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The Music Genotype: Collapse versus a Hypothesis for the Formation of a New (Macro)system

Muzikos genotipas: naujosios (makro)sistemos kūrimo hipotezė versus lūžis

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Abstract

The article continues the discussion of the ontic discourse of the music genotype (music genre) which started in Volume XXII (2021) of the present journal and approaches the consideration of the issues of the typology of twenty-first century music composition. The aspiration to cover both the concept of the phenomenon itself as a recursive self-organizing system and the ongoing “turning points” in the tradition of typologization and taxonomy of art music is based on the methodological approach of the general systems theory (GST) and synergetics as its branch. The unified conception of the ontic nature of the phenomenon and its functioning in contemporaneity enable the author to argue the concept of change in the (macro) systems of genotypes of “chromatic” intersystemic music. The author symbolizes the beginning of the hypothetical change in the genotype (macro) systems by highlighting the innovative forms of art created by the Dada and Fluxus artists in the 1950s through 1960s, which developed innovative art forms. The article monitors the further development of new music genotypes in the twenty-first century. From the point of view of typologies and taxonomies, the creation of professional music in the end of the twentieth century underwent an enormous change. At the beginning of the twenty-first century, it entered a phase of passionate change, characteristic of “seismic” situations of change of music genotypes (macro) systems. Reflecting on the process of change in music genotypes (macro) systems, the author proposes to test it with the activity of expression of three typological statuses (mono-genre, polygon, free genre [*Libro-genre*]). From the author’s point of view, the coexistence of the old tradition mono-genre – poly-genre – free genre – new tradition mono-genre and their mixes reveals the essence of the typological processes taking place in the art music today.

Keywords: music genre, music genotype, general systems theory (GST), a recursive self-organizing system, fractality, (macro)system, mono-genre, polygenre, free genre (libro-genre).

Anotacija

Straipsnyje pristatomas muzikos genotipo (muzikos žanro) ontinis diskursas ir priartėjama prie XXI a. muzikos kompozicijos tipologijos problemų. Pasiryžimas bendru sisteminiu požiūriu aprėpti ir paties fenomeno, rekursyvinės saviorganizuojančios sistemos, sampratą, ir vykstančius akademinės muzikos tipologizavimo bei taksonomijos tradicijos „lūžius“ remiasi bendrosios sistemų teorijos (BST) ir jos atšakos – sinergetikos – metodologine prieiga. Bendra fenomeno ontinės esmės ir jo funkcionavimo šiuolaikybeje samprata autoriui padeda argumentuoti „chromatinės“ tarpisteminės muzikos genotipų (makro)sistemų kaitos koncepciją. Hipotetinės genotipų (makro)sistemų kaitos pradžią tyrėja simbolina išskeldama *Dada* ir *Fluxus* menininkų XX a. 6–7 deš. sukurtas inovatyvias meno formas ir stebi tolesnę naujųjų muzikos genotipų plėtotę XXI a. Žvelgiant tipologijų ir taksonomijų požiūriu, profesionaliosios muzikos kūryba XX a. pabaigoje ir XXI a. pradžioje įžengė į pasionariškos kaitos fazę, būdingą „seisminėms“ muzikos genotipų (makro)sistemų kaitos situacijoms. Panašaus lygmens tarpisteminė muzikos genotipų cezūra vyko apie 1600 m. Apmąstant muzikos genotipų (makro)sistemų kaitos procesą, siūloma jį testuoti trijų tipologinių statusų (monožanras, poližanras, laisvasis žanras (librožanras)) raiškos aktyvumu. Autorės požiūriu, senosios tradicijos monožanrų – poližanrų – laisvųjų žanrų – naujosios tradicijos monožanrų ir jų mišrų koegzistencija atskleidžia dabarties garsų mene vykstančių tipologinių procesų esmę.

Reikšminiai žodžiai: muzikos žanras, muzikos genotipas, bendroji sistemų teorija (BST), rekursyvinė saviorganizuojanti sistema, fraktališkumas, (makro)sistema, monožanras, poližanras, laisvasis žanras (librožanras).

Music genotype: collapse versus further development

The intersection of the postwar music avant-garde with the postmodernist philosophy of artistic introspection can be associated with the “explosive” effect of evolution. The huge crossing of the destructive and simultaneously creative forces in the 1950s and ’60s were realized through radical events in the milieu of art music. I shall try to look at this epicenter from the viewpoint of the categories of

music typology, sensitive to in-depth shifts. The ontic-level changes in the composition of music were reflected and documented by quite a few participants in the theoretical discourse of art. Yuri N. Kholopov, an acclaimed representative of the Russian theoretical musicology of the twentieth century, saw the late twentieth-century revolution in art music as a massive extension of the boundaries of music to non-musical objects and a new conception of musical material. In his article “On the Essence of Music,” he wrote:

Music went out somewhere to new dimensions. This feeling is quite sufficient to make it clear: we are facing a fundamental change in what we feel as music. ... The fragmentation of the traditional unanimous conception of the essence of music, which took place and still continues in the 20th century, has already brought together “one hundred musics of our time,”¹ ultimately means a new stage in sound art, an expansion of the ancient *mousikē technē*² space, a great synthesis of ideas of the present and the past, and the opening up of perspectives for genuine artists – creators, whose work means the creation of the new as a natural continuation of the Creation of the world. (Χολοπου 2003).

The “seismic” state of music evolution and the intensity of change tested the universality and plasticity of typological structures. As noted, this category reflects a wide range of its manifestations: artistic commissions of socio-cultural milieus as well as the coordination of specific relationships between the foci of the parameters of communication, performance, and sound art (formal structural and those of poetics [content]).

Based on the data of analysis of the early twenty-first century practice of music art, we can testify to the fulfillment of numerous twentieth-century visionary insights, professed in manifestos, and their combinations in the strangest forms in *Klangkunst*, the fourth type of music. The characteristics of the mentality of the contemporary musical culture observed in its artifacts can be traced in the written theses of Western art manifestos. The reality of the ontic change in the art of music and its genotypes enables us to retrospectively summarize the transformations of the concept of the *mousikē technē* before the time of the theoretically canonized postmodernist “turning point.” The fierce reaction of art consumers and the rejection of declarations further testify to the energetic, constructive impact of creative ideas on the art process.

As early as on page 3 of the *Sketch of the New Aesthetics of Music* (*Entwurf einer neuen Ästhetik der Tonkunst*, 1907), Ferruccio Busoni proclaimed the conception of the new sound art to take effect, “music was born free, and to win freedom is its destiny” (Busoni 1911: 3), and supplemented the challenge with a comment stating that:

The spirit, emotions, and value of a work of art remain over the years, but the form taken by those three, the manner of their expression, and the flavor of the epoch which gave birth to them are transient and age rapidly. (Busoni 1911: 2)

The new philosophy of sound art and the subsequent programming challenges of the manifestos have effectively adjusted and continue to adjust the further development of sound art types and genotypes (for a compendium of the most prominent ideas of art manifestos, see Fig. 2). The maximum tone of music art creativity “exploded” in the 1950s and '60s as a breakthrough in the development

energy of multimedia, interdisciplinary, and action arts. As we shall see, this has fundamentally changed and keeps changing the development of music forms and genotypes.

Among the twentieth century’s most influential manifestos that changed the directions of art music and, accordingly, initiated new types of artistic artifacts, the ultraradical reflection on the purpose of art must be recognized in the ideological statements and artistic practices of the Fluxus movement, which swept through the United States in the late 1950s. George Maciunas, the founder of the Fluxus movement that emerged from avant-garde Dadaism and his affinity group (Wolf Vostell, Joseph Beuys, Dick Higgins, Nam June Paik, La Monte Young, Emmett Williams, etc.) founded a new philosophy of art as social reality in the early 1960s, which changed a number of the constitutional parameters of the art of the late twentieth and early twenty-first centuries.³ The paradigmatic multimedia phenomena of the new genotype (macro)system – happening, performance, installation, conceptual art, action art (action), multimedia, and musical sculpture – were the outcomes of the living practices of the “social commission” of Fluxus’s artistic ideas. It is the material about the new “types” of art – sound poetry, experimental painting, experimental cinema, electronic music, and the already mentioned taxonomic phenomena – that Mačiūnas intended to publish in the *Fluxus*⁴ magazine launched by Lithuanian artists living in New York in 1960.

The ideologists of the movement opposed the elitist institutional art of the professionals and sought to fully integrate art into life, a social reality where “the differences between an artist and an industrial worker disappeared.” Maciunas’s desire for Fluxus to “become a way of life not a profession and for the movement’s artists to gain their artistic experience from everyday experience” was witnessed by Jonas Mekas,⁵ pioneer of avant-garde cinema in the United States (Lukšas 2010). The latter remembered: “George stubbornly assured me that Fluxus was not an art or an art movement: FLUXUS was a lifestyle, a way of life” (Ibid.). The aim of such a philosophy was to cleanse artists of a routine approach to art, to refine its purpose in the world, and to change the world itself. The end of art and the exhaustion of the Fluxus movement, according to Maciunas, had to coincide with the Purge.⁶

According to Emmet Williams, the radicality of Fluxus’s ideas was determined by the personality structure of Maciunas as an artist – “a clown and a man of tricks par excellence, he simultaneously was a murderous revolutionary” (Williams and Noël 1997: 8). The activity initiated by a “hard-to-perceive genius” (Williams) and his creative approach to the organization of political actions as well as anarchist *démarches* with the strangest experimental hybrids of art and shocking artistic expression marked the striking art strategies of the twenty-first century. From Clive Phillpot’s

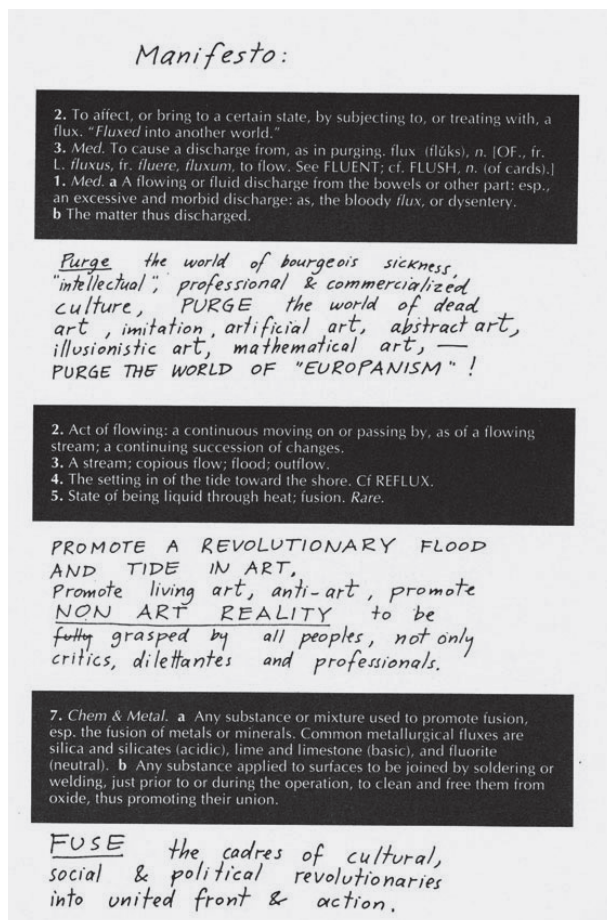


Fig. 1. Jurgis Mačiūnas (George Maciunas). *Fluxus Manifesto I* (1963; the manifesto may be accessed at: georgemaciunas.com/about/cv/manifesto-i/).

point of view, Maciunas deciphered the basic meanings of the word *fluxus* in his ambitions – to cleanse, to purge, tide, and fuse – and took action (Phillpot 2019). After refining the different goals of the *Fluxus* movement, an exploration of their effective interactions in initiating a revolution in contemporary art was explored. Its program was published by Jurgis Maciunas in the *Fluxus Manifesto I* (1963), where the basic theses of the *Fluxus* ideology were set out.

The first section of the manifesto discussed the reversal of the relationship between society and commercialized institutional culture (art). In order to save the world from evil, Maciunas invited artists “to purge the world of bourgeois sickness, of ‘intellectual,’ professional, and commercialised culture; purge the world of dead art, imitation, artificial art, abstract art, illusionist art, mathematical art” (quoted from Maciunas’s *Fluxus Manifesto I*, see Fig. 1). By opposing “living art” to “dead art,” Mačiūnas sought to stimulate the influx of vibrant creativity. In the second part of the manifesto, Mačiūnas proposed to “promote a revolutionary flood and tide in art, promote living art, anti-art, and promote non-art reality to be grasped by all peoples, not only critics, dilettantes, and professionals.” In the third

section of the manifesto, the art revolution focused on the global revolution in culture, the social sphere, and political reality. Mačiūnas encouraged artists “to fuse the cadres of cultural, social, and political revolutionaries into united front and action.”

From the “free art” of Busoni, Pratella (1910), Russolo (1913), Munari (1938), and Maciunas (1963), the anti-art ideal of Flynt, and the Fluxus manifesto, the conception of postmodernist multimedia interdisciplinary art was consistently approached. The steps were recorded in the theses of twentieth-century art manifestos and in calls to free music from violence, to introduce “small intervals” and use electricity, to “harness” machines, to turn noise into music, and to create *musique concrète* and moving objects, which was gradually realized starting with the 1960s. The further evolution of sound art (type) stimulated the formation of new art subtypes as well as new music genotypes. The compendium of the most active theses of the manifestos dedicated to music helps to trace the twentieth century’s gradual process of renewal of the art of music and its culmination in the artistic milieu of Fluxus.

Unpredictable, spontaneous scenarios, ignoring the artists’ egos, promotion of a collective spirit, anonymity, and anti-individualism⁷ are what can be recognized as the current status quo of contemporary experimental art and what Fluxus ideologists realized as their mission: filling the gap between art and life. Immanent intersystemity and interdisciplinarity (quite a few Fluxus art artifacts embodied the coexistence of various arts – kinetic art, anti-art, conceptual art, action arts, etc.) must be recognized as the twenty-first-century paradigm of the philosophy of art. In this respect, the evolution of post-Fluxus art can be interpreted as a direction of differentiation of the syncretic “embryo” of art genotypes formed by Fluxus artists.

For the documentary evidence of the development of art forms and genotypes in the late twentieth and early twenty-first century, a chart of typology of the Fluxus art forms which had undergone evolutionary change, drawn in 1965 by artist Dick Higgins, participant of the Fluxus movement, and accompanied by a notional system signifying it, was of great importance. Higgins’s chart, called *intermedia* (*inter*: between + *media*: a means of communication), innovative at the time, was perceived as a label for experimental interdisciplinary art actions, often synonymous with the Fluxus movement. The idea of Higgins’s concept-building was based on gluing the prefix *inter-* to the concept of *media*, which emerged on the cover of the book *Understanding Media* by Marshall McLuhan, a media art researcher (and which was used by McLuhan in his monograph in the meaning of an art communication milieu). Dick Higgins’s *Intermedia Chart*,⁸ drawn in 1965 and published in 1995, outlined the genealogy of the new art forms and types and captured the totality of new multimedia artifacts that

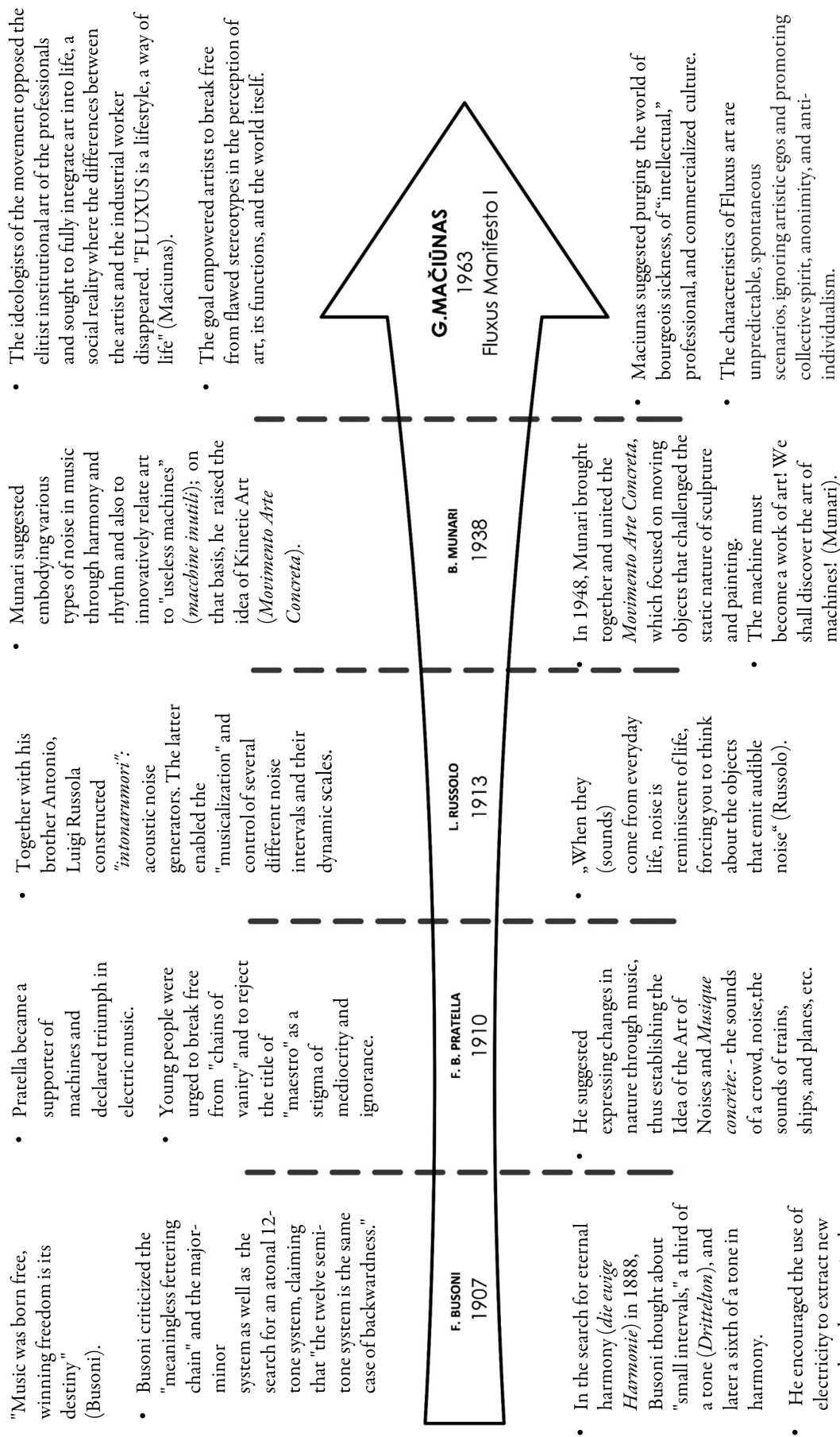


Fig. 2. The ideas of the 1907–1963 Manifestos of Busoni (1907), Pratella (1910), Russolo (1913), Munari (1938), and Maciunas (1963), stimulated the prerequisites for radical changes in art in the 1960s.

emerged in the Fluxus movement milieu (see Fig. 3). It covered Flynt's "concept art" and new genotypes of art, derived from Fluxus events - performance, intermedia, happening, musical sculpture, action, mail art, installation, and other experimental products of the synthesis of music, dance, literature, and theater music:

The language of visual graphics in the catalog chart of the new art types was decoded by Hannah Higgins (2001). She believed that the "reading" and theoretical interpretation of the graphic rhetoric of the chart presupposed several important insights:

- First, the graphics of the macrosystem (the large circle) of the new art types of *Intermedia* was fractally reproduced by the graphics of individual "genres"/"types" (small circles). In other words, based on the GST paradigm, the relationship between the macrosystem and its elements (system) in the chart of Higgins was characterized by isomorphism and fractality.
- Second, as noted by Hannah Higgins (2001: 49–54), the size of *Intermedia*'s circles probably reflected the author's view of the spread of one or another art form in the art field of the 1960s.

- Third, the overlapping circles apparently graphically visualized the interactions of differentiated art genotypes within the system.
- Fourth, the rhetoric of Higgins's unnamed circles was significant: the question marks undoubtedly reflected his conviction that, in the vibrant milieu of the birth of art innovations, new taxonomic-typological elements were to emerge in the nearest future.

The Fluxus art environment was, in terms of a genetic viewpoint, a favorable ideological and socio-cultural milieu for the realization of consequences of twentieth-century art modernization, which were established in renovated typological forms. In the chromatic field of interaction of the old and the new macrosystems, a relative boundary was marked by the multidirectional transformations of artistic conventions that began in the Fluxus era. The genotypes of interdisciplinary art (installation, performance, happening, etc.), not associated with a specific field of art (music, art, theater, dance, etc.), are shaped in Higgins' *Intermedia Chart*. The revolutionary breakthrough in the development of genotypes took place

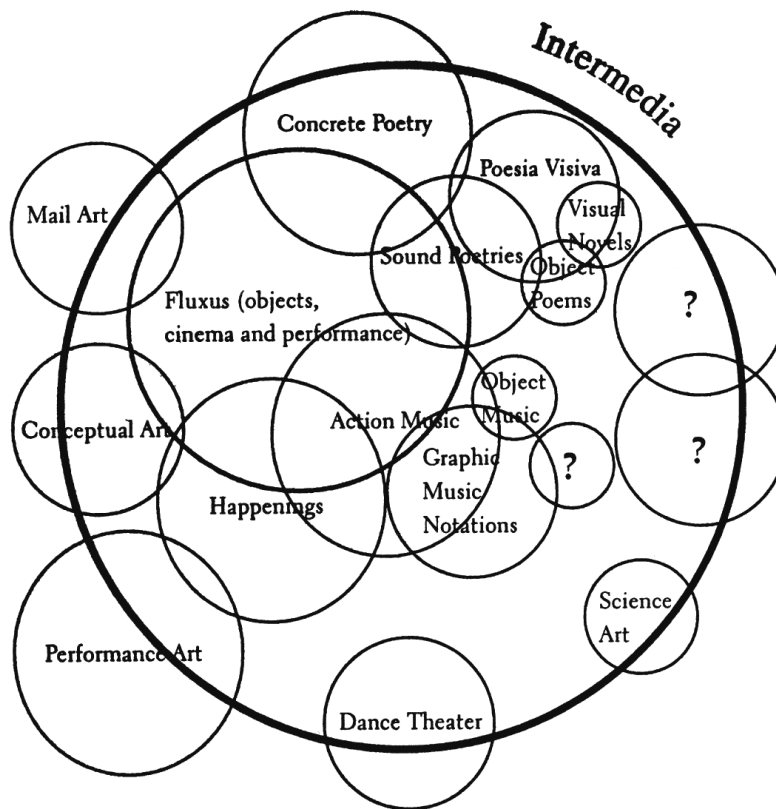


Fig. 3. Dick Higgins' *Intermedia Chart* (conceptualized in 1965, drawn and published in 1995).

* Higgins' *Intermedia Chart* is taken from: Dick Higgins and Hannah Higgins. *Intermedia*, *Leonardo*, Vol. 34, No. 1, February, the MIT Press, 2001, p. 50.

as the deconstruction of the “old” art and the creative construction of the “new” art. In the field of multimedia performative new art coming into being, many traditions, conventions, and art type boundaries as well as the professional differences between artists were transcended, which flourished in the artifacts of the Dada and Fluxus movements and which further predominates in twenty-first-century interdisciplinary art.

Music genotypes as a self-organizing (macro)system and statuses of the chromatic milieu

Postmodernist theories and new research methodologies offer preconditions for the renewal of the traumatic functioning of the epistemological approach to the music genotype. As mentioned above, for this purpose, the interpretation of system (element) and (macro)system transformations, derived from the General Systems Theory (GST) (Ludwig von Bertalanffy 1950, 1968; Kenneht E. Boulding 1956; Ervin László 1972; Debora Hammond 2010; David Pouvreau 2013) and based on the research in periodic self-organization of open systems (Liening 2020) and spontaneous self-management processes, was chosen for the present study. The connection of this theoretical model with the research in typological processes of sound art becomes clear after revealing the possibility to interpret the (macro) systems of the music genotypes of one or another historical (stylistic) period as unique elements, parts of an open, dynamic, and active system. The second condition is that these elements interact as structures of a particular chronotope of music culture, the structures of space and function. The third condition is that the interacting elements transform in a self-organizing way to create a system of new quality (a [macro]system, as it is called in the present study).⁹

Based on that, we can contend that the crystallization of new types of art artifacts takes place on the basis of a one-way logic of coming into being or in the direction of creating a new order. In her research, Margeret J. Wheatley conceptualized the ontic essence of the intersystem tension: “chaos is an inevitable process in creating a new order” (Wheatley 2006: xii). The inter-systemic “chaos” of music genotypes is to be identified in this study as the junction and transgression field of the old and the new genotype (macro) systems. Another important regularity of the development of genotypes—elements and (macro)systems from the point of view of social sciences and synergetics were published by American economist Thomas C. Schelling in his paper “Micromotives and Macrobehavior” (2006). He referred to the research evidence that dynamic systems, composed of many similar elements called “agents,” will spontaneously organize into complex, stable, self-organizing multi-agent

systems (MAS) (Howard H. Pattee, 1987, 1997; Joanna Rączaszek-Leonardi, 2009). Should we interpret these insights from the viewpoint of the theoretical epistemology of music genotypes (elements and macrosystems), we can assume that the correlations of individual genotypes (elements of macrosystems) reflect the most important laws of self-organizing, self-regulating systems:

- First, the genotype-system and (macro)system carry out energy exchange with an external cultural milieu (an open system principle), that is, the “taking” (macro) system is formed through taking over the ideas of the “giving” one.
- Second, their characteristic self-organization mechanisms presuppose the characteristics of self-destruction, the spontaneous emergence of orderly structures, and stabilization in such systems.

Such a concept of world studies, or the studies of systems synergetics, makes it possible to describe in greater detail the systems of artistic genotypes as open, self-organizing systems, the dynamics of which are based on nonlinear regularities, predicting fatal breaks, crises, and leaps for further system development (the concepts applied by Tynianov). On the basis of this interdisciplinary paradigm, the principles of functioning of the literary genre systems have been studied by Peter Bøgh Andersen (2000: 214–260); musical self-organizing systems have been discussed by Zuzana Martináková-Rendeková (2005: 6).

Compared to the changes in sound art in the 1960s, which gave meaning to the intersection of modernism and postmodernism, a turning point in sound art of a similar scale took place in the late sixteen through the early seventeenth century. In that case, Lemme Rossi’s tempered major-minor system based on equidistance octave decomposition (1666)¹⁰ displaced the modal system linking the genotypes of the medieval and Renaissance music and changed the tempering principle of the musical tone system, philosophy, and composition practice (Gioseffi Zarlino *Le Istitutioni Harmoniche*, 1558; Jean-Philippe Rameau *Traité de l’harmonie réduite à ses principes naturels*, 1722). The contrapuntal principle of composition was supplemented and conquered by the aspect of harmonic composition, the concept of *soggetto* (thematism) was replaced by increasingly compositionally interpreted thematicism, and specific aspects of music time, notation, and essential aspects of music composition also kept changing. A summarized comparative table of the cluster of elements of music composition can help to substantiate the insight into the hypothesis of changes in the (macro) systems of music genotypes in the late sixteenth through early seventeenth and in the late twentieth through early twenty-first century (see Table 1).

	A systemic turning point of the late 16th–early 17th century:	Intersystemic chromaticism, having started in the 1950s through 1960s
Concept of music	Music as sounding numbers – <i>numerus sonorus, numerus in sono</i> (Gioseffo Zarlino <i>Le Istituzioni harmoniche</i> , 1558, Part 1, Ch.. I, XII, XIV). Music as the art of affects (René Descartes <i>Les passions de l'âme</i> , 1649; <i>Musicae compendium</i> , 1650). Music as a language articulated through sounds (German <i>musikalische Sprache, Tonsprache</i> , or “the speech of sounds” – <i>KlangRede</i> ; Johann Matheson <i>Der Vollkommene Capelmeister</i> , 1739). Music as <i>ars combinatoria</i> (Marin Mersenne <i>Harmonie Universelle</i> , 1636).	Its four super-types: traditional music (folklore), art music, popular music, and interdisciplinary, multimedia art (so-called <i>Klangunst</i>).
System of harmony	The modal system was replaced by the tonal system gradually taking root. The element of the tonal system is the triad [PCS 3-11] and its derivative forms, modal-functional control of triads and seventh-chords.	The post-tonal system, the 12-tone atonal system, was replaced by neomodality, the spectrum dissemination principle, triadic afunctionality in the NRT system*, mixed individual systems, microtonal music, microdimensional music, etc.
System of rhythmic	Accentual tactometric regularity prevails	Mixed proportional systems, free, individual rhythmic systems, the metric structure replaced by a free course, individual conceptions of time.
Conception of thematicism	<i>Soggetto</i> principle is replaced by the concept of formed exposed thematicism. Thematicism becomes a basis for the musical material of a composition.	Moving away from the cantilena-type melodism, application of basic ideas, forms of generating and dissemination of the basic idea, decomposition of the spectrum (the spectrum accumulates the codes of thematicism and other parameters of the composition), individual conceptions of thematicism, etc.
Compositional techniques	The modal principle is replaced by the tonal compositional technique.	Repetitive technique, phase principle, collage technique, intertextual (transtextual) composition principle, spectralistic technique, algorithmic composition, mixed and individual techniques, etc.
Instruments and sound extraction methods	Vocal music is complemented by instrumental music and mixed vocal-instrumental forms; chamber instrumental and orchestral music is formed.	Electronic music, MIDI systems, Human Computer Interaction (HCI) 11 systems for writing “live” electronic music, etc. New technological infrastructure for sound extraction methods / sources in the field of electronic music and its varieties, mixed forms of sound extraction, etc.
Music types and subtypes	Vocal music, instrumental music; theater music, ecclesiastical music, chamber music.	Art music, folklore, popular music, sound art (<i>Klangkunst</i>), electronic music, “live” electronic music, electroacoustic music, multimedia composition, computer music, <i>musique concrète, digital music</i> , acousmatic music, indeterminism music, intuitive music, conceptual music, interdisciplinary music, multimedia projects, etc.
Music genotypes	Dramma per musica, opera, cantata, oratorio, trio sonata, <i>sonata da chiesa, sonata da cammera</i> , sonata, <i>concerto grosso, concerto da chiesa</i> , solo concert, suite, ornamental variations, ostinato variations, <i>passacaglia, chaconne</i> , etc.	Instrumental theater, performance, multimedia, scene, action, happening, video installation, sound installation, interactive sound installation, sound sculpture, musical documenting, experimental music archetypes, interdisciplinary music, musical rallies, space music, animation music, indefinite genotypes of the “new” macrosystem, etc.

* NRT, or *Neo-Riemannian Theory*, is the non-functional theory of triad transformation (connection) formulated by Richard Cohn; see Richard Cohn, Neo-Riemannian Operations, Parsimonious Trichords, and Their ‘Tonnetz’ Representations, *Journal of Music Theory* 41, No. 1, 1997: 1–66.

Table 1. Comparison of the conceptions of sound art composition in the late sixteenth through early seventeenth and the late twentieth through the early twenty-first century.

As I shall base my study on the further developed GST approach, it is also important to pay attention to the epistemology and analytical methods of the humanities. The relationship between an individual element and their macrosystem from the position of literary texts (reading and translation) is uniquely explained by the phenomenological theory of the hermeneutic circle (*hermeneutischer Zirkel*), developed in the works of Wilhelm Dilthey, Martin Heidegger, and Hans Georg Gadamer. Although the latter research was carried out on the basis of the relationships between the elements and the whole of verbal texts, the developed concept of the hermeneutic circle formulated a universal model of understanding (interpretation). Its law postulates that the whole can be understood on the basis of a part, and a part on the basis of the whole (Palmer 1969: 120).¹² In his work *Being and Time* (*Sein und Zeit*, 1927), Heidegger attributed the expression of the existential pre-structure of being (*Vor-Struktur*) to the function of the hermeneutic circle (Heidegger 1986: 153) and emphasized the ontological universality of that principle, regardless of the origin of the elements. Heidegger interpreted the hermeneutic process (circle) as a cycle of self-realization, as a universal aspect of philosophy, while Gadamer emphasized the repetition of the process. These insights offer the researcher of the music genotype systems and (macro)systems a research method in the movement of a hermeneutic (interpretation) circle: from part (or detail) to whole and back, from whole to part (or detail).

It would be methodologically beneficial to extend the principle of the hermeneutic (interpretation) circle movement by the findings of the study *Chaos and Fractals* (*Bausteine des Chaos. Fractale*) of German mathematicians and computer scientists Heinz-Otto Peitgen, Hartmut Jürgens, and Dietmar Saupe (1992) which demonstrate that the element and the system have invariance properties at different scales. This means that a system element (in this study, a specific music genotype) replicates the structure of a (macro) system by its own structure, while the evolution of a (macro)system imitates the evolution of the system element on a larger scale. In other words, a system can be understood by studying its subsystems (differentiated elements) and vice versa.

The music of the late twentieth century moved away from “thinking in keys” towards spectrum decomposition; composers’ mindsets are predominated by intense interdisciplinary synthesis, and the philosophical conception of opuses, by performativity and a concert manner of thinking; the differences between professional divides are disappearing, and the trend of a universal artist becomes more pronounced; international interdisciplinary teams of artists get together in a creative process. According to the author of the study, the intersystemic “chromaticism” of music genotypes is realized by a characteristic network of

genotypic statuses, which includes the already mentioned categories (Daunoravičienė 1990: 12–21; Daunoravičienė 2020: 39–62; Daunoravičienė 2022: 149–193):

- transformed mono-genre of the “old” system,
- polygenre,
- free genotype,
- mono-genre of the “new” system,
- different variants of their mixes.

In the evolution of music and literary genotypes, the creative processes of the intersystemic “caesura” must be recognized as a creative precondition for the creation of the “new.” This stage of development is characterized by substantial modifications of the formed art canons and indicates the “crossing” of genetic forms as well as the possibility of the formation of new taxonomic layers of art.

Hierarchical meanings of the term “(macro)system” of music genotypes and their further development

The concept of an open, self-organizing system made it possible to view the music genotype(s) – the system and the (macro)system – as an object whose dynamics is based on the regularities of nonlinear processes predicting crises and chaos phases, with the recombinations of the “old” and the new genetic traits taking place in their milieus. A dynamic, interacting milieu of systemic elements in terms of the GST and synergetics is an important indicator of the (macro)system change. Based on the principle of invariance (isomorphism) of different scales, it is possible to see the logic of the element development in the evolution of a higher level (macro)system by placing research objects in a two-way coordinate system: analyzing them from both the element and their (macro)system positions. However, we must admit that the method of research in open, self-organizing systems developed in the GST and the systems synergetics theories has not yet been effectively applied in the discourse of musicology for the studies of genotypes.

Emphasis has been placed on the concept of a dynamic, changing music genotype, which, upon absorbing the logic of the GST and synergetics as its variant as the logic of the developmental principles of systemic objects, envisages the logic of their developmental leaps, perturbation, and the crisis (bifurcation) instability processes. The complex interactions of the open system, both within the (macro) system (hybridization of genotypes) and with other complex systems (manifested by interdisciplinarity, mediality, and common genotypes in different fields of art), lead to a constant energy exchange (“diffusion” of ideas). They predetermine the consequences of the formation of mixed phenomena of various typological hierarchies, which is evident at present, starting with the genotypes of music and

ending with the fusion of art types and the arts themselves. Rosalind Krauss calls the consequences of this process the concept of post-medium art (Krauss 2000).

The abovementioned methodological approach and the reality of music composition make it possible to interpret the intersection field of the genotype systems/(macro) systems as an active “seismic zone” where typological transformation processes take place: emission of the giving “old” (macro)system genotype features and crystallization of the taking “new” genre (macro)system elements (genotypes). The recombinant interaction of genotypic traits, the disintegration of the old institutionalized typological forms, and the emergence of new ones can be considered a general, universal form of the relationship between the genre (macro)systems. At the elemental level, abundant states of interacting genotypes are observed in the environment of the macrosystem change. Reiner Kluge opposed hybridization and the formation of new genotypes as an alternative to the decline of the genre. He noted:

However, instead of a degenerate late phase, a phase of transition to another genre, a mixture of [several] genres, or the like, characterized by a fundamental transformation of the system, may occur. (Kluge 1974: 120)

In the present study, an assumption that the relative dates of the late sixteenth and late twentieth century may mark an upheaval in the music genotype (macro)systems of sound art can serve as a theoretical hypothesis. The proof is provided by the comparison of the renewal of the structural layers of music composition during those periods of time, presented in Table 1. No less important is the sense of passionary,¹³ according to Lev Gumiliov, or catastrophic, according to Yuri Tynianov, development of sound art and a leap in development as well as obvious documentary testimony of the transition to a higher stage of development, aroused by creation manifested in unconventional and vigorous forms (Тынянов 1977). The holistic concept of the functioning of the music genotype / (macro)system as a self-organizing system and its study offers three new approaches to the theoretical epistemology of music:

First, a new epistemological approach makes it possible to notice that the mechanisms of self-organization regulate both the beginnings of the system and the further stabilization of its canon, the process of both the spontaneous birth of its order structures and the characteristics of self-destruction (what in musicology was called as the order of the symbolic emergence, blooming, and decline/extinction (Kluge 1974: 120–121). In other words, it was synonymous with the “life cycle” model of the genre as an “art organism” and their metasystems.

Second, a possibility to interpret systems/(macro) systems of music genotypes as open self-organizing phenomena, the dynamics of which is based on non-linear

regularities, predicting turning points, crises, and leaps that are crucial for the development of the system. The element and the system have the trait of invariance of different scales: the system element (a specific genre of music) in its structure copies the structure of the (macro)system, while its evolution imitates the evolution of the element on a larger scale.

Third, because systems exchange energy with an external socio-cultural milieu (a characteristic of an open system), this means that system elements (music genotypes) and new (macro)systems form through taking over the ideas of the old ones and, conversely, radiate them in the destabilization stage after canonization. Within the (macro)system, the interrelationships of the genotypes-elements are characterized by the relationship of homeostasis – their interrelationship exceeds the extent of the relationship with the external socio-cultural system.

The transformative state of contemporary music in terms of the ontology of genotype-system becomes the main argument for ascertaining the probable ontic process of a self-organizing (macro)system of the new genotypes. Such an approach encourages support for the concept of a linear process of cultural cyclical development. On the basis of these insights, the evolution of the art of music is to be seen as a chain of cycles of cultural development. The conceptual review planned in this study is based on the decision to recognize the objective change in the genre (macro)systems, because the evolution of the art typologization process is realized through repetitive cycles of change.

Endnotes

- ¹ The concept of Mikhail T. Prosniaikov (Михаил Т. Просняков, 1989).
- ² The concept of ancient Greek theory of music, denoting practice of music; see Babich 2005: 171.
- ³ Jonas Mekas argued: John Cage, Jurgis Maciunas, and other “impractical” avant-garde artists have contributed more to our spiritual, inner development and growth over 40 or 50 years than all the political movements, systems, revolutions, and theories that ended and summed themselves up in the graves of millions of martyrs. (Lukšas 2010)
- ⁴ The word *fluxus*, a noun, verb, or adjective (Latin: *flux / fluere* = flowing, short-lived) had 17 different meanings: flow, torrent, the name of drugs that remove fluids from the body, etc. Maciunas hoped to publish special issues of the magazine in the USA, Japan, Western Europe, and Eastern Europe.
- ⁵ Jonas Mekas wrote: George’s contribution to the development of Western art is as important as that of Čiurlionis. Yet my Lithuanian brothers will say that I became a fool, too. ... Jurgis and Čiurlionis will meet us at the gate of Paradise and let us in. Provided, of course, we have not yet forgotten our small, unimportant [folk] songs ... (Lukšas 2010)
- ⁶ According to Maciunas, the years 1963 to 1968 was the Flux Golden Age, one of the stages in the movement that ended with the death of Maciunas in 1978. In the context of avant-garde art, Emmet Williams placed Maciunas next to Tristan

- Tzara, André Breton, Marcel Duchamp, and John Cage (Williams and Noël 1997: 9).
- ⁷ Maciunas's *Fluxus Manifesto 2* (1965) was different from *Manifesto 1* and incorporated some of Henry Flynt's ideas. Thus, the *Fluxamusement* idea was based on the adaptation of Flynt's *Veramusement*: Maciunas glued the *flux* root to Flynt's neologism (French: *Ver Amusement*: 'Worms' Fun, German *Vera Muse Ment*) Flynt's concept denoted one of the art abolishment positions.
- ⁸ Dick Higgins' *Chart* was first published in the *Something Else Newsletter* No. 1, 1966, p. 1–3 and in: Dick Higgins. *Horizons, the Poetics and Theory of the Intermedia*, Carbondale, IL: Southern Illinois Univ. Press, 1984, etc.
- ⁹ To study the mechanisms of transition from one state to another, synergetics applies mathematical models and methods.
- ¹⁰ A mathematical equal temperament formula $x_i = N \sqrt[(x_0)]{N-1} (x_N)^i$ was proposed by Simon Steven as early as in 1580–1610.
- ¹¹ Human Computer Interaction (HCI) systems: human-computer interaction systems are an interdisciplinary field dedicated to the multifaceted research in *homo sapiens* and computer collaboration. This is a twenty-first century technology-based innovative sound extraction method that integrates new types of music – MIDI systems, electronic music, etc. An important feature of HCI is the gesture-controlled sound based on the information transmitted by the microcontrollers and sensors.
- ¹² Wilhelm Dilthey cited sentence comprehension as an example of a hermeneutic circle, emphasizing that meaning was always contextual: "Meaning essentially grows from the part-to-whole relation" (quoted from Palmer 1969: 120).
- ¹³ Pasionarity (Latin *passionarium*: passion) is a concept applied by Goethe and Heine, which they perceived as a personal creative force that expands the horizon of the creator's possibilities. The passionarity of a creative personality is expressed in the ability to resonate with others' ideas as a "magnet" that establishes connections between literary phenomena. On this basis, Goethe dreamed of the formation of "world literature" (*Weltliteratur*), his *The Sufferings of the Young Werther* (*Die Leiden des jungen Werthers*, 1774) was regarded as a story of global passionarity (*eine weltliche Passionsgeschichte*). See: Bruce Duncan. *Goethe's Werther and the Critics*, published by Camden House, 2005. Tynianov and Bachtin interpreted the concept of passionarity as a symbol of becoming and creative energy.
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Santrauka

Straipsnio autorės sukurtas muzikos genotipo (žanro) teorinis modelis, publikuotas šio žurnalo XXII tome (2021), nuodugnai pristatytas 2022 m. išleistoje mokslinėje monografijoje „Muzikos genotipo teorinis modelis“. Mokslininkė ne tik pagrindė tradicinės sąvokos „muzikos žanras“ sinonimą „muzikos genotipas“, bet ir žvalgėsi sistemiskai organizuotų dinamiškų reiškinių / objektų tyrimams adekvačios metateorinės paradigmos. Jau nuo 1990 m. muzikos genotipų tyrimams ji taikė bendrosios sistemų teorijos (BST) metodologijos konceptus (Bertalanffy 1968; Pouvreau 2013), kurie buvo grindžiami pasitelkus jos atmainos – sinergetikos – teoriją ir joje plėtojamą chaoso teorijos požiūrį (Wheatley 2006). Ši konceptuali prieiga pagrindė muzikos genotipo – sudėtingos sistemiskos struktūros ontinį saviorganizacijos principą. Tai padėjo autorei išvelgti muzikos genotipų (makro)sistemų homeostazę ir tuo pagrindu interpretuoti tiek (makro)sistemų elementų (genotipų), tiek jų istorinių sankaujų plėtotės koncepciją.

Menotyrimų požiūriu, muzikos genotipai yra tradicijų saistoma muzikos raidos ontinė sąlyga, individualaus meninio intelekto sukurtų produktų tapatybės ženklas, rekursyvinė saviorganizuojanti sistema (Liening 2020). Tyrinėdama XVI a. pab. ir XX a. pab. profesionaliosios muzikos tipologinius procesus, autorė išvelgė ir susistemino „chromatinėms“ tarpsteminėms terpėms būdingas muzikos genotipų formas. Jas ji išdėstė dinamiško modelio, kuris aprėpia senosios sistemos monožanrus, poližanrus, laisvuosius žanrus, naujuosius monožanrus, forma, pripažindama jų hibridizacijos būseną kaip imanentinę dinamiško kaitos proceso išraišką. Muzikos genotipo teorinio modelio viena pamatinių tezių tapo genotipo (sistemos) ir jų istorinių sankaujų (makro)sistemų funkcionavimo izomorfinė tapatybė. Pabrėždama sisteminiams objektams / reiškiniams imanentišką skirtingų mastelių izomorfizmo principą, autorė išvelgia elemento ir jų sistemos raidos logiką XX–XXI a. muzikos genotipų (makro)sistemos evoliucijoje. Atviros saviorganizuojančios

sistemos koncepcija leido tyrėjai į muzikos genotipą (sistemą), kurio dinamika remiasi netiesinių procesų ypatybėmis, ir jo (makro)sistemą žvelgti kaip į izomorfinius objektus.

Pastarieji numato abiejų hierarchiškų sistemų krizes ir chaoso fazes, dėsningą „senųjų“ ir „naujųjų“ genetinių požymių rekombinaciją. Sąveikaujantis, dinamiškas sisteminių elementų / reiškinių procesas BST ir sinergetikos teorijų požiūriu yra svarbus (makro)sistemų funkcionavimo rodiklis. Reikia pripažinti, kad BST ir sinergetikos teorijose sukurtas atvirų saviorganizuojančių sistemų tyrimo konceptas dar nėra efektyviai pritaikytas muzikologijos problematikos objektų tyrimams. Šios dinamiškos saviorganizuojančios sistemos nuo XX a. 6–7 deš. patiria intensyvaus kismo ir transformacijos procesus, dėl kurių galbūt kristalizuojasi naujoji garsų meno tipologinė (makro)sistema.

Garsų meno postmodernistinio „lūžio“ garsų meno tipologijos transformacijas lėmusios prielaidos straipsnyje eksponuojamos autorei jas išvelgiant XX a. aktyviausių meno manifestų tezių deklaracijose (žr. 1 ir 2 pvz.). Meno tipologijos sistemos transformacijas liudija tarpsteminio „chromatizmo“ situacijoje dokumentuota *Fluxus* menininko Dicko Higginso 1965–1995 m. naujųjų tipologinių meno formų „Intermedijos“ schema (3 pvz.). Argumentuodama vykstančios muzikos genotipų tarpsteminės „chromatinės“ transformacijos hipotezę, autorė pasitelkia ir trečiąjį tiriamąjį komparatyvistinį „pjūvį“. 1 lentelėje sutelkiami svarbiausi faktai, išskylantys lyginant panašaus masto muzikos tarpstemininių perversmų (XVI a. pab.–XVII a. pr. ir XX a. pab.–XXI a. pr.) procesus.

Straipsnyje akcentuojama dinamiško, kintančio muzikos genotipo samprata, pagrindžianti sisteminių objektų raidos principų logiką, numatanti šių objektų (reiškinių) raidos šuolius, perturbacijas ir krizių procesus (Тынянов 1977; Wheatley 2006; kt.). Sudėtinga atviros muzikos genotipų sistemos elementų sąveika tiek (makro)sistemos ribose, tiek su kitomis sudėtingomis sistemomis, pasireiškianti tarpdiscipliniškumu, medialumu ir bendrais genotipais įvairiose meno srityse, lemia nuolatinius energijos mainus ir idėjų sklaidą. Procesai kartu inicijuoja įvairių tipologinių hierarchijų mišrių reiškinių formavimąsi. Šios pasekmės akivaizdžiai implantavosi XXI a. mene, pradedant bendrais meno genotipais ir baigiant meno rūšių ir pačių menų susiliejimu. Rosalind Krauss šio proceso pasekmės vadina *post-medium* meno koncepcija (Krauss 2000). Vykstantį senosios muzikos genotipų (makro)sistemos iširimą ir naujosios (makro)sistemos formavimąsi intuityviai jaučia ir amžininkai menotyriminkai, ir paties meno proceso dalyviai, tačiau jam paliudyti reikia konceptualios teorinės prieigos ir nemenko stebėtojų atsitraukimo chronologiniu požiūriu. Tikėtina, straipsnyje išdėstyta tiriamoji pozicija padeda paaiškinti šiuolaikybe vykstančias garsų meno taksonomines ir tipologines metamorfozes.