certain parameters and attributes of human movements. In our opinion, it is reasonable to distinguish eight groups of cualmots, which are inherent in musical motority:

- 1. form (spinning, swinging, bypass, waviness, straightness);
- 2. direction (lifting moving up, falling moving down);
- 3. speed (mechanical movement, flight, flow, steps, run);
- 4. dynamics (acceleration, jerk, deceleration, stop);
- 5. strength (lightness, heaviness);
- 6. figure (squatting, bow, jumping, pushing away, tapping, bob, and so on);
- 7. manner (connectedness, separateness, tearing, sliding, pushing, whipping up, limping);
- 8. expressiveness (softness, tenderness, assertiveness, aggressiveness, and so on).

The names of the cualmots of the first group seem to be rather characteristics of the pattern than a movement itself. However, in contrast to the words "around", "arc", "line", the above definitions can be applied only to movements and characterize their procedurality no less significantly than the contour.

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Since it is important for us to note not the speed itself, but the quality of movement, we introduce only figurative characteristics correlated with bodily movement into the third group. As for the fourth group - the dynamics - it is necessary to clarify that the change in the speed of movement is meant, and not the loudness qualities.

The cualmot of strength, which is represented by the texture-timbre-register, characterizes the "mass" of the musical movement.

The names of the last three cualmots speak for themselves - the figure, manner, expressiveness - these qualities of the movement undoubtedly belong to both human and musical motority. Let us try to show a few of these cualmot groups with specific examples.

1. The spinning effect (associated not only with the waltz genre) is attributed to the cualmots of form and it occurs in cases of melodic chanting, returnable step-by-step melodic movement, a stable and even rhythmic pattern and a fairly agile tempo (for example, F. Chopin's Etude f moll, op.25, №2).

2. The image of the sliding (cualmot of movement manner), which is associated primarily with the technique of glissando, may arise in other cases. So, a smooth melodic line exacerbated by syncopations contributes to it (for example, C. Saint-Sans's Rondo-capriccioso; P. Tchaikovsky's Symphony No. 5, III p; R. Schumann Sonata No. 2, I p, s.b.).

3. Analogies of a jump (cualmot of a figure) contribute to the phenomenon of a melodic jump, especially over a wide interval (for example, R. Schumann's "Carnival", Harlequin).

4. The image of running (cualmot of speed), primarily laid in the fugue, arises under the condition of fast tempo, unceasing step-by-step movement and the presence of certain strokes (staccato, pizzicato) (for example, I.S. Bach, WTC 1 vol., Fugue e - moll).

It should be noted that one cualmot is not enough for the acquisition of quality. Although there are exceptions ("Walk" from the "Pictures from the Exhibition" by M. Mussorgsky, "Steps in the Snow" by K. Debussy, "Forest King" by F. Schubert, "Flight of the Valkyries" from the opera "Valkyries" by R. Wagner and so on), but they are usually limited to a specific program of works. In all other cases, the imagery of musical motority is based on such general principles of cualmots development as: repetition, identity, collation, coherent development, dynamic connection, correspondence, arched ligaments, contrast; that is, on the aestheticphilosophical tendencies to assimilation and renewal. As a result of such an analysis, certain characteristics of musical motority can be distinguished (according to B. Yavorsky): activity, passivity, inertness.

Conclusions. Summing up the consideration of the constructive-procedural elements of the musical movement, we have formed a diagram that reflects our understanding of the category of musical gesture in the scientific-conceptual system of music.

The passage of the musical movement from the deep levels (movement of a person and the surrounding world) through the structures of the forms of the music art, which always make changes in the generated forms, can be regarded as an act of individualization of a universally specified algorithm. In other words, the musical movement is an individual transformation of the universal social rhythms of life, which are captured by the sensitive consciousness of composers, performers and listeners of music.

