ELECTRO-ACOUSTIC MUSIC IN CZECH REPUBLIC

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The following study presents a shorted form of the selected chapters of a dissertation part dealing with the Czech electro-acoustic music (hereinafter referred to as EAM). The study is in particular engaged in the information available or interpretable to foreign researchers only with difficulties.

Basic typology

For our purposes, EAM may be specified as a music the sound material of which is generated, or at least in majority elaborated and mediated by an electronic medium. It may be defined as a music genre (in Czech druh, in German Gattung) specific for its selection of material, partly by the methods of its elaboration and its functions. The majority of the contemporary music goes at least at a certain stage through editing in a sound recording room (cut, color adjustment, and reverberation). It is therefore necessary to distinguish more precisely then in the past the core of EAM and so-called transition zones between the electro-acoustic and other music types. The core of EAM consists in the production where the EA means form an integral part of so called semantic gesture, i.e. where the artifact’s transition into the acoustic form would be absolutely impossible or would significantly change its character or sense. The transition zones may be defined from a technological or an aesthetic viewpoints. As far as the technological point of view is concerned, the most important aspect is the extent and function of EA means involvement in the syntactic-semantic design. From the aesthetic viewpoint, we can distinguish in the EAM so called intensive transitions from art to non-art, and so called extensive transitions where the dominant position of the aesthetic function reduces in favor of the use functions. The intensive transition of EAM includes numerous examples of exercises (fr. term of P. Schaeffer was solfège from it. solfeggio), experiments, as well as banalities and kitsch. The extensive transition covers strongly occupied field of the film, scenic, and ambient music. Popular music occupies both the aforementioned zones. Another important aspect of EAM is the transition from music to non-music. For that matter, it is useful to distinguish the author’s and auditor’s viewpoints. The creation within this transition has been developed particularly by Bruitists, J. Cage, concrete music (P. Schaeffer, P. Henry), environmental and ambient music (T. Murray Schafer) sound therapies (P. Hübner,
A. Tomatis) The general term used in the Czech Republic is electro-acoustic music. This term has been promoted by Confederation International of Music Electro-acoustic (CIME), although we can also still meet – thanks to the tradition (Germany) or thanks to its useful brevity (U.S.A.) – the term electronic music (EM). From the axiological point of view, EAM is still currently included in so called New Music (formerly also avant-garde, experimental music). However, the internal EAM typology suggested by EA researcher F. R. Moore dividing EA creation into the “traditionalist” and “revisionist” one seems to be more adequate. This viewing enables that it is possible to work with the technically up-to-date material and studio media, for example at a syntactic level, in a conservative way or, on the contrary, with the determination to find solutions uniquely linked to the new options. We should at this point add a note to the Moore’s theory that the traditionalism and the revisionism are not a priori indexed as to their values. The traditionalist approach may be conscious “test” of a material capacity, of studio media as well as of traditional forms (in many cases there is for example exploitation of a hidden semantic potential of the concert form in its principle of contra-position or co-operation). On the other hand, traditionalism may also be an unintended effect of the overall orientation of the author. Nor the revisionism must necessarily be more valuable. It may be the expression of a serious speculation of rational or meditative nature, as well as an effect of the lust for fashionable success and of the superficial opposition. F. R. Moore apparently substitutes the modernistic term „innovating“ with a post-modern term: While the modernism absolutely accentuated anything innovating, the post-modernism perceives the new as a continuous re-evaluation of the tradition. In the Czech conditions where the large majority of the EA composers passed the classical education of composition, the aforementioned typology is taken for fundamental. There is also another typology generated by J. Cl. Risset distinguishing composers according to their primary orientation on the poetics with the ambition to “leave the material talk”, and on the poetics seeking to create a “grammar” valid or for a particular group of the author’s works or for his whole production or for a general value. There grammar rules are usually regarded as more general and substituting the former effect of tonality.

As far as the internal itemization of EAM is concerned, we may use for a criterion of the typology 1. the material source (where the Czech musicology in accordance with the foreign sources distinguishes two elementary types – concrete music (P. Schaeffer, P. Henry...) and electronic music (H. Eimert, K. Stockhausen); 2. the criterion of the mode of implementation. About this criterion EAM may be divided to Music for tape, Live electronic music, Computer music and Musique acousmatique. Till the mid-1960’s the Czech environment used the term “technical music” (C. Kohoutek), or “information” or “cybernetic” music (V. Lébl, to the extent of the current EAM). These terms were apparently connected with the modernist accentuation.
Information Sources and Literature

The factual basis of this study consists in the *EA summary of so called artistic, autonomous work of the Czech authors* working both in our country and abroad since the appearance of first more important opuses (in 1961) till the end of 1997. The data (about 480 compositions) are elaborated into the operational form of a database. The subject has been concentrated due to its considerable extent on the Czech creation leaving apart the Slovak one, though its historical connection is apparent and the former synthetic works dealing with the domestic creation included it (see below). The data of the database have also been reduced as to the documentation of the works falling to so called transition zones.

The source material of the study consist in the original radio recordings of the Czech EAM or their authorized copies (deposited in the *Music Information Center*), and replays of the *Association for EAM* (since 1990) covering particularly at the beginning the retrospective reproduction of older, technically qualified recordings (from the work of M. Kabeláč, Z. Vostřák. etc.). Later works could be monitored continuously within the concerts of the *Association for EAM*, concerts of *Atelier 90* (since 1990), International Festival in Brno, in so called *Expositions of Experimental Music* (since 1990) – later *Expositions of New Music*, and the Days of Contemporary Music in Prague. The presentation of the authors from the region of Brno is the most frequently held in the *Great Brno Planetarium*. The aforementioned institutions have been presenting the students’ works (*Janáček’s Academy of Arts* in Brno, *Music Art’s Academy* in Prague). *The Czech National Broadcasting* comments regularly upon the EAM production in the studios of the radio at Vltava station.

As to the sound sources, I have been continuously building the collection of brief audio scores with their description. As to the information sources, I have been using in particular manuscript scores (if they existed and if the authors accorded them to the archives of Broadcasting or *Czech Music Fund* or if the authors enabled me to take a copy of the manuscript scores in their private property). Another written source of information consisted in the results of a questionnaire survey initiated in 1990 by the established *Association of EAM*. The questionnaires were designed to 1) prepare a database for the needs of the association, 2) constitute material for the information center of EAM in Bourges. The questionnaire included 10 items covering the author, title, place of origin, duration, category of the work (in line with Bourges typology), technical equipment and used sound material, saving of master tape, performing and subsequent performances, awards, recordings. My solution in formulation of sentence in database is following:
Authors: Hlaváč Miroslav
Title: Fontana cantans
Date of origin: 7. 5. Year: 1971 Place: ES Pilsen
Technicians: K Genre: C Type of recording: S Time: 0:12:00
First performing: Year: 1971 Place: Pilsen
Recording: Awards: Rome 1972

Form: AXA, sound objects are combined with murmur zones or breaks.
Methods: frequency thickening, simultaneous montage.
Composition problem: rythmization of heterophonic concrete sounds.
Detailed graphic score with text supplement.
Selected to IDEAMA. Copy HIS MGF 839, 1990, Copy of recording and score GRM. INA, 1990.

Abbreviations are explicated in database introduction.

Further written information sources consist in the materials supplied by the Music Information Center (MIC, in Czech HIS) composers themselves (with variable information extent), concerts programs, newspaper articles. I compared my materials with the existing synthetic works (M. Kaduch, J. Novotný, L. Zajíček), with the existing catalogues and Internet databases complemented and maintained by Society for EAM: www.cibulka.cz/SEAH/SEAH.htm or www.cibulka.cz/musnova/compet.htm.

As to the issue of information sources
Sound records: Records marked “permanent records” are conserved in archives, which means that portion of the EA production of both radio and school studios, also enlisted in the database, has been erased from the archives of theses institutions and in case these records do not exist in author master copies, they do not exist at all. MIC holds only smaller part of copies of the production, although the significant from the artistic point of view (marked MGF). Today, great share of the so-called computer and live production is kept archived, if at all, by the authors in their private studios (Forrotronics, Peli studio etc.). These records are not signed. Sound records older than 1965 are virtually unavailable today, due either to their poor quality or loss. The information depth of archived records documentation varies. The best processed documentation could be found in the specialized radio studio in Pilsen (managed by Č. Kadlec) during the time between its founding and merger with a more general service, i. e. between the years 1967 and 1994.13

Problems are often with specification of the time of origination. Authors usually state the point of conclusion of a project on paper while its sound performance takes place somewhat later, in several stages (so called frequencies). Sometimes the two parts of creation included a great deal of time difference, for example due to prepara-
tion of the work in Pilsen and its sound recording in Prague in a better equipped studio, or writing conducted in Prague and the recording finished abroad (often in Graz or Bourges). Work in short, separate or night frequencies is rather typical for the Czech environment and has been limiting for the access of authors to studios. There have never been the proper circumstances for Schaeffer type of experiment, although Czech composers had been acquainted with the idea (1. visit by Schaeffer took place in 1966). In the database I either state the date of conclusion of a project (if no other information is available) or state the time span of creation of a composition.

As for the data on duration of a record, the most reliable source is the “birth certificate” of the permanent records in radio studios. The problem comes with the species typology EAM. The inquiries presented to authors then used typology presented at that period of time by International Confederation of Electro-acoustic Music (ICEM) in Bourges. It included separation into the following groups: a) EAM, b) music for players and a tape, c) EA programming and d) live production EAM. This hybrid typology had come from practice, in case of letters a), b), d), they were derived from the manner of creation while the category c) was content oriented. In the database, I prefer division into groups of concrete and electronic music, with possible subdivision according to the record being a live one or not. If our authors had, at the beginning, preferred the concrete music material due to its better “adhesion” to the acoustic material, later the choice of initial sound shifts more to become a part of semantic gesture of the work: for example I. Kurz intentionally used natural sounds in his composition Reverie (1982): the common, sense-receptacle reality stands for “dreaming” (reverie) on top of things, while the sound “subject the microscope” of phonoanalysis represents “hidden reality”. Here it is reasonable to call the music as “concrete”. On the other hand, A. Piňos in the part ZOO of his series Counterpoints of Nature (1978) deliberately goes i. e. natural, sounds in order to achieve bizarre effect. Such deeper, in fact structurally stylish definition of music as concrete or abstract was created by P. Boulez: “I call abstract such relations that can be truly dematerialized, concrete are those that cannot be detached from material”14. D. Forró sometimes uses the term neo-concrete for music processed in a technologically new manner (through a sampler).

The nature of existing synthetic works about the Czech EAM

The work of V. Lébl Electronic Music (Elektronická hudba in Czech, SHV Prague 1966) has been the first to provide a specialized overview of the world happening in the EAM. The first more containing text of its kind, dedicated exclusively to the Czech and Slovak EAM, is the thesis and subsequently the dissertation work of J. Novotný – EA Studios in the Czechoslovak Socialist Republic: Overview and Development to 1980 (EA studia v ČSSR: Přehled a vývoj do r. 1980, FF UK Prague 1979, 1980). The texts include detailed information on the activities of the so called Commission for Electronic music by science section of the Association of Czechoslovak composers, on six concluded educational seminars EH in years 1964–1970, detailed
listing of equipment of state studio workshops. The work also lists detailed sequence of basic events and lists of production partially including film and drama production, up to the year 1980. The text is constructed in factographic time sequence and pays no attention to the overall cultural or political environment. It is a reliable source of information on professional seminars with the use of the archive of Protective Union of Authors (OSA), Czech Music Fund (ČHF), Theatre and Literature Agenture (DILIA), Union of Czechoslovakian composers and performers (SCŠSKU), Research Institute of Radio and Television (VÚRT), whose materials have been partially discarded, lost or are otherwise hard to obtain. It provides good information on the equipment of studios. It is less reliable in the time data in individual concerts, the weakest part is the listing of production.

Another summary work dealing with Czech and Slovak production is the thesis of L. Zajiček An Oral History of EAM of the Czech and Slovak Republics (San José University, 1995), which is an exact record of dialogues and correspondence of significant composers, technicians and musicologists dealing in EAM. Interviews are not supported with notes. The level and information depth of individual interviews varies, evidently dependent on the spontaneous communication and formulation skills of the interviewed, several significant persons are missing (f. e. M. Hlaváč). The texts are supplemented with factually correct short historical introduction on individual studios and their equipment (in 1993). L. Zajiček comes from an emigrant family and somewhat simple comprehension of the cultural and political situation of the era, especially the period of so called “normalization”, is rather evident from the text, which often stands on statements (often unprovable) of influenced artists R. Berger (“The electro-acoustic music has been officially pronounced as treasonous activity”) and R. Růžička. Another synthetic work related to EAM is personal dictionary of composers, programmers, technicians, musicologists, critics and publicists Czech and Slovak EAM 1964–1994, M. Kaduch the dictionary is a basic literature of its kind. It was elaborated on the grounds of not so well organized inquiry, therefore, some items are too detailed and include vocally instrumental production as well, and others are brief. The dictionary has been edited twice. Another important work of M. Kaduch are Development Aspects of Czech and Slovak EAM (in Czech Vývojové aspekty české a slovenské EAH, Ostrava, 1997). The text is introduced with a page long overview of the world development. The chapter The Creative Concept in Historical Retrospect (pp. 9–51) presents a time axe with indication of production of significant individualities of EAM with brief description of the poetics. The author again used mainly statements of the composers. Production of R. Růžička is tended to in detail, as well as his use of the Czech composition program CCOMP. The closing list of international contest Musica nova prizes starts in 1994 without a word of explanation (1. renewed event took place in 1993).15 As for monographic works, a summary of EA compositions of Z. Vostřák with brief description is listed in the dissertation Idea and Shape (Idea a tvar, Praha 1994) of M. Pudlák. Some authors provide their own broader explanation, terminology is also discussed by (D. Forró, M. Ištván, J. Jirásek, J. Kapr, R. Komorous, V. Matoušek, A. Parsch, A. Piños, Z. Vostřák).16
To the historical, political, and cultural context

The first attempts at EA creations in our country appeared in the late 50’s in the circle of the art society opposing in a close relationship with the poetics of the art and literary Neosurrealism to the official ideology of the socialist realism (R. Komorous, V. Šrámek, L. Simon, L. Novák, or P. Kotík at the EAM). One of the sources of inspiration for the EA autonomous art production was, similarly to other countries, the artistic concept of radio plays (K. Horčička) and film music (I. Zeljenka). In compliance with the European development, the sixties, especially the late sixties, were a period of relative political tolerance. The years 1958 to 1964 in Czechoslovakia can be seen as a period in which a certain action framework had to be created for the contemporary arts (in 1959 Berg’s Vojzek was mentioned who indicated an intellectual shift in the official cultural policy). Since 1964 EAM seminars were organized (1964–1970), the artists were given the opportunity for working in studios (from the years of 1961 in TV Studio in Bratislava, 1964 Radio Prague-Karlin, 1965 Studio in Radio Bratislava, 1965 Research Institute of Radio and Television, Sound Laboratory in Institute for Musicology – Academy of Sciences, 1967 Radio Pilsen). Creative groups, typical for modernism (Prague Group of New Music, group QuaX, Studio A) were formed in the framework of the so-called New Music. These groups established cooperation on programs, including the concept of interdisciplinarity. The technology of political power questioned the activities of these groups that, contrary to the pre-war avant-garde, accentuated individual creative freedom.

Only few publications were issued outside the framework set by the ideology of the socialist realism but their concepts were prepared very thoroughly (volumes New Ways of Music – in original title (o. t.) Nové cesty hudby, SHV Prague 1964, 1970, journal Confrontation (o. t. Konfrontace), red. by V. Lébl, Prague 1969). Foreign contacts were established. The members of the above-named groups visited regularly mainly Darmstadt’s courses, Warszava’s Autumn festivals. Also, New Music representatives were invited: L. A. Hiller’s visit in 1961, L. Nono’s visit to Bratislava and to Prague in 1969, contacts with J. Patkowski mainly in Slovakia, official visit of the P. Schaeffer and F. Bayle from GRM to Prague in 1966, Stockhausen’s visit to Slovakia in 1968.

While EAM played a special “secondary” role of underground in the early 1960’s mainly in the art society (including “conspired” listening f. e. to works by Stockhausen and Boulez and home art attempts with tape recorders by Sonny or Grundig), so this kind of music, standing originally on the edge of the interest of the audience, found broader social resonance after 1968, mainly in Brno and Bratislava (After all, jazz and rock music also played a similar, not necessarily natural role at that time).

The EAM production was permanently very high in the early 1970s since the results of political “vetting” could be felt fully after 1972. The compositions were also successful on the international scene (Štědroň’s Utis, Hlaváč’s Fontana cantans, Růžička’s Gurges, Slavický’s Praise to Cembalo – o. t. Chvála cembala etc.). For a quantitative overview of the production see the chart.
Since the early 1970s the overview also included school production. However, it is important to know that the authors became notable later or participated in EA seminars. The downward tendency since the mid-seventies was so evident that the differentiation between professional studio and school production was statistically irrelevant.

The repressive political power was applied arguably in the restriction of public propagation of EAM after 1971. Concerts could not be organized especially in Bohemia and Moravia, the international competition Musica Nova was discontinued, as well as the well-established regular seminars, records, and periodicals. This was a result of replacing editors (E. Herzog in Supraphon publishing house, I. Vojtěch in Hudební rozhledy review, discontinuation of Confrontation journal, and others). The authors could not travel abroad so often. However, the restriction of the production was not global, only “less desirable” authors existed. I was not able to find any document confirming R. Berger’s statement on an official classification of EAH as “treasonable arts” by the Minister of Culture in 1971. This statement is in contrary to the “masked” political style of that time. The so-called political document “Lessons from the Crisis” were rather instructions for tactics of hidden slighting than open totality typical for the 1950s. This model combined with inconsistency (sometimes politically purposeful) that allowed a number of cultural activities to scrape along on the “edge” of the political framework. The statement on a general suppression of EAM in this period is in contrary to the fact that the postgraduate studies at Jandček Academy of Arts (JAMU) could continue in the early 1970s. JAMU began to cooperate with the broadcasting corporation in Brno and could use its studio. In 1971 the Sound Studio at Music Academy of Arts in Prague was completed (I. Kurz made here his first Etudes). According to V. Syrový, the current head of the studio, even V. Dobiáš, a leading representative of the Communist party, supported the project (today we can only hardly identify his motivation). At the same time, universities were in the focus of political monitoring and they were the so-called “normalized” area. V. Kučera (secretary of Union of Czechoslovakian Composers and Performers in 1969–1983) was
an active composer of EAM with an international reputation. His *Kinechromie* appeared on Panton’s record in 1970, his radio fresco called *Lidice* (the name of Czech village massacred during the second war) was issued at Supraphon in 1972. This composition had an untypical (poetic ideal of L. Nono) arrangement at Škoda factory in Pilsen and it was here very successful.

According to the authors themselves, several EA compositions were written at that time dealing with resistance against occupation and the power: *Avete morituri* from M. Ištván, *Angelion* from M. Hlaváč (1969), *Machinery* – o. t. *Aparát* (inspired with Kafka’s *Castle* as a parallel of political irrational machinery), *Message* – o. t. *Poselství* from J. Hanuš (realized in Prague, January 26th, 1970!) in memoriam to J. Palach, student who scorched himself as a protest against the occupation of republic. Of course, a larger number of compositions dealt with more general philosophical topics, such as humanism, resistance against violence, and others.

After 1989 the actual position of the artificial EAM in the spectrum of culture became clear: it is really a kind of music for a narrow group of specialized audience, a kind of music whose extraordinary social resonance in the 1970 was evoked by a special political situation. The works, motivated by the political context, had mostly a partially ironic timbre in this post-revolution period. On one side, they turn back to the recent past, on the other side, they show mostly ambivalent feelings for the present. These works include e. g. *Looking West, Looking East* written by J. Jirásek (1991), *Spleen of Optimism* – o. t. *Splín optimismu* by E. Viklický (1991), *Quite Alone* (in Czech idiom “Kůl v plotě”, it was a sentence pronounced by the first communist secretary M. Jakeš in his political speech. He designated by this idiom his political and personal situation shortly before the revolution in 1989) from young composer M. Marek (1996), *Rails* – o. t. *Mříže* by A. Piňos (1991). The only exclusion is Slavický’s *Transillumination V* – o. t. *Prosvětlení* with its euphoric concept (1990) celebrating the revolution of 1989. Contrary to the 1960s or 1970s, there is hardly any social resonance for the politicallyaccentuated artificial EAM. This music has also been postponed from the common broadcasting times of the radio until late hours due to little social interest. Also, the students have been interested less and less in this production. There are two causes for this: First, EAM is a minority genre in its substance; and secondly, the technical aspect has become common and to be “modern” is no longer “in”. There is also a different and well-founded view of EAM that criticizes EAM as art favored by the State. This statement results from the fact that the EA production took advantage of the State’s interest in the development of communication media as a tool of its power. This critical attitude has appeared mainly in countries in which studios and research institutes are funded mostly from public or municipal sources (France or Sweden in Europe).

How specific was in this view the situation in the socialist regime, in which area did the patronizing mechanisms work and in which area did the suppressing ones work?

*The philosophy of socialism* can be generally understood as a definitely formed expression of *modernism* with its belief in the historical progress through reason, in the good in man and his undying willingness to cooperate in favor of the whole. This
axiological concept developed since the Renaissance. It hit the political sphere significantly through the French Revolution that revealed its weaknesses. Marx’s utopian anthropological humanism, which presumed that the inner development of man would become free by removing economic hardship through class struggle, in fact opened the way for a regime without the necessary democratic control mechanisms and thus to potential despotism of the power. The Marxism of the socialist regime had one thing in common with the European modernism of the 1960s: it was the belief in universal solutions even in art. However, the attitude of the socialism to new technologies coming from the West, as well as to the functions of the arts was not very clear. The beginnings of the Czech EAM are related to an institution that should have provided for a development of media technologies controlled by the State (Research Institute of Radio and Television). This institution was involved in the research into stereo technology in the broadcasting corporation in Pilsen. On the other hand, the regime was not flexible enough to accept, among other things, A. Svoboda’s individual project (A. Svoboda was an active member of the so-called Commission for Electronic Music. He wanted to make the most of his experience from the U.S.A.) for the manufacture of computers and music software.

As for the arts, Marxism was based on Hegel’s idea that the historical development has its final optimum stage in which no individual arts will be necessary any longer because it will be replaced by higher stages of spiritual life, that is, by science and philosophy. The belief in progress and scientification of the methods of arts (thus, an opportunity for a social and political control) allowed to a certain extent to use a “language game” to push EAM through to the official program of the regime (see Kolman’s and Sychra’s “incantation” by cybernetics that had been seen as a typical product of the bourgeois quasi-science in the period of Stalinism but later it was accepted as a science important for the Soviet future). The focus on the technical aspects should have also protected from discussions on the socialist realism in EAM. The ideology of progress and enlightened reason is implicitly dangerous in the hands of the so-called ruling class (in fact, individuals and groups) that wants (and is able) to eliminate all seemingly incorrect solutions which results in the disqualification of certain personalities outside the politically protected zone, that is, Art unions in our country (for example, M. Kabeláč in EAM; however, he had realized his one and only work with EA's section E Fontibus Bohemicis in 1972, J. Kapr, M. Kopeleent, R. Růžička).

Unclear concepts of the social role of arts and the function of new technologies resulted in discussions among artists in the fifties and sixties not only in our country. They were earnest at that time, not only a language game like in the seventies. In the sixties, the artists and the intellectuals had, at least on the Euroamerican territory, a relatively high social credit. J. Fr. Lyotard related the modernistic atmosphere to the resonance of the “majestic” in the environs of which both artistic and political kitsch and undermining humor can be found. The socialist discussions, regardless of its specifics, fitted with this more general frame. In the sixties, the idea of progress was complemented in a number of countries with a counter-motive discussion on
a possible stabilizing anthropological foundation of the arts (mainly T. Volek’s comments in our country in the tradition of Czech and American structuralism).

In the Czech music reviews, information on concrete and electronic music appeared in the mid-fifties. This information came from German journalist sources. The first technical information (along with a picture of Schaeffer’s Studio) was presented in the Czech music press by M. Novotný, Czechoslovakian State Film’s sound engineer, in the story called Music through the Eyes of Technology, the so-called Concrete and Electronic Music – o. t. Hudba očima technologie, tzv. konkrétní a elektronická hudba (in Hudební rozhledy 1958, pp. 364–368). L. Mokrý and J. Albrecht were the first to inform on EAM in Slovakia. The aesthetics of EAM was discussed by E. Šimůnek. P. Kolman and L. Kupkovič organized New Music seminars (eight lessons since 1959 with the music by Stockhausen, Eimert, Křenek, and Schaeffer). M. Kabeláč performed similar activities at the Prague Academy of Music (after 1958). L. Hiller gave a lecture in Prague in 1960. Since 1960 comments on the Darmstadt courses and the ISCM festivals (by J. Klusák, C. Kohoutek, V. Kučera...) appeared in the Czech music press. A discussion was held in journal Lidové noviny (1961). Especially M. Kopeillet, J. Klusák distinguishing only “bad and good music” and J. Rychlík afraid of “axiomatization of music” formed their statements in the early 1960s that went far beyond the ideology of progress and understandability. The one-year discussion at Hudební rozhledy journal was closed by A. Sychra’s article Music Experiment in the Light of Science – o. t. Hudební experiment ve světle vědy (1963, pp. 311–316). He accentuated, in this time, tolerance of opinions, the function of artistic fantasy, and usage of technology as an auxiliary tool. He formulated an interesting opinion based on his own experimental experience with the research into paralinguistic parameters of speech (along with A. Sedláček). His proposal to extend EAM’s possibilities involved mainly the use of hidden semantics of paralinguistic (that is, mostly intonation) features of speech. Sychra referred to B. Asafjev, cybernetics, and A. Moles information theory. Sychra’s so-called psycho-acoustic basically correlated with Schaeffer’s attempts in solfege (that is, transfer of sound, hearing experience without using verbal codes).

V. Lébl intended to continue his psycho-acoustic research too in the project of the foundation of a sound laboratory that should have been prepared by the Commission for Electronic Music led by him. However, this ambitious program was not put into practice, except for the foundation of the Experimental Studio in Pilsen in 1967. Neither was L. Simon’s and I. Janoušek’s progressive project put into practice in Ostrava (1968). As the authors said, it was due to the typically problematic relations of rivalry between the official administration and the hidden power of the political structures. Only a humbler project was put into practice as part of the Electroacoustic Laboratory of the Institute for Musicology of the Academy of Sciences in cooperation with the Experimental Studio in Pilsen and a recording studio in Prague. There were very good theoretical prerequisites (structuralism) in our country for the development of the psycho-acoustic research, which has been implemented in relation with the EAM world-wide, but it was practically terminated with M. Jůzl’s research
program. The research into wind in the Sound Studio of the Prague Music Academy has focused on instrumental acoustics.

A breakthrough year for EAM was 1964 when the First Electronic Music Seminar was held and the miscellany called New Ways of Music was issued. A total of five seminars provided for free training for almost all-active composers. After 1970, EAM training was only possible at universities, originally in postgraduate studies. Work in radio studios did not offer any opportunities for experimenting systematically with materials and sound perception. The political power provided, unwillingly and secondarily, for operational background. The radio station in Pilsen had been finished just before World War II (after the war, a research by Research Institute of Radio and Television into stereo broadcasting. This Institute offered its equipment to the Pilsen studio). The Prague Audiostudio rented out its studio in the so-called Palace of Culture (1990–1994). This studio should have been used originally for sound distribution in the Congress Center during party congresses. In the Brno radio studio they could mostly work at night using non-specified equipment that was moved very often. Not even in Pilsen where the conditions were rather calm and the technical staff was reasonably proficient (technicians Č. Kadlec, V. Ježek) broadcasting times were relatively short compared to those abroad. Besides, the information from the Pilsen studio on the “effective use of time” confirms the preference for usual good prepared composition work. In the Prague radio studios, there was additional pressure by other editors. The best opportunities, including improving technical equipment, have been at Janáček Academy in Brno and at Music Academy in Prague.

As for access to information, contacts with other EA studios mainly in Poland, Germany, Italy, France, and the USA, were established in the late 1960s. It turned out that the situation of the sixties was generally, not only in the socialist countries, so different that it could only critically take up the pre-war tradition. The pre-war modernistic belief in an immediate impact of arts on the quality of the social reality was replaced by individual scepticism. Besides, a systematic interdisciplinary cooperation between Prague and Brno failed. As for the internal professional situation, both the attempts to defend the Modernism and the avant-garde (especially the requirements as to creative freedom, analytical reflection and self-reflection) and their criticism and criticism of the cheap misuse of the forms of the avant-garde expression: “It is difficult to say when the conditions for modern arts in our country were worse: whether it was in the fifties when modern arts were prohibited or today when we are experiencing a strange wave of inflation... New music has to face two different obstacles at a time. One obstacle is the distrust in the form of an administrative pressure, the other obstacle is the styliness... The administrative pressure can never be permanent. It can only have a negative impact on external circumstances of the music life, not on the substance of creative activities. The examples from the past show that the policy of prohibition can sometimes be of unintentional benefit for modern arts since it provides with its pressure for an extremely effective “sophistication of minds”. Compared to this, styliness is a generous giver, it is tricky, artful, omnipresent.” Group formations fall to pieces not only under the pressure of small but permanent administrative repression.
but also due to lack of interest by the society and due to their own principles of preferring individuality to groups, which have a specific accent in the socialist context. The Brno formations (Group A, Studio of Authors, as well as Q, originally focusing on graphic arts, later interdisciplinary) have survived. Also, contacts of various artists are rather successful, perhaps because of a perceived “opposition” to the Prague scene. The information published in music reviews lost its quality in the early 1970s. Some personalities emigrated under the pressure of circumstances (D. Brožák, P. Kolman, R. Komorous, P. Kotík).

The seventies were not only in our country but also in the whole Euroamerican world considered a period of a massive coming of consumption and conform way of life. Being an artist meant having just a common job. The category of the “majestic” was redefined. The relationship to new technologies became unmarked, only few authors perceived a relationship between technology and dehumanization. The so-called environmentally oriented authors were classified as “extremists”. The shift to “technical” music became again a domain protected against the ideological zone. Thus, even those composers who could not organize public concerts were allowed to work in EA studios at that time (for example, A. Piños was mentioned explicitly). Moreover, musicologist M. Kaduch described the seventies as a period of development in relation to the EA creation, not to the possibility of communicating in an open way: “The seventies were in their global creative views an unprecedented nursery of a multitude of inspirations arising from the common trends or technologies of EAM of that time but creating new values by their way of processing them. Looking back, we can say that they were basic values of documentary, historic importance...”

He mentioned the works by I. Loudová, I. Kurz, A. Parsch, A. Piños, R. Růžička, M. Slavický in this context. In the seventies, mostly individual contacts of the EAH composers with abroad continued (with Bourges, Paris, Utrecht, Geneve, Gera etc.), only V. Kučera was the official representative of the composers, as well as a member of the ISCM board in 1978–1983.

In the eighties, the relationship between the historical and political context and the EAM production was not very evident. The radio production was influenced, among other things, by economic pressure. The reduction of concerts continued, as well as the opportunities to participate personally in larger events abroad. In 1979 and 1980, Novotný’s first phenomenalistically based works on the EAH were published. In 1989 a separate section was prepared in the Palace of Culture as part of the conference called Application of Artificial Intelligence AI’89. This section dealt with computer arts. The discussions were led by composer R. Růžička.

Early in 1990 the Society for EAM was established in Czechoslovakia. Composer K. Odstrčil and a head of the Moravian branch R. Růžička were appointed its president and vice-president. Its members are both composers and engineers and musicologists. The Society established, among other things, official contacts with ICEM in Bourges and ICMA in San Francisco early in 1990. A meeting with the representatives of Bourges (Ms. Barrière and Mr. Clozier) was arranged on 26 April 1990. In the same year, shortly after the opening of Audiostudio in Prague, P. Henry,
a significant personality of the history of concrete music, paid a visit to Prague. He presented here his book called *Tibetan Book of the Dead*. In 1990 M. Slavický worked in Bourges, A. Piños and M. Košút in Lyon, E. Spáčil in Geneva. It was in the same year when I delivered a survey selection of the Czech EAM, copies of scores, to the archives of GRM, INA. Society for EAM began to organize regular play-backs, EA compositions were regularly presented in the Exhibition of Experimental Music (see above). The contacts, with official ideological and partially economic support, became more frequent. The production in radio studios stagnated from financial reasons. *Atelier 90* (M. Kopelent), *Society for New Music* (I. Bierhanzl), *Studio of Contemporary Music* (I. Loudová), and *Audiostream* in Janáček Academy (D. Forró, I. Medek) were particularly involved in the propagation and maintenance of foreign contacts. In fact, the artificial EAM did not provoke experts or public interest in the extent of the sixties and the early seventies. Only live audiovisual projects by authors from Brno (D. Forró and I. Medek in cooperation with percussion group DAMA DAMA) attracted a slightly greater interest by the public. A new phenomenon was the production of *home studios* (D. Forró’s private Forrotronics had the highest production after 1985; it produced mainly *Live electronic music*). After 1990 a new philosophical approach appeared – no international or national creative groups with a program but support to *local culture*, half-professional EAH for close friends, often combined with ecological, religious, philosophical, and ethnological aspects, in unusual forms, in an unusual environment. P. Samlík from village Kojetín (he owns here his home studio) was a successful example of this approach.

**Briefly on technological determination of elektro-acoustic music**

In our EAH the technical conditions of the studio equipment have also an indisputable impact on the composition strategy of the composers. The opportunity of using new technologies always provokes a certain response from the authors. At present *Studio F* in Radio Karlin Prague, *Sound Studio* in Music Academy of Prague and *Audiovisual Studio* in Janáček Academy in Brno are equipped equally with commercially available products so that the specifics of production from the individual studios is determined predominantly by other factors. For a detailed description of the studio equipment see J. Novotný’s work (by 1980) and L. Zajíček’s work (by 1993). The equipment after 1993, related to specific works, is mentioned in the author’s thesis.31 It is D. Forró who has been involved systematically in the problematic of new technologies in the Czech musicology.

In the first phase (by 1967) the Czech studios used common studio equipment except for the *Barrandov Film Studio* that had a very good synchronization equipment used for example by Z. Vostřák in his composition called *Weights of Light – o. t. Váhy světla* (1967).

1968 was a breakthrough year for composing in the *Experimental Studio* of Czech Radio in Pilsen (1967–1994) when stereo equipment was purchased. One year later quadraphonic equipment was purchased. In 1968 recordings were made in which the stereophonic effect was transformed into a semantic gesture: *Timbry* composed by
R. Růžička, *Spiral and Labyrinth* by V. Kučera. One year later the quadraphonic effect was used in the compositions *Per Aspera ad Astra* composed by M. Haase, *Gurges* by R. Růžička, *Kinechromie* by V. Kučera, *Fiction* by K. Odstrčil and *Metaphonia* by M. Hlaváč in the year of 1970 and *Prolog, Labyrinth* by A. Parsch one year after. It is interesting that after this period the opportunity of using a quadraphonic effect was no longer primarily inspirational for the composers. From 1967 until mid-1970 the production maintained a very good quantitative level (see the chart) while mostly analogue *phonoanalysis* was used rather than *phonosynthesis* that was used only when the composer had a clear syntactic concept in which he needs a detailed control of the structure or a semantic expression intention (such as the *Futurism* in Hlaváč’s *Star Story* – o. t. Hvězdný příběh, or the bizarre, humorous effect in Piňos’s ZOO).

It was in particular Z. Lukáš (*Arcecona*, 1968), M. Hlaváč (*Astroepos*, 1969) who worked with the so-called *pure phonosynthesis*, but mostly they worked in a combined methods (*Angelion, Biochron, Chimerion* composed by M. Hlaváč, *Transposizioni* by A. Parsch...).

A remarkable decline in the studio production in the early 1980s was linked directly with both political and economic difficulties, which resulted in the fact that the technological equipment fell behind compared especially with the opportunities of pop music. This situation resulted in a lack of motivation for young composers. Due to limited possibilities of further education, the older generation of authors could not keep up with high technical requirements as to the studio work, in particular after the mid-1980s when the analogue technology was replaced by analogue-digital and digital technology using commercial synthesizers, samplers, and effect devices mostly from foreign suppliers (*Research Institute of Radio and Television*’s products were near the end of their service in university studios). A new generation of composers appeared who increased slightly the total amount of production. It was in particular E. Spáčil, J. Jirásek and K. Odstrčil who worked in the Pilsen studio with the aim of using new devices as *universal music instruments*. The source of the sound is no longer so important. On the contrary, the processing of the sound, the effects in the parameters of color (sampling), and the artificial echo are of increasing importance.

In the early 1990s computer technology appeared and the MIDI standard was used broadly (D. Forró has been using this standard privately since 1985 in his studio). Depending on technological possibilities, the *aesthetic ideal* moved towards greater *syntactic freedom, improvisation, and syncretic combinatorics* (this was also a result of the coming of a new generation of composers).

Another important center of autonomous art creation was the studios in Prague. In the beginnings, it was the studio in Karlín with no special equipment or the film studio at Barrandov. From 1990 until 1994 it was *Audiostudio* in Palace of Culture, then *F Studio* in Karlín where all existing equipment was installed. *Audiostudio* was headed by composer J. Jirásek. Since the very beginning *Audiostudio* was considered equipped as standard, that is, with a 24-track mixing console, a controlled computer, samplers, synthesizers, and effect devices. It was first J. Jirásek, E. Spáčil, B. Minkolášek, R. Růžička who used the advantages of this studio for composing. J. Jirásek commen-
ted on the aesthetics: “the aesthetic of the Audiostudio essentially as opposed to the one of the Experimental studio in Pilsen, which ... in essence inclined to the creative philosophy of the time, on one hand, the overall philosophy which in those years in Europe, for example, was dominant. And (the Pilsen’s Experimental Studio’s aesthetic was also defined) from the point of the view of technical possibilities of the time ... there emerged, in essence, specifically the genre, music for tape. So on the other hand, our Audiostudio aim is, in essence, totally different, and is oriented towards the end that the music can be performed live...” The idea of “creative philosophy of time” concerns substantially the syntactic strategy of composing (narrative – space) and the extent of syntactic consistency. It is true that the aesthetics of Audiostudio relates (except for the creation by V. Matoušek, A. Piňos, M. Pudlák or R. Růžička) to more free syntactic structures, to variability of color (sampling, echoes), manipulation with rhythmic (possibility of computer splitting to any values and algorithms), live electronic music (based on the capacity of the processor), and combinatorics of genres. This approach cannot be seen as directly “opposing” to the Pilsen approach as at least part of the Pilsen production developed in a similar direction depending on changing technological possibilities. Similarly to part of the Prague later production, it is also involved in the sophisticated temporal form. The situation was also similar in the Studio F in Karlin headed by composer R. Rejšek. University studios included the Audiostudio in Brno with composer R. Růžička who taught composition from 1969 until 1994, and I. Medek and D. Forró who have taught composition after 1993. A significant change in the equipment of the studio was the gradual purchase of YAMAHA products after 1994 (thanks to D. Forró’s contacts with this company). It was in 1994 when a shift in the poetics of composition occurred from the work with the Czech statistical program CCOMP and later Isokwant, promoted by R. Růžička among his students, to a concept that was concerned with getting acquainted with new stimuli of the commercial hardware and software, live electronic music and syncresis were preferred in aesthetics. Sound Studio in Prague Academy was founded in 1970. It was headed by V. Syrový. This studio was used for ordinary lessons (obligatory completion of courses of composition in the 3rd year), research into acoustics of wind, and recording concerts in the school building. The production of the studio did not have a specific profile of styles. The studio owns a Theremin’s instrument, which is something of a curiosity. Out of the private studios, D. Forró Forrotronics is the oldest and most productive studio (since 1985).

The amount of its production (see the chart) and its profile have been linked indubitably to both general tendencies of development in Europe and the specifics of the cultural and political situation in the Czech Republic. They are also closely conditioned on the technical quality of the studio equipment, the time available for recording, and the composers’ education in both composition and technology.
ENDNOTES

1. The dissertation *Aesthetic Models of European EAM and EAM in Czech Republic (Estetické modely evropské EAH a EAH v ČR, Olomouc 1998)* consists, as the name suggests, of two base parts. The first contains more detailed definition and typology part. The next part is dedicated to four authors (P. Schaeffer, K. Stockhausen, J. Xenakis, P. Boulez), whose work (compositions, theories and institutions) has been fulfilling the function of a model of a possible approach to EAM. Further explanation of the selection cannot be discussed here. The first part is terminated by a chapter on *Current questions of EAM* with introductory information on present institutions, companies, periodicals and international publications. The impact of this chapter lies in the overview of the problems related to ontology of a work, typology of creative strategies, terminology, analysis, functions ad styles of EAM. The latter portion of the work EAM in the Czech Republic is dedicated to the historical, political and cultural context, specification of technological conditions within the Czech Republic, analysis of the poetics of a work with practical samples, topical profile of the EAM production. It is closed with an overview of EA creation. Further information can be obtained from www. smusic.cz/czmic.seah a www. cibulka.cz/SEAH/SEAH.htm, or dohnalova@email.cz.

2. *Semantic gesture* is an original semiotic term of the Czech structuralism. J. Mukařovský has defined the term especially in studies *Genesis of Sense in Mácha’s Poetry* (Genexe smyslu v Máchově poezii). *About the language of poetry (O jazyce básnickém*, Intentionality and Unintentionality in Arts (Záměrnost a nezáměrnost v umění) as “unifying semantic intention” s. g. is a profiled measure of material homogeneity, structure hierarchy, namely its contradicting constituents. It covers the inner dynamics and processing of sense. (Mukařovský J.; *Studies on Aesthetics* (Studie z estetiky, Praha Odeon 1966). The term is used in musicology specially by V. Karbusický and E. Tarasti. The term is accepted also in volume Principles of Music Semiotics (Základy hudební sémiotiky, ed. J. Fukač and. col., FF MU Brno 1992, here chap. *Semantic gesture*, vol. III by L. Dohnalová).

3. In the Czech environment, the taxonomy of “core and transitions” has pushed through J. Volek in *Principles of General Theory of Art* (Základy obecné teorie umění, SPN Praha 1968). It has been elaborated especially by J. Fukač and I. Poledník.

4. *Banal creation* uses routine workmanlike procedures without any special demands for the author or the recipient. *Trivial creation* is described alike, moreover, it is typical with its selection of simpler procedures. *Kitsch* is typical with its intentional selection of proof procedures that may be very refined. At the same time kitsch pretends to be art. If it is not concealed, (for example the works of the Brno team), than it is rather its poetisation, ironization or turning into a joke by a double code. This procedure has its tradition in poetism and surrealism. The EAM expands the possibilities of creation of kitsch and its double encoding.

5. Namely in the French speaking countries a functioning analytic model trying to separate the author’s (*poesis*), so called neutral, and recipient’s (*aisthesis*) aspects was of a great influence in the second half of the 70’s in EAM too. This model was initiated by J. I. Nattiez (in *Fondements d’une sémiologie de la musique, Paris U. G. E 1975*) inspired by J. Molino, whose structuralism has a relation to the tradition of Prague linguistic club.

6. From the recent encycl. it prefers as the root term “Electronic music” *Handwörterbuch der mus. Terminologie* (ed. H. H. Eggebrecht, from 1977). German tradition stressing author is W. M. Stroh, *Grove New Dictionary of Music and Musicians* (ed. S. Sadie, 1980), which is no surprise, since the author is one of the founders of the German electronic music H. Eimert. Very objectively conceived entries with “electronic music” as a “roofing entry” can be found in *Musik in Geschichte u. Gegenwart* (ed. L. Finscher from 1995), written by W. Seidl, furthermore, the entries by J. H. Appleton in *The New Harvard Dictionary of Music*. In the Czech literature the amplest treated entry is in *Dictionary of Czech Music Culture* (Slovník české hudební kultury, ed. J. Fukač, J. Vyslovař 1997) with entries by A. Parsch and M. Bláha. *RILM* uses terms electronic music and computer music, *DEGEM* archive in Berlin, consisting of about 18. 5 thousand EA works, uses the term *electro-acoustic music* (More detailed information in dissertation of L. D.). The alternation of the terms EAM a EM also reflects in the names of various institutions and their periodicals – e. g. *Österreichische Gesellschaft für Elektroakustische Musik* in Austria and its affiliate *Institut für Elektronische Musik* in Graz. In Czech lands the *Society for EAM* has been founded with ties to the practice of Bourges and CIME.

7. F. R. Moore is the inventor of a widely used program MUSIC V (see his studies e. g. in *Proceedings Companion to Contemporary Musical Thought*, vol. 2, ed. J. Paynter and col. Routledge London and N. Y. 1992)
8. J. C. Risset regularly publishes texts on technologies of sound synthesis especially within the IRCAM (see e.g. his study *Quelques aspects du timbre dans la musique contemporaine*, in *Psychologie de la Musique*, Paris 1994).

9. The database can be ordered at the address of the author (see note 1).


In 1990 the *Exposition of EAM* took place, and pointed to the interrupted tradition in 1970. The first and second *Expositions* took place in 1969 and 1970, when they were, for political reasons, banned. *III. Exposition* was organized on October 6, 1990 and presented overview of Czech (and emigrant) as well as foreign EA and computer production throughout the day. The music exhibition was preceded by two-day seminar “Avant-garde and postmodernism”, that commented on several works of the exhibition. The organizers were the *Society for EAM*. Since the year 1991 the EAM has been presented in the Janáček Hall. The first concert presented the works *Spleen optimismus* (E. Viklický), *Digitální hudba* 02/91 (D. Forró), *Bucina pro tr. a mgf. pás* (R. Růžička), *Tarsanova smrt* (K. Odstrčil), *Lux in Tenebris* (A. Piños), *Labyrinth* (J. Jirásek). Composers commented their works themselves during these exhibitions.

11. Regular event has been dedicated since 1990 to the presentation of the Audiostudio Prague (*From new records of Audiostudio*). The agenda has been prepared by the director of the studio J. Jirásek. The productions of the Brno and Pilsen studios have been presented irregularly within the time given to regional studio. In 1992, an overview series, starting with one of the first works of the Brno studio. Selection had been provided by R. Růžička.

12. I accept the division of scores to *prescriptive and descriptive*. Majority of Czech authors uses prescriptive charts and instructions, some archive more elaborate descriptive scores.

13. Other non-private studios, which also record autonomous EAM works, i.e. the Radio Studio in Brno, Prague, school studios of Academy in Prague and Janáček Academy in Brno keep only brief accounts incorporated into the overall framework of their production.


15. Correspondence, programs and preview of compositions of so-called “samizdat” see at: www.cibulka.cz/samiz/cibruz.htm.


17. This chapter was analyzed in greater detail in the above-mentioned dissertation, mainly in quotations and detailed references.

18. This interconnection between the beginnings of the Czech EAM and Surrealism and its poetics of paradox, black humor, and formal technique of montage (let us mention Šrámek’s *Laughter* – o. t. Smích to J. Kolář’s text from 1962, Novák’s *Geology or How We Killed Dad* – o. t. *Geologie, aneb jak jsme zabíjeli tatínka* from 1963) became a foundation mainly for the Brno poetics. The cooperation among various artists survived in Brno while it disappeared completely in Prague in the seventies. The surrealistic mood was also a foundation for the affection for P. Schaeffer’s paradoxical personality.

19. The period at the turn from the fifties to the sixties was well characterized in *Prague Group of New Music*’s article republished in *Confrontation* review in the section of *Chronicle and Documents* under the abbreviation of musicologist V. Lébl from the unpublished article for Hudební rozhledy from 1965. This article defended the concept of the group against administrative obstructions. The group was founded on 27 March 1965, its art manager was M. Kopelent. R. Komorous presented its EA composition called *Malevič’s Tombstone* – o. t. *Náhrobek Malevičův* in the group. On 26 November 1965 the group introduced itself to the public at *Czechoslovak Writer* publishing house participating in the discussion arranged by *Face* magazine.
A collective concert should have been organized in the inspiration of *Groupe de Recherche Musicale* but it did not take place after all. Thanks to I. Poledňák and M. Hercík the group was asked to arrange regular music programs and discussions on current arts at Reduta (lectures of musicologist V. Lěbl and publicist E. Herzog). On 24 April 1965 the 4th evening of the group was arranged at Reduta, for the first time concerning *Electronic and Concrete Music in Czechoslovakia*. EH gave a lecture on *New Music* on 1 September, the members of the group participated in courses in Darmstadt. On 18 December a program was arranged at Reduta dedicated to Z. Vostřák’s works. Early in 1967 the group published a miscellany at the expense of the *State Theatre Studio* containing information on activities, professional articles, and profiles of members. Let us mention in particular out of the outstanding *History of Music Experiment in Czech and Moravia* in 1967 pronounced by Moravian composers J. Berg and A. Piňos. So the proclaimed cooperation with the Brno creative team of the *Group A* (founded in 1967 and headed by A. Piňos) was established. On 15 April 1967 contacts were established with P. Kotík’s *QuaX Group*. *QuaX Group* was founded in 1967. It proclaimed a concept of spontaneous, continual music in which the pleasure of creation was primary. The group presented mainly *Live Electronic Music* and poetic ideal of J. Cage.

20. The poetics of syncretion of genres and kinds, the poetics of paradox, typical for Brno, participated undoubtedly in the success of the Brno *Microfestival of Experimental Art* with *New Music*’s two concerts. The team project – a music horror called *Silence of Little Birds in the Forest* – o. t. *Mlčení ptáčků v lese* with an untypical “multi-space” arrangement had its première in this last event before the political suppression of the EAM presentation. In Slovakia, EAM was presented even after 1970 but very rarely. In 1977, as part of the traditional international festival BHS, a functionally unnatural phenomenon appeared as EAH played the role of “underground”. The EAM concert attracted so much attention that people gathered even on the street. This resulted, as R Berger explained, in the ban on activities of this kind. (Personal statements by R. Berger, in *Zajíček L.: An Oral History of EAM...,* San José University 1995, p. 85.

21. R. Berger mentioned this in an interview with L. Zajíček, ibidem p. 84.


23. The so-called *Commission for Electronic Music*, which prepared a seminar on EAM in 1964 and the foundation of a studio in Pilsen, established tactical contacts with the *Commission for Cybernetics of the Academy of Sciences* in 1963 and took over this title temporarily. Cybernetics should have been rehabilitated as a science not only in Kolman’s work but also in the popular encyclopaedia called *The Age of Cybernetics* that contained an article by L. A. Hiller who visited Czechoslovakia. Later this title was abandoned.


27. Musicologist V. Lěbl intentioned the ample research of sound objects: “Meanwhile I estimate that we will have to put some 10 thousand objects into practice”, in: Hudební věda 1969, N. 3, p. 269 in the frame of article *Outline of Typology of Sound Material* – o. t. *Nástin typologie zvukového materiálu*.


29. Three guidelines and several parts of the dialogue “On the substance of New Music”, lecture in Reduta on 30 January 1966, reprint in Confrontation N. 1, p. 35.


APPENDIX

Brief list of EA compositions in the Czech Republic in the field of autonomous art creation. Original film or dramatic music has been included only when it has been described by its author as usable separately. “+” means co-authorship of several composers. Authors using pseudonyms D. Forró, P. Graham and M. Mays are mentioned with their civil names K. Horký, J. Pokorný and I. Klúčovský. The titles have been abridged. Detailed information is included in the database and in the chapters called “Analysis of the poetics of the work” and “Profiles of topics” (in dissertation pp. 129–148).

<table>
<thead>
<tr>
<th>Author</th>
<th>Title, Year</th>
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<tbody>
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<td>Adamík Josef</td>
<td>Z tajemné laboratoře v Bílých Karpatech (From the Mysterious Laboratory in White Carpathians), 1979</td>
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<td>Bardonová Jana</td>
<td>Konkrétní etuda (Concrete Etude), 1995</td>
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<td>Bardonová Jana</td>
<td>Etuda (Etude), 1996</td>
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<td>Barič Bojan</td>
<td>Scéna lyrické vize, balet (Scene, Lyric Vision, ballet), 1977</td>
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<td>Barič Bojan</td>
<td>Canonicus, 1977</td>
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<td>Barič Bojan</td>
<td>Konkretino, 1975</td>
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<td>Bártá Jiří (+)</td>
<td>Šouboj pro 2 klavíry a mg. pás (Duel for Two Pianos and Tape), 1970</td>
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<tr>
<td>Bártá Jiří (+)</td>
<td>Kvadriga (Spřežení) pro mg. pás, 1971</td>
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<tr>
<td>Bártá Jiří</td>
<td>Socha Eporedorixova (Statue of Eporedorixos), 1971</td>
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<tr>
<td>Bláha Ivo</td>
<td>Ta láská, hudba k básni J. Préverta (This Love, music to poem of J. Prévert), 1977</td>
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<tr>
<td>Bodorová Sylvie</td>
<td>Tobě (For you), 1979</td>
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<td>Brožák Daniel</td>
<td>Memento, 1973</td>
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<td>Brožák Daniel</td>
<td>Rigorosum, 1975</td>
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<td>Brožák Daniel</td>
<td>Panychida za D. Šostakoviče (Panychis for D. Š), 1975</td>
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<td>Brožák Daniel</td>
<td>Nečas trhovců (Bad Weather for Stall-Holders), 1994</td>
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<td>Brožák Daniel</td>
<td>Tape compositions, 1973</td>
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<td>Brožák Daniel</td>
<td>Composer, 1984</td>
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<td>Brožák Daniel</td>
<td>Patologie (Pathology), 1991</td>
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<td>Brožák Daniel</td>
<td>Yamaha quartet č. 7 (Yamaha quartet N. 7), 1985</td>
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<tr>
<td>Brožák Daniel</td>
<td>Tape compositions, 1976</td>
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<td>Bubák Bohdan (+)</td>
<td>Hudba pro syntezátor, strunné nástroje... (Music for synth., strings...), 1984</td>
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<tr>
<td>Bubák Bohdan (+)</td>
<td>Útěk I, II, III (Runaway), 1987</td>
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ELEKTROAKUSTISCHE MUSIK IN DER TSCHESCHISCHEN REPUBLIK

Zusammenfasung

Quellen und Literatur und den Problemen hinsichtlich der Beschreibung von spezifischen Quellen der AEM gewidmet (Frage des Entstehens der Komposition, ihrer Dauer, usw.).


**ELEKTROAKUSTICKÁ HUDBA V ČESKÉ REPUBLICE**

**Shrnutí**

Studie je kráčenou verzí části autorčiny disertační práce Estetické modely evropské elektroakustické hudby a elektroakustická v ČR (1998). V úvodní části se stručně věnuje definici a typologické problematice elektroakustické hudby (dále EAH). EAH je vymezena jako hudební druh, jehož jádro tvoří hudba, níz elektronicky zpracovaný (generovaný či upravovaný) zvuk tvoří nedílnou součást tzv. sémantického gesta, kompozice. Autorka vysvětluje různá typologická hlediska (technolo-
gické, estetické, axiologické ad.), charakter tzv. přechodových pásem (v terminologii J. Volka). Upozorňuje na nutnost diferencovaného a multikriteriálního přístupu. Studie se soustřeďuje na hudbu tzv. uměleckou a autonomní (samožřejmě v neostrém vymezení) v ČR, a to především z důvodu velkého kvantitativního rozsahu látky. Samostatná kapitola je věnována problematice českých pramenů a literatury, problematice deskripce specifických pramenů EAH (otázka vzniku kompozic, tvrání apod.).

Světovou problematikou jsou zvláštní historické, politické a kulturní podmínky existence EAH v bývalém Československu, později v ČR. Tento hudební druh zaujímal v období socialismu ambivalentní axiologické postavení vyplývající z afinit sociologické ideologie k modernismu. Na jedné straně patřil vývoj technologií k prestižním oblastem demonstrace politické moci, na straně druhé sehrála EAH v bývalém Československu mj. i sobě ne zcela vlastní úlohu kulturního undergroundu. Do kvantitativního vývoje produkce EAH zasáhl ovšem nejen politický vývoj (potlačením propagace a šíření EAH v 70. a 80. letech, vyvoláním zvláštní těmatiky a poetiky skladeb), ale také vývoj technologie samotné a ústup modernistického myšlení v celé euroamerické kultuře v 70. letech. Využití nových technologických medií se stalo zejména od 80. let hodnotově bezpříznakové, dynamicky se vyvíjející pop music získávala pozice ve tvorbě i percepcí mj. i díky dobře vybavenému studiovému zázemí. Státní studia oproti tomu ve vybavenosti zaostala a stala se tak pro studenty hudby neattractivním. EAH tzv. vážná hudba je po r. 1989 výrazně menšinovým druhem. Proměnila se nejen technologická, ale také sémantická orientace této hudby.

Celkový přehled produkce autonomní umělecké EAH v rozsahu cca 480 skladeb podává závěr studie. Přehled je krácenou verzí databáze EAH, která je součástí disertace.