

## ELECTROACOUSTIC MUSIC AND THE SLOVAK MUSICAL AVANT-GARDE IN THE 1960S

<sup>a</sup>ALENA ČIERNA

*Department of Music, Faculty of Education, Constantine the Philosopher University in Nitra  
Dražovská 4, 949 01 Nitra, Slovakia  
email: <sup>a</sup>acierna@ukf.sk*

**Abstract:** In the 1960s, the development of music in Slovakia was marked by prominent generational and stylistic confrontations of the compositional poetics of the previous generations of composers and the just emerging one. In the composers' community, an initiative was gaining a foothold that reassessed the practices, norms, and achievements of the previous developmental stages of Slovak music and looked for new points of departure. In certain stages of the given period, the first graduates of the Academy of Performing Arts (Iľja Zeljenka, Juraj Pospíšil, Pavol Šimai, Ladislav Kupkovič, Peter Kolman, Roman Berger, Jozef Malovec, Miroslav Bázlik, Ivan Parik, Tadeáš Salva, and others) entered the musical scene. The genesis and the formation of the Slovak musical avant-garde in the 1960s was determined by their quest for the novel possibilities of expression and the compositional techniques of the so-called New Music of Western Europe. They included experimenting with previously unknown electrogenic compositional materials and techniques of electroacoustic music. Slovak electroacoustic music, which achieved success in Slovakia and abroad already in the 1960s, emerged first on a private basis, later in the Sound Studio of the Czechoslovak Television, and, primarily, in the Experimental Studio of the Czechoslovak Radio.

**Keywords:** Slovak musical avant-garde, electroacoustic music, 20<sup>th</sup> century

### Introduction

In the early 1970s,<sup>1</sup> a discussion took place in the premises of the Association of Slovak Composers (ASC) under the title *Electronic Music and the Problems Associated With It*. Its title might evoke efforts to grasp the technological issues of electroacoustic music and the problems associated with its production and reproduction. Its main point, however, consisted of a lot more fundamental issues. Does electroacoustic music have a place in the musical culture of socialist Slovakia? Is it legitimate in the given time? Do composers of electroacoustic music have the right to receive remuneration for their compositions? In the context of the development of European music in the latter half of the twentieth century, however, electroacoustic music had already been born, achieved its maturity,<sup>2</sup> and was regularly played at concerts and festivals of contemporary music and broadcast on the radio. Although the development of music in Slovakia was delayed even in the twentieth century compared to its development in Europe, Slovak electroacoustic music had already had a history at the time of the above-mentioned discussion. The genesis of electroacoustic music in Slovakia falls in the latter half of the 1950s. Consequently, the Slovak composers present at the discussion about the "problems of electroacoustic music" had already gained significant compositional experience with electrogenic material and achieved their first successes in Slovakia and abroad.

### 1 Socio-Ideological Points of Departure

The development of music in Slovakia after World War II was a dynamic, polystylistic, and contradictory process. It was determined by both the historical-social context and the immanent development of European music in the latter half of the twentieth century. Moreover, a third factor, the inner incentives of the composers searching for their own areas of creativity, must not be disregarded, either. Therefore, three

aspects should be considered when examining the conditions for the development of musical creativity in Slovakia. On the one hand, these acted as a dynamizing factor and, on the other hand, as a retarding factor of development:

- external determinants – the socio-historical development of the society after 1945, especially after 1948,
- the integration of Slovak music into the European (especially Central European) context of music while maintaining the essential features of Slovak music (distinct from other European cultures),
- the own internal development of Slovak music, unfolding from the various points of departure and from the various attitudes of the composers.

In the latter half of the twentieth century, conditionality and dependence on the socio-political context is obvious in the development of Slovak music and musical culture. It was this conditionality that became the basis for the periodization of the history of Slovak music in the twentieth century presented in several specialized publications and reflections.<sup>3</sup> After all, in the given period of 1948 – 1970, many ideological aspects clearly reflected in the generic and stylistic profiling of Slovak music.

Immediately after the war, the state authorities in Slovakia focused their efforts on creating the material and organizational conditions for the management of culture. This translated into a gradual professionalization of the musical life and the nationalization of the existing cultural institutions.<sup>4</sup> With respect to the changes in the social system after February 1948, and in the spirit of the new culturo-political strategies, the efforts to complete the process of creating an institutional background intensified.<sup>5</sup> At the same time, a system of an ideologically motivated management of culture and artistic productions by the ideological professional Association of Czechoslovak Composers was being formed.<sup>6</sup>

Shortly after February 1948, "socialist realism"<sup>7</sup>, implemented from the Soviet Union, became the only correct and binding aesthetic doctrine for any works.<sup>8</sup> The basic attributes of this doctrine included: "democratization" (application of the creative output to a wide range of recipients), "comprehensibility" (simplification of the means of expression), "folksiness"

<sup>3</sup> See: Chalupka, L.: Vývoj hudby po roku 1945 [The Development of Music after 1945]. In: ELSCHKEK, Oskár [ed.]: *Dejiny slovenskej hudby*. Bratislava: SAV – ASCO Art & Science, 1996, pp. 273 – 329; Chalupka, L.: *Generačné a štýlové konfrontácie: Sprivodca slovenskou hudbou 20. storočia II (1951 – 2000) [Generational and Stylistic Confrontations: A Guide to Twentieth-Century Slovak Music II (1951 – 2000)]*. Bratislava: Comenius University in Bratislava, 2018, pp. 131 – 146; Chalupka, L.: *Slovenská hudobná avantgarda [The Slovak Musical Avant-Garde]*. Bratislava: Faculty of Arts of Comenius University, 2011, pp. 1 – 111.

<sup>4</sup> The Academy of Music and Drama for Slovakia was nationalized (and its name was changed to State Conservatory in Bratislava) already during the war, in 1941; the Opera of the Slovak National Theatre (SNT) was nationalized in 1945 and, subsequently, the Operetta Department of the Nová Scéna Theatre in Bratislava was formed by the detachment of the Operetta Ensemble of SNT; in 1945, the opera in Košice was also nationalized (it had been linked to the Central Slovak Opera Theatre); the activities of the Seminar for Musicology at the Faculty of Arts of Comenius University were resumed; in 1946, the Mixed Choir (which later became part of the Slovak Philharmonic) was formed in the Czechoslovak Radio in Bratislava on the initiative of the conductor Ladislav Slovák.

<sup>5</sup> 1949 – establishment of the Slovak Philharmonic and the Academy of Performing Arts; 1949 – establishment of the folklore ensembles Lúcnica and the Slovak Folk Art Collective (later on, folklore ensembles of ethnic minorities were also formed); 1950 – Centre of Music and Arts (the later Concert and Theatre Bureau, then the Slovkoncert agency, today the Music Centre) and the Bratislava Musical Spring festival (the present-day Bratislava Music Festival); 1950 – Slovak Musical Publishing House (from 1960 the State Music Publishing House, since 1971 OPUS), Institute of Musicology of the Slovak Academy of Sciences and the Military Art Ensemble; 1954 – Slovak Music Fund (the present-day Music Fund);

<sup>6</sup> The Association of Czechoslovak Composers was formed on 15 May 1949 by the merger of the Syndicate of Czech Composers and the Club of Slovak Composers. Both Czech and Slovak composers had been under the aegis of the Association of Czechoslovak Composers until 1955 when a separate Association of Slovak Composers (ASC) was formed from its Slovak section as the managing ideological body for composition.

<sup>7</sup> As documented by the presentations of Zdeněk Nejedlý and Ladislav Štoll at the Convention of National Culture in Prague (10 – 11 April 1948). After Chalupka, 2018, pp. 18 – 67.

<sup>8</sup> First declared in the Soviet Union at the convention of Soviet writers in 1934 by the writer Maxim Gorky.

<sup>1</sup> This so-called discussion took place on 3 December 1971 with the participation of the representatives of the social organizations connected to art music: Andrej Očenáš (1911 – 1995, the president of the Music Fund Slovakia), Oto Ferenczy (1921 – 2000, a representative of the Association of Slovak Composers), Ing. Peter Janík (a sound engineer of the Experimental Studio of the Czechoslovak Radio in Bratislava), and composers who had been interested in electroacoustic music already in the 1960s – Miro Bázlik (1931), Roman Berger (1930 – 2020), Peter Kolman (1937), Jozef Malovec (1933 – 1998), Juraj Pospíšil (1931 – 2007), and Iľja Zeljenka (1932 – 2007). The "discussion" was led and chaired by their peer, composer Juraj Hatrk (1941 – 2021). See: Godár, V.: *Slovenská hudba a normalizácia [Slovak Music and Normalization]*. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, pp. 112 – 120.

<sup>2</sup> At that time, the French *musique concrète* had already had an over twenty-year-old history and the German *elektronische musik* and the American *music for tape* were only a few years younger.

(orientation to folklore traditions), “nationality” (identification with past and present national elements), “programme” (requirement for clear contents), and “realism” (direct reflection of the reality). Finally, there was a requirement for party affiliation in terms of agreement with the cultural policy of the ruling communist party and for the right orientation in the post-war, class-wise divided world. The prompt implementation of these criteria into composition was the task of the Association of Czechoslovak Composers, an ideological-professional organization completely subject to the rule of the communist party and its cultural policy. This system found its support in printed and electronic media, as well as in newly established specialized journals.<sup>9</sup>

As Ľubomír Chalupka stated, the fact that Slovak composers accepted the totalitarian management practices of the society relatively quickly (and even with understanding) and that they identified themselves with the views, mottoes, and instructions of the Association of Czechoslovak Composers and adopted the creative methods of socialist realism is rooted in the previous stages of development.<sup>10</sup>

With respect to the penetration of the influences from the socio-political developments into the sphere of musical life and to the generational and stylistic confrontations of the works of Slovak composers, the 1950s may be divided into several periods in Slovak music. The first period (1948 – 1953) is characterized by the introduction of totalitarian ideology, which manifested itself most prominently in the field of compositional theory and practice. The second period (1953 – 1956) is marked by minor changes in the existing creative strategies. The third period (1956 – 1960) is distinct with two conflicting tendencies in the works of the composers: on the one hand, they returned to the practices of the first period and, on the other hand, their inner self-reflection and critical stance to dogmatism arose.<sup>11</sup> In the development of Slovak music, retarding tendencies clearly appeared in the 1950s in the works of the composers of the older generation, who were content with their achievements. At the same time, under the influence of external socio-political realities, a change occurred in the strategy of cultural policy which, along with the criticism of the previous monostylistic development, led to a significant dynamization of the development of composition.<sup>12</sup> One of the essential conditions for making the musical development more dynamic was to learn about the European musical output of the twentieth century. The awareness of it gradually increased and cultural contacts with western music were enlivened both in official<sup>13</sup> and private ways.<sup>14</sup>

<sup>9</sup> Critiques, reports, reviews, and essays regularly appeared in the daily press (*Kultúrny život* [Cultural Life], *Práca* [Work], *Pravda* [Truth], *Lud* [People], *Sloboda* [Freedom] etc.). In September 1948, the existing Czech specialized periodicals *Rythmus* [Rhythm] and *Tempo* were cancelled and replaced in the same year by the periodical *Hudební rozhledy* [Musical Outlook] with nationwide distribution. *Hudební rozhledy* mapped in detail all the contributions, discussions, and reports from the conventions and other professional meetings. Its 1948 to 1989 issues represent unique source materials for forming an idea about the musical life in Czechoslovakia and for understanding how totalitarian practices, and even “brainwashing”, worked at that time. The editions of the monthly *Slovenská hudba* [Slovak Music], on whose pages the development of ideas and the confrontations of views and attitudes to the direction of Slovak music can also be traced, date to the years 1957 to 1971. Due to the progressive orientation of this monthly after Oskár Elschek became its editor-in-chief, reflecting the development and the compositional techniques of “western” music, *Slovenská hudba* was cancelled after 1971 and was resumed only in 1991.

<sup>10</sup> See Chalupka, 2018, pp. 20 – 21.

<sup>11</sup> For more details, see Chalupka, 2018, pp. 18 – 37.

<sup>12</sup> In February 1956, at the Twentieth Convention of the Communist Party of the Soviet Union (CPSU), Nikita Khrushchev delivered a speech in which he condemned Stalin’s power practices. This speech became a signal for the criticism of the existing dogmatic system. The Second Convention of the Association of Czechoslovak Writers (1956) responded swiftly to the conclusions of the Twentieth Convention of CPSU and raised ideas about the revival of the development of literature as a true creative process with all the contradictions of writing. A cautious but still clearly communicated effort to revise the existing practices occurred also in Slovak and Czech music. This is evident from the radical writing of the composer and musicologist Ladislav Burlas entitled *Myšlienky o vývine národnej hudby* [Thoughts on the Development of National Music] (see *Slovenská hudba*, 1, 1957, no. 2, pp. 54 – 61).

<sup>13</sup> A positive role in this respect, and also with regard to the development of Slovak music, was played by the Warsaw Autumn festival of contemporary music, organized for the first time in Warsaw in 1957.

<sup>14</sup> It was through private channels that scores, books, and journals published in Western European countries, containing information about novel compositional techniques, made their way to Bratislava. The proximity of the Viennese radio, which

Despite the above-mentioned obvious conditionality and dependence of the development of Slovak music on the socio-political situation of the 1950s, we cannot disregard the fact that, in the post-war era, Slovak music experienced a growth in its professionally trained, talented creative base in both the compositional and the performance sphere. In the subsequent decade, this factor translated into the acceleration of the musical life and musical output, especially thanks to the emergence of a new, young generation of composers who graduated from the Academy of Performing Arts in Bratislava.

## 2 The Emergence and the Formation of the Slovak Musical Avant-Garde in the 1960s

In the 1960s, the development of music in Slovakia was marked by prominent generational and stylistic confrontations of the compositional poetics of the previous generations of composers and the just emerging one. Several tendencies reflected in composition:

- a) confirmation of the existing stylistic points of departure,
- b) innovation and enrichment of the acquired individual stylistic poetics,
- c) quantification of the output of less significant composers,
- d) adoption of new stylistic points of departure, which negated the previous direction and were oriented towards the genesis of an avant-garde line.<sup>15</sup>

Contrary to the previous period, the generational and stylistic profiling of Slovak music in the 1960s took place in a more favourable socio-political situation. As mentioned above, the dogmatism of culture management and monostylism under the aegis of socialist realism had been criticized already in the late 1950s. In the 1960s, the socio-political pressure on composers was not that massive. Discussions began about the “socialist” character of music and the role of ASC and its transformation from an ideological to a professional organization. In the composers’ community, an initiative was gaining a foothold that reassessed the practices, norms, and achievements of the previous developmental stages of Slovak music and looked for new points of departure in the novel compositional trends and phenomena of Western European music. Slovak music was no longer to be closed within itself or within the circle of cultures that belonged to the so-called Eastern Bloc, but it was to be integrated into the Central European context.

However, in the 1960s, these initiatives were not easy to implement in the field of art music. In the early sixties, the postulates enforced in the 1950s about the “right”, i. e., socialist, development of Czechoslovakia still lingered on.<sup>16</sup> Nevertheless, in 1962, the Twelfth Convention of the Communist Party of Czechoslovakia (CPCS, 4 December – 8 December 1962) admitted the mistakes that had been committed in the 1950s. Another positive thing was the annulment of the original accusations of “bourgeois nationalism” inflicted on Slovak writers and the intelligentsia (mainly the representatives of social sciences). These momentums led to a dynamic progress not only in social sciences, but also in arts. The liberalization of the socio-cultural conditions, however, was not accepted by the representatives of the official political circles without reservations. The representatives of totalitarian power were reluctant to renounce their practices in the management of society and culture. In addition, they were concerned that the path of liberalization might pose a direct threat to the idea of a single right path for development in “socialist” Czechoslovakia. That is also why reservations were voiced at the Thirteenth Convention of CPCS in 1966 (31 May – 4 June 1966) against “slipping” into liberalism, questioning the leading role of CPCS,

regularly broadcast twentieth-century Western European compositions, also played a positive role in Bratislava.

<sup>15</sup> For more details, see Chalupka, 2018, pp. 131 – 149.

<sup>16</sup> In 1960, this tendency was confirmed by the new constitution that declared Czechoslovakia the Czechoslovak Socialist Republic.

revising the doctrine of socialist realism, etc.<sup>17</sup> From the aspect of the objective socio-political determinants of the development of musical culture, the entry of the Warsaw Pact troops and their occupation of Czechoslovakia (21 August 1968) may be viewed as a milestone in the periodization of the 1960s. The subsequent response of resistance and opposition was distinctively present also in the cultural and artistic milieu. This is where the conflict between the two tendencies of development manifested itself markedly: on the one hand, the right to free creativity (declared at conventions and meetings in the early sixties) and, on the other hand, the views of the political representatives about the totalitarian management of culture (facilitated by the presence of Soviet troops in the territory of Czechoslovakia).

The socio-political events translated into musical culture and composition through the resolutions of ASC, the ideological instrument for the management of composition at the time. At its first convention in 1959, ASC in its resolutions defended the monostylistic development of Slovak music based on the doctrine of socialist realism. Even after 1960, empty phrases praising “healthy socialist” compositional orientation and rejecting “ill and rotting” Western European composition did not subside completely. Nevertheless, the subsequent development proved that these claims were unsustainable.<sup>18</sup> From 1962, several periodicals published discussions about the topical issues of Slovak composition with respect to the freedom of expression and the freedom of choice in artistic means and about the need for maintaining contact with the European artistic platform. This was confirmed even by ASC at its Second Convention (1963), which carried on in an atmosphere of liberal discussions. Against the background of these events, stylistic and generational confrontations of the views about the direction of Slovak music began to appear within the community of Slovak composers more prominently. This was noted also by the Third Convention of ASC (1967) where the participants to the discussions pondered the achieved compositional results<sup>19</sup> in the development of music in Slovakia and the transformation of ASC from an ideological institution to a professional one.<sup>20</sup> Critical voices calling for a more radical enforcement of the freedom of artistic creations and for an effort for liberation from the continuing subordination of creation to the cultural policy of the state party were raised increasingly in the second half of 1968 and these demands grew even stronger after the Warsaw Pact invasion of Czechoslovakia (in August 1968).<sup>21</sup> For a long time to come, the extraordinary convention of ASC held in February 1969 became the last platform for free discussions about the direction of Slovak music and its status in federal Czechoslovakia. The subsequent General Assembly convened by the Ministry of Culture of the Slovak Republic (in April 1970) criticized liberalism in arts and foretold a new phase, that of “normalization”, in the development of Slovak musical culture.

Several generations of composers took part in the musical developments of the 1960s in Slovakia. The members of each generation presented their individual compositional styles, which were evolving at various stages of formation. Retrospectively, we might establish that the driving force behind the dynamic development of Slovak music in the 1960s was the emerging young generation of composers with strong avant-garde ambitions. Their appearance may be divided into several phases.

The first (preparatory) phase took place from 1956 to 1959 and is characterized by the activities of the first graduates, and some of the students, of the Academy of Performing Arts in Bratislava (APA): Ilja Zeljenka (1932 – 2007), Juraj Pospíšil (1931 – 2007), Ladislav Burlas (\*1927), Pavol Šimai (1930 – 2020), Ivan Hrušovský (1927 – 2001), Ladislav Kupkovič (1936 – 2016), Peter Kolman (\*1937), Roman Berger (1930 – 2020), Jozef Malovec (1933 – 1998), and others. Their compositions were still timid and indecisive in style, marked by searching and getting to know oneself. At that time, avant-garde expressions were muted in the society. The young composers responded to the criticism of their compositions voiced by the members of the older generation of composers<sup>22</sup> with increased activity and initiatives.

The second (activation) phase covers the years 1960 to 1963. The young composers were joined by others: Miro Bázlik (\*1931), Dušan Martinček (1936 – 2006), Ivan Parík (1936 – 2005), Juraj Hatrík (1941 – 2021). This phase is marked by developing polystylism among the members of the emerging generation, increased output, and building creative self-confidence. The initiatives of the youth could no longer be artificially disputed in the society. The remarkable achievements of the avant-garde initiatives of young composers to adopt and experiment with compositional techniques and audio materials previously unknown in Slovak music (their first experiments with “tape music”, both privately and, later on, in the Sound Studio of the Czechoslovak Television, 1961) led to a gradual appreciation of their creative points of departure. This was also confirmed by the Second Convention of the Association of Slovak Composers (1964), which acknowledged the right of the youth to participate in the development of Slovak composition.

The third (confrontational) phase (1964 – 1967) is characterized by the crystallization of the intentions and aims of the Slovak musical avant-garde. The period of sympathizing with, and enthusiastically adopting, the techniques and means of New Music and the acceptance of the contemporaneous avant-garde orientation in Slovak music was followed by a period of critical re-evaluation. The highly diversified poetics of the young avant-garde composers were enriched by the new, fresh approaches to avant-garde composition of the other graduates of APA: Jozef Sixta (1940 – 2007), Tadeáš Salva (1937 – 1995), and Juraj Beneš (1940 – 2004). A crucial dynamizing factor in the development of avant-garde composition was the ensemble called *Hudba dneška* [Today’s Music] (1964), which became the proponent of twentieth-century Slovak and world avant-garde music. In this period, young composers began to call for a more profound transformation of the means of New Music.

The fourth, final phase (of culmination) of the Slovak musical avant-garde falls to the period of 1968 to 1970. In this phase, the homogeneous position of the young avant-garde composers was consolidated in the musical life of Slovakia both quantitatively and qualitatively. Avant-garde ambitions in Slovakia culminated in the three so-called Smolenice Seminars in 1968 – 1970.<sup>23</sup> During the entire decade of the sixties, the young avant-garde composers fought for the improvement of democratic conditions for local musical life and creative milieu not only in the field of composition, but also in the field of journalism and the organization of musical life. This is documented, e.g., by the

<sup>17</sup> Proceedings *KSČ a kultúra III, 1960 – 1971 [The Communist Party of Czechoslovakia and Culture III, 1960 – 1971]*. Prague: Vysoká škola politická, 1978, pp. 37 – 134. (After Chalupka, 2018, pp. 133.)

<sup>18</sup> From 1962, several periodicals published discussions about the topical issues of Slovak composition with respect to the freedom of expression and the freedom of choice in artistic means and about the need for maintaining contact with the European artistic platform. The papers were published not only in the *Slovenská hudba* periodical, but also in the periodicals *Slovenské pohľady [Slovak Perspectives]* and *Kultúrny život*.

<sup>19</sup> The efforts of the composers were presented also at concerts of Slovak music (1963, 1967, 1970).

<sup>20</sup> See the papers of Zdenko Nováček and Eugen Šimúnek (in *Slovenská hudba*, 5, 1961, no. 3), Antonín Hořejš (in *Slovenská hudba*, 7, 1963, no. 2), Andrej Očenáš (in *Slovenská hudba*, 11, 1967), and others in *Slovenská hudba* from 1961 to 1971.

<sup>21</sup> Slovak musicians joined the declaration of the Association of Czechoslovak Composers and the Standpoint of Scientists, Artists, and Journalists (November 1968). For the concrete activities of ASC, see the Resolution of its Extraordinary Convention (in *Slovenská hudba*, 13, 1969, nos. 4 – 5, p. 188). See Chalupka, 2018, p. 140.

<sup>22</sup> The young composers’ new initiatives and orientation to the tools of Western European New Music were not appreciated. See, e.g., the article of Dezider Kardoš, *Rozvoj slovenskej hudobnej tvorby za posledných 10 rokov [The Development of Slovak Musical Output for the Past Ten Years]* (in *Slovenská hudba*, 3, 1959, no. 3, p. 97). The young composers could learn about the Western European musical developments only at the Seminars of Twentieth-Century Music held in the Music Theatre under the aegis of the Czechoslovak Youth Association (1959). The participants of the last Seminar (in October 1959) could also hear the electroacoustic compositions of Ernst Krenek, Herbert Eimert, and Karlheinz Stockhausen.

<sup>23</sup> The idea of organizing and holding an international show of avant-garde compositions was born in 1965. The seminars of contemporary music (so-called Smolenice Seminars) took place in a castle (the House of the Scientists of the Slovak Academy of Sciences) in a village called Smolenice. They were a counterpart of the Darmstadt Summer Courses of New Music. Besides concerts, the programmes included thematic lectures and workshops. During these three years, the seminars were attended, e.g., by the composers Karlheinz Stockhausen and György Ligeti, the musicologists Ulrich Dibelius, Hans Peter Reinecke, Carl Dahlhaus, and Józef Patkowski, and others.

initiatives and contributions of the composer Roman Berger and the musicologist Peter Faltin at conventions or on the pages of *Slovenská hudba*.<sup>24</sup>

The last Smolenice Seminar (1970) symbolically closed the avant-garde phase in the development of twentieth-century Slovak music. Its subsequent development after 1970 terminated most of the avant-garde initiatives. Under the pressure of the socio-political events after August 1968, in the so-called normalization period, Slovak composition found itself in isolation again. Its contacts with the European development of music were discontinued. Naturally, the return of the dogma of “socialist realism” brought along the political criticism of the avant-garde tendencies in the compositions of the 1960s.<sup>25</sup>

### 3 The Genesis of Electroacoustic Music in Slovakia

The young composers, graduates of APA in Bratislava who entered the scene of music in Slovakia in the late 1950s and during the 1960s, had their eye on the West. Despite the complex socio-political situation, whose reflection may be traced in the generational confrontations and gradual diversification of personal styles, the young composers gradually managed to assert themselves on the musical scene.

The genesis and the formation of the Slovak musical avant-garde in the sixties was determined by their quest for novel possibilities of expression and compositional techniques. They included experimenting with previously unknown electrogenic compositional materials and techniques of electroacoustic music. As pointed out above, the first, primitive experiments with “tape music” took place privately. The composers Ilja Zeljenka, Roman Berger, and Pavol Šimai, and the musicologist Ivan Mačák had only a commercial tape recorder of a Czechoslovak make, a Tesla “Sonet Duo” and a borrowed four-input mixing console available. By these experiments, they honed their aural and analytical skills and tried out new compositional techniques already in the late 1950s: the techniques of montage and collage.<sup>26</sup> The collaboration of Zeljenka and Berger in a private environment resulted in *Etude No. 1* and *Etude No. 2* (1958), and the collaboration of Zeljenka, Berger, and Šimai in *Etude No. 3* (1958). The sound of these first experiments was not known for a long time. The sound of a 1961 composition was discovered in Berger’s personal archive only in the early twenty-first century and a fragment of it entitled *Žaba!* [Frog!] (by Berger, Zeljenka, and Šimai)<sup>27</sup> was released on the CD *Iná hudba* [Other Music]: *Experimental Studios Series I* (Bratislava, 2015).<sup>28</sup>

#### 3.1 The Sound Studio of the Czechoslovak Television in Bratislava

The first impetus for the momentary fascination by sound and these “pranks” to become avant-garde artistic compositions was provided by films. Thanks to Zeljenka, Berger, and, shortly afterwards, also Malovec and Kupkovič in collaboration with the

sound engineer Ivan Stadtrucker, the first compositions utilizing electrogenic sound materials were born in the modest conditions of the Sound Studio of the Czechoslovak Television in Bratislava<sup>29</sup> (Ilja Zeljenka: *Štúdia 0,2* [Study 0.2] for prepared piano, *Štúdia 0,3* [Study 0.3] for tone generator – both 1962). Although the technical equipment of the Sound Studio was not completely suitable in the beginning, other composers besides the above-mentioned ones also showed interest in working in it, including Pavol Šimai, Svetozár Stračina, and the German composer Paul Dessau who arrived in Slovakia to produce an electroacoustic soundtrack for the film *Ruský zázrak* [*Russian Miracle*] (directed by a married couple, the Thorndikes).<sup>30</sup> The subordination of the studio to the needs and urgent requirements of television broadcasting pushed creative work on autonomous electroacoustic compositions to the background. Although the Sound Studio kept producing electroacoustic soundtracks for films and television productions, autonomous electroacoustic composition was still absent in the 1960s.

From August 1961 to the year 1967, soundtracks for the following short documentaries and feature films were produced in the Sound Studio of the Czechoslovak Television in Bratislava partly or completely with electroacoustic music:

- Ilja Zeljenka: *65 miliónov* [65 Millions] (1961); *Slnko v sieti* [The Sun in a Net], *Dáma v čiernom* [Lady in Black] (1962); *Voda a práca* [Water and Work], *Operácia X* [Operation X], *Nezabudnutá dedina* [The Unforgotten Village], *Deň svätého Ladislava* [Saint Ladislav’s Day], *Muži z Gaderskej doliny* [Men from the Gader Valley] (1963); *Vstupujeme do doby atómovej* [We Are Entering the Atomic Age], *Stretnutie* [The Meeting], *Muži vo výškach* [Men at Height] (1964); *Každý týždeň sedem dní* [Seven Days a Week], *Zotrvačnosť* [Perseverance] (1965), *Drak sa vracia* [The Dragon Returns] (1967);
- Roman Berger: *Opustená zem* [The Abandoned Land] (1962); *Po sedemnástich rokoch* [After Seventeen Years], *Vzbura na ulici Sycamore* [Revolt in Sycamore Street] (1963); *Kam nechodí inšpektor* [Where the Inspector Does Not Go] (1964); *Tri spomienky* [Three Memories], *Analógie* [Analogies] (1965); *Čierna a červená* [Black and Red] (1967);
- Jozef Malovec: *Výhybka* [Railroad Switch] (1963); *Posledný na izbu* [The Last to the Room] (1964); *Bolo to na váš účet* [It Was on Your Account] (1966);
- Ladislav Kupkovič: *Nezmar hneď* [Brown Hydra] (1961); *Magazín* [Magazine] (1962); *Infarkty* [Heart Attacks], *Výskum materiálov* [Material Research], *Otec turbín* [The Father of Turbines] (1964); *Reumatická horúčka* [Rheumatic Fever], *Trenie* [Friction] (1965);

The first attempt at autonomous electroacoustic composition in the Sound Studio was a music for the ballet *Kozmos* [Cosmos] (1963) composed by Ilja Zeljenka, which remained fragmentary because the choreographer Tóth gave up the project. Another attempt was Wiliam Bukový’s music for the ballet *Faust* which was being created while working on the soundtrack of the film *Automat na přání* [Wishing Machine]. The completion of the project was prevented by the death of the composer. As a result of the worsening social conditions and the growing political pressure on artistic television productions, the experimental projects of the Sound Studio were tolerated rather than supported. The subsequent structural and staff reorganization

<sup>24</sup> For more information on the genesis and development of the Slovak musical avant-garde and their representative compositions, see: Chalupka, L.: *Slovenská hudobná avantgarda*. Bratislava: Faculty of Arts of Comenius University, 2011.

<sup>25</sup> Due to the cultural policy situation and the awareness that it would no longer be possible to develop the avant-garde line, several young composers were forced to emigrate – Pavol Šimai (in 1968 to Sweden), Ladislav Kupkovič (in 1969 to Germany), Peter Faltin (in 1969 to Germany), and Peter Kolman (in 1977 to Austria).

<sup>26</sup> See Stadtrucker, I.: *História jedného zvukového pracoviska*. [The History of a Sound Studio.] In: *Slovenská hudba*, 13, 1969, no. 9 – 10, p. 344; Berger, R.: *Esej o elektroakustickej hudbe* [An Essay on Electroacoustic Music] (1987). In: *Rozhlas o slovenská elektroakustická hudba* [Študijný zošit Metodicko-výskumného kabinetu. Čs. rozhlasu.] Bratislava: The Czechoslovak Radio in Bratislava, 1989, pp. 111 – 150.

<sup>27</sup> Based on this recording (where Zeljenka reads an excerpt from the *Stravinsky Interview with Robert Craft*, edited in a simple retrograde process, with other sounds and edited orchestral excerpts added), we can establish that the initial études consisted of recording various (musical and non-musical) sounds, texts, and Dadaist exclamations, their simple editing with the tape recorder, and their subsequent montage.

<sup>28</sup> The three-CD + LP *Experimental Studio Bratislava Series* project was released on the occasion of the fiftieth anniversary of the establishment of the Experimental Studio of the Czechoslovak Radio in Bratislava (EXS). They consist of historical recordings primarily from the archives of EXS and the Radio and Television of Slovakia (RTVS): CD 1 – *Iná hudba* [Other Music] (SOZA, VD 0011-2, 2015), CD2 – *Nová generácia* [New Generation] (SOZA, VH 0011-2, 2016), CD 3 – *Naši hostia* [Our Guests] (SOZA, 2790-001-2, 2017).

<sup>29</sup> The Sound Studio of the Czechoslovak Television was situated on the first floor of the building of the former Tatra Bank. At that time, it had four Sander-Jansen studio tape recorders, a sinusoidal wave generator, and, later, also a ring modulator (made in the State Film in Koliba based on the designs of the Polish musicologist Józef Patkowski). The first list of the technical equipment of the Sound Studio of the Czechoslovak Television was published in Ivan Stadtrucker’s paper presented at the First Seminar of Electronic Music in Plzeň in 1964. See Bláha, M. – Mandík, M.: I. seminár elektronickej hudby v ČSSR [The First Seminar of Electronic Music in the Czechoslovak Socialist Republic]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, pp. 23 – 24.

<sup>30</sup> The original intention was to produce a twenty-minute soundtrack, but only a two-minute étude was born. See Stadtrucker, 1969, p. 345.

gradually led to an end of this then progressive experimental sound studio in Slovakia.<sup>31</sup>

The significance of the Sound Studio of the Czechoslovak Television for avant-garde ambitions lay in learning about the possibilities of electroacoustics in the process of sound production. Although the priority of its productions was film, in this studio the composers had an opportunity to work equally with musical and sound material, both real (concrete) and electrogenic, for the first time. Ultimately, the experience gained by working in the Sound Studio translated also into the orchestral and chamber compositions of the Slovak Musical Avant-garde over the 1960s (in the use of glissandos, canonic repetitions, or reverberation). Although the Sound Studio in fact did not achieve the status of an electroacoustic studio and, after eight years of active work its activities gradually declined, it played an indispensable role in the context of the development of Slovak electroacoustic music. On a professional basis, it provided an opportunity for Slovak composers for their first encounter with the electronic media in the field of musical production and it entrenched electroacoustic music in the sphere of both the dramatic and the documentary art (narrative and documentary films, television productions).<sup>32</sup>

### 3.2 The Experimental Studio of the Czechoslovak Radio

The imaginary baton was handed over to the newly established studio in the Czechoslovak Radio, which significantly dynamized the avant-garde musical developments of the 1960s in Slovakia. Already in 1964, on the initiative of Slovak directors, Triková režia [Trick Direction] was established, whose task was to enhance the artistic intentions of the directors of dramas and deepen their aesthetic effect with electrogenic and concrete sound materials. The Trick Direction had the technical equipment available at the time: several devices manufactured by the Department of Development of the Czechoslovak Radio in Bratislava<sup>33</sup> (including a so-called trick recorder<sup>34</sup>), a mixing console, a connection panel, and several laboratory generators. Further devices were added later from the Department of Development of the radio and from the Research Institute of the Radio and Television in Prague.<sup>35</sup> The year 1965 may be viewed as a turning point in the development of electroacoustic music. In May 1965, the composer Peter Kolman<sup>36</sup> was appointed as the dramaturge of the studio and, in June, the studio acquired the official status of an electroacoustic studio and was named the Experimental Studio of the Czechoslovak Radio (EXS).

The Slovak avant-garde composers who familiarized themselves with the tools and technology of electroacoustic music in the Sound Studio found their way to EXS, too. In 1965 – 1969, several compositions were produced in it for the stage and for documentary narratives:

- 1965: Peter Kolman – *Cikády* [Cicadas]; Ladislav Kupkovič – *Všetci, ktorí padajú* [All Who Fall]; Jozef Malovec – *Polotemné pásmo* [Semidark Zone], *Edison*;
- 1966: Peter Kolman – *Facka* [Slap], *Letecká linka* [Airline]; Jozef Malovec – *Bolo to na váš účet* [It Was on Your Account];
- 1967: Jozef Malovec – *Rekonštrukcia básnika* [Reconstruction of a Poet];
- 1968: Jozef Malovec – *Kismet, Splynutie* [Fusion];
- 1969: Peter Kolman – *Generál Federik* [General Frederic];

EXS covered the needs also of the Czechoslovak Television, so even film music was produced in it:

- 1965: Ladislav Kupkovič – *Nie je škola ako škola* [No Two Schools Are the Same], *Pesticídy* [Pesticides]; Jozef Malovec – *Bolo to na váš účet* [It Was on Your Account]; Pavol Šimai – *Každých sedem minút* [Every Seven Minutes], *Zrak* [Sight], *Tatranské kontrasty* [Contrasts in the Tatras];
- 1966: Ladislav Kupkovič – *Autičko cililink* [Ding-a-Ling Car];

In addition, in 1966, Jozef Malovec produced *Hudba k poézii* [Music for Poetry] (released by Supraphon).

Contrary to the Sound Studio, the EXS of the radio focused, besides stage music, on the production of autonomous experimental electroacoustic and concrete compositions right from its inception.

Several composers competed in composing the first autonomous electroacoustic music. Peter Kolman was working on his composition *Moto non perpetuo* (he did not finish it, it remained a two-minute fragment). Miro Bázlik presented a score in the shape of a pyramid to the sound engineers when he visited EXS for the first time. His project was not implemented, however. Ultimately, *Orthogenesis* by Jozef Malovec became the first autonomous Slovak electroacoustic composition.<sup>37</sup> In the spring of 1968, Malovec's *Orthogenesis* represented Slovak electroacoustic music with success at the international festival of electronic music in Florence.<sup>38</sup>

In the 1960s (up to 1970), several representatives of the Slovak musical avant-garde visited EXS to produce autonomous electroacoustic compositions:

- 1966: Jozef Malovec – *Orthogenesis*; Tadeáš Salva – *Vianočné oratórium* [Christmas Oratorio];
- 1968: Jozef Malovec – *Punctum Alfa, Tmel* [Binder] (live electronics); Peter Kolman – *D 68*; Ladislav Kupkovič – *Intermezzo 2*, *Preparovaný text 1* [Prepared Text 1], *Preparovaný text 2* [Prepared Text 2], *Preparovaný text 3* [Prepared Text 3], *Preparovaný text 3 1/2* [Prepared Text 3 1/2], *Collage*, *Vianoce* [Christmas], *Morceau de Genre*, *Etuda* [Étude], *Confessio*, *Les adieux*;

<sup>31</sup> Because of the lack of sustained interest of ASC in the profiling of the Sound Studio, Berger resigned from his post of art director. Ján Růčka succumbed to a malignant disease at the age of thirty-seven. The structural reorganization separated the audio equipment from the sound engineers, so the influence of Stadtrucker as the head of the department of sound engineers on the development of the technical equipment was secondary. See Stadtrucker, 1996, p. 44.

<sup>32</sup> Electroacoustic sound was no longer degraded to the role of background sound or for creating an atmosphere but became a fully-fledged factor that created meaning and enhanced the aesthetic audio image of the overall form. Screenplays already counted with it as a basic dramaturgic supporting and consolidating element.

A list of films and stage productions up to 1969 (including musical studies) which, partly or completely, used electroacoustic music was provided by Stadtrucker in his contribution *História jedného zvukového pracoviska* [The History of a Sound Studio] (in: *Slovenská hudba*, 13, 1969, no. 9 – 10, pp. 348 – 349).

<sup>33</sup> Already at the end of the 1950s, the programme producers of the Czechoslovak Radio felt they were in need of devices for special effects. Therefore, the Development Department of the Czechoslovak Radio in Bratislava, headed by Mikuláš Zima, focused on producing these devices and it made an effect device for producing sound figures based on foreign models. See Janík, P.: *Premeny technického zariadenia Elektroakustického štúdia* [Transformations of the Technical Equipment of the Electroacoustic Studio]. In: *Rozhlas a slovenská elektroakustická hudba*. [Študijný zošit Metodicko-výskumného kabinetu Čs. rozhlasu.] Bratislava: The Czechoslovak Radio, 1989, pp. 173.

<sup>34</sup> See Janík, 1989, p. 174; *Elektroakustické intermezzo* [Electroacoustic Intermezzo]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, p. 50.

<sup>35</sup> For the devices and equipment of the studio, see also Čierna, A.: *Elektroakustická hudba na Slovensku* [Electroacoustic Music in Slovakia]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, pp. 67 – 111; Príloha [Appendix]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, p. 324.

<sup>36</sup> At that time, Peter Kolman was employed as an editor specializing on twentieth-century music in the Main Editorial Office of Music Broadcasting. They were deciding for the position of the dramaturge between him and Jozef Malovec (who was the editor of Hungarian Broadcasting at that time). Although Kolman had already joined EXS as its dramaturge in May 1965, he received his official appointment decree as the Art Director of EXS on 29 May 1967.

<sup>37</sup> The first mono version of *Orthogenesis* was created in 1966 based on experience gained by producing soundtracks for film and stage (which the composer carried out in the Sound Studio and in the Trick Direction) and under the influence of the philosophy of Pierre Teilhard de Chardin. It was based on the music prepared for the LP *Moderná svetová básnická tvorba v slovenských prekladoch* [Modern World Poetry in Slovak Translation] (released by Supraphon in its Gramoklub edition, 1967). Its stereophonic version was created a year later and it represented Slovakia at the World Competition of Electronic Music at Dartmouth College in Hanover (USA) where it won the third prize (LP released by Turnabout-Vox). That is why 1967 is usually stated as the year of its origin. In 1968, its quadrasonic (so-called Fiorentini) version was produced for the international festival Maggio Musicale Fiorentino. See Čierna, A.: *Poetika elektroakustických kompozícií Jozefa Malovca* [The Poetry of Jozef Malovec's Electroacoustic Compositions]. In: *Osobnosti slovenskej hudobnej tvorby II. [Personalities of Slovak Music Production II]*. Banská Bystrica: Academy of Arts, 2006, pp. 55 – 56.

<sup>38</sup> *Ibidem*, pp. 51 – 63.

- 1969: Roman Berger – *Elégia in memoriam Ján Rúčka* [Elegy in Memoriam Ján Rúčka]; Ivan Parík – *Hommage to William Croft*;
- 1970: Jozef Malovec – *Tabu* [Taboo]; Miro Bázlik – *Aria (Spektrá V.)* [Aria (Spectra V)], *Adieu (Spektrá VI.)* [Adieu (Spectra VI)]<sup>39</sup>; Peter Kolman – *Ommagio à Gesualdo*; Ladislav Kupkovič – *Citáty I, II* [Quotes I, II]; Ivan Parík – *Variácie na obrazy Miloša Urbáška* [Variations on the Pictures of Miloš Urbásek], *Hudba k vernisáži II* [Music for Vernissage II]; Juraj Pospíšil – *Méditation électronique* Op. 20;

In their electroacoustic compositions, the Slovak avant-garde composers of the given decade pursued various aesthetic and compositional technical ideas. Based on the analysis of the above compositions,<sup>40</sup> we may establish that after the initial experiments with sound (Ladislav Kupkovič, Ilja Zeljenka, Pavol Šimai), some basic features of the poetry of Slovak electroacoustic music profiled already in the 1960s: a) ties to musical tradition – using quotations, reinterpretation, and transformation of the musical material from the works of the composers of the past used as a model (Ivan Parík, Miroslav Bázlik, Peter Kolman); b) selection of sound materials from the well-known world of sounds – the sound of instruments and human voice (Ivan Parík, Miroslav Bázlik, and others). The sound material was probably selected with the aim of communicativeness (emphasis on the contentual, semantic potential of the utilized means of expression). The communicativeness of these compositions was ensured also by references to the sources of inspiration in their titles. This was affirmed by the success of the first electroacoustic composition, Malovec's *Orthogenesis*, abroad, as well as by the other presentations of Slovak compositions at concerts and festivals of contemporary music.

#### 4 Conclusion

In Slovak music, the 1960s were marked by the emergence of a young generation of composers with an avant-garde orientation, a generation that introduced the necessary innovative momentums to Slovak music and radically dynamized the development of music in the course of a single decade. The generation of avant-garde composers did not appear as a stylistic monolith but was characterized by the diversification of specific individual stylistic poetics. These manifested themselves also in electroacoustic music, which acted as a prominent dynamizing factor in the development of music in the given period. The subsequent decade, the 1970s, was already marked by "normalization". The unconventional ensemble Hudba dneška [Today's Music] was dissolved, the publishing of the *Slovenská hudba* [Slovak Music] monthly was suspended, the membership of several avant-garde composers in the Association of Slovak Composers was cancelled (which meant they lost funding for composing and their compositions were banned), and the activities of EXS were restricted. Although the subsequent years did not favour the further development of the avant-garde tendencies of the 1960s, the indicated development could no longer be halted and the qualitative achievements of the Slovak musical avant-garde of the 1960s could not be completely negated.

#### Literature:

1. Godár, V.: Slovenská hudba a normalizácia [Slovak Music and Normalization]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, pp. 112 – 120.
2. Chalupka, E.: Vývoj hudby po roku 1945 [The Development of Music after 1945]. In: Elschek, O. [ed.]: *Dejiny slovenskej hudby* [History of Slovak Music]. SAV – ASCO Art & Science, Bratislava, 1996, pp. 273 – 329;
3. Chalupka, E.: *Slovenská hudobná avantgarda* [The Slovak Musical Avant-Garde]. Bratislava: Faculty of Arts of Comenius University, 2011. 672 pp.
4. Chalupka, E.: *Generačné a štýlové konfrontácie : Sprievodca slovenskou hudbou 20. storočia II (1951 – 2000)* [Generational and Stylistic Confrontations: A Guide to Twentieth-Century Slovak Music II (1951 – 2000)]. Bratislava: Comenius University in Bratislava, 2018. 879 pp.
5. Burlas, L.: Myšlienky o vývine národnej hudby [Thoughts on the Development of National Music]. In: *Slovenská hudba* 1, 1957, no. 2, pp. 54 – 61.
6. Kardoš, D.: Rozvoj slovenskej hudobnej tvorby za posledných 10 rokov [The Development of Slovak Composition For the Past 10 Years]. In: *Slovenská hudba*, 3, 1959, no. 3, p. 97.
7. Berger, R.: *Esej o elektroakustickej hudbe* [An Essay on Electroacoustic Music] (1987). In: *Rozhlas a slovenská elektroakustická hudba* [Študijný zošit Metodicko-výskumného kabinetu Čs. rozhlasu.] Bratislava: Czechoslovak Radio, 1989. pp. 111 – 150.
8. Stadtrucker, I.: História jedného zvukového pracoviska. [The History of a Sound Studio.] In: *Slovenská hudba*, 13, 1969, nos. 9 – 10, p. 344.
9. Bláha, M. – Mandík, M.: I. seminár elektronickej hudby v ČSSR [The First Seminar of Electronic Music in the Czechoslovak Socialist Republic]. In: *Slovenská hudba*, 22, 1996, no. 1 – 2, pp. 23 – 24.
10. Janík, P.: Premeny technického zariadenia Elektroakustického štúdia [Transformations of the Technical Equipment of the Electroacoustic Studio]. In: *Rozhlas a slovenská elektroakustická hudba*. [Študijný zošit Metodicko-výskumného kabinetu Čs. rozhlasu. / Study Brochure of the Methodological Research Department CzS. Radio in Bratislava.] Bratislava: The Czechoslovak Radio, 1989. pp. 173.
11. Janík, P.: Elektroakustické intermezzo [Electroacoustic Intermezzo]. In: *Slovenská hudba*, 22, 1996, nos. 1 – 2, p. 50.
12. Čierna, A.: Elektroakustická hudba na Slovensku. Príloha [Electroacoustic Music in Slovakia. Appendix]. In: *Slovenská hudba*, 22, 1996, nos. 1 – 2, pp. 67 – 111, pp. 307 – 324.
13. Čierna, A.: Poetika elektroakustických kompozícií Jozefa Malovca [The Poetry of Jozef Malovec's Electroacoustic Compositions]. In: *Osobnosti slovenskej hudobnej tvorby II* [Personalities of Slovak Music Production II]. Banská Bystrica: Akadémia umení, 2006, pp. 51 – 63.
14. Čierna, A.: *Elektroakustická hudba na Slovensku a možnosti jej pedagogickej interpretácie* [Electroacoustic Music in Slovakia and Ways of its Pedagogical Interpretation]. [Dissertation]. Nitra: Constantine the Philosopher University, 2010. 220 pp.
15. *Slovenská hudba* [Slovak Music], Vol. 1 – 15, 1957 – 1971.

#### Primary Paper Section: A

#### Secondary Paper Section: AB, AJ, AL

<sup>39</sup> Originally independent electroacoustic compositions based on Johann Sebastian Bach's *Well-Tempered Clavier I*, which the composer later combined into a single cycle called *Spektrá. Metamorfózy a komentáre k I. dielu Dobre temperovaného klavíra J. S. Bacha* [Spectra. Metamorphoses and Commentaries to Book I of Johann Sebastian Bach's *Well-Tempered Clavier*] (1970 – 1974). The cycle consists of six movements: 1. *Pieta* [Pieta] (Spektrá I. [Spectra I], 1972), 2. *Immersion* [Pieta] (Spektrá II. [Spectra II], 1974), 3. *Apokalypsa* [Apocalypse] (Spektrá III. [Spectra III], 1971), 4. *Concertino* (Spektrá IV. [Spectra IV], 1972), 5. *Aria* (Spektrá V. [Spectra V], 1970), and 6. *Adieu* (Spektrá VI. [Spectra VI], 1970). When performed, each movement of the cycle was preceded by Bach's *Prelude and Fugue: No. 4 in C# Minor, No. 8 in D# Minor, No. 12 in F Minor, No. 15 in G Major, No. 18 in A Minor, and No. 24 in B Minor*.

<sup>40</sup> Tectonic analyses were performed based on the acousmatic approach and the subsequent perception score. See Čierna, A.: *Elektroakustická hudba na Slovensku a možnosti jej pedagogickej interpretácie* [Electroacoustic Music in Slovakia and Ways of its Pedagogical Interpretation]. [Dissertation]. Nitra: Constantine the Philosopher University, 2010, 220 pp. Also, Čierna, A., 1996, pp. 67 – 111.