



UDK 78.071.1(474.5)Balaukas O.:781.6
DOI: 10.4312/mz.54.2.45-95

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Compositional System of Osvaldas Balakauskas: An Attempt to Restore the Theoretical Discourse

Kompozicijski sistem Osvaldasa Balakauskasa: Poizkus obnovitve teoretičnega diskurza

Prejeto: 19. julij 2018
Sprejeto: 21. avgust 2018

Received: 19th August 2018
Accepted: 21st August 2018

Ključne besede: dvanajstonska tehnika, dodekatonika, modalnost, litvanska glasba, teoretično-kompozicijski sistem, Osvaldas Balakauskas, formalizem, sovjetski modernizem.

Keywords: twelve-tone technique, dodecatonics, modal system, Lithuanian music, theoretical-compositional system, Osvaldas Balakauskas, formalism, Soviet Modernism.

IZVLEČEK

Razprava se v kontekstu modernizacije litvanske profesionalne glasbe v času od poznega sovjetskega obdobja do zgodnjega 21. stoletja osredotoča na teoretično-kompozicijski sistem *dodekatonike*, kakršnega je razvil najbolj dosledni litvanski modernist Osvaldas Balakauskas (r. 1937). Na podlagi konceptualizacije skladateljevega ustvarjalnega procesa, modernega izraza težnje po specifičnosti, socialno-političnega in kulturnega konteksta bo razkrita njegova estetska vrednost. S pomočjo interpretacije procesa modernizacije s stališča parataksičnega vzporejanja bodo raziskana razmerja med *dodekatoniko* in drugimi teoretično-kompozicijski-

ABSTRACT

Against the background of the Lithuanian professional music modernisation over the late Soviet period through to the early 21st century, the study focuses on the theoretical-compositional system of *dodecatonics* by the most consistent Lithuanian modernist Osvaldas Balakauskas (b. 1937). Based on it, the conceptualisation of the composer's creative process, the modern expression construing specificity, the socio-political and cultural context, and the aesthetic value will be revealed. By interpreting the process of modernisation from the viewpoint of parataxical comparativism, the relationship between the *dodecatonics* and other 20th century

mi sistemi iz 20. stoletja ter občo teoretično tradicijo. Razprava se bo dotaknila vprašanja individualizacije dvanajsttonske tehnike kot tudi implementacije principov *Dodekatonike* v opusu Balakauskasa. Sistem bo postavljen v kontekst predpisovanja »formalističnih« doktrin v Litvi in Sovjetski zvezi ter v čas posodabljanja kompozicijskih sistemov in razvijanja novih.

stheoretical-compositional systems as well as the theoretical tradition will be examined. The issues of individualisation of the 12-tone technique and the implementation of the principles of the *Dodekatonics* in Balakauskas' compositions will be discussed. The system is contextualised in the milieu of the inculcation of "formalistic" modernist doctrines in Lithuania and the USSR and of the updating of composing systems and the development of new ones.

"In the 20th century, there are two directions: forwards to the unknown or backwards to the unknown."
(Osvaldas Balakauskas)¹

Introduction

The musical-theoretical systems developed by the 20th-century composers are still of great importance. Their value is predetermined by at least two factors: they represent the essential indication of compositional thinking and, simultaneously, an open professional conceptualisation of the shifts in music composition. The researcher's interest is attracted both by the change in the approaches to the traditional theoretical models and by the continuous attempts of practicing composers to develop a universal theoretical model capable of explaining the fundamental shifts in compositional thinking in the late 20th century.

The present study focuses on two main subjects. The first is the dynamics of the changing approaches to the traditional theoretical models represented by the concepts of tonality and dodecaphony. The second is a permanent search for the comprehension of one of the fundamental issues of musical composition, the nature of which is defined by the concept of hylomorphism established in the 19th century based on Aristotle's metaphysics (philosophy) (cf. Greek υλοσ [*hylē*] 'the matter, dust' + μορφή [*morphē*] 'form') with an inherently high degree of abstraction.² In music composition, its content, with some degree of metaphoricalness, can be deciphered as the basic problem of interdependence of the initial relationship between form and matter: the synergy of the composition material and the forming energy. Thus, the main attention will be given to the reflection on the responses of composers-theorists to the challenges posed to the art of sounds by the issue of the interdependence of matter and form (structure) or self-formation (self-organisation) in the spirit of the philosophical category of hylomorphism.

1 From Balakauskas' comment in a public hearing, 9 February, 1984: minutes of the discussions of creative public hearings in the Composers' Union of the Lithuanian SSR, see *Lithuanian Archives of Literature and Art*, Fund 21, schedule/inventory 1, file 605, p. 25.

2 According to Aristotle, for our cognition, all existence is a compound of form and matter. In terms of being, form is the essence of things, and in terms of cognition, form is the concept of things; see B. B. Агеев, Сознание как проблема психологической науки [*Consciousness as a Problem of the Science of Psychology*], in *Science and Education, A new Dimension: Pedagogy and Psychology* 134 (2017): 56. On the issue of intelligence in Aristotle's philosophy, see: Victor Caston, *Aristotle's Psychology: A Companion to Ancient Philosophy*, ed. Mary Gill and Pierre Pellegrin (Hoboken: Wiley-Blackwell, 2006), 316–346.

Some recipes for the solution of a similar problem in music composition were indirectly presented in the theoretical works of the past devoted to the issues of counterpoint, harmony, and form (as, e.g., in *Liber de arte contrapuncti* by Johannes Tinctoris, 1477) as well as in practical guides on music composition (Percy Goetschius (1892), Robert T. Kelley (2001), Eric Starr (2009), Richard Knight and Richard Bristow (2017), etc.). In the debate on the relationship between matter and form – the body and soul in the structure of an individual – as developed in the treatise of Aristotle's *De anima* [On the Soul], primacy was clearly attributed to the active form, while the passive and inert matter was subjugated to it. In the hylomorphic presentation of Aristotle, “a thing's form is its definition or essence” (*On the Soul*, Book 1). Undoubtedly, a straightforward analogy between the composition material and the form (structure) of music with the hylomorphic doctrine of the constitution of the body and soul would be a source of astonishment and would be incorrect from a scientific viewpoint. Moreover, it is worth noting that in several 20th century theoretical systems of composition, composers clearly shifted their attention from form (structure) to matter (material).

Paul Hindemith spoke about it in the foreword to his guide on musical composition *The Craft of Musical Composition: Theoretical Part (Unterweisung im Tonsatz. Theoretischer Teil)* (1937). As the main goal of the book, Hindemith defined the need to examine the characteristics of the new way of composition. He believed that young composers were obliged to clearly know the potential hidden in the material and, based on that, to make use of all its possibilities. Thus, the study of the composition material becomes a necessary part of the creative process: to quote Hindemith, it is only after the discovery of the possibilities and regularities of the material that the composer acquires a “new freedom” (*eine neue Freiheit*).³ The regularities of the composition material were explored by Hindemith in Chapter 2, *The Medium (Werkstoff)*, of his book, which laid out the foundation for his teachings on the tonal non-diatonic system, or his own version of the twelve-tone tonality (after the typology of tonal systems by Yury N. Kholopov).

It was Hindemith's approach that revealed a new quality in the thinking of composers-modernists of the first half of the 20th century. That was clearly reflected in the significantly increasing role of the pre-composition stage, devoted to the studies of the composition material. The shift was recorded in the formulation of musical material in the *Philosophy of New Music* (1949) by Theodor W. Adorno, while in the reflections of Carl Dahlhaus, this was manifested by the introduction of new concepts in terms of “thinking in matter” (*Materialdenken*), or even “fetishism of matter” (*Materialfetischismus*). Thus, the approach to the material by Hindemith and Adorno integrated a modernist claim on the effect that the sound form of the composition was predetermined by the insightful maximisation of the structural potential of the composition material. In other words, the modernist approach saw the composition material as already pre-formed (*vorgeformtes*

3 In accordance with his own observation, Hindemith experienced the transition from the conservative teachings to the new freedom more profoundly than others (“*Ich habe den Übergang aus konservativer Schulung in eine neue Freiheit vielleicht gründlicher erlebt als irgendein anderer.*”). Paul Hindemith, *Unterweisung im Tonsatz: Theoretischer Teil* (I), Neue, erweiterte Auflage (Mainz: Schott Söhne, 1940), 22.

Material”) and subject to further formation.⁴ Nevertheless, very soon Adorno also revealed substantial losses in *Schoenberg’s* transformations, since the “clever, thinking material” started dictating to the composer. Modernist music was losing its expressiveness, and, from an ideal viewpoint, the artist was losing his hard-won freedom of creation. “The state of technique presents itself to him as a problem in every measure that he dares to think: In every measure technique as a whole demands of him that he do it justice and give the one right answer that technique in that moment permits” (Theodor Adorno).⁵

It was the Modernism of the 20th century that returned to Aristotle’s idea of hylomorphism and tried to examine it both from the philosophical and practical viewpoints. The question about the primacy of matter and form in music – *materia secunda* or *forma secunda*, as formulated by Dallhaus – got answers from numerous composers. Quite in solidarity, they tried to remove “the greatest curse” (as formulated by Howard Hanson) both from the creative process and the outcomes of their creative efforts. The essence of the “curse”, as defined by the American composer of contemporary music and theorist Howard Hanson in his theoretical study *Harmonic Materials in Modern Music: Resources of the Tempered Scale* (1960), was an insufficient consideration of the material; to quote him, “One of the greatest curses of much contemporary music is that it uses a wide and complicated mass of undigested and unassimilated tonal material.”⁶ Hanson suggested that “the end result becomes tonal chaos not only to the audience but, I fear, often to the composer himself.”⁷ It is from this angle that the musical-theoretical system of the *Dodecatonics* of Osvaldas Balakauskas as well as the process of its further development is going to be analysed. The analysis will be preceded by several facts regarding the creative path of the modernist of Lithuanian music.

A graduate from the Kiev Conservatoire in 1969 (the class of Boris Lyatoshytsky, and having written the final thesis under Myroslav Skoryk), Balakauskas in his work purposefully followed the precept of professor Lyatoshytsky, “Find your own”. It was a spiritual testament, an authorisation of the professor who saw his pupils off onto an independent creative path.⁸ However, the basis of his own musical-theoretical system and the ideal of contemporary music were brought by Balakauskas to the Kiev Conservatoire from Vilnius where he had thoroughly studied the two volumes of *The Classics of Dodecaphony (Klasycy dodekafonii, 1961, 1964)* by Bogusław Schaeffer. Balakauskas was admitted to the Kiev Conservatoire and, while studying (1964–1969), formed his own creative individuality. Already in his student works, an original compositional technique surfaced, testifying to his independent way of thinking.⁹

4 Theodor W. Adorno, *Ästhetische Theorie* (Frankfurt am Main: Suhrkamp, 1970), 222.

5 Theodor Adorno, *Philosophy of New Music*, ed. by Robert Hullot-Kentor (Minneapolis and London: University of Minnesota Press, 2006), 33.

6 Howard Hanson, *Harmonic Materials in Modern Music: Resources of the Tempered Scale* (Irvington: Appleton-Century-Crofts, INC, 1960), 348.

7 Ibid.

8 Quite a few of Lyatoshytsky’s students were active composers already at the time of postmodernism. His former students represented different trends of composition; however, only individualists who declared their own positions or systems of composing, such as Balakauskas, Hrabowski, Silvestrov, etc., resisted the obvious influence of the music of their teacher.

9 See Gražina Daunoravičienė-Zuklytė, *Osvaldo Balakausko kompozicijos mokyklos šaknys* [The Roots of Osvaldas Balakauskas’ School of Composition], in *Lietuvių muzikos modernistinės tapatybės žvalgymas* [Exploration of the Modernistic Identity of Lithuanian Music] (Vilnius: Lietuvos muzikos ir teatro akademija, 2016), 409–485.

As early as in the first years of his studies in Kiev, Balakauskas experimented with segments of different pitches of his future series proceeding from the principle of the progression of fifths (e.g. segments *g-d-a*, *d-a-g*, etc.) and distributing them symmetrically. The “universal symmetrical row” (to be discussed further in the text) can be found already in his *Auletika* of the student years (1966), and the segments of the “infinite diatonic row”, in *Aerophony* (1968) and *Sonata for Violin and Piano* (1969). *Concertino* (1966) and *Cascades. Sonata for piano* (1967), compositions from his student years, featured a row of 36 tones (12 transpositions of the chords of sixths). The rational method of Balakauskas’ composition proceeded from a well-coordinated harmonic system and was subject to the constructive power of numbers. Both served as an algorithm of the introduction of musical logic and order to composition (from Schoenberg’s point of view) and, on the other hand, dictated solutions of the interaction of harmony and structure.

The young composer, however, managed to avoid pure imitation of the musical avant-garde techniques; instead, he re-interpreted it in a rather specific way. This was caused by Balakauskas’ dislike for the apotheosis of dissonance in the conception of musical Modernism, and the strict (systemically) operating principle of tone functioning in his music as well as the harmony of symmetrical structures contributed to the emergence of consonances and even to some atmosphere of *quasi-tonality*.¹⁰ In fact, the music of Balakauskas had nothing in common with the dodecaphony of *Schönberg* or the compositions of the representatives of the Ukrainian avant-garde (Leonid Hrabowsky, Vitaly Godziatsky, early Valentin Silvestrov, etc.). The strictly organised, euphonious, and harmonious music of Balakauskas, when confronted with the adaptations of the avant-garde techniques in the USSR in the 60s, sounded original and thus differed from numerous experiments (attempts) to individualise the principle of management of the 12-tone continuum of music.¹¹

The maverick thinking of Balakauskas in the environment of the Kiev Conservatoire drew attention of those around him. The somewhat speculative and *dry* music of the Lithuanian composer clearly stood out against the background of the *hot* Ukrainian mentality. However, students of the Kiev Conservatoire were more impressed by Silvestrov’s avant-garde method of composing with the inherent energetic verbleness of sound interrelations. For Balakauskas, the value in composing was represented by the analytical manipulation of tones and the ability to compose a rather consonant and “pure” contemporary music. Nonetheless, all that was not enough to solve the riddle of what exactly made such a scrupulously composed structure sound like the individual music of Balakauskas. The effect of his well-functioning harmonic system was not enough: clear self-determination at the level of the philosophy of art was required.

10 A teacher at the Kiev Conservatoire, composer Yury Ishchenko, defined the distinguishing characteristics of the music of Balakauskas musically and metaphorically as different degrees of dissonance between the major seventh and the minor seventh (according to Ishchenko, Balakauskas used the minor seventh and the major second). From a private conversation between the author and Ishchenko in Kiev, 24 April, 2015.

11 From 1968 to 1972, Balakauskas joined the circle of I. Blazhkov – V. Silvestrov, or evening meetings and hearings of the Kiev avant-garde, where he diligently studied the compositional techniques of the latest 20th century music. It was there that he became thoroughly acquainted with the scores and compositional techniques of the Second Viennese School and the Second Avant-Garde.

In his music, he clearly resisted the temptation to express a certain content of music or of communicating, enunciating through sound structures; moreover, he obviously ignored extra-musical rhetoric gestures and preferred *pure* musical means (like *pure structures* of Eduard Hanslick's absolute music).¹² In his own music, Balakauskas spoke the language of constructive structures. His peer Silvestrov defined the nature of individuality of Balakauskas' music through the impression that "his music sounds as if by itself, simply in the manner of Haydn. A pure structure and some speculative-ness, abstractness are inherent in (identical to) his music".¹³ As noted by Silvestrov, "the music of Balakauskas represented an example of the classics, only in a different compositional system. He managed his music – its texture, structure, and different types of forms – mainly through the gestures of music itself and did it in a very reserved and harmonious manner. It corresponded to his looks and his external and internal characteristics".¹⁴ In 1972, Balakauskas was accepted into the National Union of Composers of Ukraine, however, he returned to Vilnius soon afterwards. In the 70s, in the Lithuanian State Conservatoire (today the Lithuanian Academy of Music and Theatre), he founded his own composition school. Until the end of the 20th century, Balakauskas and his compositions represented the priority of systemic compositional work, and he became the most consistent and prominent modernist in Lithuanian music of the 60s through to the 80s.

Fundamentals of Osvaldas Balakauskas' Theoretical-compositional System of Dodecatonics

It is noteworthy that, chronologically, the time of Balakauskas' renouncement of the modernist doctrine in his compositions coincided with the public presentation of his musical-theoretical system of dodecatonics, first published in Polish in the collection *W kręgu muzyki litewskiej* [In the Field of Lithuanian Music]¹⁵ in Krakow, Poland, in 1997.. The subtitle of the theoretical system specified the name of the system as "the study of the modal and harmonic potentiality of the *12-tone equal-temperament system*".¹⁶ In recognition of the main stimuli for that work, Balakauskas named his creative discussion with the first row of Hinedemith (*I Reihe*) from *Unterweisung im Tonsatz* (1937) and the aforementioned book by Howard Hanson *Harmonic Materials in Modern Music: Resources of the Tempered Scale* (1960). However, the system of Balakauskas' opens a discussion with several traditions and paradigms of theoretical musicology, starting with Pythagoras' idea of the progression of fifths. It must be admitted that the arguments for the discussion arise from the theses postulated by

12 Eduard Hanslick, *Vom Musikalisch-Schönen* (Leipzig, 1854).

13 From a private conversation between the author and Valentin Silvestrov in Druskininkai, 25th July 2013.

14 Ibid.

15 Translated into Lithuanian, the *Dodecatonics* by Balakauskas was published in Vilnius in 2002. See Osvaldas Balakauskas, *Dodekatonika. Osvaldas Balakauskas: Muzika ir mintys, (Music and Thoughts)*, ed. Rūta Gaidamavičiūtė (Vilnius: Baltos lankos, 2000), 169–206.

16 The *Twelve-Tone Equal Temperament System* (12-TET) has been the most common tuning system of European professional music in the last three centuries.

Balakauskas and conceal the context of the theory itself. As in the theory of *Dodecatonics* itself, the author does not start an extensive discussion with a number of potential opponents, some comments are provided merely in an appendix, named in the tradition of Arthur Schopenhauer *Paralipomena* (from Greek *paraleipomena*) [*what was omitted, aside*].¹⁷

The very title of his musical-theoretical system of *Dodecatonics*¹⁸ was made up by Balakauskas from two roots: twelve + tonic, i.e. by emphasising the chromatic completeness of the 12-step system of a tempered structure and the idea of the centre (the emblem of tonality). In other words, the concept of dodecatonics manifests the nature and the idea which George Perle, and later Ernst Křenek, found in the 3rd edition of *Harmonielehre* (1922) by Schönberg where the author defined dodecaphony as the tonality of 12-step rows (*Tonalität einer Zwölftonreihe*).¹⁹ In the same edition of *Harmonielehre*, tonality (*Tonalität*) was further characterised by Schönberg as a phenomenon that, first, was not an eternal law (*kein ewiges Gesetz*) and, second, was not a law by nature (*Naturgesetz*) that would be able to naturally substantiate the model (*Vorbild*) of tone.²⁰ In other words, in that text, Schönberg spoke about the formation of a milieu close to tonality when composing on the basis of 12 interrelated tones (as defined by him, *die Komposition mit zwölf nur aufeinander bezogenen Tönen*). As noted by Balakauskas, the concept of dodecatonics in his system represented two meanings. First, it was a theory of harmony which followed from the technique of the principle of the projection of fifths. Second, it was a theory of harmony with its objective (immanent) structure, including all known (empirical or artificial) as well as hardly used, or never used (hypothetical), systems of a smaller volume than the dodecatonics.²¹

The interrelationship between the traditional tonality and the sound field formed by the dodecaphonic technique was of interest both to composers and musicologists of the 20th century for many years. Thus, e.g., Hanns Eisler, a pupil of Schönberg, identified the latter's *Suite for Piano, Op. 25*, as a "new tonality – as one can define a composition with 12 tones".²² As is well known, the nature of the tonality of the 12-tone music (*die Tonalität der Zwölftonmusik*) was persistently advocated by Schoenberg at an advanced age, and he spoke about it in his public lecture *My Evolution* in the University of California on 2 November 1949. During that lecture, he kept returning to the idea of the tonal essence of the 12-pitches music and propagated it.

The author of the *Dodecatonics* considered his own approach to be a rather universal theoretical conception, even if he postulated that "the statements in the present

17 The concept of *Paralipomena* in the title of his work was also used by Hanns Jelinek, pupil of Schönberg and Berg and a supporter of tonal music. See Hanns Jelinek, *Anleitung zur Zwölftonkomposition: nebst allerlei Paralipomena* (Wien: Universal-Edition, 1952–1958).

18 The Latin root of the Greek origin *dodeca* = twelve, used in the name of the system of Balakauskas, was first proposed and used in 1911 in the concepts of *sistema dodecafonica*, *accordo dodecafonico*, *scala dodecafonico (cromatica)* in the study of Domenico Alaleona, "I moderni orizzonti della tecnica musica," *Rivista musicale italiana* 18 (1911): 397.

19 Arnold Schönberg, *Harmonielehre* (Wien: Universal Edition, 1922), 488.

20 *Ibid.*, 28.

21 Osvaldas Balakauskas, *Dodekatonika*, op. cit., 171.

22 "Hier gibt es sogar eine neue Tonalität, wenn man die 'Komposition mit zwölf Tönen' so bezeichnen darf: dazu eine Musizierfreudigkeit, wie sie seit langem nicht da war." Quoted from Arnold Schönberg, "Der musikalischen Reaktionär Arnold Schönberg zum 50. Geburtstag, 13. September 1924", *Sonderheft der Musikblätter des Anbruch*, 6. Jg., August-September-Heft (1924): 313.

study do not in any sense mean any revolutionary ambitions of the author and represent merely a search for a more objective basis than the arguments that justify the ‘common chord’ (major triad)”. At the same time, as one of the goals of his development of the dodecatonics, Balakauskas named “a search of an analytical method that would lead to revealing the harmoniousness of the music of any epoch or any stylistic trend, as well as the music of any textural design”.²³ The author’s maximalistic and somewhat utopian desire to discover “a methodological tool that would cover all the phenomena of mode and harmony ever known in practice, and those hiding within the frame of a 12-tone continuum of sounds of a tempered melodic structure as an opportunity, regardless of how they were used or how they were going to be used”²⁴ was evident. The search for a more objective basis for the functioning of 12 chromatic tones reflected the maximalism of numerous composers-theorists of the 20th century (Paul Hindemith, Milton Babbitt, Allen Forte, Anatol Vieru, Howard Hanson, etc.).

Since the method served as an algorithm for composing his own music, Balakauskas also set himself another goal: to identify an objective basis for revealing the “logic of natural self-organization of the 12-tone continuum of sounds and the possibility of systematisation on that basis”.²⁵ A special feature of that theory was the emphasis placed on the primacy of the Pythagorean projection of fifths (PQ) and the mathematical logic of proportions (Pythagoras, Hanson). The questioning of the physico-acoustic basis of sound organisation in the overtone series (the tradition of the harmonic systems of Jean-Philippe Rameau, Paul Hindemith, and many others) left an imprint on the conceptual level of the system. However, the elements of the natural scale were present in the justification of the principal concept of the system, i.e. the axiom of the fifth. In other words, the author of the *Dodecatonics* sought to find the most objective basis for the natural logic of self-organisation of the 12-tone continuum of the pitches (regardless of the register, only 12 harmonic tones (pitches) existed, next to hundreds of melodic ones) of the tempered structure.

In his *Dodecatonics*, Balakauskas focused on the phenomenon of harmony. As emphasised there, the epoch after Webern, serialism, and sonority as well as the latest trends of composition in the late 20th century “required to check anew the content of many traditional concepts and abandon the limitations of tonal thinking”.²⁶ The *Dodecatonics* of Balakauskas dealt with in the present paper is just the first part of his theoretical conception, since the total theory was planned by the author to be provided as a study in four parts. The theory under analysis represents the theoretical foundation of the system of Balakauskas, i.e. the method of the projection of fifths. In the second part, the author was going to explore all the “diatonic” systems through evaluation of the said method from the monotonic to the dodecatonic scale, with special attention paid to the systems exceeding the volume of the heptatonic scale. As noted by the author in the preface, the third part of the *Dodecatonics* was to be devoted to the classification of chords or harmonic structures. The method of the projection of fifths, as promised

23 Ibid., 170.

24 Ibid.

25 Ibid., 171.

26 Ibid., 170.

by the author of the *Dodecatonics*, made it possible to organise large numbers of such structures into the prototypes of a few dozens.²⁷ And ultimately, in the fourth part of the *Dodecatony*, readers were promised to be provided with examples of the analysis of music of different epochs and styles, carried out on the methodological basis of the first three parts.²⁸

As the main arguments of the dodecatonics, the starting points and theses of the author should be defined. When reflecting on the totality of tones of the tempered structure, Balakauskas argued that each tone was simultaneously “one of a hundred” as a melodic tone or “one of the twelve” as a harmonic tone.²⁹ The author noted that harmony in that case was not identified with the phenomenon of the “vertical”, since the laws of harmony functioned regardless of the positions of tones in terms of pitch or texture. Moreover, the analysis of a melody was impossible without attention to the automatically functioning processes of harmony.

Even though Balakauskas emphasised that the phenomena of melody and harmony should not be confused in composition, on the pages of his musical-theoretical system, he was quite vague about the relationship between the melodic and harmonic structures. As became evident further in the text, in his own compositions, the melodies of the composition came from the harmonic system and vice versa (see the analysis of his *Symphony No. 2*). However, as aptly noted in his *Dodecatonics*, the melodic nature and the harmonic nature of one and the same tone represented complementary characteristics of the tone, and their separation was done only for the methodological purposes in order to get to the nature of the phenomena of harmony.³⁰ The differences between melodic tones and harmonic tones were also defined in terms of methodology, as different measurements were proposed for their calculation: the counting out of the melodic tones was based on the semitone principle,³¹ while the counting out of the harmonic tones was based on the count of the steps of fifths.

Similar ideas were in fact a common denominator in various theoretical approaches and works on the theory of harmony. Thus, e.g. Kholopov in his theory of harmony also proposed to explain the “size” of each diatonic interval and the interrelationship between intervals by calculating a specific distance, based on the chain of the Pythagorean fifths.³² The positions of the intervals were set by Kholopov, based on the mathematic calculation of the steps of the fifths in accordance with the formula $S - Q = N$. Thus, e.g., in the system of sounds consisting of seven fifths ($f - c - g - d - a - e - h$)³³, the tritone f/h contained 6 steps of the fifths. In the formula, S denoted the number of the fifths in the system (7); Q denoted the number of steps of the fifths up to a specific interval (e.g. there were 6 steps of the fifths up to the tritone interval). Simultaneously, N denoted the number of intervals of each category in the system. As concluded by

27 Ibid., 171.

28 Ibid.

29 Ibid., 172.

30 Ibid., 172-173.

31 Ibid., 171.

32 Ю. Н. Холопов, Гармония. Теоретический курс [*Harmony. Theory Course*] (Санкт-Петербург, Москва, Краснодар: Лапы, 2003), 135.

33 In the example and further in the study, the names of tones are marked in compliance with the German system. Osvaldas Balakauskas applied the system in his *Dodecatonics* and in the theory illustrating examples.

Kholopov, “the number (N) of intervals of some specific type is strictly in accordance with the number of the steps of the fifths (Q) required to obtain it and the total number (S) of the fifths in the system (including zero)”.³⁴

The main theses of the system of *Dodecatonics* of Balakauskas followed from the axiom and method of the **projection of fifths (PQ)**. The idea proposed by Pythagoras and the discovered genetic principle to construe the 12-tone scale (circle) remained no less relevant and attractive. When approaching the method of the projection of fifths, the author postulated the following: the octave was an equisonance (as Rameau defined the nature of the octave – *G.D.*) and produced the effect of maximum fusion, and its melodic effect was created by two non-identical tones. However, with respect to harmony, both tones were identical. The statement brought Balakauskas to the main categories of his theory. The author postulated: the fifth represented the correlation of the second and the third overtones (3:2), both tones of the fifth were non-identical in terms of harmony and simultaneously they were harmonically the most related and homogeneous. Another conclusion followed: that it was the fifth that became the expression of a minimal harmonic correlation and acquired the function of its measure and of the representative of the system. A further logical conclusion stated that the projection of fifths was the objective basis of the system, while **the step of the fifth**, or the quint (Engl. *step* + French *quinte* = *sq*), a unit that Balakauskas signified as T (tau, letter T of the Greek alphabet),³⁵ logically became a measure of harmonic relationship between the tones of the system. The axiom of the fifth, or the principle of the closest relationship of two non-identical tones, became universal in the *Dodecatonics*: the step of the fifth (*sq*) and a unit of the fifth (T) were considered as a unit and the measure of the harmonic relationship and intensity.

By adding ever new quints to the unit on both sides of the authentic and plagal direction, Balakauskas formed a complete projection of fifths (quints) (PQ), or the Pythagorean circle of all the 12 tones (see Schema 1). As noted by the author, the concept of *projection*, which in his system replaced the concept of a *circle*, most closely corresponded to the spirit of the system, since the projection of fifths (as demonstrated further) did not always consist of all the 12 tones and fifths; more frequently it appeared not entirely complete, i.e., it became a semi-circle. However, it should be emphasised that the said idea and the concept were discovered by Balakauskas not so much in the mathematics of Pythagoras as in the system of Hanson where a whole section of a chapter was devoted to the issue of the *Projection of the Perfect Fifth*.³⁶ However, Hanson derived his six basic tonal rows (series) on the basis of the progression of the perfect fifths, as well as other intervals: major and minor seconds, thirds, and tritones.

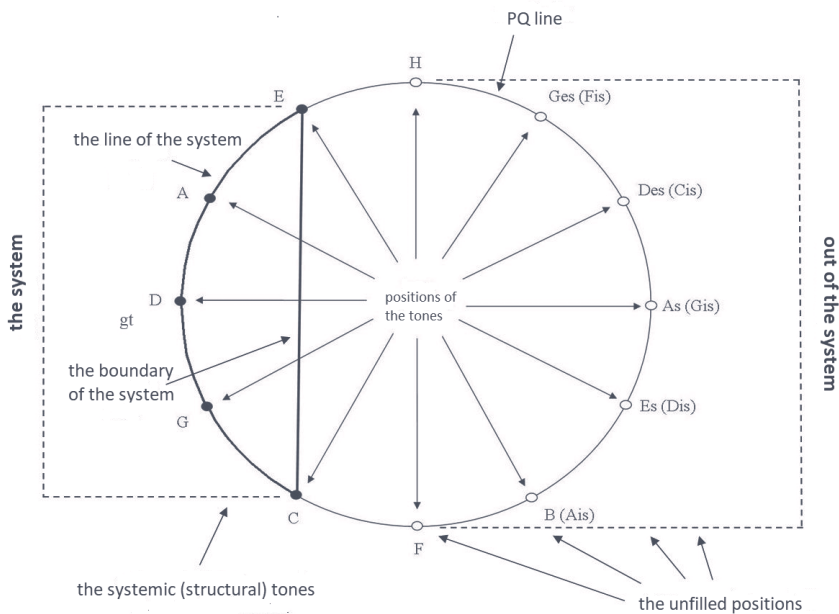
In Schema 1, the system consists of 5 systemic tones. The system is graphically presented with the line inside of the system (a semi-circle *E – A – D – G – C*) and a straight line, denoting the boundary of the system (*E – C*). The tones that form the unoccupied PQ positions (*H – Ges(Fis) – Des(Cis) – As(Gis) – Es(Dis) – B(Ais) – F*) remain

³⁴ Ibid.

³⁵ Osvaldas Balakauskas, *Dodekatonika*, op. cit., 175.

³⁶ Howard Hanson, *Harmonic Materials in Modern Music*, op. cit., 27–39.

unsystemic, beyond the boundary of the system. Further logical consequences are built up under the functioning of a single principle of the system.



Schema 1: The conception of the projection of fifths (PQ) in Dodecatonics by Osvaldas Balakauskas: systemic and non-systemic tones³⁷.

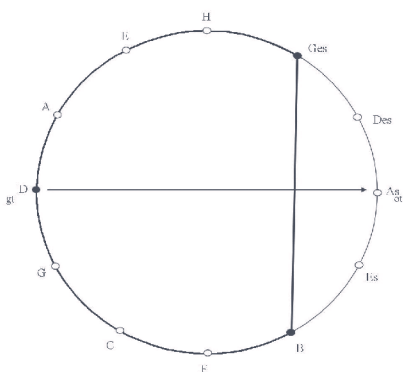
Other categories of the system of the *Dodecatonics* by Balakauskas represented the **generative tone** and the **vector**. The immanent projection of fifths (PQ), as defined by Balakauskas, was only an inert field of the projections of fifths. Striving to consciously control it, Balakauskas defined his methodological instruments as follows: to start with, there was a **generative tone (gt)**; in Schemas 1 and 2a, that was tone D, and in Schema 2b, tone E. The projection of fifths functioned as a methodological instrument in establishing the generative tone which initiated the process of the fifths. It should be emphasised that, in the *Dodecatonics*, the initial (generative) tone (gt) in general schemata represented the symbol of the modal space – tone D (*Re*), since Balakauskas argued that European music developed in the direction of vector D-As. It was due to the initial tone that all the tones were automatically localised and acquired their functional identity: they became – more or less – related with regard to the generative tone (gt). In that way, a certain natural hierarchy of interrelationships was established which Balakauskas designated as action of the phenomenon of immanent functionality.

37 Schemas 1 to 10 in the paper are presented following the schemas in the *Dodecatonics* of Balakauskas, pgs. 175–192.

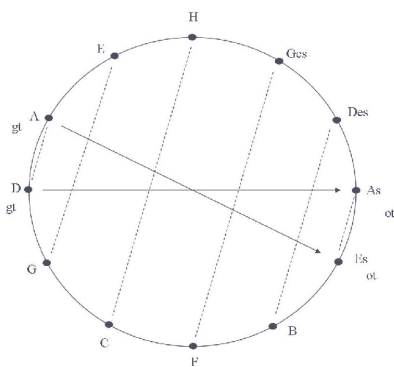
The system also provided for active action of the **opposition tone** (*ot*) with respect to *gt* (in Schema 2a, that was tone *As*, and in 2b, tone *B*). The process of fifths and the direction were predetermined by the position of the generative tone (*gt*). The arrow that connected the generative and the opposition tones (*gt* and *ot*) in the PQ schema was called **the vector** by Balakauskas (in Schema 2a, the vector connected tones *D* and *As*, and in Schema 2b, vector *A-Es*). Simultaneously, the author of the system noted: upon changing *gt*, *the direction of the progression of fifths* (i.e., the vector) *changed*, too, which was analogous to the transition to another key (tonality). As we can see, the conception of the opposition tone (*ot*, tritone) of Balakauskas was similar to the compositional system of Bela Bartok which, as intersections of the tritone axes of the principal functions and tonalities in the so-called *Axis System*,³⁸ was revealed by Ernő Lendvai. A similar principle of the tritone opposition of tones could be seen in the system of Hanson (1960).³⁹

It was the generative tone (the centre of the system) that formed the entire projection of fifths, quints (PQ) and due to that, according to the author of the system, all the tones automatically became more or less related with regard to it. In that way, some natural hierarchy of interdependencies was established, or a self-organised hierarchy of tones, defined by Balakauskas as **immanent functionality**. As the generative tone changed, the vector *would also change*, which, as noted by Balakauskas, was analogous to the transition to another tonality.

In the *Dodecatonics*, one of the central places was devoted to two projections (models) of fifths denoted by the principle of manipulations with the prepared methodological instruments of the system. Based on the functioning of one generative tone (*gt*) and one vector, the so-called **mono-vector projection of fifths (PQ)** emerged (was defined), see Schema 2a. However, next to it, Balakauskas placed an equivalent **bivector PQ model**. In that case, the process of fifths initiated two generative tones (two adjacent tones or a fifth) and, accordingly, two vectors appeared in the Schema (see Schema 2b).



Schema 2 a: A monovector PQ model.



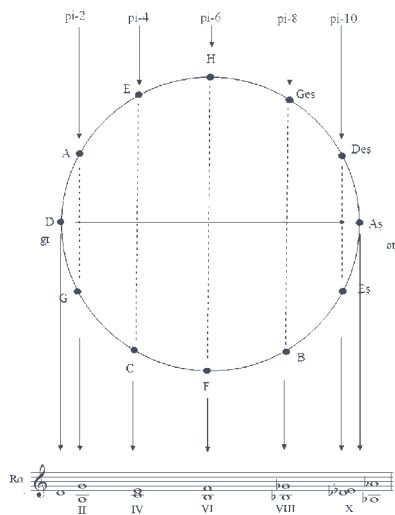
Schema 2 b: A bivector PQ model

38 Ernő Lendvai, *Béla Bartók: An Analysis of His Music* (London: Kahn & Averill, 1971).

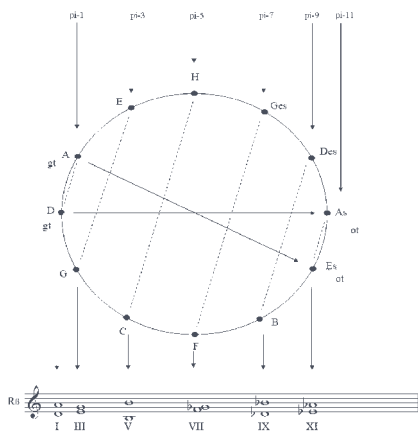
39 See "The Perfect-Fifth-Tritone Projection," in Howard Hanson, op. cit., 150.

When dealing with the solution of the problem of functionality in the *Dodecatonics*, Balakauskas identified **pairs of inversible tones (*pi*)**. Under such a pair, the author defined the tones situated at the same distance from the vector (in the Schema, they are connected with a dotted line), and in calculation, they were given corresponding numbers *pi-1*; *pi-2*, etc. Thus, the monovector PQ (the projection of quints) consisted of 5 *pi*; the bivector, of 6 *pi*; altogether, 11*pi* (see Schemata 3, 4). The degree of relationship of the interval pairs were additionally denoted by Balakauskas with small Roman numbers: i, ii, iii, iv, v, vi, vii, viii, ix, x, xi. It was obvious that in the monovector model of PQ (row/series *Rα*), the first pair of tones *pi* (*pi-2*), or tones *G* and *A* with respect to the generative *D*, represented the first degree of relationship, *C* and *E*, respectively, the second degree, etc. The even numbers of the pairs of intervals (*pi*) were typical of the monovector model, and the odd numbers of the pairs of intervals (*pi*), of the bivector model, see Schemata 3–5.

The said procedure took Balakauskas to one of the most important further steps of composer-theorist, viz., to the logical substantiation and construing of the so-called **perfect rows**. Based on the monovector PQ model, **the perfect *Rα* row** was derived (see Schema No. 3), and based on the bivector PQ model, **the perfect *Rβ* row** (see Schema No. 4). The degrees of relationship of the tone rows were arranged in accordance with the arrangement of the pairs of inversible tones (*pi*) with respect to the generative tone (*gt*). The opposition tones (*As* in row *Rα* and *As* и *Es* in row *Rβ*) represented further relationship. The perfect summary row (Schema No.5) synthesised both rows: $Rα + Rβ \rightarrow Rδ$ (all pairs of intervals were represented alternately).⁴⁰

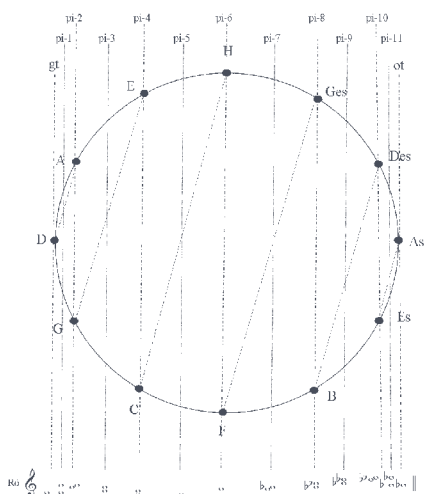


Schema No. 3: Perfect row *Rα*.



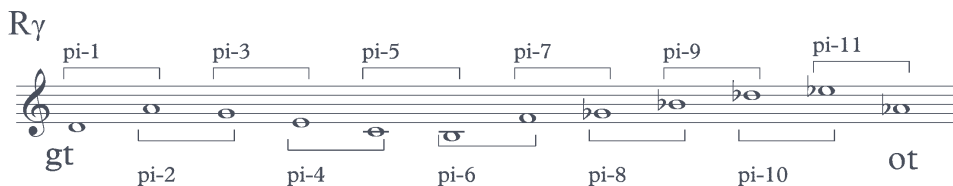
Schema No. 4: Perfect row *Rβ*.

40 See Osvaldas Balakauskas, op. cit., 178–179.



Schema No. 5: Perfect symmetry row $R\gamma$.

Based on the melodic form of the monovector model, in *Dodecatonics*, row $R\gamma$, or a “magic symmetrical row”, was construed (which became the basis of *Symphony No. 2* (1979); to be analysed further). As noted by Balakauskas, a perfect symmetry row synthesised both types of rows, the melodic monovector and the harmonic bivector: rows $R\alpha + R\beta \rightarrow R\delta$ (all pairs of intervals were represented alternately):⁴¹



Schema No. 6: A magic symmetrical row, or row $R\gamma$ of Balakauskas.

Since in the present paper we are interested in some specific features of the system of the dodecatonics by Balakauskas, we shall focus on the issues of **elementary harmonic structures** and the determination of their harmonic intensity.

In the discussion of the issue of intensity of the elementary harmonic structures of the correlation of tones, the author of the system first introduced additional symbols for the designation of the components of interval pairs (pi), which basically complicated the transparency and the general understanding of the system. Additional Greek symbols were introduced to indicate the main intervals and their transformations or elementary harmonic structures (denoted by Se) and their transformations up to tritone (which corresponded to the Babbitt-Forte’s system).

41 Ibid., 180, 189.

Balakauskas marked the elementary harmonic structures (*Se*), or the main intervals, together with their transformations up to tritone, by Greek symbols. He measured their harmonic intensity by the number of the constituent perfect fifths in the progression of fifths, i.e. a unit of measurement was the perfect fifth – *Tau* (T). In cases like this, the main role was played not by the indicators of relationship but on the contrary by the harmonic opposition and the degree of dissonance in a specific interval. Thus, each interval in the *Dodecatonics* acquired its own **index of static intensity** – *Ista*. The correlation of intervals and their transformations (elementary harmonic structures *Se*) with the symbols of elementary harmonic structures (*Se*) and the index of static intensity (*Ista*)⁴² is presented in the table below.

Interval	Symbol <i>Se</i>	Symbol <i>Ista</i>
Prima = octave, two octaves, etc.	Σ	0 T
Fifth = fourth = eleventh = twelfth, etc.	T	1 T
Major second = minor seventh = major ninth, etc.	Φ	2 T
Minor third = major sixth = major tenth, etc.	X	3 T
Major third = minor sixth = major tenth, etc.	Y	4 T
Minor second = major seventh = minor ninth, etc.	Ψ	5 T
Tritone = triton + octave = triton + 2 octaves, etc.	Ω	6 T

In a reference (in *Paralipomena*), Balakauskas noted that the *Ista* indicators challenged the traditional approach, as well as Hindemith's approach, regarding the issues of consonance and dissonance. However, the composer formulated a logical condition, believing "that the actual indicators of harmonic intensity are just as acceptable as the axioms of the octave and the fifth".⁴³ It has to be noted that a similar system and the results of calculations of the fifth steps of diatonic intervals was laid out in Table 5 in the book of Yury N. Kholopov *Harmony. Theory Course*.⁴⁴ Next, Balakauskas differentiated between elementary harmonic structures, based on the impact of *gt* and *ot*.

Balakauskas' inner conviction prompted him to the idea that the **functionality** of the systems in the *Dodecatonics* was derived from the most natural logic of the formation of progressions of fifths (PQ) and the embedded main principles of self-organisation: the objective basis was inherent in the very nature of perfect rows; each of those rows could be seen as an **integral wave**, caused by an impulse of the generative tone. Consequently, in each integral wave (row), each pair of intervals (*Se*) could be functionally defined, depending on two conditions (indicators):

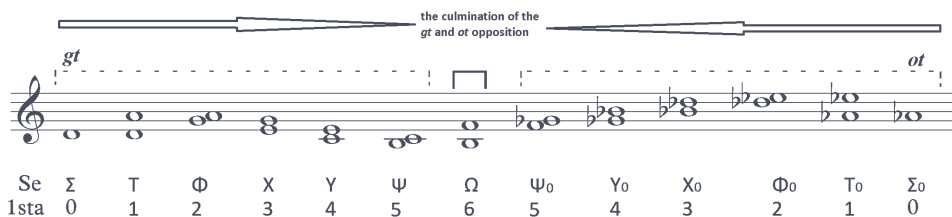
1. *Indirect dependence on gt* predetermined the position in a row (the indicator of internal intensity *Se* was denoted by **the *Ista*** symbol). In Schema 7, the impact of attraction of the generative and the opposition tones was shown as well as the culmination of their opposition in the centre (tritone *h-f*). As noted by Balakauskas, on the left side of the tritone, the attraction of the generative tone (*gt*)

⁴² Ibid., 180.

⁴³ Ibid., 199–200.

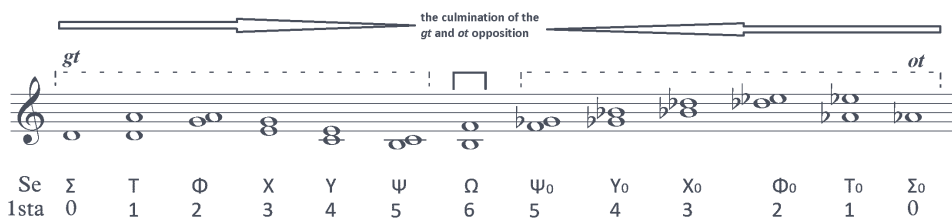
⁴⁴ See Ю. Н. Холопов, *Гармония. Теоретический курс* [Harmony. Theory Course] (Санкт-Петербург: Лапы, 2003), 35.

predominated, while on the right side of the tritone centre, the attraction of the opposition tone (*ot*) predominated.⁴⁵



Schema 7: The impact of attraction of the generative and the opposition tones and the culmination of their opposition.

2. The direct dependence on *gt* predetermined the presence of the initiator of the wave in each intermediate period of the integral wave as the third tone and the consequent forming of a subsystem of a given segment (its harmonic interrelationships were denoted by the symbol *Ista*). Due to the harmonic impact of the generative tone, in that case, its dominance was more pronounced. In Schema 8, Balakauskas outlined: a) the absolute predominance of *gt* up to DVIII (*F-Ges-D*), b) the ambivalence of the impact of *gt* and *ot* was outlined in zone DIX (*Ges-B-D*); c) the highest opposition was observed in the zone of three harmonic structures (DVIII, HFis VIII, FisVII; *B-DES-D*, *Des-ES-D* as well as *As-Es-D*), and d) the equilibrium was achieved at the end of the process on the point of the tritone correlation (FisVII, *As-D*).⁴⁶



Schema 8: Correlation between the generative tone and the opposition tone.

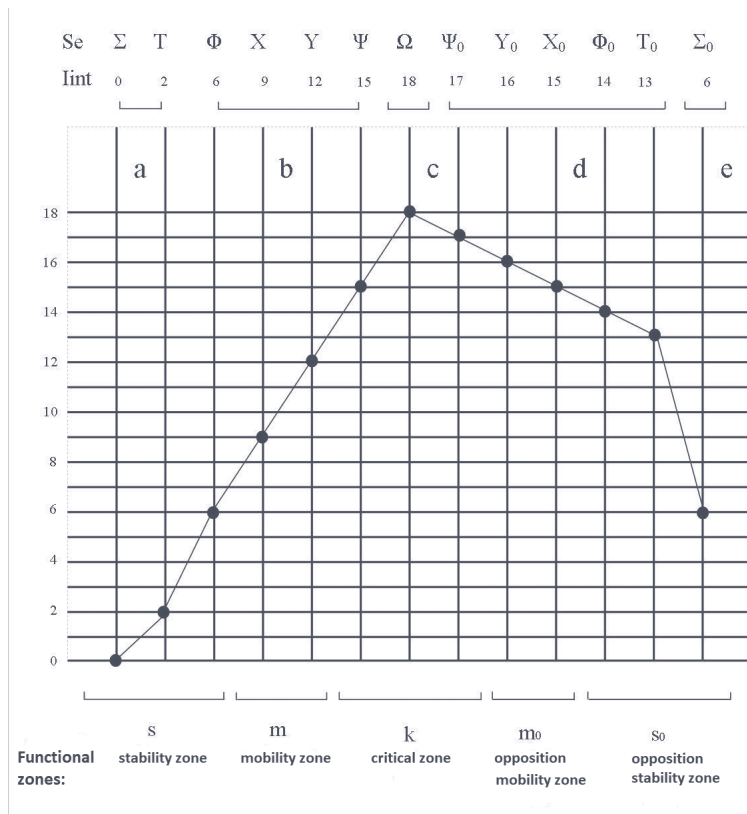
The nature of the aforementioned statements in the *Dodecatonics* by Balakauskas remained, however, a part of the presented theoretical system which was open to discussion. The absence of clear arguments to confirm the said conclusions became a vulnerable point of the system.

The lack of a distinct theoretical argumentation evidently prevailed in further considerations and steps of the methodological nature of the author of the *Dodecatonics*. Further, Balakauskas summed up both indicators of immanent functionality (meaning

⁴⁵ Osvaldas Balakauskas, *Dodekatonika*, op. cit., 191.

⁴⁶ Ibid.

the symbols *Se + Ista*) and noted that both interrelated based on the interference principle. The summary index of the indicator of harmonic functionality (the symbol **Iint**) in the *Dodecatonics* by Balakauskas was presented as a dynamic curve (see Schema 9). As indicated by the author, the curve reflected the dynamics of all the harmonic relations. In that way, five functional zones were identified: stability zone (s), mobility zone (m), critical zone (k), opposition mobility zone (mo), and opposition stability zone (so):⁴⁷



Schema 9: The summary index (*Iint*) of the indicator of harmonic functionality.

When determining the functional character of each harmonic structure (*Se*), Balakauskas advised to additionally consider the functional context, i.e. the interrelations with the adjacent structures on both sides. Harmonic moves in the *Dodecatonics* were considered as of either decreasing (the semantics of resolution) or increasing intensity. In that way, the author summarised his observations and determined the functional identity of each elementary harmonic structure (*Se*).

⁴⁷ Ibid., 192.

The summary of characteristics of the functional identity of elementary harmonic structures is presented below:⁴⁸

- Σ – the function of absolute harmonic stability (absolute consonance, no possibility of resolution);
- T – the function of stability;
- Φ – the function of weak stability (resolution in s is possible);
- X – the function of relative mobility (mobility is understood as a possibility to transfer to the functional zones s or k);
- Y – the function of absolute mobility (transfer is possible to Ω , the top of the wave intensity);
- Ψ – the function of relative criticality (through resolution in the fifth (T), a contact with the stability zone is still possible);
- Ω – an highly critical zone (the point of the highest intensity, no possibility of transition exists, and only resolution is possible);
- Y, Σ – the quintessence of functional interrelations expressed by the most elementary means of the sequence (impulse) of functions.

Further functions were symmetrical equivalents (correspondences) of the defined functions, however, they were indicated as oppositional:

- Ψ_0 – an oppositional function of relative criticality;
- Y_0 – an oppositional function of absolute mobility;
- X_0 – an oppositional function of relative mobility;
- Φ_0 – an oppositional function of weak stability;
- T_0 – an oppositional function of relative stability;
- Σ_0 – an oppositional function of stability.

On that basis, different zones of functionality of the system of progression of quints were identified:⁴⁹

- The zone of stability (s), consisting of 3 Se of the lowest intensity (Σ, T, Φ)
- The zone of mobility (m), consisting of 2 Se of medium intensity (X, Y)
- The critical zone (k), consisting of 3 Se of the highest intensity (Ψ, Ω, Ψ_0)
- The zone of oppositional mobility (m_0), consisting of Y_0, X_0
- The zone of oppositional stability (s_0), consisting of Φ_0, T_0, Σ_0 .

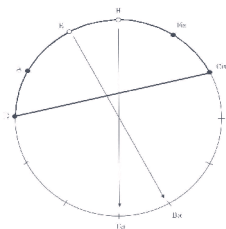
While giving up the concept of chord, in his *Dodecatonics*, Balakauskas determined the phenomenon of **harmonic structure** (Se) first of all quantitatively: a harmonic structure consisted of more than two tones. Balakauskas joined the initiative of his colleagues Ernst Křenek, Herbert Eimert, Vincent Persichetti, Yury Kohn, Milton Babbitt, and Allen Forte and sought to mathematically determine the harmonic intensity of consonances. Balakauskas based the intensity of harmonic structures on three criteria:

⁴⁸ Ibid., 191–192.

⁴⁹ Ibid., 191.

1. belonging to the system;
2. the summary/total structure of all the components of elementary harmonic structures (*Se*);
3. the summary intensity: the indicators of the static intensity index *Ista* of all tones where all tones are summed up.

Thus, e.g. consonance EH VI: *D-Fis-A-Cis*:



All the tones of the harmonic structure were placed on a line (semicircle) PQ, and the conclusion followed that the harmonic structure of 6 positions derived from a bivector model of an incomplete hexatonic scale (two positions were not filled) and the generative tones (*gt*) were EH. The summary structure consisted of the following indicators of harmonic correlations: D-A=T, D-Fis=Y, D-Cis=Ψ, A-Fis=X, A-Cis=Y, Fis-Cis=T, the total was 2T-X-2Y-Ψ. The total intensity (structure) of the harmonic structure was calculated as follows: D-A=1T, D-Fis=4T, D-Cis= Ψ (5T), A-Fis= X (3T), A-Cis=Y(4T), Fis-Cis=1T, and the total sum, the summary *Ista* = 18T.⁵⁰



Se	Y		T		Ψ		X		T		Y		Ssum	2T-X-2Y-Ψ
Ista	4	+	1	+	5	+	3	+	1	+	4		=	18T

Example 1: Harmonic intensity of consonance D-Fis-A-Cis in bivector model E-H.

As can be seen, it was very tiresome procedure.

The author of the *Dodecatonics* also noted that, in the establishment of the affiliation of the harmonic structure to the system, difficulties arose in cases when in the semicircle PQ, next to the existing tones, some positions remained unfilled. For such cases, he proposed a law: the part of the system containing the largest group – an entire row of unfilled positions – was considered as beyond the boundaries of the system. Non-systemic tones, however, were perceived as certain **chromatic tones of the system** (see Schema 1).⁵¹

Thus, **the diatonic systems** of the *Dodecatonics* of Balakauskas formed progressions of quints of a smaller or larger volume and they were separated by a boundary from

⁵⁰ Ibid., 185-186.

⁵¹ Ibid., 186, 189.

the non-systematic (chromatic) tones. **The boundary of the system** was defined by two extreme tones connected by a straight line. Graphically, the system was denoted by the so-called system line (the semi-circle covering all the positions + the straight line of the boundary of the system). In Schema 1, the system was formed by tones *F-C-G-D-A-E-H-Ges-Des*, while tones *As-ES-B* remained beyond the boundary. Balakauskas accentuated the special significance of the margins of the system, since both of its extreme tones formed its most characteristic structure, and it was exactly that separating structure that determined the existence and the identity of the system itself (new quality appeared specifically at that given point), regardless of the affiliation to actual sounds.

Based on the monovector and bivector PQ models, in his *Dodecatonics*, Balakauskas identified 12 diatonic scales (D I, D II, D III... D XII). Those were, respectively (see Example 2): monotonic (D I), bitonic (D II), tritonic (D III), tetratonic (D IV), pentatonic (D V), hexatonic (D VI), heptatonic (D VII), octatonic (D VIII), enneatonic (D IX), decatonic (D X), hendecatonic (D XI), and dodecatonic scales. As the volume of the system was predetermined by the amount of its constituents, and not by really sound- ing tones, the systems could be either complete or incomplete:

Example 2: Diatonic systems of the Dodecatonics, based on the monovector and bivector PQ of the models.⁵²

52 The schemas came from *ibid.*, 182–183.

Thus, the macrosystem of the *Dodecatonics* revealed its universal and fundamental principle in subordinated subsystems of different completeness and complexity (from the monotonic to the dodecatonic scale). Incidentally, the systems may have acquired that characteristic in accordance with a similar principle applied in the system by Hanson (1960). In the summary of his study, Hanson concluded that understanding of the nature of complex, sophisticated musical structures as ones composed of the structures of a smaller scale could offer a way to overcome the crisis in contemporary music or to cope with a certain chaos of tones of the non-mastered (non-assimilated) material. "Complete assimilation of a small tonal vocabulary, accomplished on the basis of mastership, finally acquires a priority right against a large vocabulary, totally non-mastered by the composer himself."⁵³

In the characteristics of the vocabulary of different volume tones in his *Dodecatonics*, Balakauskas noted some specific features of his musical-theoretical system which may be determined as a phenomenon of synergy of different volume diatonic systems. Moreover, as he stated, monotonic and bitonic scales could not be incomplete because of their volume (the system became merely a separating structure), while in tritonic, tetratonic, pentatonic, hexatonic, and heptatonic scales, it were the tones that denoted the boundary of the system that became a separating structure. The systems of larger volumes than a heptatonic scale were characterised by more complex structures. In Schema 10, arrows denoted the minimal separating structures of the nine systems of the *Dodecatonics*:⁵⁴

The image displays musical notation for Schema 10, illustrating diatonic systems of the Dodecatonics from the tritonic to the hendecatonic scale, along with minimal separating structures. The notation is presented in two staves. The first staff shows systems III through VII, and the second staff shows systems VIII through XI. Each system is represented by a set of notes on a staff, with arrows indicating the minimal separating structures. The systems are labeled with Roman numerals III, IV, V, VI, VII, VIII, IX, X, and XI. The notation includes treble clefs, a key signature of one flat (B-flat), and various note values and rests.

Schema 10: Diatonic systems of the *Dodecatonics* (from the tritonic to the hendecatonic scale) and minimal separating structures.

Moreover, Balakauskas noted that dodecatonics by nature could not be incomplete, and only its totality (a set of 12 chromatic tones) represented a system. Others (from the tritonic to the hendecatonic scale), even when represented merely by their separating structure, were unmistakably recognised as systems of a corresponding volume.

Since the *Dodecatonics*, as well as many others compositional musical-theoretical systems, simultaneously turned into a kind of an algorithm of the author's own work, it is important to emphasise that Balakauskas in his compositions paid equal attention

53 Quoted from Hanson, op. cit., 348.

54 Schema 10 comes from: *Dodecatonics* by Osvaldas Balakauskas, op.cit., 184.

both to the dodecatonic (12-tone) system and to the systems of a smaller volume. As examples of his dodecatonic technique, which significantly differed from the representatives of the Second Viennese School, a number of his compositions, such as *Quartetto concertante* (1970; 1990), *Symphony No. 1* (1973), *Symphony No. 2* (1979), *Dada Concerto* (1982), *Concerto for Quartet and String Quartet* (1986), and other should be indicated. Simultaneously, however, Balakauskas continued composing according to the generative potential of the material of smaller volume systems. Thus, e.g. the octatonic scale (D VIII, an 8-tone system), served as a basis for such compositions of Balakauskas as a Symphony-Concerto for piano and orchestra *Mountain Sonata (Kalnų sonata)*, (1975), a vocal cycle *By the Blue Flower* for choir, piano, violin, viola, cello, flute and oboe (1976), as well as *Sinfonia concertante* No. 3, *Das Bachjahr* for flute, harpsichord, and strings (1985), etc. The enneatonic scale (DIX, a 9-tone system) became a basis for the *Concerto for oboe, harpsichord, and strings* (1981), etc.

It is important to emphasise that the time of the publication of the musical-theoretical system (theory) of harmony *Dodecatonics* of Balakauskas coincided with his farewell from the most influential 12-tone compositional system of the 20th century “as exceedingly exhausted in our time” (O. Balakauskas). Although he, both in composition and publicly, renounced the strict 12-tone chromatic system – a template of Modernism, the discipline of thinking, precise selection, and the interrelationship of micro- and macro-structures never left his music. His farewell to Modernism was clearly demonstrated by the genre and music of the three-Waltz suite *La Valse* for Violin Solo (1997) and *Symphony No. 4* (1998). A turn toward the opposition of Modernism, i.e. toward the tradition, was witnessed by the dramaturgy of the traditional sonata-symphonic cycle first used in his symphonic works (*Allegro, Andante, Scherzo, Finale*).⁵⁵ The harmonic structure of his *Symphony No. 4* originated from the diatonic systems of the dodecatonics: from the octatonic (8-tone) to the hendecatonic (11-tone) scale, and the systems in the cycle were distributed in accordance with the decreasing progression of the number of tones. The music of the symphony was permeated with an open longing for the fundamental gravitation of the centre of gravity, the apotheosis of consonance, and the tradition of craving for values. “The new now is what is long-lasting: harmony and melody,” said Balakauskas on the eve of the premiere of his *Symphony No. 4*. By that composition for the symphony orchestra, he bade farewell to the 20th century musical Modernism.

The fact that Balakauskas was no longer interested in the procedures of the compositional manipulations of the avant-garde was confirmed by his *Symphony No. 5* (2001). The previous pre-composition rites were gone; the conceptually constructed series and the structural “alchemy” of formation were losing relevance. The excitement of the search for all kinds of new ways of material manipulation, caused by the striving for technological excellence and the coherence of all structural levels of a composition, retreated into the shadow. A 4-movement cycle of symphony with the tempo of the traditional symphonic dramaturgy was evidently composed not by a vanguard, constructively distributing sound structures, but rather by a musician improvising in the spirit of jazz swing. The chromatic 12-tone sound field was replaced by the “tonality” of the dodecatonics.

55 *Symphony No. 1* (1973), *Symphony No. 2* (1979), *Sinfonia Concertante for violin, piano solo, percussion, harp, and strings* (1982) by Balakauskas was a three-movement concerto type.

The Discourse of Harmonic Resources of the Dodecatonics and their Use in Individual Music Composition

While coming back to the main issue of research, i.e. the interrelationship between the principles of tonality in the theoretical system of dodecatonics and music composition by Balakauskas, it is necessary to provide some of the starting positions. As the author of the compositional-theoretical system of dodecatonics did not interpret his understanding of the concept of diatonic tonality in detail, therefore, not only the paradigms of the chord-harmonic conception of tonality (*harmonische Tonalität*) should be taken into account, but also some attention should be paid to the models of its melodic forms (*melodische Tonalität* – the concepts of Carl Dahlhaus).⁵⁶ It is the latter that is presented by Kholopov when challenging the decision of Dahlhaus to simply assign them to the paradigm of modality. As is well known, the issue of the correlation of tonality and modality were analysed by Kholopov in his study *Категории Тональности и лада в музыке Палестрины* [*Categories of Tonality and Mode in Palestrina's Music*] (2002). Kholopov identified three constants as the characteristics of modality: the priority of a certain scale, consonances of a melodic origin, and the unstable, oscillating gravitation.⁵⁷ However, the musical-theoretical system of dodecatonics was perceived, and primarily by its author, as a system (theory) of harmony or as “harmonic tonality” (the term of Rudolph Réti) which operated systems (tonalities) of different volume: from the monotonic to the dodecatonic scale. Before we start dealing with the issue of the correlation of the system of Balakauskas with the systems of modality and tonality, we shall present an overview of the context at hand.

What did Schoenberg do in that case in his *Harmonielehre* (1911)? First, he critically examined the traditional approach to tonal harmony, and only afterwards he began to revise the system. Subsequently, he started creating an alternative to it, i.e. dodecaphony. As later evaluated by Réti, he replaced the power of one structure (tonality) by another (which increased the degree of the thematic unity). That was the nature of the 12-tone technique which became the result of Schoenberg's disappointment with free atonality.⁵⁸ Webern, however, in his *Lectures on Music* (1933) expressed doubts about the promising character of the consideration of the method of composition through the correlation of 12 chromatic tones and the achievement of their closer interrelationship just as a “substitute of tonality”. Milton Babbitt in his dissertation *The Function of Set Structure in the Twelve-Tone System* (1946) and a monograph *The Function of the Structure of Rows in the Twelve-Tone System* (1992) emphatically and unequivocally

56 The concepts were used by Dallhaus in his habilitation paper, see *Untersuchungen über die Entstehung der harmonischen Tonalität* (Kassel: Bärenreiter 1988), 18.

57 Ю. Н. Холопов, *Категории Тональности и лада в музыке Палестрины* [*Categories of Tonality and Mode in Palestrina's Music*] at: <https://studfiles.net/preview/3911180/>, as well as Ю. Н. Холопов, *Модальная Гармония: Модальность Как Тип Структуры (Modal Harmony: Modality as a Type of the Structure)*, in *Музыкальное искусство. Общие вопросы Теории и эстетике музыки*, [The Art of Music: General Issues of the Theory and Aesthetics of Music], ed. Т. Соломонова, Ташкент: Издательство литературы и искусства им. Г. Гуляма, с. 1975, с. 16–31; Ю. Н. Холопов, *К проблеме лада в русском Теоретическом музыковедении* [On the Issue of Mode in Russian Theoretical Musicology] in: *Гармония: Проблемы науки и методики* [Harmony: the Issue of Science and Melodics], ed. by Е. Стручалина, вып. 2 (Ростов на Дону: РГК, 2005), 135–157.

58 Rudolph Réti, *Tonality, Atonality, Pantonality: A Study of Some Trends in Twentieth Century Music* (Westport, Connecticut: Greenwood Press, 1958).

proclaimed the incompatibility of the tonal and serial organisations and thus refuted the attempts of Perle to create a certain analogy between them. Babbitt also challenged the attempt of Hindemith to create a universal theoretical system and stated that the strength of the system lay not in the fact of its universality, but in the creation of an alternative theoretical structure, based on experience, experiments, and tradition. Systems become part of music composition, and not its invariant context, as explained by Benjamin Boretz and Edward Cone.

The concept of tonality,⁵⁹ regardless of its individual interpretation or a traditional or innovative approach to it, has already acquired some constant content: the basis for understanding tonality includes the idea of the centre and the phenomenon of gravitation of the unstable toward the stable. The position was first established in the conception of tonality as “the technique of the centre” (*Technik des Klangzentrums*), developed by Hermann Erpf. In 1927, Erph wrote in his *Studien zur Harmonie- und Klangtechnik der neueren Musik* [*Studies on the Harmony and Sound Technology of the New Music*]: “Die Technik des Klangzentrums hat als wesentliches Merkmal einen [...] Klang, der im Zusammenhang nach kurzen Zwischenstrecken immer wieder auftritt. Dadurch gewinnt dieser Klang [...] in einem gewissen primitiven Sinn den Charakter eines klanglichen Zentrums.”⁶⁰ Erph also proposed to replace the term *tonality* by a clear concept, revealing its nature, of the “central functional relationship” (*zentrale funktionelle Beziehung*) as well as to completely abandon the term of *atonality* due to its negative and unprecise nature.⁶¹

Erph saw the origins of the 12-tone music as early as in the music of collapsing functionality, and he considered the origins of dodecaphony as the extreme limit which naturally had to be reached, however, in the future it was to be overcome.⁶² Afterwards, in the consideration of tonality, theorists placed emphasis on different aspects of the phenomenon. Thus, e.g. in the *Introduction to 12-Tone Composition*⁶³ (*Anleitung zur Zwölftonkomposition: nebst allerlei Paralipomena*) (1952-1958), Hanns Jelinek related tonality to the idea of the centre (*Zentralton*), or tonic, which was able to interrelate all the tones of a composition and to introduce a promising principle of organization. In the *Vocabulary of Music* by Hugo Riemann (*Riemann Musiklexikon*, 1967),⁶⁴ Carl Dallhaus built the concept of tonality on three principles: systematicity, hierarchy, and functional differentiation.

In the present study, the foundation of the concept of new tonality is also related to the Kholopov's teachings on tonality. As is known, the said phenomenon

59 In *Comprehensive Music Teaching* (*Allgemeinen Musiklehre*, 1924) Hermann Grabner defined the key: “The relationship of the individual keys of the composition with the principal key is called the tonality.” (*Die Beziehungen der einzelnen Tonarten eines Stückes zur Haupttonart heißt Tonalität*). Quoted after Michael Beiche, *Tonalität, Handwörterbuch der musikalischen Terminologie* (Stuttgart: Steiner, 1999), 11.

60 Hermann Erpf, *Studien zur Harmonie- und Klangtechnik der neueren Musik* (Leipzig: Breitkopf & Härtel, 1927), 122.

61 *Ibid.*, 110. Kholopov wrote about it in the footnote of his book *Очерки современной гармонии* [*Essays on Modern Harmony*] (Москва: Музыка, 1974), 136.

62 *Ibid.*, 85–86. It is important that Erph explained the essence of the 12-tone music, based on the examples of compositions of Josef Matthias Hauer (the author of the first theory of the 12-tone music), and not on compositions by his personal friend A. Schönberg. See also Hermann Erpf, *Vom Wesen der Neuen Musik* (Stuttgart: Curt E. Schwab GmbH, 1949).

63 Hanns Jelinek, *Anleitung zur Zwölftonkomposition: nebst allerlei Paralipomena* (Wien: Universal-Edition, 1952-1958).

64 *Riemann Musiklexikon*, Bd. 3 (Sachteil), herausg. von H. H. Eggebrecht (Mainz: B. Schott's Sohné, 1967), 960.

was defined by him as a system organised around a unified pillar (the central element of the system – CE), the tones of which were under hierarchical subordination, while the pillar and the system of interrelationships were established at a certain height. “The system of functional relations is hierarchically centralized, and the tonic permeates the entire harmonic structure.”⁶⁵ Nonetheless, in the case of the *Dodecatonics*, only in the appendix (*Paralipomena*) it became clear that Balakauskas related the concept of tonality to the phenomenon of functionality (“functionality is recognised as an essential attribute of tonality”), and understood the phenomenon rather broadly, without relating it exclusively to the tonic and the dominant seventh chord.⁶⁶ Still, the gravity of the centre and the principle of tonality in the long run were increasingly gaining the composer’s recognition. On the example of the theoretical conceptualisation of the composer’s creative principle, one must agree with the conclusion of Kholopov that the very evolution of musical thinking brought him to individualised forms of tonality. Its models and structures became an integral part of the creative process itself.

The analysis of the foundations laid out above and the theoretical argumentation of the technique of the projection of fifths (quints) of the 12-tone system (theory) by Balakauskas and the way of its functioning in the composer’s music led to the conclusion that the tonal essence of Balakauskas’ system subordinated its dodecaphonic identity. The conclusion supported the characteristics of the elements and the structural-functional principles of the *Dodecatonics*:

- The presence of the centre or the quasi-tonic (*gt*) and the counting out of tones from a specific centre (which was consistent with Hindemith’s idea of rows formation).
- Operation of the idea of immanent functionality which manifested itself under the operation of the principle of the hierarchy of the tone belonging, i.e. their proximity or remoteness from *gt*.

Balakauskas also demonstrated the tonal nature of his system by analysing the cases of harmonic gravity⁶⁷ in the situations of resolution and presented models of the immanent dominant and tonic as the prototypes of harmonic gravitation (*tension* and resolution or cadences). The impact of the gravitation of the tonality centre and the desire of the composer to create a new-tonal centralized 12-pitch system kept increasing in the course of time. In that, the position of Balakauskas-composer became close to the evolution of the approach to the phenomenon of tonality of Schoenberg, Perle, Stravinsky, and others. Thus, e.g. Stravinsky has been increasingly seeking to discover the tonal nature in serial music and announced in his declaration in the year of his arrival to the USSR (1962): “Without tonality, there is no music.”⁶⁸ In 2008, a similar declaration came from the 70-year-old ex-modernist Osvaldas Balakauskas: “Now I believe

65 Ю. Н. Холопов, *Гармония. Теоретический курс* [*Harmony. Theory Course*]. Санкт-Петербург: Ланы, 2003), 236.

66 Osvaldas Balakauskas, *Dodekatonika*, op. cit., 198.

67 *Ibid.*, 193-198.

68 И. Стравинский - публицист и собеседник [I. Stravinsky, Publicist and Interlocutor], ed. by В. П. Варунц (Москва: Советский композитор, 1988), 197.

that tonality is what separates *music* from *sounds* [...], and here lies the specific power of music (and only music) to excite.”⁶⁹

As already mentioned, the theoretical conception of the dodecatonics did not have a lot in common with the principles of classical dodecaphony. Balakauskas defined the technological nature of his compositions based on the system of the dodecatonics in a certain “chromatic mode” as “tonal seriality” or “serial minimalism”. Indeed, in the functioning of a “magic symmetrical” 12-tone row (Example 3) in his opera, explicit declarations of serial principles were not observed. Balakauskas’ attitude to Schoenberg’s dodecaphony can be compared with the revisionist approach of the former admirers George Perle⁷⁰ and Ernst Křenek. As is known, the twelve-tone modal system of Perle was also transformed into its own version of twelve-tone tonality. Some intervals or consonants acquired the function of the centre (tonic), and their change predetermined the entire harmonic process. Both Perle and Balakauskas provided rather similar arguments in their criticism of dodecaphony: it was “disorder” in the logic of harmony (even if Schoenberg believed the opposite!). With some solidarity, the “seismic” state of the mid-20th-century music composition was characterised by Pierre Boulez as balancing between order and chaos. On that occasion,

Balakauskas made a definite statement: “I am not satisfied with the chaos produced by the rules of Schoenberg.”

It is worth adding that this idea and some elements of the system of Balakauskas were also similar to the 12-tone modal system of Eduard Křenek. That was especially true of the fact that the 12-tone chromatic system of Křenek provided an opportunity of functioning as modal tone rows and enabled the operation of modal or tonal centres. As a result, the systems of Perle, Křenek, and Balakauskas were united by their polyvalent nature: the sound pitches’ potential could be treated both as modal and tonal systems and, when desired, also as dodecatonic (dodecaphonic) as well as free atonal systems.

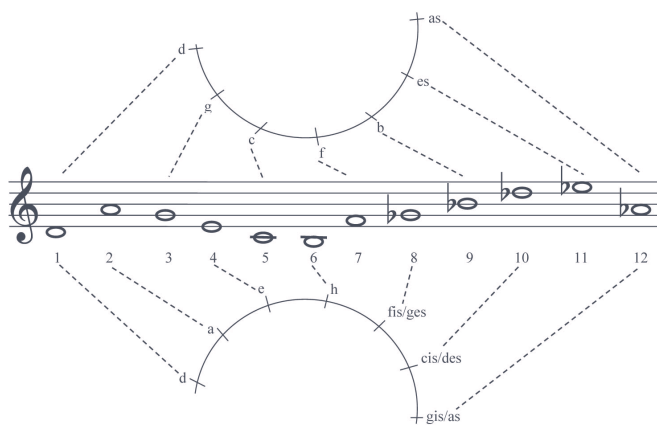
In the present study, considerable attention was devoted to the relationship of the system of Balakauskas with other theoretical conceptions of the 20th-century composers (such as Schönberg, Perle, Hindemith, Křenek, Babbit, etc.). It was necessary to touch upon the works of musicologists-theorists who also built their theories on the basis of the Pythagorean conception of the progression of fifths. First of all, I mean François-Auguste Gevaert and the hierarchy of his sound systems in the work *A Treatise on Theoretical and Practical Harmony (Traité d’harmonie théorique et pratique)* (1905–1907), translated into German by Hugo Riemann. In Russia, the idea of the progression of fifths was propagated in the writings of Georgy Catoire, Yury Tiullin (Тюллин), Ivan Pustyl'nik, Antanas Venckus, and was further developed in the periodical system of Aleksej Ogolovets (Оголовец) and others. As the present study focused on the systems of composers, it became apparent that the dodecatonics by Balakauskas had something in common with the basis of fifths and the “axis system” (*das Achsensystem*)

69 Quoted from Gražina Daunoravičienė-Žuklytė, op. cit., 192.

70 In his book on atonal and serial music, Perle noted that the most influential effect of the method of Schönberg was not related to his idea of 12 tones. The value of the method was based on individual conceptions of permutations, inversional symmetry, and mutual complementarity, variantness based on transformations, aggregates, structures, closed systems, and the treasure of a close impact of the factors of composition. See George Perle, *Serial Composition and Atonality: An Introduction to the Music of Schoenberg, Berg, and Webern*, 6th Edition (University of California Press, 1991), x.

of tritonal counterparts in the compositions of Béla Bartók, as revealed in the conception of Ernő Lendvai (1971) developed with the aim of a harmonic analysis of Bartók's music. The tritonal vector and the motivation of the chromaticism of the system (= a non-systemic tone) related the dodecatonics also to the approach of Hanson laid out in his book *Harmonic Materials in Modern Music: Resources of the Tempered Scale* (1961). In contrast to the approach of the Lithuanian composer, in Hanson's morphology of intervals, the extreme dissonance was represented by minor second, and the extreme consonance coincided with the perfect fifth. As argued by Hanson, the multiplication of exclusively those intervals can represent the entire chromatic pitches' continuum. In the framework of the present study, it was impossible to comment on all the relationships of the musical-theoretical system of Balakauskas with many other theoretical systems. The desire to conceptually reflect on their own compositional method united numerous composers-intellectuals of the 20th century: to the above-mentioned, I would like to add Henry Cowell, Alois Hába, Olivier Messiaen, Henri Pousseur, Heinrich Simbriger, Karlheinz Stockhausen, Claude Ballif, Anatol Vieru, Gérard Grisey, and many others.

I shall present an example of the composer's interpretation of the basic statements and principles of the dodecatonics, based on a brief analysis of *Symphony No. 2* by Balakauskas. This score is a good example how the principles of the *Dodecatonics* theory organize the entire composing process in his own creation. Moreover, I shall add some comments on the composer's attitude towards the main material of the symphony: that is an already familiar universal to us, a "magic series of symmetrical tones". The monovector R_y model in the row acquires the shape of a palindrome: O=R, while its second half (tones 7–12) represents the first retrograde (tones 1–6). Two tritones (between tones 6–7 and 1–12) form a strong structural framework which indicates the presence of rational precompositional procedures, very typical of the *Materialdenken* of many composers-modernists:



Example 3a: Genesis of the "magic symmetrical row", or row R_y , of Balakauskas drawn by G. Daunoravičienė.

A geometry-based spherical image of the projection of quints and the opposition tones, or a dodecagram/dodecagon,⁷¹ represents the genetic identity of George Perle's cyclic set and Balakauskas' "magic symmetrical row", or row R_7 (Fig. 3b):



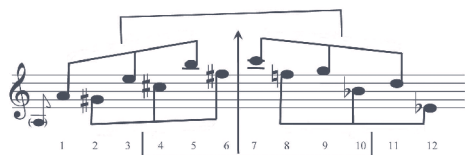
*Example 3 b: Spherical geometry of George Perle's "cyclic set" and Osvaldas Balakauskas' "magic symmetric row", or row R_7 , based on the spatial principle and the schema of Pythagorean circle of fifths.*⁷²

In the search for some constructive resonances in the context of the 20th century, first of all, we paid attention to the fact that the binary structure of the crossing of the cycle of perfect fifths – fourths was also found in the series of 11 different intervals (*Allintervallreihe*, all interval series) of Fritz Klein, a composer who should be reasonably included in the list of discoverers of the 12-tone technique. The fundamental structure of fifths in the series of Klein was clearly identified by the division of the series into two rows (Example 4): the upper $a - e - h / c - g - d$ and the lower $gis - cis - fis / f - b - es$. The said proto-form (*Urform*) was insightfully identified by Perle when examining the row as a series of Alban Berg in the latter's *Lyric Suite*. The fact that the series of the *Lyric Suite* belonged to Berg's pupil Fritz Heinrich Klein was witnessed by documents (Klein analysed the structure of the row in letters to his teacher Berg, in his article *Die Grenze der Halbtonwelt* (1925), and in the preface *Analyse des Modells – Typ II* (11 pages) to *Variations*, op. 11 (Klein 1925; 1992). That was also clearly evidenced by Berg's letter of 13th June 1926 to his teacher Schönberg. The fifths principle of Klein's series was graphically presented in the study by Arved Ashby:⁷³

71 Eric Wolfgang Weisstein, *Dodecagram*, *MathWorld*, A Wolfram Web Resource. <http://mathworld.wolfram.com/Dodecagram.html>.

72 The schema comes from: <https://www.pinterest.com/elmcreekmusic/circle-of-fifths/>.

73 Arved Ashby, "Of 'Modell-Typen' and 'Reihenformen': Berg, Schoenberg, F. H. Klein, and the Concept of Row Derivation," *Journal of the American Musicological Society*, 48, No. 1 (Spring, 1995): 75–86.



Example 4: The quint principle (a protoform/Urform) of all-interval series (*Allintervallreihe*) of Fritz Klein.

Another constructive law that was typical of the most rational and constructive series of the 20th century should also be noted. The said characteristics identified not only the tritone quality of the “axial points” (6–7 and 12–1) of the series, but also the symmetrical “umbrella-shaped” network of tritonal interrelationships. The tritonal quality of interrelationships between tones became universal and extended to all pairs of symmetrically arranged intervals of the series. The said quality was inherent (see Example 5) in: a) the aforementioned all-interval series (*Allintervallreihe*) of Fritz Klein in *Variations for piano*, op. 14 (24); b) in the retrograde (crab-wise) palindromic series of *Symphony*, op. 21(1928) by Webern; c) the series *Il canto sospeso* (1956) by Luigi Nono, consisting of all progressively increasing intervals; d) the series of *Nocturne No. 2* from the opera *The Soldiers* (1965) by Bernd Alois Zimmermann; and e) the tritone “umbrella”, or a structure of symmetrical tritones, was also a regularity of the “magic symmetrical row”, or row R_γ, which formed the basis of *Symphony No. 2* (1979) by Balakauskas:

Example 5: Tritone symmetrical pairs of intervals in the series of Klein (a), Webern (b), Nono (c), Zimmermann (d) and Balakauskas (e). The analytical Example was developed by G. Daunoravičienė.

The characteristic of the “magic symmetrical row”, or row R_γ, of Balakauskas would be incomplete, should we ignore the fact that, in the 30s of the 20th century, a row of an analogous structure was developed by American composer and theorist George Perle, first an adept, and later a critic of the dodecaphony of Schoenberg. The projection of fifths, like the rows of Klein and Balakauskas, also became the basis of his conception of twelve-tone tonality⁷⁴ and of the serial harmony of Perle. The core of Perle’s system was represented by the so-called symmetrical cycles (cyclic set, symmetrical cycles), and in their functioning a certain hierarchy of chromatic pitches, intervals, chords, and correlations with the centre was observed.⁷⁵

At the beginning of the present study, a question of a hylomorphic character was raised, i.e. a hypothesis was offered that the composers’ answer to the question about the primacy of form or matter in the compositional practice of the 20th century was in favour of the former, the “smart” material of the composition. A similar thesis was formed by the modernist works of Balakauskas. As suggested by the analysis of his *Symphony No. 2* (1979), in the precomposition, the concentrate of the material – a 12-tone row⁷⁶ – was perceived by the composer as a universal and polyfunctional project. The “magic symmetrical row”, or row R_γ, served as a code of the logic of sound pitches. However, it combined the projects of many other constructive parameters of composition, including the organizing numbers. In the genesis of the row of the symphony, three principal generative programmes can be identified. The latter took an active part in the compositional process and, in a hylomorphic sense, predetermined a harmonious form of the whole. The said concepts included:

- **Measure-numbers (numerus).** The acoustics’ code of the fifth (2:3) logically predetermined further mathematical consequences, based on the logic of the Fibonacci series (2+3=5, 8, 14);⁷⁷
- **The progressions (of quints).** The said code was implemented in a row of 12 chromatic tones in transpositions, as well as in the progression of periodicities of a formal character;
- **Symmetry.** The mirror-like character of the “magic symmetrical row” was determined by the inversion, retrogradness, and symmetry of different structural layers of the composition – formal structures of different character and volume, up to an entire cycle.

The projected constructivism of the row contributed to the formation of the sound space in *Symphony No. 2* by Balakauskas. This was facilitated by the factor of autonomy of sound parameters and their strict regulatory organization. However, the composer first focused not so much on diverse elements of the composition, but on the *interrelationships* between them. The search for organic structural coherence became the main task of the composer in the solution of a dilemma of a hylomorphic

74 George Perle, “Symmetry, the Twelve-Tone Scale, and Tonality,” *Contemporary Music Review* 6, No. 2 (1992): 81–96.

75 “Letter from George Perle,” *Music Theory Spectrum* 15, No. 2 (Autumn 1993): 300–303.

76 A complete row is present everywhere, e.g. in the part of the organ – *cantus firmus* in Part 1, in quick-as-a-flash replies of Part 2 (see Example No. 7), or in the refrains of the finale.

77 Балакаускас consciously avoided the “unlucky” number 13, included in the Fibonacci row, and replaced it by the number of J. S. Bach (14).

character. Examples of organic coherence of a row and a macroform were presented by the precedent of *Symphony, op. 21* (1928) by Webern. The thesis of the avant-garde composition represented the mandate of Karlheinz Stockhausen “to bring to the common denominator” the regularities of the form and the background of the material. In his keynote article of 1953 *Zur Situations des Metiers (Klangkomposition)* [On the Situation of the Profession Composition], he recommended the unity of the row and the entire composition in order to make the entire opus the last augmentation of the original series (*das ganze Werk letzte Vergrößerung der ursprünglichen Reihe ist*).⁷⁸ I shall comment on the analytical schemas of *Symphony No. 2* by Balakauskas from that perspective.

Schema 11: Osvaldas Balakauskas. *Symphony No. 2* (1979), I Moderato. An analytical schema.⁷⁹

The logic of arrangement of the pitch parameter of the symphony should be defined as **12-step forms** of the three parts of the cycle, predetermined by the pitch project of the row. The regulatory interrelationships of the pitch, temporal, and formal structures were also encoded in **the progression 1:2:3:5:8:14**. Its fragments predetermined the law of segmentation of the row: e.g. the middle part (*II Moderato*) was formed by *two-voice* harmonic segments (see Schema 12), the finale (*Presto*), by *three-voice* ones (see Schema 13), and the first part (*I Moderato*), by segments of 5 tones (see Schema 11).

78 Karlheinz Stockhausen, *Zur Situation des Metiers (Klangkomposition)*, Texte, Bd. 1, ed. D. Schnebel (Köln: DuMont-Buchverlag, 1963), 60.

79 The analytical schemas 11–13 were developed by the author of the present study Gražina Daunoravičienė.

The entire progression 1 : 3 : 5 : 8 : 14 basically assumed the role of the project of organisation of the formal logic of segmentation of the sections of forms: 8 sections of the *Crescendo* form were presented in Part 1 of the symphony, while, based on the timbral-textural repetition, the 8 sections were additionally segmented into 5 + 3 (three-part sections) of the form (see Schema No. 11). The mirror-retrograde (crab-wise) form of Part 2 of the Symphony was additionally segmented into 14+14 by the structural caesuras *talea* of the bongo drum (see Schema 12). The finale manifested the basic formula of the organising numbers 1 : 2 : 3 : 5 : 8 : 14 (see Schema 13).

The image shows a page of a musical score, likely from a symphony. The score is arranged in a standard orchestral format with multiple staves. The instruments listed on the left side of the page are: Cl. b., Fag., Cor., Tr-be, Tr-ne, Timp., Tr-lo, C-lli, Vibr., Cel., Arpa, Org., V-ni I div., V-ni II div., V-le div., V-c. div., and C-b. div. The score includes measures 14 and 35. There are various performance instructions and markings throughout the score, such as "I con sord.", "arco", "col legno", and "sim. cresc.". The bottom of the page has the number "c 1084 k".

15

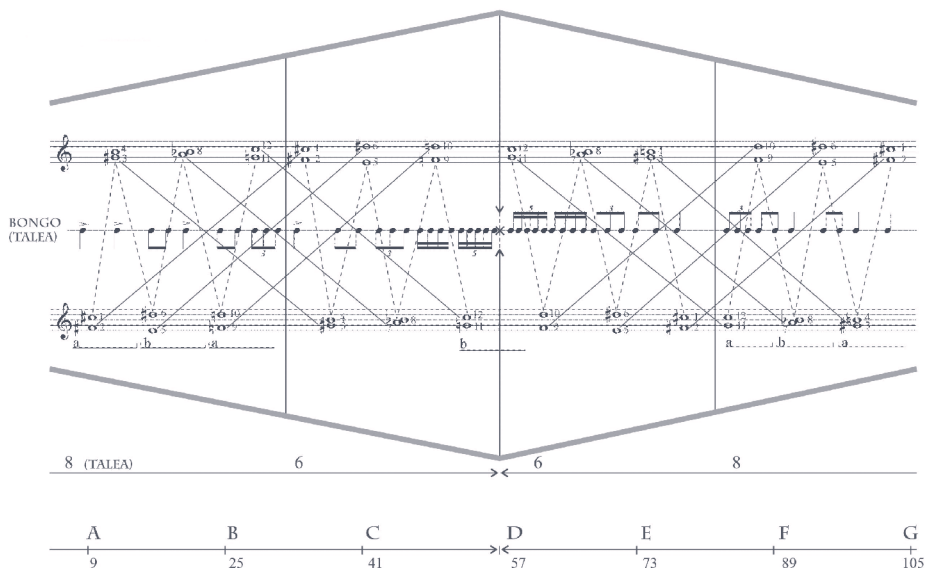
c 1084 k

Example 6: Osvaldas Balakauskas. Symphony No. 2 (1979). I Moderato, measures 34–39 (the score).

The idea of the sound wave of quints was also embodied in specific kinds of **dynamic forms** – the multi-parameter crescendo was presented in Part 1 of the Symphony, and the antipode *diminuendo* (*decrecendo*), in the finale. The macroform was isomorphically reflected at the intersections of *crescendo* and *diminuendo* of a smaller scale and in the middle part of the cycle (see Schema 12, Example 7). Still, the multi-level poly-ostinato of the first *Moderato* contained both replicas of postmodernism (meaning the

repetitive character of minimalism, see Example 6) and some neo-classical *Ars Nova* emblems, such as open and closed (*ouvert et clos*) iso-cadences that put into shape the structural blocks of the form (Schema 11). In the finale (*Presto*), the fanfares of iso-introductions proclaimed the return of the refrain (Schema 13).

In the world of strict lyrics (*II Moderato*) of the middle part of the *Symphony*, a certain sonic “stained-glass window” sparkled with the colours of the orchestra. The strict geometry of timbre reflections was built based on the structure of the cross (which was contained in the series). In the score of the said impressionistic canvas, the horizontal axis was formed by the progressions of the bongo drum, and the imaginary vertical axis in the centre of the form (measure 56, figure D, see Schema 12) was created by a certain “point” around which all the sound process moved back. As if on Suprematist canvases of abstractionists, some sound objects crashed into other ones, and the “chords hanging on slurs” (Olivier Messiaen) were with lightning speed cut through by the sharp “strokes” of the series (Example 7). The iridescent colours of the orchestra were embodied in pure and strict forms, and the timbral colours provided for the plasticity of movement. However, it was the pulsating *chroma* that became the main reality of the colourful landscape of the second part of the *Symphony*. In it, the metaphors of the 20th-century musical composition – *Klangfarbenforme* of Schönberg and the moving colours (*Bewegungsfarben*) of Ligeti – seem to have come together. The “sonically moving forms” (as termed by Hanslick) of Balakauskas brought together and realised the constructive energy coming from multiple compositional parameters.



Schema 12: Osvaldas Balakauskas. *Symphony No. 2 (1979)*, II Moderato. An analytical schema.

40

Ob. I, II *dim.* *ppp*

C. ingl. *dim.* *ppp*

Cl. I, II *ppp*

Cl. b. *ppp*

Fag. I, II *dim.* *ppp*

C-fag. *dim.* *ppp*

Cor. *ppp*

Tr-bc *cresc.* *ff*

Tr-ni *cresc.* *ff*

Bongo *cresc.* *ff*

V-cello el. *ppp*

V-ni I *ppp*

V-ni II *ppp*

V-le *ppp*

V-c. *ppp*

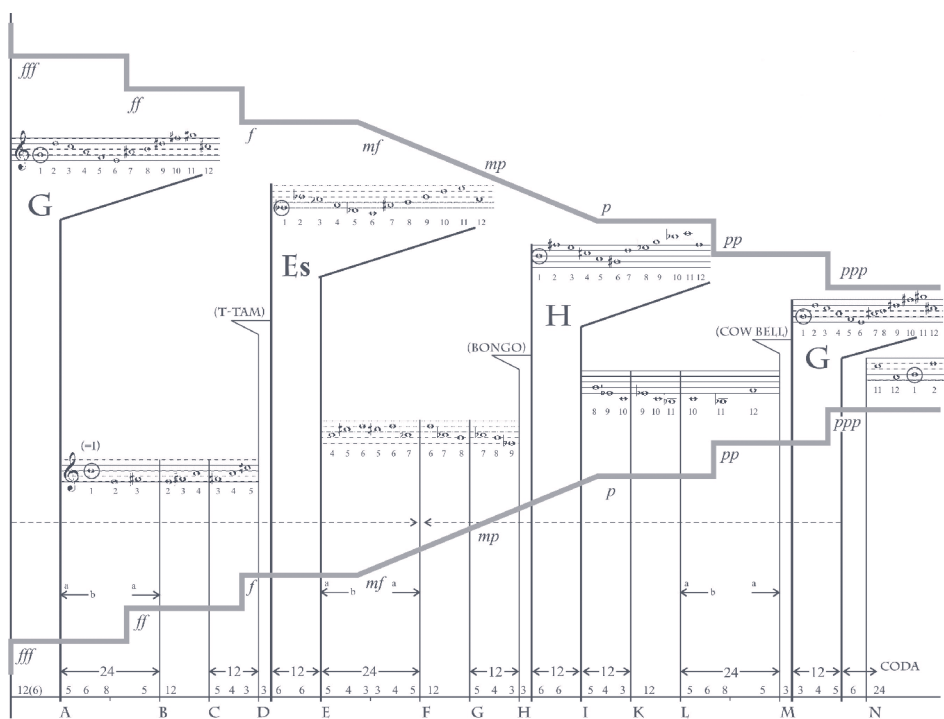
C-b. *ppp*

7 10 11 2 3 5 8 10 12 1 4 6
8 9 12 1 4 6 7 9 11 2 3 5

Example. 7. Osvaldas Balakauskas. Symphony No. 2 (1979), II Moderato: “chords hanging on slurs” and vertical strokes of the series, measures 40–43.

The dynamic *decrescendo* (*diminuendo*) turned the sound material of the finale (*Presto*) of *Symphony No. 2* by Balakauskas into silence. Based on a 12-step form, the finale

of the symphony represented a new constructive manifesto consisting of the periodicity of symmetry: the refrains framed isomorphic episodes by a modulatory circle of major thirds (in $G - Es - H - G$) (see Schema 13). In the finale of the symphony, the neo-classical manner of form-building and the modal (melodic-tonal row) interpretation of the series came to the fore. The refrains (like *tutti*) contained the row R_7 in its full volume, while the episodes (*solli*) were made up of the tritonal segments of the row (the retrograde inversion). However, due to the operation of the timbral-textural organisation, isomorphic rondo manifested themselves in the episodes. Thus, the integral form of the finale of *Symphony No. 2* was polyrondo (see Schema 13). It was the technique of generative structures (by observing a strict formalist order) and a certain counterweight to it in the meaning construction strategy that accounted for the originality and the creative identity of Osvaldas Balakauskas.



Schema. 13: Osvaldas Balakauskas. *Symphony No. 2* (1979), *Finale Presto*. An analytical schema.

By arranging, or simply harmonising, the parameters of the multidimensional sound, Balakauskas strove for the perfection of the *forma formata* of his compositions. For him, the synonym of *good music* was *beautiful music*, thus, in composition, *ars* inevitably clashed with *pulchrum*, and the centuries-long discussion of their correlation (from St. Augustine and Thomas Aquinas to Immanuel Kant and Benedetto Croce) was

resolved through professing the philosophy of the beauty of tradition and order. An integral part of the ideal of harmonious music in Balakauskas' compositions and the analysed opuses revealed the composer's efforts to accumulate the generative prerequisites for the whole in an invariant structure (series) of the opus and in each composition to look for ever new and never repeating disclosure of the modelling qualities of that structure. Balakauskas' technique of composition gives prominence to the multi-dimensional relationships of compositional structures, functionally operating in the general context of the coherence of micro- and macro-structures.

Individualisation of the 12-tone Technique and Balakauskas' Farewell to Modernism

Obviously, the conception of the post-avant-garde dodecatonic seriality of Balakauskas was close to the desire of Igor Stravinsky to "stay in tonality". Thus, in his compositions, Balakauskas opposed, and simultaneously transformed, both the tonal, modal, and dodecaphonic techniques. His music became a revisionist continuation of the last ones on the road of post-modernist development and of deviation from the conventional orthodox forms. Challenging the utopia of Hindemith to create a universal theoretical system in his *Unterweisung im Tonsatz* (1937, 1939), Milton Babbitt once formulated the main argument on the value of musical-theoretical systems. He argued that their influence lay not in a new technological vocabulary. Value and relevance lay not in the very fact of utopian universality, but in the development of an alternative theoretical structure, based on experience, experiments, and tradition.⁸⁰ Systems turned into parts of music compositions. The theoretical and creative work of Osvaldas Balakauskas included his dodecatonics in the general discourse of the 20th-century music composition.

Individual compositional studies of the structuring of 12 chromatic tones in the searches of Balakauskas posed new questions to the serial technique itself. Based on his compositional experiments, it was possible to work out the main among them: Question 1, which structure of a composition can assume the role of an element of a row (series) and to become a potential object of transpositions (transpolations)? Question 2, what new principles of transposition are possible? When speaking about the perspective of the dodecaph(t)onic technique of Balakauskas, it should be emphasised that he started associating the technique not only with its axiom, i.e. a row/a series of tones, but also correlating it with the idea of the strategy of transpositions (transpolations). Consequently, the idea of a series (a row) was considered as a principle of arrangement of *a cycle, a row (series) of transpositions*. That significantly changed the understanding of the *element* of the series and its "tangible" forms. I shall highlight the main variants of Balakauskas' answers:

- **An element of a series = a tone. A series** consists of 12 transpositions of a certain element in a 12-tone chromatic system, as, e.g. a "universal symmetrical row", or row Ry (see Example 3). The latter was used in Balakauskas' student-year opus *Auletike*

80 Guerino Mazzola, *The Topos of Music – Geometric Logic of Concepts, Theory, and Performance*, in collaboration with Stefan Göller and Stefan Müller (Basel: Birkhäuser Verlag, 2002), 248.

for flute and oboe (1966), in his *Symphony No. 2* (1979), in *Gaida* (1983), *Erasmus* (1983), and other compositions. In his musical works, Balakauskas used series in a very careful way, the tones of the series were introduced gradually, slowly, and sounded polychronically in different layers of the texture. In accordance with the composition plan, a series was divided into certain segments, and in the process of disposition, the segments systematically moved along the scale of the row to the next tone of the series. In the early 20th century, a similar method was used by Čiurlionis when dealing with cryptographic rows in his compositional work. In his Piece VL 257 (1907), cryptographic structures *Es-A-B-C-Es // A-B-C-Es-A, etc.*, existed. In the cycle of variations *Besacas* (LV 265, 1904–1905?), a similar principle was used in composing a palindrome of the disposition of a 7-step series,⁸¹ In the mid-60s, in the dodecatonic compositions of Balakauskas, some signs of the minimalist technique could be found: small segments of the text, based on the polyostinato principle, again and again rotated in repetitive “loops” (the impact of the *loop* technique).

- **An element of a series = a structure of 3 tones.** Such is the “infinite diatonic row/series” of Balakauskas: it consists of three transpositions (on a minor third circle ↓) of the original structure – a segment of the fourth-the second (e-↓h-↓a)⁸². The said series was used in such compositions of Balakauskas as *Suite for string orchestra* (1965), *Aerophonía* (1968), *Sonata for violin and piano No. 1* (1969), *Quartetto concertante* (1970), *Studi Sonori* for 2 pianos (1972), *Dada concerto* (1982), *Tranquillo* (1985), and the opera *Silence – Le silence* (1986). A similar principle also applied to the development of a 36-tone row (series) by the composer. The initial structure – the sixth chord a-↓e-↓c – was transposed from each chromatic tone. The said row served as a basis for such compositions of Balakauskas as *Concertino for piano and strings* (1966), *Sonata Cascades for piano* (1967), *String Quartet No. 1* (1971), *Sonata for organ* (1973), etc. The consonant sound of his music was here provided by two main qualities of the composer’s method: a diatonic structure of the segments in a series and a slow exploitation of the pitch resources in a series.
- **An element of a series = a complex of two or more harmonies (chords).** Transpositions of the latter will follow in accordance with the pre-compositional project *forma formans*. Such a principle of transpositions was used, e.g. in the third part of *String Quartet No. 2* (1972) with its element of a quasi-classical cadence (DD-D-T), transposed from different tones. In Part 1 (*Meditation*) of *Sonata for cello and piano Retrospective I*, a binary structure of two chords a-↑d-↑g + h-↑c-↑e became the element of transpositions. Incidentally, the structure contained the first half (tones 1 to 6) of the “magic symmetrical row” of Balakauskas (the tones correlated in accordance with the principle of the fifths cycle). However, the binary structure was transposed from the schema of tones of the “infinite diatonic row” a-e-d / fis-cis-h / es-b-as / c-g-f:

81 For more information, see Gražina Daunoravičienė-Žuklytė, *Lietuvių muzikos modernistinės tapatybės žvalgymas* [A view on the Modernist Identity of Lithuanian Music], op. cit., 94–105.

82 The idea of the fifths lies in the main structure-invariant of the row e-↓h-↓a, since it can be considered as the rotation of three fifths a - h - e. As argued by Balakauskas, the fifth and fourth have an archetypal significance for his system – as the generative tone and the two tones most closely related to it (sons, or *Söhne*, to quote Hindemith).

Example 8: Osvaldas Balakauskas. Part 1 (Meditation) of *Retrospective I*, Sonata for cello and piano (1974). The binary structure and its transpositions.⁸³

- **An element of a row of transpositions = a fragment of someone else's music (a sample).** A rather radical method of transpositions of an invariant segment is an attempt to transfer the primary element of a row (series) or a fragment of music – a “sample” (term by Balakauskas) to the renovating harmonic systems or recognizable styles (techniques) and thus form / create ever new sound objects. A constant modulation of the “sample” into a new system becomes a real test for those listening to such music. A specific case of that kind in the compositional work of Balakauskas was *Concerto for cello and chamber orchestra Ludus modorum* (1972). Its invariant-sample was a melody from an early composition of Balakauskas *Twelve Pieces for piano* (1964). The “melody”, split into segments, was transformed in a series of transpositions into a whole-tone system, a chromatic system of “narrowed intervals”, the system of “diatonic, or a white note” scale. It was also processed by means of quasi-pointillism, and it sounded like an association with quasi-Baroque music, as well as in the style of quasi-Classicism (in traditional harmony), while the finale of the concerto opened with a melody-swing of jazz improvisation. In other words, the tonal melody in *Ludus modorum* (1972) was transposed to different harmonic systems: a pentatonic scale, quasi-dodecaphony, jazz, (Georgian) quasi-folklore, the quasi-Shostakovich style, etc.

A similar principle of transpositions of the original model was used by Balakauskas in his other compositions: Part 6 (*Sincro – Asincro*) of the composition *Studi sonori* (1972); in *Bop Art* (1995), where the “sample” was his own period of the bop style. It

83 From Osvaldas Balakauskas, *Retrospectiva. Sonata for the violoncello and piano* (Budapest: Editio Musica, 1981), 2-3.

should be noted that Leonid Hrabovsky, Balakauskas' colleague from the Kiev Avant-Garde circle, came close to the idea of stylistic modulation in the 70s. The supporter of constructive methods in music composition had been developing the theory of "stylistic modulation" since 1973, which was embodied in his *Concerto misterioso* for 9 instruments (1977). We must agree with Fredric Jameson that every true creator is in a tireless search of some invariant structures of consciousness and of generative categories or forms through which the consciousness can learn about creation (the world). Meanwhile, when discussing the stylistic trends in the late Soviet period, Ivana Medić chose an umbrella term of *meta-pluralism* for "various manifestations of late Soviet composers' desire to (re)engage with the past(s)".⁸⁴ Thus, a composer's resolution to "transpose" the same element (music, sample) to different styles can be hardly identified by the audience. Although Balakauskas applied some post-modernist techniques, the true intertextual postism (the term of Richard Taruskin's) was not characteristic of his compositions. On the other hand, Balakauskas adapted a quite commonly used compositional method of the post-modernist practice (e.g. when a plan of transpositions of an invariant represented a certain cluster of an intext (the term coined by Mark Aranovsky), and the said strategy reflected the ways of adaptation of someone else's music), used by Schönberg or Stravinsky in the early 20th century. The said technique of intext adaptation was called by Joseph Straus a generalisation technique.⁸⁵ Likewise, in Balakauskas' *New Turkish March* (1987), the main Turkish motifs of *Alla turca* (*Sonata A-dur* (K 331) by W. A. Mozart became the invariants of his pitch-class material and simultaneously a schema of his plan of transpositions.

- **An element of a series = a key, a mode.** A series of 12 keys (modes), and an ever-new transposition used in each episode of the composition: that was the technique of transpositions (transpolations) of series in *Erasmus* (1996) by Balakauskas.

Some comments should be added on the further evolution of the modernists of Lithuanian music. Just like in the case of the creative work of Silvestrov, Martynov, Pärt, Denisov, Volkonski, and many other composers in the cohort of Balakauskas, it is necessary to discuss the post-avant-garde period of Balakauskas that began at the turn of the 21st century. The evolution of his compositional method can be represented as a curve of the technological process from simple to complex, with a return to simple complex in the early 21st century. Doubts about the genetic musicality of the serial principle may have existed in Balakauskas' consciousness for a long time. Even though in his modernist period we did not hear any declarations of that kind from him, this was evidenced by obvious signs in his music and his theoretical system of dodecatonics. Basically, it represented a "softer", more musical and consonant compositional system. Its interpretation deviated from the strict rules of the classical dodecaphony, and the manner of its application suggested the post-modernist spirit

84 Ivana Medić, *From Polystylism to Meta-Pluralism: Essays on Late Soviet Symphonic Music* (Belgrade: Institute of Musicology SASA, 2017), 141.

85 Joseph N. Straus, *Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition* (Cambridge: Harvard University Press, 1990), 17.

of minimalism. Similar signs can be traced in the music of his *Symphony No. 4* (1998) and *Symphony No. 5* (2001).

In the characteristics of one of the original algorithms of the compositional technique of Balakauskas, I would like to emphasise that similar searches and solutions were crucial for the individualisation of the serial principle and a row/series as its constructive element (meaning the serial technique interpretations by Webern, Stravinsky, Messiaen, Babbitt, Goeyvaerts, Boulez, Pousseur, Pärt, etc.)

Although the conceptually justified code, as well as the principle of organisation of the material, served Balakauskas for a rather long time and contributed to the creation of numerous compositions, in the framework of a strictly regulating system, it turned out to be rather difficult to endow each composition with creative energy and bright individuality. In other words, in the case of a rational method, composer finds it difficult to avoid multiple replication of the unified bases of the system, and – for the audience – to get rid of the impression that the opuses become too similar to one another (variants of the invariant).

For Balakauskas, a stimulus for considering his own compositional method and the point of departure from the paradigm of Modernism were authorial concerts of his former idol Iannis Xenakis in France at the beginning of the 80s.⁸⁶ That was the time when Xenakis made use of the *Gendy* software to translate the stochastic algorithm, or the so-called *dynamic stochastic synthesis*, into a sound process. Purely speculative music, or simply a mass of sounds, colour-timbres with different sound qualities and structures (“clouds”, “galaxies”) affected audiences by the intensity, tension, and the power of sounds. The stochastic conception of the transformations of sounds in time (at the level of pitch, registers, timbres, and rhythms) was entrusted by Xenakis to mathematical models, theories of contemporary physics, and Fibonacci numbers, and Balakauskas found that kind of music increasingly less attractive. There were disputes about the interrelationship of intelligence and freely manifested creativity, as well as acceptable doses of *ratio* and the conception of music as a verbal musical language that were a bone of contention for Balakauskas and Silvestrov in the Kiev period. The disputes started in the early 60s during the discussions of night hearings in the group of Lyatoshinsky students and the supporters of the Kiev avant-garde. Even then, Silvestrov was convinced that the music of Xenakis, a provocateur and the inventor of the method, affected purely by its physical parameters and was devoid of any verballity: “In the music of Xenakis, those were not words that sounded, but some mathematical, structural processes. You can try to hear, but the effect is very straightforward due to some power of tones – by their horror and tension, they remind of hippopotamus and crocodile serenades. What shall I listen to in it? I am not a crocodile, after all” (Silvestrov).⁸⁷ In the discussion about the degree of the speculative and the intuitive in music, in the late 20th century, Balakauskas took the side of his colleague.

The music of the avant-garde that for a long time attracted Balakauskas’ attention was in 2013 defined by him as non-communicative, some “game without rules, which

86 The following premieres of Xenaki took place: in 1991, *Gendy 3*; in 1992, *Pu wimuej we fyp* based on Arthur Rimbaud’s *Dormeur du val*, in 1993, *Mosaïques*, and in 1994, *Zyia* and *S. 709*.

87 From the author’s talk with Valentin Silvestrov in Druskininkai on 25 July, 2013.

no one understands and which does not excite anyone”.⁸⁸ In his music composition, he gave up the pre-composition rites, in which the music (series) was conceptualised, the ways of its generation were predicted, schemas of sound disposition were drawn, and technological purity as well as coherence of all the levels of the composition were sought. Through reformulation of his modernist theses, Balakauskas admitted that, for each composer, the most important aim should be “the desire to be in harmony with tradition and to stay recognisable and individual”.⁸⁹ It also changed the composer’s attitude to revolutions in creation and dethroned the previous ideology of his composer identity. Balakauskas called Karlheinz Stockhausen, Pierre Boulez, and Luigi Nono “left-wing revolutionaries”, as they, “by means of the serial technique, sought to eradicate tonality. They were driven by the intolerance to consonance and the absolute recognition of dissonance”.⁹⁰ He renounced revolutions in music and dethroned what substantiated his ideology as the composer’s identity. He explained the reason of the defeat of Modernism as a revolution by “the renouncing of tradition *par excellence* [...] I can say I reject the principles and techniques of avant-gardism, as I have already tried it and know how such music functions”.⁹¹ Post-avant-garde modernist Balakauskas simultaneously identified the fear of the composers to be doing “the same thing” and the main method of “rejecting what is accepted”. “So many new ideas that fascinated with their revolutionary character turned out to be as good for nothing as a revolution in art.”⁹²

Instead of a Conclusion

In the present study, the function of a summary will be executed by the contextualisation of Osvaldas Balakauskas’ composition system in the environment of the modernisation processes of the Lithuanian and the USSR late socialism musical culture. Several circumstances, such as the situation of the official art discourse at the time and late and historically irrelevant penetration of dodecaphony into the composers’ scores predetermined the specificity of the context. The first attempts at using a 12-tone technique in the western part of the USSR was marked by the boundaries of the Khrushchev’s “thaw” period (1960–1961): the initiators included Andrei Volkonski, Arvo Pärt, Vitaly Hodziacky, Valentin Silvestrov, Julius Gaidelis (in Boston), and others. The breakthrough of the Second Avant-Garde⁹³ in the USSR was identified by several specific circumstances: the persecution of any “formalist art”, which initiated “a total work of art” syndrome and “a mature post-historical culture”, as the state and the content of the art of social realism was defined by Boris Groys.⁹⁴ The ideological persecution and the

88 Quoted from Osvaldas Balakauskas, “It is not normal for an artist to despise audience”. A talk with Rūta Gaidamavičiūtė, in web: <http://www.delfi.lt/news/ringas/lit/obalakauskas-nenormalu-kad-meninkas-niekina-publika.d?id=60468819>.

89 Ibid.

90 Quoted from Gražina Daunoravičienė’s talk with Osvaldas Balakauskas on 16 April, 2012.

91 Op. cit. (Osvaldas Balakauskas, “It is not normal for an artist to despise the audience.”)

92 Ibid.

93 The term of Levon Hakopian, which separated the Soviet music avant-garde of the 20s of the 20th century from the stage of music modernisation in the late Soviet period.

94 Boris Groys, *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond* (Princeton, N.J.: Princeton University Press, 1992).

level of supervision led to the long-term stagnation and backwardness of the musical culture of the USSR.

Nevertheless, the modernisation of Soviet music – its creative and theoretical discourse – was stimulated by a number of synchronic and diachronic events. One of the stimuli was the visit of Igor Stravinsky to Soviet Russia in 1962; a year later (in 1963), an apologist of Webern's music and a believer in communist ideas, Luigi Nono, came to Tallinn, and afterwards to Moscow. His informal talks with Arvo Pärt, Alfred Schnittke, and other progressive composers of the USSR provoked in that part of the world the era of “second conservatoires”, or non-academic studies of the new music of the 20th century. Pärt, Schnittke, Edison Denisov, Sofia Gubaidulina, and Nikolai Karetnikov undertook independent studies of modern compositional techniques; in Ukraine, this was done by the members of the *Kiev avant-garde* group, and in Lithuania, by Vytautas Barkauskas, Julius Juzeliūnas, Eduardas Balsys, Vytautas Montvila, Feliksas Bajoras, Osvaldas Balakauskas, and others. Those were powerful stimuli for alternative (non-formal) creation and the updating of the theoretical discourse of music.

The institutionalisation of the 12-tone composition technique in the 60s through 70s in Lithuania took place in a complex context of ideologized socialist realism, a tiring process of information accumulation, and a heterogeneous composition practice. In fact, it was a delayed adaptation of the already established and finished “mummified” traditions, nonetheless, the formalised modernist composition techniques in the totalitarian regime meant oppositional moods and contributed to modernisation. The road of theoretical works of Bogusław Schäffer, Ernst Křenek, and George Perle to Lithuania was difficult and mostly illegal.⁹⁵ Three rotaprint copies of Křenek's *Zwölf-ton-Kontrapunkt-Studien* (1952) were brought by Vytautas Barkauskas from Tallinn from Arvo Pärt who had secretly brought a copy of the book from Sweden. Eduardas Balsys discovered the dodecaphony technique in 1962, when conductor Piero Bellugi in his home in Florence showed the compositions of Bruno Bartalozzi written in that technique.⁹⁶ Balakauskas studied it from a two-volume Bogusław Schäffer's *Klasyca dodekafonii* (1961–1964), sent to Vilnius by a friend from Poland. However, the information was incomplete: in the 60s, either in Lithuania or the USSR, the scores of Schönberg, Webern, Stravinsky, Messiaen, Nono, Boulez, etc., based on the 12-tone technique and its avant-garde modifications (serialism), were not known. The compositions of Karlheinz Stockhausen, George Rochberg, Karel Goeyvaert, Hans W. Henze, Brian Ferneyhough, etc., sometimes performed in the *Warsaw Autumn* festivals, were known only by ear. Due to the blocking of Western information, Theodor Adorno's *Philosophy of New Music* (1949) was not known, as well as the author's critical alienation from

95 In the academic year 1966/1967, the course *Theoretical Issues of Contemporary Music*, held by Algirdas Ambrazas in the Lithuanian State Conservatoire, included the topics on Bela Bartok's modal thinking, introduced with E. Křenek's *Twelve-Tone Counterpoint Studies* (*Zwölf-ton-Kontrapunkt-Studien*, 1952) and with O. Messiaen's *My Musical Language Technique* (*La technique de mon langage musical*, 1944). From 1970 to 1974, a cycle of lectures devoted to the studies of the 20th century modern music and taught by visiting professors was organised. The lectures were held by Yu. Khholopov, T. Bershadsckaja, A. Schnittke, E. Denisov, V. Dernova, and others. See Gražina Daunoravičienė, “The Battle for New Music in Lithuania of Late Socialism: The Process of Modernisation and Network of Intercultural Partnership,” *Lietuvos muzikologija* [Lithuanian Musicology], 18 (2017): 10–45.

96 Ona Narbutienė, *Eduardas Balsys* (Vilnius: Baltos lankos, 1999), 102.

dodecaphony because, as he stated, that music stopped being expressive.⁹⁷ The criticism of the serial technique as a mechanical, non-communicative system that “aimed to create its own prison”⁹⁸ also did not spread (i.e. Ligeti’s conclusion after the analysis of Pierre Boulez’s *Structures Ia* performed by him). Unknown were *The Raw and the Cooked* (1975) by C. Lévi-Strauss and the works of linguists that based their research on the communicative models of linguistic systems and the dethroning of serialism; the diagnosis of uncommunicativeness of the serial music, based on the deficiency of the hierarchic relationships between structures did not spread either.⁹⁹

For various complex reasons, the dodecaphonic technique in Lithuania and the USSR in the 60s was euphorically accepted by trending modernist composers as a Western composition system. It was desirable as a tool for mastering the process of thinking and of algorithms of the new “order” of musical parameters, as well as for stimulating the very mindset in terms of modern composition. The creators of unofficial music from the Baltic countries and the USSR tended to associate the radically dissonant sound with the opposition to the primitivized stylistics of Soviet music that was protected by the ideology of socialist realism and with a dissident position against the ideology of Soviet culture in the Baltic countries and rallied against their occupation. Thus, the permeation of the 12-tone technique into scores and simultaneously the context of Balakauskas’ theoretical-compositional system of dodecatonics was formed by at least four circumstances.

The first attempts at dodecaphony in Lithuania had programme headings with negative connotations, and the trend was common to many Soviet republics, including Russia.¹⁰⁰ Composers soon found ideological means to justify “formalist” music and covered it up with verbally formulated programmes, which reflected the prerogative of the communist art ideology of the USSR. As is known, the dodecaphonic technique in the USSR in the 60s was partly legitimately used to create a musical analogy of negative dissonance images (aggression, warfare, threat, etc.).¹⁰¹ In the very first case of the dodecaphonic technique in Lithuania – the *Concerto for clarinet and orchestra* by Benjaminas Gorbulskis (1959) – its Part 2 was called *Woe*. An “acrimonious” 12-tone theme and the dissonant sound of the slow part strongly contrasted with the first and third

97 Theodor W. Adorno, *Philosophy of New Music*, translated, edited by Robert Hullot-Kentor (Minneapolis and London: University of Minneapolis Press, 2006), 33, 42–43.

98 Ligeti György, „Pierre Boulez. Entscheidung und Automatik in der Structure Ia,” *Die Rheie* 4 (Wien, 1958), 38.

99 The statement was further developed in the works of Nicolas Ruwet, L. B. Meyer, and Fred Lerdahl, and afterwards, in the studies of S. Heinemann and U. Mosch. See Stephen Heinemann, “Pitch-Class Set Multiplication in Theory and Practice”, in *Music Theory Spectrum* 20, No. 1 (1998), 72–96; Ulrich Mosch, *Musikalisches Hören serieller Musik: Untersuchungen am Beispiel von Pierre Boulez’ Le Marteau sans maître* (Saarbrücken: Pfau-Verlag, 2004).

100 To stop the spreading of the “chickenpox” (dodecaphony - G. D.), Tikhon Khrennikov escalated public criticism of the first Estonian 12-tone composition, *Obituary*, op. 5 by Arvo Pärt (1960) because of its serialism and “an inclination toward foreign influences”. However, in the competition of works of the young composers of the USSR (with about 1,200 entries), Arvo Pärt was awarded one of its seven prizes. Evidently, a decisive role was played by the legitimization of dodecaphony, established by Schönberg’s *A Survivor from Warsaw (Ein Überlebender von Warschau)*, op. 46 (1947), to reflect evil in music, and Pärt made use of it in his *Obituary*. The only legal possibility for the existence of dodecaphony will soon be recognised in the USSR.

101 The trend was confirmed by Valentin Silvestrov who tried to change the stereotypes of thinking and to “tame” the 12-tone technique for the modernisation of his musical compositions. “As it was believed in 1961 or 1962, it could be applied only to the expression of negative emotions: horror, darkness, or tension. In a nutshell, a tragedy with no gleam of hope. My goal in the first compositions was to avoid such simplification and to achieve lyricism.” Quoted from the journal *Советская музыка [Soviet Music]*, 1962, No. 2, 123.

parts (*Flight* and *Humour*), bursting with optimism of socialist realism and composed on the tonal principle.¹⁰² The compositions of Eduardas Balsys with the application of the dodecaphonic principles – *Dramatic Frescoes* (1965) and *Don't Touch the Blue Globe* (1969) – developed the theme of war threats. The adaptations of Schönberg's techniques in the Soviet times were united by a rather amateurish and unclear system of the adaptation practice.

Therefore, the first mature dodecaphonic composition of a Lithuanian composer was *Trio for violin, clarinet, and bassoon* by Julius Gaidelis (1909–1983), an *émigré* in the USA, written in Boston in 1961. In the score, the composer wrote down a 12-tone series (*e-es-d-a-as-g-des-c-f-b-h-fis*) and added “A. Schönberg's 12-tone system technique”.¹⁰³ Comprehensive information and creative courage in the cultural milieu of the USSR were important factors of modernisation: it was by no accident that the 12-tone technique in Russia was applied by “local foreigners”: Andrei Volkonsky (1933–2008) who returned from Geneva, Phillip Gershkovich (1906–1989) who arrived from Austria, etc.

The 60s in Lithuania manifested themselves in another form of a compromise. It was “rendering harmless” the fierce formalistic dissonance of the sound by folk remedies.¹⁰⁴ A specific “socialist realism” method of applying dodecaphonic means reflected the theses of the ideologized realism doctrine in its own way. Series were construed by using segments of the “folk” (folklore) origin, and such compromises was observed in the compositions of Benjaminas Gorbuskis, Algimantas Bražinskis, Eduardas Balsys, Vytautas Barkauskas, and Julius Juzeliūnas. In them, elements of the dodecaphonic technique were crossed with modal scales typical of the national folklore, the complexes of supporting tones coming from folklore, intonations, and rhythmical models. The psychology of application of the dodecaphony technique regulations was reflected by a characteristic comment of Balsys: “I am using the principles of free dodecaphony. Why should I stick to a broken series? A series should come from an emotional need.”¹⁰⁵ Innovative application of dodecaphony was advocated in a presentation of a young Lithuanian musicologist Algirdas Ambrazas¹⁰⁶ during the conference *On True and Supposed Innovation in Contemporary Music*, first organised in Moscow in 1965. Later, the editorial of the journal *Soviet Music* [Советская музыка] made a critical comment specifically on the “compromise” version of the Lithuanian dodecaphony of the

102 The exposed 12-tone theme in an original and transformed shape sounds in different parts of the orchestra, however, in further exposition of the material, the principle of tonality is manifesting itself increasingly stronger, and polytonal harmony (chords) starts to prevail.

103 Gaidelis composed his *Trio* in accordance with the regulations of dodecaphonic procedures by applying serial inversions, retrogrades, and retrograde inversions.

104 Dodecaphony was heard in *Poetry* (1964), and *Intimate Compositions* (1968) by Vytautas Barkauskas, in a somewhat freer form it was used in the *Dramatic Frescoes* (1965), an oratorio *Don't Touch the Blue Globe* (1969), and the opera *The Journey to Tilsit* (1980) by Eduardas Balsys. Feliksas Bajoras used the technique in his *Variations for double-bass* (1964), and Vytautas Laurušas applied elements of the 12-tone technique in the poem for male choir *Voices in the Night* (1969), *Sonata for violin* (1979), and *Quartet for Strings No. 1* (1979). Julius Juzeliūnas integrated the principles of the 12-tone technique into his compositional system and on its basis composed his *Concerto grosso*, *Sonata for voice and organ Melika* (1973), *Symphony No. 5 Songs of Plains* (1982), and other. Bronius Kutavičius used this compositional technique in some episodes of his opera for children *Old Man Bones on the Iron Mountain*, etc. He was one of a few Lithuanian composers who in the 70s of the 20th century composed some freestyle serialism opuses, e.g., controlled parameters of pitch and duration were created in his *Quartet Clocks of the Past I* (1977).

105 Ona Narbutienė, ed., *Eduardas Balsys* (Vilnius: Baltos lankos, 1999): 174–175.

106 *Lithuanian Archives of Literature and Art*, Fund 305, schedule/inventory 1, file 501, p. 4–12.

60s, including a sharp observation: “As we can see, our Lithuanian colleagues have nothing in common with dodecaphony as a system.”¹⁰⁷

As we can see, the institutionalisation of the 12-tone technique in Lithuanian music was dictated by numerous circumstances of acquaintanceship, studies, and mastering. Due to fragmentary information and a lack of original examples, compositions abandoned (or, more precisely, did not observe) the technological principles of Schonberg's dodecaphony work with series. The series of Lithuanian composers, as a rule, were organised in a “primary way”, by creating series of 12 non-repeating chromatic tones, however (apart from Balakauskas), rarely implementing a more complex, conceptual serial structural organisation. Thus, by exposing a 12-tone series (theme), in some cases of an incomplete composition, the organisation of the composition material was getting freer, and the sequence of tones, the standards of non-repetition, “pure” permutations, transpositions, and the requirements of other technological procedures were ignored. Moreover, the mastering of dodecaphony co-existed with the long-lasting inertia of the operation of the focal point of the chromatic pitch continuum gravitation centre. Therefore, the scores of Lithuanian composers long preserved the impression of the tonal field and, from the technological viewpoint, the music was approaching the sound of atonal music developed on the basis of the 12-tone themes. The lack of academic Lithuanian or Soviet musical compositions composed on the basis of “pure” serial or serialist technique is accounted for by many of the aforementioned circumstances. However, it is necessary to add the particularly active primacy of the newly contemplated modality, evidently, as an imprint of the national mentality. All those intersections of historical time and art processes predetermined the identity of the Lithuanian musical Modernism of the 20th century late Soviet period and creative events.

The authorial composition systems of Lithuanian composers that emerged in the early 70s and their theoretical discourse was based on complex foundations and a still incomplete theoretical argumentation. The theoretical-compositional system of the dodecatonics of Balakauskas, next to the system created by Juzeliūnas based on supporting tones of Lithuanian folklore¹⁰⁸ in the 70s, represented a strong declaration of ideas and principles of the modern art of the 20th century providing for its individual creative application. The critical overview of the system in the context of the theoretical discourse of the 20th-century music composition revealed the retrospective of the Lithuanian music modernisation in the 60s and 70s and, it should be added, testified to a rather rare case in the process of conceptualisation of Eastern European music composition. Even though due to its theoretical incompleteness and a lack of arguments

107 See “С Трибуны Теоретической конференции” [From the Podium of the Theoretical Conference], *Советская музыка*, 6 (1966): 27.

108 The first authorial compositional system developed by a Lithuanian composer in the early 70s was the conception of supporting tones of Julius Juzeliūnas, laid out in his monograph *On the Issue of Chord Structure* (1972) and his habilitation paper (See Julius Juzeliūnas, *Akordo sandaros klausimu* (Kaunas: Šviesa, 1972)). Starting with mid-60s, Juzeliūnas started construing the “constructive atmosphere” typical of folk music by means of 12-tone rows consisting of 3 or 4-tone segments (“cells”). At first glance, they were similar to Webern's series, however, the sound of the compositions differed radically, since Juzeliūnas formed the series of segments on the basis of archaic cells of the Lithuanian folklore. Even though Juzeliūnas' system had interfaces with the 12-tone technique in terms of 12 chromatic-tone composition of rows, he did not recognise the strict technique of European Modernism (he rejected the requirement for non-repetition of sounds, freely developed the segments of rows, modified and re-grouped them).

of authorial motivation the *Dodecatonics* did not make a deep imprint in the development of composition theory in the 20th century, the very resolution of Balakauskas to conceptualise the process of composition and analysis, and his original application of the system in his works deserves a broader critical discourse. The modernist resolution of Balakauskas realised the belief of his colleague Howard Hanson that “the complete assimilation of a small tonal vocabulary used with mastery is infinitely to be preferred to a large vocabulary incompletely understood by the composer himself”¹⁰⁹ in his own way. As mentioned before, the dodecatonics of Balakauskas, similarly to the systems of Ernst Křenek and George Perle, was an example of the 12-tone composition and simultaneously the synthesis of modality. The epistemic cultural breakthroughs were undoubtedly reflected in the content of the theoretical system of Balakauskas and his application strategies: the 12-tone principle co-existed with individual forms of tonality and modality. In other words, the system enabled the composer to use its content in three states: as modal, as tonal, and as 12-tone atonal. The author of the dodecatonics believed that, after loading the series with a lot of intellectual energy, the composition will grow from the “seed” as a live spiritual organism, and the formative roots of the series will spread through increasingly larger-scale structural levels. The composer himself realised its structural potentials through multiplicative repetitive principles.

The 20th-century music modernisation processes in the theoretical system of the dodecatonics by Balakauskas triggered a critical overview of the cultural development in the environment of ideological and technological transformations.

The fourth feature of contextualisation of the dodecatonics by Balakauskas was pre-determined by another circumstance of the emergence of the Soviet second avant-garde seeking to compensate for the losses of the Stalinism epoch. The time of adaptation of the 12-tone technique in the USSR, the late Soviet period (the 80s and 90s) was the time of the full speed-criticism of the post-war avant-garde in the West, and simultaneously the *stretto*-time of oncoming postmodernism which invaded not only with fierce anti-modernist attitudes, but also with a new philosophy of sound technologies. Having ended the period of their acquaintanceship with dodecaphony and euphoria, Lithuanian composers accepted sonorism and aleatoricism on the basis of the 12-tone technique and integrated the principles of collage and minimalistic repetitivism. Free mixed combinations of the 12-tone technique with other avant-garde or already post-modernist techniques prevailed. When exploring the unofficial music of the USSR in the second half of the 20th century that the intellectuals related to the manifestations of the strongly desired modernisation, Peter J. Schmelz proposed to differentiate between two phases of the development: the *abstract phase* and, (from the mid-60s), the *mimetic phase*¹¹⁰. Schmelz marked the divide between them by two processes: in the abstract phase, Soviet composers mastered the “formalist” 12-tone technique and applied it by opposing the paradigms of socialist realism. Meanwhile, in the mimetic phase, the signs of postmodernism emerged: the means of intertextuality (quotations and allusions) were employed,

109 Howard Hanson, op. cit., 348.

110 Peter Schmelz, *Such Freedom, If Only Musical: Unofficial Soviet Music during the Thaw* (New York: Oxford University Press, 2009), 12. In that case, Schmelz took over the divide between the abstract and mimetic arts, applied by Karol Berger in *A Theory of Art* (2000).

the tonality did not retreat, and dramaturgical schemas of the socialist realism time were used. Starting with the mid-70s, according to Schmelz, both trends were combined. The 20th-century music modernisation processes in the theoretical system of the dodecatonics by Balakauskas triggered a critical overview of the cultural development in the environment of ideological and technological transformations.

Balakauskas' work (his musical and theoretical system) summarised not only the identity of the Lithuanian composer-modernist of the second half of the 20th century, but also a number of distinctive features of the Pärt – Silvestrov – Schnittke cohort (with reference to the social-cultural concept of the *generational cohort theory* used by Thau, Heflin, Jurkiewicz, and Brown). Compared to the generation of Shostakovich and Lyatoshinsky, the artistic consciousness of the representatives of that cohort was not so badly damaged by the frustrating struggle of the Soviet art ideologists with the “bourgeois” art and formalism in 1948. The character of the Balakauskas' generation could be identified through the aspirations of like-minded people spontaneously grouped in different geographic locations of the USSR: the Moscow *Troika*, Khrennikov's Seven,¹¹¹ Kiev Avant-Garde, and some groups of composers from the Baltic countries. Their creative rebellion in the late Soviet-era cultural milieu identified the cohort's determination to create a unique system of the signs of their art, the grammar of the composers' language, and an individual logic (system) of self-expression. The cohort aggressively declared an alternative artistic approach, disobedience to the clan of ideologists and functionaries, and applied irritating “formalist” techniques in their compositions. The changes predetermined radical modernisation transformations of the Soviet music in the last decades of the 20th century. That was the struggle of the artists in this part of the world for the technological symbols of the 20th century Modernism and for what was the basis of the content of Adorno's concept of *Zeitgeist* and the perspective of Schoenberg's *Zukunftsmusik*.

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111 The crime of the seven people was the performance of unauthorized works in the Cologne Soviet avant-garde music festival *Meetings with the Soviet Union*. The “Khrennikov's Seven” were Jelena Firsova, Dmitriij Smirnov, Aleksandr Knaifel, Viktor Suslin, Viacheslav Artimov, Sofija Gubaidulina, and Edison Denisov. They were interested in the compositional means of the West and the new technologies, which, in Khrennikov's opinion, ousted them from contemporary Soviet music whose identity was “a programme narrative”. “Can they represent our country and our music?” was Khrennikov's rhetoric question with an intonation calling for a negative answer. Quoted after: Тихон Хренников, “Музыка принадлежит народу,” *Советская культура*, 23 ноября 1979.

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POVZETEK

Teoretično-kompozicijski sistem dodekatonike litvanskega modernističnega skladatelja Osvaldasa Balakauskasa (prvič izdan v Krakovu leta 1997) zrcali zapleten proces razvoja glasbene kulture v Litvi in Sovjetski zvezi v poznem sovjetskem obdobju. V svojem delu je Balakauskas premislil epistemološke preboje v glasbeni kulturi 20. stoletja in poizkuse njihove uporabe, pri čemer je dvanajsttonski princip povezal s posebnimi oblikami tonalnosti in modalnosti. Z drugimi besedami, teoretično-kompozicijski sistem Balakauskasa je omogočil interpretacijo različnih vplivov in vzpostavitev harmonskih principov, v katerih se je združevala tonalna, modalna in dvanajsttonska kromatična logika. Analiza uporabe sistema in posameznih kompozicij je potrdila trend v kompozicijski praksi 20. stoletja, ki je vodil k vzpostavitvi individualnih kompozicijskih sistemov. Osrednja ideja sistema dodekatonike izhaja iz aksioma in metode projekcije kvint. Sistem je nadaljeval z razvijanjem principa, ki ga je predlagal Pitagora in znotraj katerega je mogoče konstruirati dvanajsttonsko lestvico (krog), ki ostaja zanimiva. Tehnični termini, uporabljeni v dodekatoniki (kot na primer *projekcija kvint*, *generativni ton*, *opozicijski*

ton, *vektor* itd.) in vzpostavljanje identitete harmonskih lestvic s pomočjo metode kvintnih korakov, so bili podlaga za konceptualne ideje na teoretični ravni. Balakauskas je na začetku razlagal generativni potencial mono- in bivektorjev projekcije kvint, ki so logično vodili do konstruiranja vrst na podlagi kvint. Priznati je treba, da je »magično simetrična vrsta« oz. vrsta Ry, sestavljena s pomočjo sistema Balakauskasa, podobna *cikličnemu setu* Georgea Perla. V razvijanju svojega teoretičnega sistema je dal Balakauskas prednost ustvarjalnosti in je iskal analitično metodo, ki bi omogočala razločevanje harmonske logike in temperiranega sistema preteklih obdobj, seveda v mejah dvanajsttonske lestvice.

Balakauskas je želel individualizirati princip dodekafonije na ta način, da je razvil transpozicije (transpolacije) in jih uporabil v svojih skladbah ter pri tem razporedil elemente različne provinience v 12 vrst. Teoretična podlaga dodekatonike je bila v pričujoči študiji interpretirana v kontekstu širerega teoretičnega diskurza (Pitagora, Rameau, Erpf, Schönberg, Křenek, Perle, Hanson, Dahlhaus, Holopov). Analiza *Simfonije št. 2* s stališča hilmorfizma je prikazala značilnosti modernistične kompozicijske doktrine in je pokazala, kako so bili principi teoretično-kompozicijskega sistema

uporabljeni v skladateljevih delih. Prvenstvo sistematičnega in konstruktivističnega komponiranja v simfoniji se kaže v strategijah konceptualizacije ustvarjalnega procesa, skladateljevem pogledu na zvočnost in v značilnostih organizacije materiala in strukture.

Na prehodu v 21. stoletje se je modernist Balakauskas odrekel komponiranju na osnovi racionalnega sistema in spoznal njegove omejitve, omejen pomen, izpraznjenost in nezmožnost komunikativnosti. V svojih delih se je vrnil k tistemu razumevanju tonalnosti, ki po njegovem mnenju loči *glasbo* (kot umetnost) od *zvokov*, pri čemer je videl posebno sposobnost glasbe v tem, da zmore vznemiriti. Tre-

nutno Balakauskas uporablja logično kontrolirano improvizacijsko metodo in nadaljuje z razvijanjem formalizirane slovnice svojega glasbenega jezika. Igrivo-improvizacijsko oblikovanje glasbenih struktur znotraj kromatičnega kontinuuma vzpostavlja občutek posameznih »tonalitet« in gravitacijskega centra. Modernizacija litvanske glasbe je bila v študiji povezana z začetkom konceptualizacij kompozicijskega procesa, kakor jih izkazuje *Dodekatonika* Balakauskasa. S pomočjo pogleda na ustvarjalne dosežke litvanskih skladateljev so bile inovacije interpretirane s stališča parataktičnega vzporejanja, pri čemer so se pokazale posebnosti modernizacije vzhodnoevropske glasbe.