Journal of History Culture and Art Research (ISSN: 2147-0626) Tarih Kültür ve Sanat Araştırmaları Dergisi

Vol. 8, No. 2, June 2019

DOI: 10.7596/taksad.v8i2.2001

Citation: Cherniak, Y., Barantsova, I., Biletska, M., Mitlytska, V. & Pidvarko, T. (2019). Transformation of Sound Cipher Complexes in the History of Musical Art and Their Specific Manifestations in the Work of Composers of the 17th - 21st Centuries. Journal of History Culture and Art Research, 8(2), 301-309. doi:http://dx.doi.org/10.7596/taksad.v8i2.2001

Transformation of Sound Cipher Complexes in the History of Musical Art and Their Specific Manifestations in the Work of Composers of the 17th - 21st Centuries

Yevheniia Cherniak¹, Maryna Biletska², Irina Barantsova³
Viktoriia Mitlytska⁴, Tetyana Pidvarko⁵

Abstract

The article discusses the features of sound cipher complexes in the works of famous composers-representatives of different styles and trends. The phenomenon of monograms in the baroque art of J.S. Bach, the semantics of musical anagrams revealed in the works of R. Schumann and the peculiarities of the manifestation of onamophony in postmodernism also considered. The transformation of separate sound cipher complexes in the historical development and the development of musical art is traced. It is emphasized that when studying musical material containing onamophony, the performer traces the patterns of stylistic changes in composer's thinking, analyzes the semantic features of the musical language, and reveals the author's idea in the process of creating the original interpretation of the work.

Keywords: Onamophony, Musical monogram, Symbolic overtones, Musical lexemes, Music monointonation, Postmodernism, Polystylistics.

_

¹ Bogdan Khmelnytsky Melitopol State Pedagogical University, Ukraine Department of Instrumental Perfomance and Variety Arts Ph.D. (Pedagogy), Associate Professor. E-mail: evgenya1551@gmail.com

² Bogdan Khmelnytsky Melitopol State Pedagogical University, Ukraine Department of Instrumental Performance and Variety Arts Ph.D. (Pedagogy), Associate Professor. E-mail: violinchik@ukr.net

³ Bogdan Khmelnytsky Melitopol State Pedagogical University, Ukraine Department of English Philology and Methods of Teaching English Ph.D. (Pedagogy), Associate Professor. E-mail: irene25@list.ru

⁴ Bogdan Khmelnytsky Melitopol State Pedagogical University, Ukraine Department of Instrumental Performance and Variety Arts Ph.D. (Pedagogy), Associate Professor. E-mail: viktoriamitlitska@gmail.com

⁵ Bogdan Khmelnytsky Melitopol State Pedagogical University, Ukraine Department of Instrumental Performance and Variety Arts Senior Lecturer. E-mail: rifusya_@ukr.net

Introduction

The problem of cryptography has always attracted the attention of researchers from various fields of human knowledge. And this is quite understandable, because the Universe and its components, the natural processes occurring around us, are endowed with hidden meanings. Ciphering attracts attention and contains something mystical. It is known that many ancient texts, masterpieces of literature are filled with secret meaning. Encrypted messages are contained in works of famous writers and poets (A. Dante, J. Joyce, T. Mann, W. Shakespeare, and others).

Ciphering plays a big role in music. It is here that sound cryptograms help to reveal the meaning laid down by the composer, to reveal the characteristic properties of the semantics end symbolisms of the works (Lippman, 1953).

In scientific sources, terminology is used that operates with enigmas, anagrams, cryptograms or cryptographic sequences. However, the term monogram is often used, which is a musical cipher consisted of a complex of letters and sounds, created on the basis of a personal name (Yuferova, 2006, p. 5).

It must be said that the problem of expressing individuality through a name, as well as attempts to comprehend its essence is considered one of the most difficult in the musical art. The name, encoded with a monogram-emblem, is common among composers representing different styles and directions. There are several options for determining the specified phenomenon. For example, Yu. N. Kholopov introduces the concept of "literaphonia" or alphanumeric emblem (2006, p. 590). A monogram can be represented by verbal and pictorial figurative encryption, and to clarify its individual meaning, abbreviations, cryptograms, ideograms, logograms, and other forms are used.

The monogram, according to I. Snitkova (2015), is a kind of "nominative-symbolic" cryptophony. It arises from the taboo on uttering aloud some names and objects, which are replaced by encrypted symbols and characters. Analyzing the modern trends in musical art O. Surminova (2011) uses the term "onamophony", which means not only an encrypted proper name but also symbols indicating certain cities, phenomena, concepts. When a nominal monogram is nominated, a sound transcription of the name occurs, where each letter corresponds to a tone of a certain height.

Research Methods

The scientific basis of the article is the use of such methods:

- The method of historicism in the study of musicological works devoted to the designated problem of the cipher complexes;
- Summarizing the results of studies of sound cipher complexes in existing musicological works;
- Comparative analysis in the study of sound cipher complexes of different musical and stylistic epochs;
- Identifying the features of sound cipher complexes characteristic of the music of the baroque, romanticism and postmodernism;
- A panoramic method in describing historical modifications of the sound cipher complexes as an imagesemantic unit.

The Phenomenon of Ciphering in the Works of J. S. Bach

According to studies the presence of well-known monograms in the works (for example, BACH – J.S. Bach, DSCH – D.D. Shostakovich) means not only fixing a specific code, but also symbolizes the standard of musical art. Thus, the monogram has the properties of an iconic sign and at the same time symbolic features with a large semantic potential. In the phenomenon of monogram the mythological features are traced. This means that the meaning of the name code is reflected in the motif outline of the musical monogram. When

the alpha-sound complexes (anagrams) change, onamophonies that enhance the hidden meaning arise completely unexpected (Kudryashov, 2010).

Coded surnames and various combinations of initials of famous composers act as onamophones:

```
Alban Berg – AB;
Alfred Schnittke – A (D) SCH;
Arnold Schoenberg – AD SCHBEG;
Dmitry Shostakovich – DSCH;
Joseph Haydn – EsEF AD;
Lyadov – La-do-f;
Sofia Gubaidullina – EsG;
Shchedrin – SHCHED;
Edison Denisov – ED(Es).
```

Possessing a symbolic essence, the monogram is capable of forming the outline of a polysemantic space. Obviously, one of the sides of the musical emblem is the identity of the object of a particular person. Its important feature is the overcoming of subject-sign limitations, as the monogram is transformed under the influence of a new style. Thus, its old meaning is leveled and a different meaning is acquired.

When an alphabetic character is encoded into a musical symbol, the information canvas, which is hidden in the name of a person, is revealed in the context of a certain person who stands behind that name.

A striking example is the Bach monogram, which is distinguished by multi-valued symbolism. Its original meaning (translated from the German word Bach) is "stream". The subtext of the monogram is the path of genius, which consists in perpetual nonstop progress. Consequently, not only the name of the composer is encrypted in the musical monogram of BACH but also contains the symbol of baroque art. In the genesis of musical art, the combination of four letters symbolizes the timeless mark of a brilliant master.

The character function of sound codes is enhanced when they are used several times. When synthesized with words, their emotional impact increases significantly. The work of the German composer is replete with musical, numerical, graphic symbolism, where the symbols of the cross and circle have a special meaning (Nosina, 2011).

A. Schering discusses the issues of semantics and the polyphony of meanings in J.S Bach's music. The author emphasizes expressive and graphic functions of Bach signs, which include rhetorical musical figures, timbres, genres, etc. (Schering, 1925).

Many researchers are also attracted by the author's monogram of J.S. Bach. Taking into account the fact that the end-to-end sound complex is found in works of various styles and trends, the works reveal numerical, graphic aspects of cipher coding and connections with intonationally similar motifs. In different types of ciphering a special kind was differentiated, based on intuitive perception, and different from the traditional one. This is justified, since the most significant contrast to the music of the Baroque era is the combination of the polar tendencies of sensationalism and symbolism (Kudryashov, 2010).

The complex semantic maze, formed by the interweaving of contrasting poles, is often presented in the structure of musical works (for example, "The Small Harmonic Maze" by J.S. Bach). Naturally for Baroque, the inclusion of musical affects in the idea of the true effect of music on the listener also emerged. The latter are considered as rationally tempered, typologically constructed canons in the depiction of the senses.

The symbolic slide was defined in the baroque musical thinking (the idea of orderly knowledge). This is quite explainable aspiration of this style to all sorts of codifications and classifications (genres, affects, rhetorical

figures). We should note also the emergence of the largest theoretical treatises, where music relates to all spheres of the universe (I. Kepler, A. Kircher) and the emergence of not only unsurpassed in concentration of musical thought but also universal masterpieces, like "The Well-Tempered Clavier" or "The Art of Fugue" by J.S. Bach. The ground for the richest flourishing of musical symbolism – motif, genre, letter, number, was created.

Personal musical figures were revived in the era of romanticism, primarily due to the resurrection of Bach's heritage from non-existence. The increased interest in the aesthetic tenets of baroque music led to an appeal to rhetorical utterances, symbolic overtones, alphanumeric cryptograms. However, musical lexemes, leitmotifs, monograms relied on personal-individual attitudes, especially in programmatic works.

The Symbolism of the Sound Complex in the Works of R. Schumann

The impact of musical images was greatly enhanced in the compositions based on the plot basis. First of all, in the cycles of the German romance Robert Schumann "Butterflies" (Jean Paul Richter's novel "Flegeljahre"), "Kreisleriana" (works by E.T.A. Hoffmann).

The composer sought to streamline aphoristically vivid and laconic fragments, to reconcile the two intonationally polar characters (Eusebius and Florestan). He tried to overcome the kaleidoscopic nature of various episodes with the help of a suite of a through structure, where music monointonation often played a cementing effect (Zhitomirsky, 1964, p. 265).

The intonational integrity of thematically contrasting cycles was achieved through the use of encrypted motifs. In the first bars of Schumann's work "Variations on the Theme of Abegg", the key to the clue was hidden. The alpha-sound cipher means not only the name of Meta Abegg, familiar to Schumann from Heidelberg, but also becomes the intonational source for the further development of all musical material.

The subtitle "Little Scenes Written by Four Notes" contains the answer to the mysterious cipher code "Carnival". The history of the laconic theme is rather prosaic: the letters that make up the outline of the motive are the name of the Bohemian city of Ash (Asch), where Ernestine von Fricken lived – the love of the young composer. However, upon closer examination it can be seen that three of the four notes are consonant with the first letters of the composer's last name.

The choice of a monogram topic is a good one, although its genesis is alphabetic. In the composition of the cryptogram an enlarged second, a reduced fifth and a reduced fourth are hidden, which contributes to a rich intonational unfolding of the thematic "embryo". On these repeated moves, one of the most mysterious plays of the cycle, "the Sphinxes", is built, acting as the symbolic key of the entire work (Merkulov, 2011).

The free deployment of intonational-thematic structures contains an important property of the technique of composition of the German romantic. Its specificity lies in the fact that bright, relief, laconic "aphorism" motifs, which sometimes dominate and sometimes veil in the general sound stream, replace the clearly outlined melodies. The composer's penchant for polyphonic presentation of texture is obvious.

E. Sams (1965) puts forward a hypothesis of the existence in R. Schumann's works of an extensive cryptographic system that allows the composer to introduce elements of an extramusical series into the sound fragments, the basis of which was Schumann's letters . On the contrary, E. Wellesz (1965) advances the idea of the primacy of the musical principle over the extra-musical, the primacy of creative imagination over speculative constructions.

In the contrapuntal transformation of musical material, especially in imitative roll calls, the intensity of dynamic tension and the emotional impact of the works increases. The piano cycle "Symphonic Etudes" is replete with a huge range of polyphonic variation: from simple imitation to multi-theme counterpoint

connections. If one imagines graphically the outline of the Schumann texture, then an association with living, changing tissue, constantly changing and elusive, arises.

Referring to documentary sources, the epistolary heritage of prominent composers helps in the study of musical ciphers. It contains descriptions of vivid events of their personal life, indirectly or directly influencing the emergence of monograms, ways of constructing musical ciphers.

Features of Musical Onamophony in Postmodernism

In the musical works of composers of the 20th – 21st centuries, the choice of sound complexes is due to the peculiarities of the authors' thinking. According to A. Schnittke, the composer is interested in works where the largest number of cipher programs are hidden (Ivashkin, 1994, p. 72). This is explained by the desire for reminiscence of the musical past, and, as a result, by referring to the sign, numeric and letter codes of Baroque and Romanticism. The emergence of monograms was facilitated by the leveling of the personal principle in the work in combination with the aesthetics of polystylistics, the free operation of symbols and intertextuality.

The patterns characteristic of the art of this period determined the "mobility of the monogram meaning" in the works of some composers. Analyzing their works, containing various versions of monogram names, O.V. Surminova suggested using the term onamophony ("onim" – the name, and "phone" – sound) (2011, p. 4). Thus, traditional terminology is not abolished, but only the meaning of the concept is clarified and specified, providing the opportunity to use onamophony as a translation of verbal text into a system of musical signs, and as a feature of composer encryption in a specific historical context.

If a monogram acts as a concrete nominal abbreviation, then onamophony goes beyond the sounding name, revealing a wide field of voicing reality with names. The postmodern reality is distinguished by "supramental", non-authorial thinking, functioning in a special system of musical language. Often composers include historically significant named codes in symphonic works. For example, Alfred Schnittke's Concerto grosso, Symphony № 5 by Boris Tishchenko (Yuferova, 2006).

There are also many works of memorials, where the name cipher becomes almost the only intonational material (musical dedications to D.D. Shostakovich with the DSCH monogram). Also in the process of blurring the components of the name-monogram the onamophonic formula acts as an abstract pattern for modeling the artistic context of a musical composition ("Quintet RG5" by R. Gonia and others).

The most frequently encountered forms of musical cipher complexes include anthroponyms with initials (DSCH of Dmitri Shostakovich, ASCH of Alfred Schnittke; SG of Sofia Gubaidullina), last names (BERG – Berg; SHCHED – Shchedrin); various forms of names (SASCHA – Alexander; La-Re-Cis – Larisa, etc.). It is not uncommon for names and surnames to be simultaneously used in onamophonic constructions (for example, AEBE – Anton Webern, ADSCHBEG – Arnold Schoenberg). In the process of verbal-audio coding, alphabetic, syllable or mixed versions are used. A number of composers, developing the cryptophonic tradition, use their own invented "alphabet" to encrypt proper names (D. Smirnov, I. Sokolov). Composers, resorting to onamophony, use both homophonic-harmonic ("Monograms. Four initiations" for the string quartet by Yu. Tolkach) and polyphonic ("Polyphonic variations on the B-A-C-H theme" by L. Lubovsky) texture.

The nominal monogram is often the main core of the series of representatives of the New Vienna school (suite for piano, op. 25 by A. Schoenberg, string quartet, op. 28 by A. Webern). In such works, the monogram and the series are identified, their synthesis in the whole image. Often the serial number is completed using the monogram transformation. Sometimes onamophony is an important component of the obscure-themed complex ("Collage on the B-A-C-H theme" by A. Pärt), and the features of the onarhythmic formula are traced in numerical and rhythmic encryption ("Etude on the BACH rhythm" S. Zagnia).

However, with all the variety of compositional techniques, the natural functioning of onamophony implies its harmonious "introduction" into the intonation context of a musical work. In this case, the monogram becomes the stylistic know-how of the composer.

Thus, monograms:

BACH – hemitone sound field;

DSCH – tetrachord of the Phrygian mode by Shostakovich;

EDS – E. Denisov's recognizable outline of the touch sound complex.

Creating a new context based on a ready-made dictionary – features of the musical art of postmodernism. For it, the polystylistic tendencies, the use of intertextual principles by composers, collages and quotations, game characters, post-followings are illustrative.

Thus, the composer Areo Pärth in his work "A collage on the B-A-C-H theme" combines the design features of the series, the technique of a sono-cluster composition with individual forms of baroque music and the Bach monogram. The combination of such diverse thematic layers leads to the creation of a completely new reality, and the musical material is saturated with unexpected timbres.

Frequently, the composers turn to onamophonic formulas as quotations. Opus by E. Denisov "DSCH" is based on quotes from the quartet Nº 8 and symphony Nº 5 by D. Shostakovich, and B. Tishchenko operates not only with this emblem (the reverse quote), but also tries to preserve the stylistic features of the great master's language (Yuferova, 2006).

Harmoniously fitting into the structure of modern essays, the formula of onamophony often acts as an integral attribute of the gaming space, where systematized game rules with names prevail. The potential of a cipher sound complex is realized in a variety of styles (pointillism, sonoristics, serial technology). Monogram game transformation helps to free listeners and composers from annoying clichés, to build a model of the phenomenon under investigation. So, the work of composer R. Gonia "Quintet RG5" is a mix of Bach symbolism, overtone harmony with verbal text. The author does not seek to become an inventor of the new technology, but designs his work on the basis of ready-made modules – the musical alphabet, cipher, and onamophonic formula.

The musical space is a certain detachment from reality, speaking as a meditative manifestation of the thinking of its creator. Reflexive self-deepening, detachment from the outside world (meditativeness) cause expressive techniques of musical utterance. Distinctively meditativeness can be traced in the works of Ukrainian author Valentin Silvestrov. In "Postlude 08 CH", where the leitmotiv intonations of the monogram dissolve in the worldview, as a result, the emblem disappears into the postlude space.

Discussion

The dialogue structure of the literary text (Bakhtin, 1994), the verbal nature of the "musical name" led to the concept of the dialectic relationship between the phenomena of the Word and Music, which was developed by musicologist Y. Kholopov (2006).

The system of Bach sound codes is revealed in the works of B. Yavorsky. Studying the cantatas and oratorios of the master, he drew attention to their close intonational connection with many instrumental compositions. The symbolism of the composer's musical heritage has been the subject of special studies (Berchenko, 2005). M. Chershintseva (2010) proposes to consider Bach's musical ciphering as a manifestation of the phenomenon of coding in the context of the historical development of art. Musical coding is a specific method used by J.S. Bach for veiling information, as well as a specific art form, fixing sacred and cult meaning. These tendencies are traced in the graphic depiction of the instrumental compositions of the German master.

As a result of the generalization of the information received, works appear where questions of musical ciphering are considered from one or another point of view (Surminova, 2011). According to them, on closer examination, any works appear as some kind of ciphering (steganography), because the prehistory of their creation, the performing interpretation, the individual perception are conditionally symbolic. In this case the sound of music acts as a kind of holistic symbol that returns the listener to the ancient archetypal images: from leitintonation (lowering fourth move – heroism, courage; raising second – grief, loss) – to leitmotifs (for example, Dies irae); from the symbolism of individual numbers – to branched cipher complexes (Kudryashov, 2010).

In researches devoted to the study of sound encryption in semantics and semiotics of musical language, the sign nature of monograms is revealed, their explicit or hidden relationship with baroque rhetorical figures is traced (Kudryashov, 2010; Nosina, 2011).

Quite often coding of musical material arises in the process of studying the works of famous composers, which contain musical riddles (R. Schumann, D. Shostakovich, A. Berg, S. Gubaidullina, and others).

According to the research of M. Bakhtin (1994) onamophony is analyzed through the concepts of "single-voice" and "two-voice" words. The "mono-voiced" word includes the authors' nominal emblems appearing in the works of their own style. They appear most often where the composer, seeking to personification, refers to a musical portrait − a monogram. Such is D. Shostakovich's monogram DSCH, which was used by him in Symphony № 10 and Quartet № 8. The unique EDS ciphergram, found by E. Denisov accompany many author's works (Surminova, 2011).

Among the varieties of "two-voice" words the unidirectional, multidirectional and active types are defined. When composers resort to "unidirectional monophonic words", the author's intention does not contradict the "someone's" meaning but connects with it in a single process. As an example we can note the stylization used by B. Tishchenko in the symphony № 5, where semantic one-directionality is achieved through the operation of D. Shostakovich's intonation lexemes of the musical language (Yuferova, 2006).

Multidirectional two-voice words can be traced in the event when the composer, appealing to someone's word, introduces it into his plan, in his author's interpretation. One has to note distance, comparison, often with ironic overtones when referring to a "someone's" word. An example of such word is the work by E. Irshai "BACH-ACH-CHA-CHAOS" (onamophony BACH). The author lays out the topic into separate intonations, so the emblem undergoes amazing metamorphoses, becoming the musical realization of a new idea (Yuferova, 2006).

Thus, it can be stated that the musical sign of Postmodernism is the absence of melody, harmony, that is, the traditional meaning of the constituent elements of the musical texture undergoes significant changes (Kholopov, 2006). It is natural that composers turn to the monograms of great masters. Using them as symbols, they maintain a steady relationship with the culture and history of musical art. At the same time, when composing a work, authors often rethink stylistic canons, striving to embody specific intonations, revealing the semantic essence of music with the help of modern technique (Kholopov, 2006).

In the process of learning new pieces of music, containing onamophony, the performer gets the opportunity to trace the patterns of stylistic changes in the composer's thinking, to understand more deeply the semantic features of the musical material, to reveal the author's idea in the original interpretation (Chernyak, 2018).

Researchers of the transformation of sound cipher complexes in the history of musical art focus their attention on the special "encryption" of works by composers of the 21st century, who have absorbed the entire arsenal of the cultural heritage of mankind.

Conclusions

- 1. The Bach Monogram (BACH) is an example of multi-valued symbolism, where not only the name of the composer is encrypted, but also the symbol of baroque art is present. When synthesized with words, the emotional impact of sound codes increases. The work of the German composer is replete with musical, numerical, graphic symbolism, where the symbols of the cross and the circle have a special meaning.
- 2. The symbolic beginning in the works of R. Schumann is traced in the process of interaction of two polar musical layers. The composer uses the principle of free-associative dialogue between two characters Eusebia and Florestana. At the heart of the monogrammed R. Schumann theme (ASCH) there is the alphabetic cipher-complex, which acts as the cementing beginning of suite cycles of the through structure.
- 3. The most frequently encountered forms of cipher complexes in the history of musical art are anthroponyms with initials, surnames, various forms of names. In the process of verbal-audio coding, alphabetic, syllable or mixed versions are used.
- 4. The peculiarities of the art of Postmodernism is the transformation of the existing onamophones, revealing the stylistics of the author's thinking in works where polystylistic tendencies, intertextual principles of construction, collages, quotations, game signs and symbols dominate.

References

Bakhtin, M. M. (1994). Problems in the works by Dostoevsky. Problems of poetics of Dostoevsky. Kiev: Next. ISBN 5-88316-018-X.

Berchenko, R. E. (2005). In search of lost meaning. Boleslav Jaworski on the "Well-Tempered Clavier". Moscow: Classic-XXI.

Chernyak, E. B. (ed.). (2018). Peculiarities of gender perceptions of instrumental players in the process of musical and performing behavior. Pedagogical education: theory and practice: Collected scientific works of Kam'yanets-Podolsk National University named after Ivan Ohienko, 24, 63-69. ISSN 2309–9763.

Chernyak, E. B. (ed.). (2018). Forming gender competence of students in the process of preparation to the conditions of performing activity. Herald of the Alfred Nobel University: Pedagogy and Psychology. Pedagogical sciences, 2(16), 102-109. DOI 10.32342 / 2522-4115-2-16.

Chershintseva, M. A. (2010). The phenomenon of ciphering in culture and its specific manifestations in the works of J.S. Bach. Abstract of Candidate's thesis. Moscow.

Ivashkin, A. V. (1994). Conversations with Alfred Schnittke. Moscow: Culture.

Kholopov, Yu. N. (2006). Introduction to musical form. Moscow: Moscow State Conservatory named after P.I. Tchaikovsky. ISBN 5-89598-170-4.

Kudryashov, A. Yu. (2010). Theory of musical content. Artistic ideas of European music of the XVII – XX centuries. [Textbook for musical universities and universities of art], (2nd ed.). St. Petersburg: The Planet of Music. ISBN 978-5-8114-0600-5. I

Lippman, E. A. (1953). Symbolism in music. The Musical Quarterly. Vol.39, No 4, 554–575. URL: https://doi.org/10.1093/mq/XXXIX.4.554

Merkulov, A. M. (2011). Schumann's piano suite cycles. Moscow: Music. ISBN 5-7140-0223-7.

Nosina, V. B. (2011). Symbolism of music by J.S. Bach. Moscow: Classic - XXI. ISBN 978-5-89817-337-1, 978-5-905102-05-9.

Sams, E. (1965). Did Schumann use ciphers? The Musical Times. London, 8, 584-591.

Schering, A. (1925). Bach und das Symbol. Bach, Jahrbuch, 40-65.

Snitkova, I. I. (2015). Bach-Webern. Richerkar from The Musical Offering: the idea of structural counterpoint. Scientific notes of the Gnesins Russian Academy of Music, 2, 26-38. DOI: 10.7256/2227-9997.2015.2.15944.

Surminova, O. V. (2011). Onomaphonia as a phenomenon of the proper name in the music of the second half of the XX - beginning of the XXI centuries. Abstract of Candidate's thesis. Kazan

Wellesz, E. (1965). Schumann and the cipher. The Musical Times. London, 10, 767-771.

Yuferova, O. A. (2006). Monogram in the musical art of the XVII – XX centuries. Abstract of Candidate's thesis. Novosibirsk.

Zhitomirsky, D. V. (1964). Robert Schumann. Moscow: Music.