A selected bibliography reflecting the GRM's concepts and trends

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In order to understand through the original writings the evolution of ideas and technology in the history of GRM, a recommended bibliography is proposed here.

1. INTRODUCTION

During the sixty years of existence of musique concrète, the GRM has produced an important amount of written material. This material can be separated into different themes: technical, philosophic, musicological, pedagogical, general. Since Pierre Schaeffer was quite gifted for writing and formalising ideas, from the very first moments of his experiments with sound (and even before) he regularly produced books and articles, mainly oriented to explain his discoveries and the ideas of musique concrète as well as his general ideas on music and communication. Therefore, the first ten years of musique concrète are very well documented and contain many of the 'founding' texts that have strongly influenced the ideas about music.

His close collaborators followed him in this task, and then his successors continued with the ambition of communicating and spreading what they considered to be the important ideas and concepts that this new way of making music had brought. Parallel to the more general writings, specific articles, often in the technical domain, would regularly give insights on the evolution of technology and practice as well as of the research orientations. Another strong trend was that of aesthetic and philosophical ideas, which started from the very beginning and were the backbone for the evolution of concrète, electroacoustic and acousmatic music, generating increasing interest through time. In recent years through multimedia productions and the Internet, interactive analysis of electroacoustic music has become available, thus supporting a greater understanding of what music is and how it functions.

Except in recent years, there has always been a certain separation between musical research, as it was carried on at the GRM, and writings evolving from the academic research world. From the very beginning Pierre Schaeffer was quite sceptical about the methods of academic research and their capacity to propose effective solutions to tackle the diversity of new problems that musique concrète brought to light. This is why he created research groups and developed specific multidisciplinary research projects, crossing different domains of knowledge. The academic domain also regarded his activities as not being completely orthodox, and was quite critical regarding his approach. This mutual distrust continued during the first thirty years of musique concrète, and only in the 1980s were some exchanges and collaborations undertaken as well as publications appearing in the academic domain. This trend has increasingly become important in the last ten years, and numerous collaborations and exchanges exist with universities in different countries.

The outstanding fact in GRM's history is that Pierre Schaeffer was not the only writer who developed original ideas on music and the influence that technology brought on it. His work was strongly divulged by Michel Chion, who was the exegete in charge of analysing and explaining his positions, as well as an original writer on sound and music that has since enlarged the vision of electroacoustic music. François Bayle as promoter of the word 'Acousmatic' has also brought new understandings regarding the sound phenomenon and how our mind creates structures that give coherence to the musical listening. Finally, François Delalande has offered original insights regarding musicians' approach to composition and the way children explore and play with sound and objects, thus determining the origins of musical perception and pleasure.

Many others have contributed regularly and occasionally to explain and diffuse the ideas and positions as well as work in progress or achieved actions and tools. They have worked from within the GRM or had studied it from outside, often developing more critical regards on its achievements.

2. ORGANISATION OF THE BIBLIOGRAPHY

This bibliography is structured in three domains: books, articles and Internet links. Books often develop the

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author's position or theories regarding concrète, electroacoustic or acousmatic music; they can be highly specialised or more intended to the public. Most books referenced here are still available and can be found first or second hand.

For articles, the references are mainly to research articles, often in the technological domain. A campaign has been started to make most of these articles available online.

The Internet links are given in order to give access to interactive analysis of music or to articles only available online.

As a general remark it must be said that most of the references are in French. Except for the occasional article, there is no major translation of the founding texts of Schaeffer, although some projects are on their way. There is no discrimination by the authors of this article towards books or articles not shown here; the ambition is not to make a complete bibliography but a recommended one containing what the authors think are the most necessary in order to understand the evolution of the GRM and its ideas.

3. BOOKS

3.1. Collections

Three collections have, through time, offered regular information about the main trends or ideas on which the GRM was working or that other researchers contributed to. After the 1950s and the 1960s, when Schaeffer himself carried on the main publishing activity, the trend was to make collective publications on specific themes. The three collections are as below.

3.1.1. The *Cahiers Recherche/Musique* (Research and Music Notebooks)

This lasted from 1976 and 1980, some volumes included previously published articles. This was an important collection of collective works, which became a strong reference among music teachers and researchers, since they brought the current ideas and projects of the GRM up to date. They are quite optimistic in their views, at a time when the GRM was starting a new life through its integration in INA and the computer seemed to be an essential tool for the future. For the first time, the strong concern of the GRM in terms of teaching was no longer restricted to adults, but now was intended for children.

Eight volumes were published, some of them still available at GRM or in specialised libraries. Nos 2 and 3 are difficult to find.

No. 1: *Pédagogie musicale d'éveil*, 1976 (pedagogy of music early discovery)
No. 2: *Le traité des objets musicaux 10 ans après*, 1976 (The Treatise of Musical Objects, 10 years later)
No. 3: *Synthétiseur ordinateur*, 1976 (Synthesiser–Computer)
No. 4: *La musique du futur a-t-elle un avenir?*, 1976 (Is there an afterlife for the music of the future?)
No. 5: *Le concert pourquoi? comment?*, 1977 (The concert, why? How?)
No. 6: *Le pouvoir des sons*, 1978 (The power of sounds)
No. 7: *L'animation musicale*, 1979 (Musical activities)
No. 8: *Hors série: Répertoire acousmatique 1948–1980*, 1980 (Acousmatic repertoire, 1948–1980, special volume)

3.1.2. Bibliothèque de Recherche Musicale (Musical Research Library)

This is in a way the continuation of the Notebooks; it was directed by François Delalande from 1982, and has produced several classics regarding 'musique concrète', pedagogy, musical analysis and sociology of music. The collection was published by the INA/GRM and Buchet-Chastel in Paris.

L'enfant du sonore au musical by Céleste, Delalande, Dumaurier (The child, from sound to music)

First printed in 1982, reprinted in 1996, it studies the ways children experience sound and later music.

L'Envers d'une Oeuvre by Mion, Nattiez, Thomas (A work upside down, an analysis of *De Natura Sonorum* of Bernard Parmegiani)

A complete analysis of *De Natura Sonorum* with three different points of view. Printed in 1982.

Guide des Objets Sonores by Michel Chion (A Guide to Musical Objects)

A comprehensive explanation of the *Traité des Objets Musicaux* of Pierre Schaeffer, where all the concepts of the Treatise are explained and analysed; an essential book for understanding Schaeffer's ideas. An English translation is being prepared and should be accessible in 2008. First printed in 1983, reprinted in 1995.

La musique est un jeu d'enfant by François Delalande (Music is a child's game).

One of the great classics in musical pedagogy, showing how the attitude of children when exploring the sounding world is very similar to electroacoustic musicians attitudes and how pedagogy can be built on these premises. First printed in 1984, reprinted in 1990, 1994, 1996, 2001, 2003. Spanish translation: Buenos Aires, Ricordi Americana, 1995, 2001. Italian translation: Milan, FrancoAngeli, 2001, reprinted four times.

Musique acousmatique, propositions … positions by François Bayle (Acousmatic Music, propositions … positions)

Important book in which François Bayle gives insights into his concepts and music. Printed in 1993.

'Il faut être constamment un immigré', entretiens avec Xenakis by François Delalande ('One has to constantly be an immigrant', discussions with François Delalande)

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A very rich book of discussions with Xenakis, where he explains his main ideas and concepts. Printed in 1997.

Ouïr, entendre, écouter, comprendre d'après Schaeffer, collective work (Listen, hear, understand, following Schaeffer)

Printed in 1999.

Le Son des musiques by François Delalande (The Sound of Musics)

Studies on how sound is conceived in different musical domains, as baroque music, electroacoustic and pop. Printed in 2001.

Next issue:

La musique au-delà des notes by François Delalande (Music beyond notes).

3.1.3. Portraits Polychromes

Collection of composer's portraits directed by Évelyne Gayou, with the collaboration of Pierre-Albert Castanet and started in 2001. The aim of this collection is to give an insight of a composer through his writings, biography, catalogue, as well as writings by other researchers. This collection has a multimedia part on the web, developed by Dominique Saint Martin, where complementary texts and graphical analyses can be found, thus completing the points of view presented on the books. The list of composers is the following:

Luc Ferrari
Jean-Claude Risset
Gilles Racot
Bernard Parmegiani
Ivo Malec
François Bayle
John Chowning
Michel Chion
Jacques Lejeune
Francis Dhomont
Max Mathews (also in English)

Available at: www.ina.fr/grm/acousmaline/polychromes/index.fr.html

3.2 Reference books

Chion, Michel. 1991. *L'art des sons fixés, ou la musique concrètement*. Fontaine: Métamkine/Nota Bene/Sono-Concept. 104 pp. Conceptual approach to the ideas of Michel Chion.

Chion, Michel, and Reibel, Guy. 1976. *Les musiques électroacoustiques*. Aix-en-Provence: INA-GRM, Edisud. 340 pp. This is a historic book retracing the history, the technology and the main concepts of electroacoustic music. It also surveys all the existing studios in the world.

Pierret, Marc. 1969. *Entretiens avec Pierre Schaeffer*. Paris: Éditions Pierre Belfond. 193 pp. Interview with Schaeffer, where he speaks in a very friendly way about his ideas and personal history.

Reibel, Guy. 1984. *Jeux musicaux, Vol. 1: Jeux vocal*. Paris: Éditions Salabert. 276 pp. A complement to the work of François Delalande, oriented towards musical practice.

Schaeffer, Pierre. 1952. *A la recherche d'une musique concrète*. Paris: Éditions du Seuil. 230 pp. Reprinted in 1998. One of the most touching books by Pierre Schaeffer, he tells the story of how he came to 'musique concrète' and how his ideas started and were developed.

Schaeffer, Pierre. 1966. *Traité des objets musicaux*. Paris: Éditions du Seuil. 702 pp. The 'Bible' as it is often called, a general text about the views and concepts of Schaeffer on music. Discussions have been undertaken regarding the necessity of an English translation, however, the project has never managed to take form. Abridged versions of the Traité exist in Spanish and Portuguese.

Schaeffer, Pierre. 1967a. *La musique concrète*, Collection Que sais-je? Paris: PUF. 128 pp. An overview book in the famous French collection Que sais-je? (What do I know?)

Schaeffer, Pierre. 1967b. *Solfège de l'Objet Sonore, Trois microsillons d'exemples sonores de Guy Reibel, assisté de Beatriz Ferreyra illustrant le Traité des objets musicaux et présentés par l'auteur*. Paris: Éditions du Seuil. 44 pp. Three CDs with Schaeffer's recorded voice explaining the different examples issues from the *Traité des Objets Musicaux*. Reprinted in 1999 by INA/GRM.

Schaeffer, Pierre. 1971. *La musique et les ordinateurs*. Paris: La Revue Musicale. 46 pp. Also printed in English: *Music and Computers*, translation: William Skivington. The Revue Musicale was a constant reference publisher for Schaeffer and the GRM, directed by Pierre Richard. Since the 1950s it has regularly published articles on concrète and electroacoustic music. The last number dedicated to GRM was in 1985, with a book called *Recherche Musicale au GRM*, where the different research projects are exposed. The review ceased to exist in 1990.

Teruggi, Daniel. 1998. 'Le Système Syter. Son histoire, ses développements, sa production musicale, ses implications dans le langage électroacoustique d'aujourd'hui'. PhD dissertation, Université Paris VIII. Extensive work on the technology of GRM.

Veitl, Anne. 1997. *Politiques de la Musique Contemporaine*. Paris: l'Harmattan. 254 pp. Socio-political work analysing the way politics regarding contemporary music was carried. A whole chapter is dedicated to the GRM and its role in the evolution of music in France.

4. ARTICLES

Allouis, Jean-François, Dürr, Bernard, Jaffrennou, Pierre-Alain and Mailliard, Bénédict. 1976. 'Synthétiseur/Ordinateur'. Cahiers Recherche/Musique No. 3. Paris: INA-GRM. 278 pp.

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Allouis, Jean-François and Bernier, Jean-Yves. 1982. 'The Syter project sound processor design and software overview', *Numero e Suono, La biennale di Venezia*. Venise: ERI-Edizioni RAI. 294 pp.

Allouis, Jean-François. 1986. 'Syter et le temps réel', in *Recherche musicale au GRM*. Paris: Cahiers Recherche-Musique no. 394, 395, 396, 397. 335 pp.

Bayle, François. 2003. 'L'image de son, Klangbilder', bilingual French-German. Köln Universität, LitVerlag.

De Laubier, Serge and Teruggi, Daniel. 1991. 'The Midi Formers', *Proceedings of the ICMC Montréal 1991*. Montréal: ICMC. 594 pp.

Delalande, François. 2004. 'L'invention du son', *Révolutions industrielles de la musique*. Paris: Fayard, Cahiers de la Médiologie/Ircam. Also in *New Music Research*, 1998, **27** (1–2): 13–66. Netherlands: Swets & Zeitlinger.

Delalande, François. 2007. 'Toward an Analysis of Compositional Strategies', *Circuit* **17** (1). Montréal.

Favreau, Emmanuel, Racot, Gilles and Teruggi, Daniel. 1999. *Evolution des outils, évolution des idées, dans Interfaces homme-machine et création musicale*. Paris: Hermès science.

Geslin, Yann. 2002. 'Digital Sound and music transformation environments: A twenty-year experiment at the Groupe de Recherches Musicales', *Journal of New Music Research* (special issue: Musical Implications of Digital Audio Effects) **31** (2): 99–107. Netherlands: Swets & Zeitlinger.

Koechlin, Olivier and Vinet, Hugues. 1991. 'The Acousmographe, a Macintosh software for the grafical representation of sounds', *Proceedings of the ICMC Montréal 1991*. Montréal: ICMC. 594 pp.

Mailliard, Bénédict. 1981. 'Simulation par ordinateur du studio électroacoustique et applications à la composition musicale', *Conférences des Journées d'Études*. Festival International du Son Haute Fidélité. Paris: Éditions Radio. 198 pp.

Mailliard, Bénédict, Geslin, Yann and Allouis, Jean-François. 1982. 'The GRM Digital Studio for treating natural Sounds', *Numero e Suono, La biennale di Venezia*. Venise: ERI-Edizioni RAI. 294 pp.

Poullin, Jacques. 1954. 'L'apport des techniques d'enregistrement dans la fabrication de matières et formes musicales nouvelles. Applications à la musique concrète', *L'Onde Électrique* **34** (324): 282–91. Société des Radioélectriciens, Paris: Éditions Chiron. Translated in 'The application of recording techniques to the production of new musical materials and forms. Applications to "musique concrète"', National Research Council of Canada – Technical translation TT-646 (D.A. Sinclair), 1957, Otawa.

Poullin, Jacques. 1960. 'Les chaînes électro-acoustiques', *Situation de la Recherche*. Cahiers d'Études de Radio-Télévision no. 27–28. Paris: Flammarion. 331 pp.

Radio Télévision Française. 1962. 'Répertoire international des musiques expérimentales', publié par le Service de la Recherche de la Radiodiffusion-Télévision Française. Paris. 56 pp.

Schaeffer, Pierre. 1961. 'Brochure de présentation du Service de la Recherche'. Paris: R.T.F. July. 54 pp.

Schaeffer, Pierre. 1960. 'Note on time relationships', *Gravesaner Blätter*. Gravesano: Ars Viva Verlag. 143 pp.

Teruggi, Daniel. 1994. 'The Morpho Concepts: trends in software for Acousmatic Music composition', *Proceedings of the ICMC*. Aarhus.

Teruggi, Daniel. 1996. 'The technical developments in INA-GRM and their influences on musical composition', *Neue Musiktechnologie* II: 42–48. Mainz: Schott.

Teruggi, Daniel, 1999. 'L'interactivité dans les processus de création sonore', *Interfaces homme-machine et création musicale*. Paris: Hermès science.

Teruggi, Daniel and Spain, Martin. 2000. 'L'Interpolateur, une interface de contrôle multi-paramètrique', *Journées d'Informatique Musicale*. Bourges.

Teruggi, Daniel and Geslin, Yann. 2003. 'Sound transformations: Past or Future?', *Proceedings of the XIV Colloquium on Musical Informatics* (XIV CIM 2003). Firenze, Italy.

Vinet, Hugues. 1991. 'DSP Station, a HyperCard environnement for DSP sound processing algorithms', *Proceedings of the ICMC Montréal 1991*. Montréal: ICMC. 594 pp.

5. INTERNET LINKS

5.1. CDRom

In 2001 the GRM produced a CDRom called *La musique électroacoustique*, partially funded by the Education Ministry and published by Hyptique. This CDRom was conceived as a global tool for teaching electroacoustic music, and consists of three parts. *Connaître* (to know) with all the necessary historical sources, fifty-four excerpts of music, biographies, programme notes, general concepts and images that make the history of electrocaoustic music since 1948; also with the previous discoveries that opened the road to it. *Entendre* (to listen) where six works are analysed and presented through interactive pages done on the Acousmographe, presenting several analytical approaches to each work. *Faire* (to do), small studio for sound processing, where external sounds can be introduced and the result recorded as a new file. More than 12,000 volumes were sold and it is very popular among French teachers and students. Some attempts were made to translate the CDRom to English, however, the size of the task (300 pages of text to be translated) and the difficulty of selling a

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'cultural' CDRom have been strong impediments to it.

The CDRom can be ordered at: www.hyptique.net

5.2. Website

The INA GRM website is a rich reference for interactive multimedia analysis of electroacoustic works. Initially conceived as an extension of the collection *Portraits Polychromes*, where the music of the analysed works on the books were presented online, it has strongly enhanced the original presentations, through analysis of musical works related to the composers present in the *Portrait Polychrome* collection. It is available in French and a large selection is available in English. Another interesting issue is the Webradio, which presents either concert reports on contemporary actions or historical radio programs.

www.ina.fr/entreprise/activites/recherches-musicales-index.html

www.ina.fr/entreprise/activites/recherches-musicales-portraits-polychromes.html

5.3. CDs

The GRM has a very important collection of CDs, which started in 1984 and has to the date ninety-nine references, with historic and contemporary electroacoustic music. The collection can be addressed on different website, mainly:

www.ina.fr/actualites/boutique/disques.html?collec=138

www.emf.org

Among the references, a recent one, published in 2005, is called *Archives GRM*. It is a collection of five CDs with a booklet of photographs. It contains rare works from the 1950s and 1960s, different examples of works done on the 123 software and Syter, as well as radio and airport jingles composed by composers from GRM, which have become extremely popular without people knowing its origin (as the famous Charles de Gaulle airport jingle composed in 1975 by Bernard Parmegiani, which functioned until 2005).

Reference: ARCHIVES GRM : *ina c1030 276502*

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