

Reinventing Greek electroacoustic music: from tradition to multidisciplinary

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Abstract

Greek electroacoustic music, born in the *New Music* environment of the sixties and developed among fruitful and critical periods, seems to be in expansion in our days. In this article we present a brief overview of the genesis and evolution of the electroacoustic music in Greece since 1967 until today, exposing three crucial periods. In the second section we present the works, the means and aesthetics of representative composers of the most recent period (1990-2005). In the last section we focus on the pedagogical and institutional development of the Greek electroacoustic music during the last fifteen years, as well as on the diversity of styles and techniques of works presented in various events in Athens and other places in Greece. We also stress the lack of an official institute for the archiving, creation and expansion of the electroacoustic music, and the indifference of the cultural authorities to cultivate such kind of music.

Introduction

In this paper we outline the new landscape of Greek electroacoustic music from different points of view which make up the puzzle of what is called today the post-modern electroacoustic musical era, in a country which used to be and still is, the cross-road of civilizations.

1. Historic evolution of GEM¹

To understand the conditions that gave birth to Greek electroacoustic music in the sixties, it is necessary to explore the historic, socio-political and cultural context in which this music actually took place. If we refer to Greek-origin composers, we may consider

¹ GEM: Greek Electroacoustic Music.

that the roots of the Greek electroacoustic music can be found in the late '50s in the first experimental works by the Greeks of the diaspora: *Iannis Xenakis* in France, *Anestis Logothetis* in Austria, *Dimitris Terzakis* in Germany, and others². These works seem to have influenced next generations of composers (born in the 30's): *Michael Adamis*, *Theodoros Antoniou*, *Stefanos Vassiliades* and the next, like *Harris Xanthoudakis* and *Dimitris Kamarotos*. These two generations correspond to the formative period of electroacoustic music in Greece.

1.1. The pioneers. First experimentations (1964-1980)

The pioneer³ of the first period of electroacoustic music in Greece, which starts officially in the mid 60s, is considered to be the composer *Michael Adamis (1929)*⁴, “the alchemist of Greek sonorities in a contemporary context” (Georgaki A., Loufopoulos A., 2000). Adamis is a paradigmatic figure in Greek contemporary music for over forty years now, and is the one who systematically managed to bridge novelty with tradition by using musically enhanced sacred texts of the Byzantine and traditional Greek music. From this point of view, Adamis has achieved the transformation of Byzantine (eastern) sound into a contemporary (western) musical idiom, by integrating vocal and electronic sonorities in a unified way that enhances the spiritual context of his works⁵.

Another dominant figure of this period is the so-called “metaphysician of music”⁶, *Yannis Christou (1925-1970)*, who unfortunately died very young. Christou who in most of his works composed in an interdisciplinary conjunction of arts and music, from 1963-1970 uses the tape as the medium to the evolution of what he called the *psychodrama* and the *katharsis* (Luciano, 1999). Christou and Adamis are the ones who

² Nikos Mamalis : *Δραστηριότητες γύρω από την οργάνωση τη διάδοση και την εκμάθηση της ηλεκτροακουστικής μουσικής στην Ελλάδα*, Ιόνιο Πανεπιστήμιο, 1999, www.ionio.gr/~GreekMus/mamalis.htm.

³ Adamis established and operated the first electronic music laboratory in Greece in 1965, and this is where he worked on most of his electroacoustic pieces.

⁴ From 1961 to 1965 Michael Adamis studied Composition and Byzantine Music Palaeography, with A. Berger and K. Levy, respectively, at Brandeis University in Boston; the Electronic Music Studio at Brandeis, a rare laboratory at that time, gave him the opportunity to become familiar with electroacoustic composition. There the composer worked on his first electroacoustic pieces - *Piece 1*, *Piece 2*, *Proschimata* - in 1964. During his postgraduate studies in the United States, Michael Adamis met pioneer composers of modern music like J. Cage, M. Feldman and A. Lucier, to name a few.

⁵ In most of the electroacoustic pieces he composed between 1965-1977, like *Apocalypsis (1967)*, *Genesis (1968)*, *Glaros (1977)*, *Kratima (1971)*, *Miroloi (1970)* and *Tetelestai (1971)*, a unique combination of two different music worlds, the Byzantine and the Electronic, is revealed (Georgaki, Loufopoulos 1999).

⁶ Michael Stewart (1999) in www.janichristou.com: “...What the metaphysician attempts to say cannot be said, but can only be shown. Philosophy, rightly understood, is not a set of theories, but an activity, the clarification of propositions. Above all, philosophy will not provides us with any answer to the problems of life. Propositions show how things are; but how things are in the world is of no importance in relation to anything sublime”.

have broadly used the electronic medium in ancient Greek Tragedy in order to put the accent on the dramaturgy and the symbolism^{7 8} (Dimitropoulou E., Georgaki A., 1999).

Other composers as Th. Antoniou (1935), one of the most important figures of the Greek contemporary musical scene⁹, has been experimenting in electronic music through an approach of “organised sound” and an extension of the instrumental sound, taking his themes mostly from abstract terms of the ancient Greek language and philosophy¹⁰. In his first electronic works, the symbolism of abstract meaningful philosophical ideas through the electronic medium is evident.

From a political point of view, the sixties were a very critical period for the Greek society. The idea of progress and the social role of the arts immanent in the newborn electroacoustic music were considered suspicious to the dictatorship regime (1967-1974) and after 1969 all isolated activities were banned. Meanwhile, other young composers joined the first steps of the so-called “Greek electronic music”, next to Christou, Adamis and Antoniou, by participating in the organisation of seminars, festivals, concerts and thus keeping alive the spark of experimentation in the unstable socio-political environment of the ‘70s. The main activities of this first period of GEM, are undoubtedly the “Greek weeks of contemporary music”, which have taken place in 1966, 1967, 1968, 1971 and 1976 and included among others, many electroacoustic music creations for tape and multimedia (Mamalis, 1990), (Dimou, Georgaki 1999).

Creative groups, typical of modernism, were formed in the framework of the so-called “New Music”. These groups established cooperation on programs, including the concept of interdisciplinarity. Three are the dominant figures of the second phase of GEM’s first period (1965-1985). First, *Stefanos Vassiliades* (1933), a tutor and theater music composer, founder of KSYME¹¹. Second, two younger composers who returned to the country from abroad, *Harris Xanthoudakis* (1950) and *Dimitri Kamarotos* (1954), oriented their researches on the new-born UPIC System of Xenakis at KSYME and

⁷ Yannis Christou: *Agamemnon* for orchestra, tape and actors (1964) 1st perf. Epidaurus, 27th June 1965, *The Persians* for instruments, tape and actors (1965) 1st perf. London, Aldwych Theatre, 20th April 1965, *Oedipus Rex* electronic (1969) 1st perf. London, Aldwych Theatre, 22 May 1969, *Oresteia* (1967-70) unfinished at time of death

⁸ Michael Adamis: *Epta epi Thebas* (1968), *Iphigenia en Avlidi* (1970), *Orestes* (1971), *Promitheas Desmotis* (1974).

⁹ Theodore Antoniou, one of the most eminent and prolific contemporary artists, leads a distinguished career as composer, conductor, and Professor of Composition at Boston. University.

¹⁰ *Paravassis, parastasis, diamartyria*, etc.

¹¹ KSYME (Κέντρο Σύγχρονης Μουσικής Έρευνας: Center for Contemporary Music Research) is the first institution which was supervised by I. Xenakis in order to open a window to the international evolutions in the domain of electronic music, musical acoustics and music research. Since 1985, it has been the pole of attraction of young composers of contemporary and electroacoustic music, as well as a creative center for education and performance in multimedia arts.

created with *Stefanos Vassiliades* the first center for music creation and research in Greece (supervised by I. Xenakis).

While in the western world of the sixties two main aesthetic lines developed in electroacoustic music¹², in Greece the electroacoustic resources, especially the concrete techniques and the analog synthesizer ~VCS3, were mostly used for the creation of electronic tape works, the revival of the Ancient Greek tragedy (the tape as a supporting dramaturgic medium), sound installations and the extension of the instrumental and vocal sound through traditional music (Byzantine singing).

1.2. Entering the digital era (1980-1995)

After the dictatorship (1967-1974) came the *Metapolitefsi* period, the transition from dictatorship to democracy, when people were more concerned with the reformation of the state than with the development of new artistic genres. The structure of the new state was strengthened by the entrance of Greece in the European Union in 1979¹³. With the emergence of new technologies, the evolution of synthesizers and the invention of MIDI, as well as the entrance of personal computers in the market and the blast the music technology industry for the production of software or hardware for all uses, the electroacoustic music composer has the possibility to experience new approaches that extend from pure acousmatic music through the digital medium¹⁴ to the interactive music systems. Since 1993, the sudden expansion of music digital industry has given another dimension beyond time and space to the electroacoustic music in Greece.

The return of expatriated composers who had lived mostly in Europe and the United States and who had already been introduced to the new techniques of electroacoustic music, gave birth to a new state in the Greek contemporary music scene. More precisely, in the field of electroacoustic music, the second period from 1980-1995 is characterized by the works of composers who have lived in France or Germany and who were introduced to the computer music booming, as well as to the French *concrete* or German *elektronisch* techniques. As mentioned above, the foundation of KSYME in 1979 by the composer and pedagogue *Stefanos Vassiliades* and its official opening in 1985

¹² The "analog" conception derived from the European tradition of *concrete* and *Elektronische musik* and the "computer music" aesthetics derived from the United States (Paul Lansky, Richard Moore, Charles Dodge, John Chowning, etc.). In the late seventies "analog composers" regarded computer music with suspicion and doomed it as being anaemic, academic or plain boring while "computer composers" argued that analog music was narcissistic, structurally poor and predictable.

¹³ Official entry of Greece in EU in 1981.

¹⁴ More sophisticated systems for the spatialisation, sound diffusion as well as the interaction of instrumental and electronic sound.

(under the supervision of I. Xenakis) marks a new era for the electroacoustic music and computer music research in Greece.

This new generation of composers¹⁵ (born in the 40s and 50s) lead to two different tendencies. On the one hand, composers who perceive the electronic medium as a field of experimentation, either in pure sound synthesis by UPIC -as an extension of the instrumental sound- or in the Schaefferian tradition of acousmatic music. These composers (*H. Xanthoudakis, D. Kamarotos* and others) have been working at KSYME on the UPIC station. On the other hand, composers who have used the electronic sound, issued by the new born digital synthesizers (Yamaha Dx7, Korg M1, etc) for a popular style of electronic music used in media and theater (*Michalis Gregoriou, Vangelis Katsoulis* and others). From this tendency emerges the “society for music and theater”, founded by *Michalis Grigoriou* and *Vangelis Katsoulis*, which produces through the new means of technology creations for theater, cinema and dance. It also manages concerts through the mixture of traditional and electronic instruments: the composer *Dimitris Marangopoulos*, for example, has been experimenting between tradition and western music as well as acoustic instruments and electronic sounds in the group Melita Gabes (Mamalis, 1999).

From 1985-1990, a number of seminars, concerts and events have been organized by KSYME¹⁶, which remained for several years the main pole of music research and electroacoustic music creation. After 1989, this role was shared with a new Institution, IRMA (Institute for Research in Music and Acoustics)¹⁷, mostly active in the domain of Greek music archiving (portal, digitalization), as well as in the organization of seminars and conferences about electroacoustic music and new technologies in music.

During this period, several factors contributed to the development of the new Greek electroacoustic music: the foundation of the research centers KSYME and IRMA, the creation of IPSA¹⁸ and of the first society of Greek electronic music composers (which had been inactive for many years), the award winning by some Greek composers

¹⁵ Main figures: Harris Xanthoudakis, Dimitris Kamarotos, Vangelis Katsoulis, Michale Grigoriou, etc.

¹⁶ Seminars in contemporary music, history and techniques of electroacoustic music, musical acoustics, studio techniques, multimedia conception of music, happenings, etc.

¹⁷ www.iema.gr (supervised by the composer Kostas Moschos). The Institute for Research on Music and Acoustics, founded in 1989, is a non-profit, non-government organization aiming to develop and support research in the field of music and acoustics, to support contemporary music creation and to provide systematic information and documentation in these domains.

¹⁸ www.auth.gr/ipsa: IPSA. Institute for psychoacoustics studies. IPSA has organised three scientific symposium on Computer music during this period: International Meeting on Physical Modelling (Thessaloniki 1995), Computer Music Conference and Festival (Delphi 1992), Psychoacoustics Symposium (Athens 1991).

at the Bourges Festival¹⁹, the establishment of four new Music and Musicology departments since 1986-1996 in Greece²⁰, the release of a few discs and the organisation of two festivals.

As a conclusion, on the two periods that we have previously referred to, we could assume that the pioneer composers of the GEM of the first period (1964-1980) are at the same time the dominant figures in the contemporary music domain. The insufficiency of the technological equipment due to socio-political reasons, the conservatism of the Greek conservatories, the difficult transition from an authoritarian military dictatorship to a genuinely pluralistic democracy, the fact that the Greek society, that was trying to stand up after a tremendous period of changes, marginalized the first attempts of these Greek electroacoustic music composers (Mamalis, 1990). Most of them have been working in their self-made home studio equipped with technological means that were not very advanced in relation to those in Europe at the time.

2. The new soundscape in GEM (1995-2005)

During the last decade (1995-2005), globalisation, a process that has been underway for decades but in countries such as Greece accelerated and concentrated its effects mainly during this period, permeates every aspect of contemporary society, manifesting itself especially through mass culture. More than ever, it is during this stage -marked by the digital revolution through the internet highways, by the global trade in goods (sheet music, music instruments, recording antipiracy) and in intellectual property (musical scores, information, educations, recordings), by advertising (broadcasters and narrow casters) and market economic imperatives- that electroacoustic music composers, living and working in Greece, had the opportunity to be a part of the worldwide electroacoustic community: integrating international movements and propelling their works through the global market.

Consequently, while the electroacoustic community is becoming increasingly global, electroacoustic music creation and studies are characterized by a re-thinking of its own role towards the changes and new data introduced in its surrounding. The so-called "virtual reality" is increasingly becoming an aspect of "normal reality" and 'surrogate'

¹⁹ Awarded young composers: Akis Daoutis (solar rain, 1987), K. Mantzoros (Nocturne), K. Stratoudakis, etc.

²⁰ Music Department of the Aristotle University (1986), Music Department of the University of Athens (1991), Music Department of the Ionian University (1992), Department of Music, Art and Science of the University of Macedonia in Thessaloniki (1997).

environments (Barry Truax, 2000). Through the use of background music, radio, television and recordings, GEM is being expanded in various ways. This expansion derives from different factors such as: the development of academic music studies in Greece, the quest of a new musicological environment, the venue of a new generation of composers who have studied in European and North American Music departments, or the organization of various conferences and concerts.

2.1. Institutions, events and educational issues

Since 1995, we can observe in Greece the emergency of Music technology/ computer music as a discipline of teaching, learning and research in the universities, responding to the demand for courses in the musical applications of these new technologies. The organisation of ICMC 1997 in Thessalonica by ICMA and the support of the IPSA²¹ (by the supervision Thanassis Rikakis²²) have gathered the new generation of GEM. Centers like KSYME and IRMA which we have previously mentioned, have continued the organization of seminars, concerts, presentations of composers' works and musicological discussions, but the main activities were smoothly moved to the Academic environments, especially to the Music Department of the Ionian University²³.

The last five years we notice a movement more and more upcoming of GEM by the organization of electroacoustic music concerts: the annual Marathon concerts by the Goethe Institute²⁴, the electroacoustic music nights by the Small Music Theater²⁵ - present an hybrid aspect of the new electroacoustic music scene through improvisation and electro-pop mixtures-, the Bios club²⁶ -hosts and projects, since 2005, new multidisciplinary aspects of electronic arts and culture such as video art and other forms of visual arts-, the Fournos²⁷ centre for digital culture, the Electrograph music festival²⁸ - exhibits intermedia and multimedia aspects of electroacoustic music- and others.

²¹ www.auth.gr/ipsa

²² Thanassis Rikakis (1963), Greek computer-music composer who works and lives in the United States (Arizona University).

²³ www.ionio.gr/music.

²⁴ Goethe Institute in Athens has continuously been a pioneer, since 1965 in the organisation of electroacoustic and contemporary music events.

²⁵ www.smallmusictheatre.gr: since 2000, small music theatre presents works by groups or musicians who are involved with experimental electronic or improvised music.

²⁶ www.bios.gr: with its continuous activity throughout the last years (2001-2006) Bios has contributed to the creation, expression and development of new ideas and is now an acknowledged nodal point of cultural communication. Having organized and hosted more than 300 events, it has managed to establish itself as the premium vehicle for modernistic ideas and activities in the city of Athens.

²⁷ <http://www.fournos-culture.gr>.

²⁸ <http://www.electrograph.gr>.

Apart from these, the Music Department of the Ionian University has been planting the first seeds for the development of electroacoustic music studies in the Academic environment. Michalis Adamis, is the architect of the first undergraduate program in the Music Department of the Ionian University which makes use of new technologies in both the scientific and creative domain. Since its establishment, in 1994 (Georgaki, Mniestris 2000), a new generation of composers emerged who continued their researches abroad and who now constitute the new generation of GEM²⁹. Slowly, the other three academic Music departments have developed a Music technology sector as well. The inauguration of the new postgraduate program “Master in Arts and Technologies of Sound” by the Electroacoustic Music Lab of the Music Department of the Ionian University, in 2004, as well as the Summer Academy in Music Technology of the same institution, gives the opportunity to young composers or musicians to attend intensive programs on computer and electroacoustic music studies in Greece, with a special emphasis on the creative and technical approaches of electroacoustic music. Concerning the research on the musicological field of GEM, some undergraduate dissertations, supervised by the author of this paper, have focused on the archive of the first period of the electroacoustic music (M. Adamis, Y. Christou, Th. Antoniou and S. Vassiliades), on the production of CD-ROMs, articles and program notes of the electroacoustic works³⁰.

2.2. Multidisciplinarity in new GEM

The homecoming of Electroacoustic music composers and Music acoustics researchers and musicologists who had studied abroad as well as the creation of university music departments and peripheral institutions, mark a new period for the GEM. Having experienced this movement while teaching Musical Acoustics, History /Aesthetics of Electroacoustic Music and Systematic Musicology of Computer Music at Music Department of the Ionian University during the period 1995-2001, in collaboration with Andreas Mniestris³¹ composer of electroacoustic music, it might be worth mentioning that at least 5 of our students, now composers of the new generation, have followed post-graduate studies in the domain of electroacoustic music (Master and PhD). Two

²⁹ Konstantinos Karathanassis (1973), PhD in composition, Buffalo University and Apostolos Loufopoulos (1973), PhD in electroacoustic music composition, City University.

³⁰ More information: undergraduate dissertations (in annex).

³¹ www.ionio.gr/mniestris.

special events, like the organisation of the first Symposium on Music and Computers³² (with special guests J. C. Risset, Luc Ferrari, G. Assayag and P. Nelson) in October of 1998, opened the doors to a new era for GEM and launch the basis for an annual meeting of the electroacoustic and computer music community. Within 2000, the second Symposium on Music and Computer³³ gathered the Greek computer music and electroacoustic music community in Corfu³⁴ and was the first step for the creation of the ESSIM/HELEMCA³⁵ (the association of Greek electroacoustic music composers). Since then, the annual meeting at the Symposium on Music and Computers has been called “Electroacoustic music days” and its focus has been for the most part on the creation of music than on computer music and musicological research. Since 2002, the Electroacoustic Music Days, the foremost annual gathering of Greek electroacoustic music composers from around the world, featuring a range of concerts, talks, seminars, presentations and other activities³⁶, are hosted by several Institutions all over Greece³⁷.

The multidisciplinary nature in GEM that we are going to describe is focused in three main axis: (1) the personal style and the technical equipment, (2) the transition from the old GEM to the new GEM and (3) the new groups of GEM .

2.2.1. Technical means and style

Presently it is possible to confirm the existence of a considerable electroacoustic music community in Greece³⁸. Approximately 40 composers who present their works three or four times per year in the annual meetings of the Greek Electroacoustic music days, the Marathon of Goethe Institute and others organised by ESSIM and, of course, in international festivals and competitions all over the world. Although the Greek electroacoustic community maybe still small in terms of membership, it is growing fast

³² Cf. A.Georgaki (ed.), *Proceedings of the First Symposium on Music and Computers*, Corfu, Ionian University, 1998: the first symposium on music and computers has been held in Corfu, October 1998, organised by the music department of the Ionian University.

³³ Α.Γεωργιάκη (επιμ.), *Πρακτικά του Δεύτερου Συμποσίου Μουσικής Πληροφορικής, Κέρκυρα, Ιόνιο Πανεπιστήμιο, 2000* [A. Georgaki (ed.), *Proceedings of the second symposium on Music and Computers*, Corfu, Ionian University, 2000].

³⁴ A. Georgaki (ed.), *Proceedings of second symposium on music and computers*, Corfu, Ionian University, 2000 (in Greek).

³⁵ www.essim.gr. The Hellenic Electroacoustic Music Composers Association (HELMCA) is a non-profit organization. It brings together composers and sound artists who engage in a creative use of music technology and, with their work, explore and produce a wide spectrum of musical approaches and forms of sonic art. The main aim of HELMCA is to strengthen collaboration and solidarity among its members and to promote their work in Greece and abroad. For this reason, its work focuses on communicating and exchanging information as well as organizing festivals, concerts, installations, conferences, seminars and workshops. The “Electroacoustic Music Days” festival forms the association’s main event held annually, a meeting of the members to present and perform their latest work.

³⁶ The Electroacoustic Music Days 2005, hosted by the Computer Music Lab of the Department of Music Technology & Acoustics TEI of Crete, took place on the 28, 29 and 30 of October 2005 at Rethymno. For more information please visit the web address below: www.teiher.gr/mta/meres05/index_en.htm.

³⁷ For more information please visit www.teiher.gr/mta/meres05/index_en.htm.

³⁸ We will refer mostly to composers who live and work in Greece, because there is a considerable community of Greek composers of Electroacoustic and Computer Music who live and work abroad.

and has an international constitution. Most of them, born between 1965-1980 (V. Kokkas, N. Valsamakis, Y. Kalantzis, S. Gianoullakis, A. Loufopoulos, N. Stavropoulos, K. Harizanos, K. Karathanassis and others) have followed post-graduate studies in French, British, German or American music departments. These composers of the New GEM try to find new ways of expression in a country that does not possess the means outside the academic environment to reinforce their attempts.

In GEM, the technical conditions of the studio equipment have also an unarguable impact on the composition strategy of the new generation of composers. Presently, the electroacoustic music studio of IRMA - IPSA, the electroacoustic music lab of the Ionian University and the Computer Music Lab of the Department of Music Technology and Acoustics of TEI of Crete, by giving access to their facilities contribute to the diminishing of the lack of essentials on behalf of the individual studios which become determined predominantly by other factors. Since 1995, the equipment of these studios has been linked to the production of specific works and enriched with new interfaces and software. A number of the compositions that are presented at the Greek electroacoustic days, at the Marathon and other events, is produced in academic laboratories of English, German or French institutions, since the last generation of GEM composers has been studying abroad. As a result, exceptional works by Th. Lotis, P. Kokkoras, N. Stavropoulos, K. Harizanos, A. Loufopoulos, K. Karathanassis and others, have been produced in foreign institutions as part for their Masters or PhD Thesis. The hard reality for all these composers is that even if they wish to continue their work within Greece, it is very difficult to find support for performance, diffusion or recording of their works outside the academic world.

2.2.2. The transition form the old to the new generation of GEM

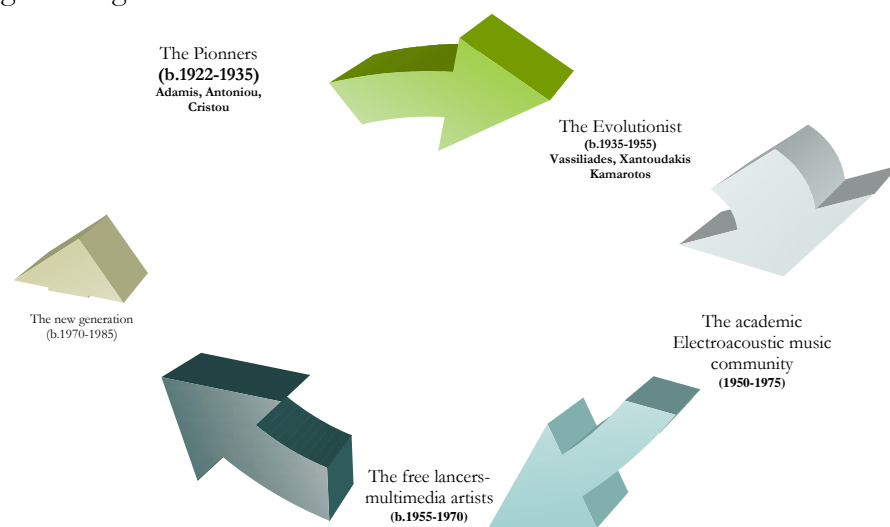
In order to move forward one should make the link with the past. In our days, one can say, the electroacoustic music scene worldwide is separated from the instrumental music scene and composers are specialized in one of these fields. In Greece, as well, a gap has been gradually formed between the pioneer composers of the first and second periods of GEM and the last one. The first and second generation, *les enfants prodiges* of the Greek Avant-garde music scene (*M. Adamis, Th. Antoniou, S. Vassiliades, H. Xanthoudakis, D. Kamarotos*) write electroacoustic music through the contemporary music techniques and

structures having in mind the expansion of the instrumental sound, the link between instruments and electronic sound (Emmerson 1998a).

The new generation of electroacoustic music composers, instead, takes extensive advantage of the computer music techniques, the results found in acoustics research, and the rapid development of their instruments-computers interfaces', software and synthesis techniques. Most contemporary composers of GEM have studied Electroacoustic music in Master of Arts or PhD programs, lacking access to new instrumental composition techniques.

There is a minority of composers who have a very profound background of instrumental composition, aesthetics, history of music and musical acoustics. Some of them are especially involved in the audio aspect of the electroacoustic music, but apply more avant-garde background algorithmic music and sophisticated technology (physical modeling, granular synthesis, etc).

At this point it should be useful to discuss the transition from the old way of thinking about music to the new one. Most of the new generation composers are slowly driven towards the emerging world of sonic arts where their aesthetic concern³⁹ derives from the use of original algorithms or synthesis techniques, as well as the evolutionary timbral polymorphy and originality in detriment of the form and the structure: the composition through the synthesis and sound processing and through the virtuosity of music programming and sound software.



³⁹ The aesthetic preoccupation of many composers in electroacoustic music is to create a distance form the instrumental composition.

Another difference is that the majority of the pioneers' generation has been strongly interested in establishing the link or the reference between the Greek music tradition and modernity. From this point of view, *Adamis* has achieved the transformation of eastern (Byzantine) sound to a contemporary (western) musical idiom by integrating vocal and electronic sonorities in a unified way that enhances the spiritual context of his works (Georgaki, Loufopoulos, 1999) and *Christou* has worked on the reformation of Ancient Greek drama through the electronic medium. The new generation, by the contrary, rarely seems to make use of the extensively large music tradition of Greece in order to attempt a sort of linkage or continuity between the old and the new. Furthermore, it is a blessing to see in the annual meeting of the Greek electroacoustic community, that modern recording studio technology allowed many so-named composers, who have never been schooled in the Western music tradition or even in the traditional Greek music, to create "serious" musical works⁴⁰.

2.2.3. The new GEM groups

In the world of electroacoustic music, the composer must be skilled in technology in order to achieve his creations by himself. The diptych composer - performer is being continuously transformed to a triptych composer (*synthetis*) - technologist (*technologos*) - performer (*ektelestis*), reflecting a major transition from the traditional mode of composition to the new one.

Every composer of GEM's new generation is skilled in manipulating all types of software, hardware and particularly MIDI devices, synthesis techniques, as well as acousmatic and concrete techniques. Most of them work in the Max/Msp environment and others are simultaneously involved with the media world: video art, music and sound design for film, TV, radio, CD-ROMs, world wide web, sound engineering⁴¹.

In order to classify the active composers of the new GEM scene, we will focus on the use of medium for composition as the main criterion, as well as the mode of sophisticated techniques used.

⁴⁰ The same statement has been referred by many other writers: [Travis Pope, 1995].

⁴¹ Freelance, studio, TV, radio, concert venue; technology-based composition and performance; employment in internet and digital media companies; CD production and internet promotion for musicians; application development (music / sound programming); music and sound algorithms (e.g. pattern matching, composition, digital signal processing); technology-based music education; location and studio recording; music typesetting; music software and hardware companies.

A) **The interactive music team:** The composers who have a specific background in classical compositions and have already a list of instrumental works, compose mostly for instrument and electronics in various live electronic forms or in the interactive way. The morphological and structural aspects of their works differ from each other. In a first attempt one might mention *P.Kokkoras, Y.Kalantzis, G.Spyropoulos, D.Kamarotos, K.Karathanassis*.

B) **The acousmatic music team:** The composers, characterized as acousmatic, present a majority of their works written for fixed medium and are mostly preoccupied with spectromorphological grammars, the space-performance and the real-time spatialisation of the sound through novel approaches (sound diffusion). Many of them are involved in the creation of acousmatic music through the study of soundscapes and the different modes of Schafferian listening. Among these one could refer *Andreas Mniestris, Theodoros Lotis, Katerina Tzedaki, Apostolos Loufopoulos, Nikos Stavropoulos*.

C) **The computer music team:** In this team we can mention composers who apply mostly algorithmic processes through Max/Msp programming to their works and are focused on the microevolution of the sound or to the search of new sound microstructures, like *Ioannis Zannos, Nikolas Valsamakis, Kostas Moschos, Vassilis Kokkas, Anargyros Deniozos*.

D) **The mixed media team:** In this team we can classify the digital media artists who explore the linking of sound and image outputs from a single source of data or between video and music, or sound installation. In the new landscape of GEM, we can remark a tendency of composers who are mostly involved with pure algorithmic music connected to image, but also composers for video art and cinema. Just to mention some of the most representative: *Dimitris Kamarotos, Ioannis Zannos, Kostas Moschos, Akis Daoutis, Stelios Giannoulakis, Kostas Mantzoros*, etc

A pluralism and interdisciplinarity concerning the styles and tendencies is undoubtedly connected to the composers of academic formation in different musical and technological levels.

3. Aesthetic issues in GEM

In our first attempt to outline the way Greek composers think and work in the domain of electroacoustic music, we have prepared a preliminary questionnaire⁴² (cf. annex) which contains five categories of questions on: a) theoretical and methodological background of compositions; b) technical means (software, hardware) used for the production, reproduction; c) modes of performance (sound diffusion, midi controllers, interactive music systems); d) aesthetics concerning categorization, symbolism, abstraction, interaction and references to Greek music tradition; e) their opinion about public reception and cultural politics concerning Electroacoustic music.

Considering the responses to the above mentioned questionnaire we can draw the following initial conclusions:

a) Composition: Concerning the composition procedure and the theoretical background, many of the modern GEM composers don't place too much emphasis on the development of expressive grammatical elements in their compositions. Some of them apply the traditional form of instrumental composition, a minority is based on algorithmic procedures and the majority isn't strongly concerned with the form or the structure of the piece. Many composers have claimed that they don't employ a particular methodology to compose electroacoustic music but vary upon the circumstances and the techniques used.

b) Technical means: Concerning the technical means used in the production or diffusion of their works, most of them use a standard technological environment which they can easily manipulate (Macintosh and Windows XP environments) through sound processing and synthesis software. Only a few of them experiment in new technological tools that derive from research (physical models, granular synthesis, multi-channel diffusion systems, etc.). Composers who work as tutors or professors in Music Departments of the country (Th. Lotis, A. Mniestris, P. Kokkoras), in the Audio-visual Department (I. Zannos), in technological Institutes (N. Valsamakis, K. Tzedaki) and also in private technological institutes (St. Giannoulakis, P. Kalantzis, etc.) or IEMA (K. Moschos) have the opportunity to renew their technological armoury and experiment with new methods.

⁴² This questionnaire has been sent to almost 20 persons (aged 30-50), who are the most considerable and representative composers of modern GEM, and we hope that in the future we will have more feedback.

c) Performance: Performance is mainly focused on the sound diffusion, because most of the compositions presented in various manifestations of ESSIM⁴³, during the last ten years, are mostly in the spirit of acousmatic music or for instruments and tape. Only a few of them use new live-electronic techniques such as solo organ and interactive music system, or new Midi controllers, interactive sound-image etc., because the technological equipment for this kind of experimentation is, so far, scarce in Greece and the research in this domain is not systematic.

On the other hand, if composers who use mixed media techniques (light, movement space and video-art or sound installations) constitute the minority one can not avoid the hypothesis of their reduced number being connected with their difficulty in accessing new technologies and consequently their diminished possibilities to achieve more.

d) Reception and listeners: The development of electroacoustic art during the last fifteen years has raised a number of questions in the world of traditional music concerning the aesthetic credibility of an art form often regarded as narrow, highly specialized and, in the worst of cases, elitist (Pennycook, 1992), (Landy, 2001 b). An issue that has preoccupied musicologists and composers of the international Electroacoustic music is the “question of musical structure”. Mostly, expert listeners have been asking the question of what “good” musical form is, and how “musical dramaturgy” is different from “theatrically-structured music” (Pope 1994). The reception of an electroacoustic work by an audience who has never listened to this kind of music can easily be traumatic. It depends on the formation, receptiveness, imagination and familiarity of the listener with these new sound environments⁴⁴.

In my opinion, there are three different kinds of listeners in Greece: the electroacoustic music community, the contemporary music community (composers and performers) and the electro-fun music community who balances between the avant-garde electrofusion soundscape and the more sophisticated electroacoustic music scene⁴⁵.

4. Perspectives of redefinition of GEM

⁴³ The Association of Greek Electroacoustic music composers.

⁴⁴ Concerning the communication with the audience, the Swedish composer Eke Parmerud proposes: “We need to build up a new set of sounding symbols and signs that will allow us to communicate with the audience. A new kind of spectral harmonic system, adapted to sonic art, is yet to be invented and investigated. The rhythm of electroacoustic music has to be redefined and reinstalled as a major musical attribute, which will enable us to develop more complex time-relations between an increasing number of layers of sound objects. It is time to leave the mono-linear state and learn how to expand into a multi-dimensional musical space where poly-linear composing will be the exact equivalent of the traditional polyphony”. Eke Parmerud, *Tendencies in Electroacoustic music* (<http://members.tripod.com/~Parmerud/articles.html>).

⁴⁵ Our future projects include more systematic research on GEM reception.

During the last ten years, Greek electroacoustic music has started to be redefined following the international tendencies; but without the support of the State, not even from the Ministry of Culture, it is confronted with the ignorance of the cultural authorities and of the classical and contemporary musical world.

GEM must continue to be developed in the Academic departments of Greek Universities (theory and praxis) by the support of ESSIM, as well in the conservatories and in the elementary and high-school giving the opportunity to young people to listen, understand and why not (?) create this new kind of music⁴⁶ (Battier 2004).

4.1 Education: From Theory to Praxis

Our proposition concerning the educational system of the Academic Music Departments in Greece is the development not only of the creative domain of electroacoustic music but also of its theoretical counterpart. Through the development of the Electroacoustic musicology and creative Electroacoustic music studies, through the development of criticism concerning the links of Electroacoustic music with the actual contemporary music scene, electro-pop music scene and the ethno-scapes of traditional music in Greece and establishing the links between the research in music informatics⁴⁷ and electroacoustic music composition.

Concerning the creative aspect of Electroacoustic music in Greece, the Music Departments of Ionian University and the Aristotle University of Thessalonica give the possibility to their students to attend creative courses in electroacoustic music composition. At the University of Athens we emphasize the musicological aspect of this music by analyzing, reading, commenting and experimenting on the new electroacoustic environments, with the objective of developing the domain of Musicology of Electroacoustic music in the model that Leigh Landy has proposed in his article: *Historic, Systematic and Ethnomusicology* (Landy, 2001b).

The program we intend to establish at the University of Athens⁴⁸ will have a strong theoretical and practical emphasis on the spirit of interdisciplinarity, in the

⁴⁶ According to EARS their theory and praxis program includes: sonic arts/electroacoustic music (including interdisciplinary art work), applications of music technology, acoustic and electroacoustic communication, as well as popular music.

⁴⁷ Research in Music Informatics for the moment is taking place at the Computer Science Department of University of Athens (in collaboration with the Music Department) and in the Computer Engineering Department of the Technical University of Athens.

⁴⁸ www.music.uoa.gr: The Music Department of the University of Athens has a strong musicological field in Ancient Greek music, Byzantine music, traditional and popular Greek music Anthropology and Ethnomusicology

direction of culture and European tradition by drawing material from Greek culture (Ancient Greece, Byzantium and Greek popular music). This program will open new directions in the mixture of European intellectual aesthetic tradition with the study of electronic popular music in a framework that combines global and local, theoretical and cultural, technical and esthetical as well as western and Greek tradition. Our goal is to establish a program of theory and praxis of electroacoustic music where there will be a dialectic between music and technology, where new experience meets the narrative weight of history and culture, where new art forms are produced and the most innovative work can often occur. We also wish that the Greek state would support the two existing centres for electroacoustic music creation and music research, KSYME and IEMA, in order to establish a fruitful collaboration between our Music Department and these Institutions.

4.2 . Archiving of composers and their works

Concerning the music information retrieval of GEM, work must be done on the digitalization of electroacoustic music works, preservation of scores and notes as well as in the creation of large databases such as InfosonoWeb (Nattiez J.J. 2005). This would allow at least a reference system where materials can be found and, wherever possible, also permit users to gain direct access to them, whether they are in text, image and/or audio format. In this way information will be diffused and pooled and GEM composers will have a better opportunity to see what others are producing in their area.

4.3. Broadcasting and discs

The electroacoustic music was born in the radio, which used to be the ideal medium in the 60s for this type of music. And for some years electroacoustic music, in various forms, including the Radio opera, has been broadcasted in Germany, France and England and other. In Greece, there is only one station, the Third Program (equivalent to UK's BBC Radio 3), which emits high quality music from classical to jazz, contemporary and ethnic worlds. Electroacoustic music, in a systematic approach, has rarely been presented, possibly for the reason that the discography of Electroacoustic music is very poor and not well advertised⁴⁹.

4.4. Diffusion and concerts

⁴⁹ See annex (discography of GEM).

GEM is marginalized in Greece and we must underline the lack of electroacoustic music from the programs of Megaron, the most relevant official organization and concert hall of classical and contemporary music⁵⁰. On the other hand, composers of GEM cannot express themselves outside their association ESSIM, which organises two or three meetings per year, in what the Ministry of Culture is concerned there is no provision to the presentation of their works. Apart from these, there is a frequent misunderstanding in Greece, between electroacoustic music and pop electronic music of musicians such as *Vangelis*, while the majority of audiences, even the well-educated musicians, have no idea of the electroacoustic music movements and the new esthetics of composition neither in Greece nor abroad.

Conclusions

The new Greek Electroacoustic Music scene is being developed towards a multi-dimensional direction, accurately following the international tendencies of electroacoustic music, since composers who have studied abroad transfer the esthetical and technological approach of the countries they were related to. Concerts, seminars, the Greek electroacoustic music union, master classes, participation of Greek composers in interaction competitions and Greek electroacoustic music days constitute the new landscape for GEM. The main problems, though, the indifference of the state and the ignorance of the listeners for this kind of music remain. Many aesthetic issues, which have been partially mentioned in this article, arise since the birth of GEM within the perspective of a more systematic research in this new kind of music.

BIBLIOGRAPHY

- BATTIER, Marc (2004).** Electroacoustic Music Studies and the Danger of Loss. *Organised Sound*: Vol. 9 no. 1. Cambridge: Cambridge University Press: 47-53.
- BATTIER, Marc, LANDY, Leigh (2004).** Electroacoustic Musics: A century of innovation involving sound and technology - resources, discourse, analytical tools. *Organised Sound*: Vol. 9 no. 1. Cambridge: Cambridge University Press: 1-2.
- CAMARGO, Lucio Edilberto Cuellar (2000).** The Development of Electroacoustic Music in Colombia, 1965-1999: An Introduction. *Leonardo Music Journal*: Vol. 10, Issue 1. Cambridge, MA: MIT Press: 7-12.
- CHADABE, Joel (1996).** The History of Electronic Music as a Reflection of Structural Paradigms. *Leonardo Music Journal*: Vol. 6, No. 1. Cambridge, MA: MIT Press: 41-44.
- DELALANDE, Francois (1996).** La musique Électroacoustique, coupure et continuité, *Ars Sonora*, Revue 4.

⁵⁰ www.megaron.gr.

- EMMERSON, Simon (1998a).** Acoustic/Electroacoustic: The Relationship with Instruments. *Journal of New Music Research*, Vol. 27, No. 1-2. Lisse: Swets and Zeitlinger: 146-164.
- FUMAROLA, Martin Alejandro (1998).** Change and Permanence in Latin American Electroacoustic and Computer Music: A Compositional Approach. In *Proceedings of the 1998 International Computer Music Conference*. San Francisco, CA: ICMA: 80-83.
- GEORGAKI, Anastasia (ed. 1998):** *Proceedings of the First Symposium on Music and Computers*, Ionian University, Corfu, 1998
- GEORGAKI Anastasia, LOUFOPOULOS Apostolos (2006).** Michael Adamis, the alchemist of Greek sonorities. *Journal of Musicology*, Exandas, Athens 2006 (in Greek).
- GEORGAKI Anastasia, LOUFOPOULOS Apostolos (2000).** "Spirituality in the Electroacoustic works Apokalypsis, Tetelestai and Kratima of the Greek composer Michael Adamis", in the *New sound, International magazine for music*, Spectra, Belgrade 2000 (English, Serbian).
- GEORGAKI Anastasia, Mniestris Andreas :** The pedagogy of Music technology and informatics in the Music Department of the Ionian University, *Proceedings of the third symposium of EEME* (Greek society of music education), Thessaloniki 2000 (in Greek).
- GRABÓCZ, Marta (1997).** Survival or Renewal? Structural imagination in recent electroacoustic and computer music. *Organised Sound*: Vol. 2, no. 2. Cambridge: Cambridge University Press: 83-95.
- LANDY, Leigh (1999a).** Reviewing the Musicology of Electroacoustic Music: A plea for greater triangulation. *Organised Sound*: Vol. 4, no. 1. Cambridge: Cambridge University Press: 61-70.
- LANDY, Leigh (2001b).** Measuring Intention against Reception in Electroacoustic Music: a new opportunity for analysis. *International Computer Music Conference Havana Proceedings*. 26-29.
- LOUFOPOULOS Apostolos (1999) :** *Archivage-descriptive analysis of the electroacoustic works of M. Adamis*, unpublished dissertation (supervisor A. Georgaki), Corfu: Music Department, Ionian University (in Greek).
- LUCCIANO Anne Marie (1999).** *Jani Christou: The Works and Temperament of a Greek Composer*, Harwood Academic Press.
- MAMALIS, Nicolas (1990).** *La musique électroacoustique en Grèce*, mémoire de D.E.A., Sorbonne I, Paris, 1990.
- MAMALIS Nicolas (1998).** *Δραστηριότητες γύρω από την οργάνωση τη διάδοση και την εκμάθηση της ηλεκτρονικής μουσικής στην Ελλάδα*, www.ionio.gr/~GreekMus/mamalis.htm.
- NATTIEZ Jean-jacques (2003).** La musique de l'avenir, dans *Musiques, une encyclopédie pour le XXI^e siècle*, Actes Sud, /Cite de la musique, Paris.
- PALOMBINI, Carlos (2000).** The Brazilian Group for Computer Music Research: A Proto-History. *Leonardo Music Journal*: Vol. 10, Issue 1. Cambridge, MA: MIT Press: 13-20.
- PENNYCOOK, Bruce (1992).** Composers and Audiences: New Relationships in the Technological Age. In Paynter, J. et al. (eds.), *Companion to Contemporary Musical Thought*: Volume 1. London: Routledge: 555-564.
- POPE, Steven Travis (1994).** Why is Good Electroacoustic music So Good? Why is Bad Electroacoustic music So Bad?, Editor's Notes, *In Computer Music Journal*, Vol. 18 Issue 3.
- POPE, Steven Travis (1995).** Touched by Machine? - Composition and Performance in the Digital Age. *Computer Music Journal*: Vol. 19, No. 3. Cambridge, MA: MIT Press: 13-17.

TRUAX BARRY : Soundscape Composition as Global Music:
<http://www.sfu.ca/~truax/soundscape.html> *Sound Escape Conference Text*, Trent University, Peterborough, Ontario, July 1, 2000.

DISSERTATIONS on GEM (Unpublished)

Dimou Antonia (1999): Greek Electroacoustic music, a multimedia presentation. Unpublished Bachelor dissertation, Supervisor A. Georgaki, Corfu, Ionian University, 1999.

Papada Aikaterini (1998): Archiving and mastering of Stefanos Vassiliades' electroacoustic music works, unpublished Bachelor dissertation, Supervisor A. Georgaki, Music Department, Corfu, Ionian University, 1999.

Loufopoulos Aposotolos (1999): Archiving, descriptive analysis of Michael Adamis' electroacoustic works, unpublished Bachelor dissertation, Supervisor A. Georgaki, Music Department, Corfu, Ionian University, 1999.

Dimitropoulou Eleni (1999): The electroacoustic medium for music investment in Ancient Greek tragedies, by M. Adamis and Y. Christou, Bachelor dissertation, Supervisor A. Georgaki, Music Department, Corfu, Ionian University, 1999.