

**Electroacoustic Music and Popular Culture Interacting:  
Aesthetic and musicological implications of *GRM Experience*  
by Christian Fennesz, Mika Vainio and Christian Zanési**

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**Abstract**

Created on October 11<sup>th</sup>, 2003 at the Maison de Radio France in Paris, *GRM Experience* is a work signed by three composers coming from different electronic-related musical horizons. Whereas both Christian Fennesz and Mika Vainio usually perform in popular spheres of diffusion – the former's processing of instrumental sources by digital means being largely marked by the aesthetics of pop and rock music, the latter's analogue methods inheriting from his experiments among the techno duo Pan Sonic – Christian Zanési's art belongs to electroacoustic music as it has been produced in the Groupe de Recherches Musicales since 1977. Their collective creation was based on a first session of individual work from preliminary exchanged sound material, followed by a confrontation stage which led to the final composition, performed live in several European concerts and edited on CD.

Although many musical events attempt to bridge the gap between electroacoustic music and popular culture, actors from these two general spheres most often play jointly rather than through intimate collaborations. Furthermore, if musicology provides a wide range of approaches to technology-based creation made inside institutions, popular electronic music is generally regarded as a global phenomenon and few detailed studies have aimed at particular works or artists yet.

As *GRM Experience* constitutes a significant instance of an accomplished collaboration between artists sharing an extensive use of sound and music-dedicated technology but evolving in distinct aesthetic and socio-cultural domains, the main issue of this communication is to evaluate the musical contribution of each composer to the resulting work, in order to raise the influence of their personal background as well as the way their different strategies of creation may have been transformed by such a heterogeneous context. While some materials can clearly be recognized as being provided by one particular artist, other sequences are more ambiguous and reveal a careful work of collective development, which actually addresses the interactions involved in the compositional process.

Since no documentation subsists from the working sessions, such a study has to lean on a comparative analysis of the sound materials included in the published version of *GRM Experience* on the one hand and those found in the compositions by the three musicians as soloists on the other hand. This will usefully be completed by a direct account from some of the composers themselves. By investigating the interactions between different compositional

methods and aesthetic influences involved in the creation of a unique and coherent work, this contribution leads to further considerations on the musicology of technology-based activities from popular origins, which may benefit from the analytical tools dedicated to electroacoustic music.

## Introduction

The 2011 edition of the Electroacoustic Music Studies network conference addresses with its *Sforzando!* special theme several major questions that are believed to “need sudden, forceful answers”<sup>1</sup>. Amongst these, the following two are gathered under a “socio-acoustics” category: “Given the democratization of art, what is the changing role of artists, virtuosity, expertise, creative excellence? To what extent is electroacoustic music as a field becoming self-referential?”<sup>2</sup> Within such a framework, this contribution interrogates the relationships between electroacoustic music and popular practices of electronic music, under both musical and musicological perspectives. The first cited question and the term “democratization” may be considered in two ways: on the reception side, art and in particular music based on technological tools are nowadays largely accessible to wide audiences; on the production side, new hardware devices and software dedicated to creation are not restricted to institution-based artists anymore. In an article published in 1995, Marc Battier highlighted the double impact of the integration of computers into musical practices:

When computers appeared, research expanded further. [...] By taking over as the necessary environment for research, computer science applied to music did more than simply expanding the conventional activities of studios: it transformed deeply and permanently some of them [and] generated new centres. [...] Such a change is not restricted to techniques: it is social as well, as composers now have constant access to means of production, thanks to home studios. [...] Thus, European studios are now focusing their production activities to aspects that are still inaccessible to independent musicians: sound techniques for real time performance, control over spatialisation.<sup>3</sup>

The distinction between electroacoustic music and popular culture initially assumes that the latter can point to the musical works being produced and/or presented outside the institutions traditionally considered in the electroacoustic field: research centres, universities, conservatoires. This assumption shall not be regarded as a definition and will be discussed shortly; as a starting hypothesis and articulated to the aforementioned conference questions, it raises the principal issue of this article: as popular electronic music is generally regarded in musicological works as a global phenomenon, as few detailed studies have aimed at particular artists or pieces yet, how can the arguably established domain of electroacoustic music studies

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<sup>1</sup> “EMS11 Home”, Electroacoustic Music Studies Network 2011, conference main webpage, www.ems-network.org/ems11/ (last visited October 31<sup>st</sup>, 2011).

<sup>2</sup> *Ibid.*

<sup>3</sup> “Avec l’arrivée de l’ordinateur, la recherche s’est démultipliée. [...] En s’imposant comme l’environnement nécessaire de la recherche, l’informatique musicale fit plus que s’ajouter aux travaux conventionnels des studios : elle métamorphosa définitivement le visage de certains d’entre eux [et] engendra de nouveaux centres. [...] Le changement ne peut se réduire aux seules techniques : il est aussi social, puisque les compositeurs ont désormais un accès constant aux moyens de production, grâce aux studios domestiques (home studios). [...] Les studios européens concentrent donc désormais leur activité de production sur les aspects qui échappent encore à la portée du musicien indépendant : techniques du son liées à l’exécution de l’œuvre en temps réel, maîtrise de la spatialisation.” Marc Battier, “Europe, avis de recherche”, *Résonance*, 9, 1995, pp. 18-20. Translation by Frédéric Dufeu.

be helpful in the investigation of non institutionally circumscribed technology-based creative practices?

Created on October 11<sup>th</sup>, 2003 in the Olivier Messiaen Hall at Maison de Radio France in Paris, *GRM Experience* lends itself to such a questioning, as a collective work that gathered within one of the most renowned institutions of electroacoustic music three artists coming from different electronic-related cultural backgrounds. While both Christian Fennesz and Mika Vainio's activities usually take place in popular domains of creation and diffusion – the former's processing of instrumental sources by digital means being largely marked by the aesthetics of pop and rock music, the latter's analogue methods inheriting from his experiments among the techno duo Pan Sonic – Christian Zanési's art belongs to the field of institution-based electroacoustic music as it has been developed within the Groupe de Recherches Musicales since 1977. In this article are first discussed further the possible delimitations between the two poles that are initially designated as “electroacoustic music” and “popular culture”; then are presented the origins and realisation of *GRM Experience* itself. Finally, musicological and analytical perspectives are drawn after the inherently collective and collaborative nature of the work.

## 1. Elements for a Delimitation of Electroacoustic Music and Popular Practices

If a thorough investigation of criteria for a definition and distinction of electroacoustic music and popular electronics-based practices is well beyond the scope of this article, some elements shall be proposed to clarify the singularity of the collaboration that led to *GRM Experience*. In his book *The Music of Sounds*<sup>4</sup>, Leigh Landy describes the 2004 NewMix festival in Paris as being specific in bringing together a wide variety of musical practices relying on electronics:

The Electronic Music Foundation (EMF) celebrated its tenth birthday. Its founder-director, Joel Chadabe, said ‘Let's have a celebration. In fact, let's have a number of celebrations’. As he wished, celebrations there were. One of these celebrations was to take place in Europe. Under the initiative of Marc Battier, and in collaboration with Ramuntcho Matta and Pierre Couprie, a two-day festival called *NewMix* was held at the Palais de Tokyo in Paris on 17 and 18 December. To me *NewMix* was not just another electroacoustic music festival, insofar as a ‘normal’ electroacoustic music festival exists. [...] What made *NewMix* special was its celebration of the art form's inherent eclectic nature. The eclectic approach is in contrast to that of many festivals focusing on, for example, music on a fixed medium, digital music in new media contexts or interactivity or, more recently, various forms of electronica. The *NewMix* programme contained all of these and some works that would have caused difficulties in terms of fitting them into any of the above categories.<sup>5</sup>

This quotation emphasizes the issue of elaborating straightforward genre definitions amongst the works that use electronics and digital resources as primary means of creation, as well as it shows the existence of several practices that do not frequently share a same event.

Although I have nothing against focused concerts, [...] what I have found disappointing within the broad worlds of electroacoustic music, sonic art and so on is that most events focus on a

<sup>4</sup> Leigh Landy, *La musique des sons / The Music of Sounds*, bilingual edition, Paris, Université Paris-Sorbonne, MINT, Observatoire Musical Français, 2007.

<sup>5</sup> *Ibid.*, pp. 85-86.

relatively narrow repertoire instead of offering more eclectic programmes. The result is the creation of parallel communities of interest, many of which are fairly small in size.<sup>6</sup>

If many communities coexist, does it make sense to establish categorisations on the top of which would be the distinction between institutionally supported creation and popular practices? In another monograph<sup>7</sup>, Landy elaborates a discussion, from hypothetical examples, of expressions such as “electroacoustic art music”, which might find “its key venue in the university or conservatoire recital place”<sup>8</sup>, “pop music”, the example of which “involves electroacoustic processes and an overtly sound-based introduction”<sup>9</sup> but “becomes a pitch- and more importantly beat-driven piece employing sampled sounds that belong to today’s club culture”<sup>10</sup>, and “sound design”. Following these broad elements, Christian Zanési’s music could be associated to electroacoustic (art) music, while Christian Fennesz and Mika Vainio would both belong to pop music, which would be in accordance to the initial assumption stated in the introduction of this article. It is worth noting that the difficulty of terminological and typological efforts is enforced by linguistic differences<sup>11</sup>. As Landy writes, “I shall attempt to demonstrate that the question raised earlier – ‘is there but one answer to these questions?’ – should often be answered in the negative”<sup>12</sup>.

Another useful element of reflexion is that of the development and use of technological tools for musical creation. In the transcription of a round-table discussion<sup>13</sup> with major actors of music-dedicated programming environments<sup>14</sup>, Eric Lyon suggests that

[the] distinction between experimental music and what might be termed ‘normative music’ – that is, music based on accepted stylistic norms – is mirrored in our software. On the normative side of software are utility programs such as mixers, sequencers, and reverberators. On the experimental side are the programs that we discuss today. This software is open, extensible, and invariably used in ways unanticipated by its creators. While such software does not command a market on the scale of normative utility programs, it is arguably much more influential in the long run, as it facilitates the creation of the music which today exists only in our collective imagination. And the experiments of today will lead inevitably to the norms of tomorrow. This debt is even occasionally acknowledged, such as when the Beatles put Stockhausen on the cover of their album *Sgt. Pepper’s Lonely Hearts Club Band*, or more recently when Radiohead sampled (and credited) Paul Lansky on their album *Kid A* which went platinum.<sup>15</sup>

<sup>6</sup> *Ibid.*, pp. 87.

<sup>7</sup> Leigh Landy, *Understanding the Art of Sound Organisation*, Cambridge (MA, USA), The MIT Press, 2007.

<sup>8</sup> *Ibid.*, p. 6.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Ibid.*

<sup>11</sup> For instance, Landy tends to adopt a broad definition for electroacoustic music (which “refers to any music in which electricity has had some involvement in sound registration and/or production other than that of simple microphone recording or amplification”, *ibid.*, p. 13, after Leigh Landy, “Reviewing the Musicology of Electroacoustic Music”, *Organised Sound: An International Journal of Music and Technology*, 4(1), 1999, pp. 61-70). This definition equally includes the three authors of *GRM Experience*, but in French, the expression “*musique électroacoustique*”, which would apply to Christian Zanési without difficulty, would rarely be used for Christian Fennesz and Mika Vainio. On the other hand, the extremely broad use of the expression “pop music” in an English-speaking context seems to be adequate for both Fennesz and Vainio, but the use of the term “*pop*” or, *a fortiori*, the expression “*musique populaire*” would be awkward and inconsistent in French, where slightly more specific expressions might fit, such as “*musiques électroniques expérimentales*” (for both Fennesz and Vainio) or, simply, “*techno*” (for some of Vainio’s beat-driven works).

<sup>12</sup> Leigh Landy, *Understanding the Art of Sound Organisation*, *op. cit.*, p. 7.

<sup>13</sup> Eric Lyon, “Dartmouth Symposium on the Future of Computer Music Software: A Panel Discussion”, *Computer Music Journal*, 26(4), 2002, pp. 13-30.

<sup>14</sup> Gareth Loy, Max Mathews, James McCartney, Miller Puckette, Barry Vercoe, and David Zicarelli.

<sup>15</sup> Eric Lyon, *op. cit.*, p. 13.

After replacing “experimental music” and “normative music” with “electroacoustic music” and “popular electronics-based music”, respectively, Lyon’s statement shall be nuanced: if institutions certainly favour the developments of innovative software for music creation, an important proportion of composers from the electroacoustic field entirely create their works from pre-established tools; conversely, many artists from the broad experimental pop music domain build their own hardware and/or software tools. Furthermore, on both sides, most developments never grow beyond the scope of their creators’ personal practices.

According to Christian Zanési, the distinction between electroacoustic music and electronic pop music exists, but does not fundamentally rely in the aforementioned socio-cultural or technological criteria. It is rather the conceptions of the artwork and of the musical form that differ significantly between the two domains:

What makes the difference between this pop practice, even if it is experimental, and a compositional activity such as the one that I have or that we have [at GRM], to me, is not [the criterion of presentation and reception contexts]. That is part of the difference, but what is fundamental is the concept of artwork. [...] The concept of artwork that is used when you work for six months on a project comes from art music, from classical music, even if new materials are involved. [...] [In] the environment of electronic [pop] music, [...] I saw people who were practicing, with about the same tools, an expressive research on sound, and who had not the same conception of the artwork at all. The work is not permanently fixed, it is not an ideal to be reached. On the contrary, it can be at best a certain number of plans and structures [...] and then, during the concert, there is a great freedom for interpreting these plans.<sup>16</sup>

Whether they are socio-cultural, technological, or aesthetic, criteria for a delimitation of electroacoustic art music and popular electronic music remain loose rather than definite. Still, the idea of gathering both domains<sup>17</sup> through three composers working together on a unique electroacoustic piece has been one of the starting points of the *GRM Experience* project.

## 2. *GRM Experience*: Origins and realisation of a collaborative artwork

Initiated by Christian Zanési and designed within the “Culture 2000” programme of the European Union, the *GRM Experience* project found its roots in the will to realise a collective musical experience linking the Groupe de Recherches Musicales to artists from the popular electronic scene, and to present it in several locations. Initially producer and promoter of the main idea, assisted by Claude Mussou, the composer recalls:

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<sup>16</sup> “*Ce qui fait une différence entre cette pratique pop, même si elle est expérimentale, et une pratique compositionnelle telle que je la fais ou que nous la faisons ici [au GRM], à mon avis, ce n’est pas [le critère des sphères de diffusion]. Ça en fait partie, mais ce qui est fondamental, c’est le concept d’œuvre. [...] Le concept d’œuvre qui est pratiqué quand on travaille six mois sur un projet, il tient de la musique savante, de la musique classique, même si c’est avec des matériaux nouveaux. [...] [Dans] le milieu de la scène électronique, [...] j’ai vu des gens qui pratiquaient, à peu près avec les mêmes outils, une recherche expressive sur le son, et qui par ailleurs n’avaient pas du tout le même concept de l’œuvre. L’œuvre n’est pas fixée définitivement, elle n’est pas un idéal à atteindre. Au contraire, elle peut au mieux être un certain nombre de schémas, de structures [...] et au concert, il y a une grande liberté d’interpréter ces schémas.*” Christian Zanési, personal interview, Paris, Maison de Radio France, May 12<sup>th</sup>, 2011. Transcription and translation by Frédéric Dufeu.

<sup>17</sup> In the aforementioned interview, Zanési uses the French expressions “*musiques électroacoustiques classiques*” and “*musiques électroniques*”. In the rest of this article, I use the expressions “electroacoustic art music” and “popular electronic music”.

We were considering that what was connecting electroacoustic art music and popular electronic music of this period [2002-2003] was a way of organising sound in space. [...] We thought that GRM could bring something, a way of representing the sound with the Acousmonium.<sup>18</sup>

Zanési approached Christian Fennesz, that he had previously invited to the Villette Numérique festival in Paris in 2002; Fennesz suggested the collaboration with Mika Vainio<sup>19</sup>. Originally, Zanési wished to invite one of the earliest and renowned composers associated to GRM. Bernard Parmegiani was the first approached but declined the proposition, as later did Luc Ferrari. Unable to find a GRM-based contributor, Zanési eventually decided to take that role himself.

The collective project, as the creation programme note points out, inherits from an experience by Pierre Schaeffer: in 1962,

the ten composers of GRM [were invited] to put in a ‘common reservoir’ short musical sequences. Each participant could then choose one or several (but not his own) sequences as the starting point of his own composition. The result, as the series of the ten works, was presented to the audience under the name ‘Concert Collectif’.<sup>20</sup>

The *Concert Collectif* involved both live instrumental and electroacoustic resources, while *GRM Experience* was only performed with electronic devices. Another difference is that Schaeffer’s project did not eventually lead to a definitely collective work. As Simon Emmerson notes in his monograph *Living Electroacoustic Music*<sup>21</sup>,

this ambitious project involved finally nine composers<sup>22</sup> and resulted in a ‘composite work’ for groups of instruments and tape. [...] Originally intended to be a group work, the sections were finally credited to individuals but some sharing of materials is described in the programme note.<sup>23</sup>

Initially presented as *GRM Experience 2*<sup>24</sup>, the 2003 project has been realised by three musicians for which GRM is not a common working background. Christian Fennesz, born in

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<sup>18</sup> “Nous considérons que ce qui liait les musiques électroacoustiques classiques et les musiques électroniques de ce moment-là [en 2002-2003], c’était une manière d’organiser le son dans l’espace. [...] Nous avons pensé que le GRM pouvait apporter quelque chose, une manière de représenter le son avec l’Acousmonium.” Christian Zanési, aforementioned interview. Transcription and translation by Frédéric Dufeu.

<sup>19</sup> An earlier collaboration between Fennesz and Vainio is documented on the record Mika Vainio and Christian Fennesz, *Vainio – Fennesz – Vainio. Invisible Architecture #2*, CD, Brussels, Audiosphere, AS02, 2002. The disc content was recorded live at Kaaitheaterstudio in Brussels on November 29<sup>th</sup>, 1999.

<sup>20</sup> “[...] les dix compositeurs du GRM [avaient été conviés] à mettre dans un ‘pot commun’ de courtes séquences musicales. Chaque participant pouvait ensuite en choisir une ou plusieurs (hormis les siennes) comme point de départ de sa composition. L’ensemble, c’est-à-dire la suite des dix œuvres, fut présenté au public sous le nom de ‘Concert Collectif’.” “*GRM Experience 2*”, concert programme note, Paris, Radio France/Ina-GRM, October 11<sup>th</sup>, 2003, n. p. Translation by Frédéric Dufeu.

<sup>21</sup> Simon Emmerson, *Living Electronic Music*, Aldershot (UK), Ashgate, 2007.

<sup>22</sup> Emmerson mentions the contributions of “Luc Ferrari, François-Bernard Mâche, François Bayle, Edgardo Canton, Bernard Parmegiani, Ivo Malec, Jean-Étienne Marie, Philippe Carson, and N’Guyen Van Tuong”. *Ibid.*, p. 151. The tracklist of the record *Concert Collectif Du Groupe De Recherches Musicales De l’ORTF*, Vinyl LP, Baarn, Philips, 4FE 8501, 1968 differs slightly as it does not include N’Guyen Van Tuong but includes Michel Philippot.

<sup>23</sup> Simon Emmerson, *op. cit.*, p. 151.

<sup>24</sup> The work was created in Paris and later performed in Amsterdam under the title *GRM Experience 2* as *GRM Experience* had been the name of a concert held at the Grande Halle de la Villette in Paris on September 27<sup>th</sup>, 2002, during the Villette Numérique festival, which included four performances by Arnaud Rebotini, Collectif Canicule, DJ Röm and Thomas Bloch, and Christian Fennesz. Later performances and the commercial CD release of the work by Fennesz, Vainio and Zanési were simply entitled *GRM Experience*, which I use in this article.

Vienna in 1962, was originally a guitarist playing pop and rock music, before orienting his creation towards electronic and somewhat minimalistic practices, often relying on heavily processed guitar sounds. Prior to 2003, he had released three solo albums published by Peter Rehberg's Viennese label Mego<sup>25</sup> and the London-based label Touch<sup>26</sup>, and collaborated with a wide range of artists from the electronic, experimental pop, or free improvisation scenes such as Robert Hampson, Jim O'Rourke, Rosy Parlane, Polwechsel, Peter Rehberg, or Zeitblom. According to the programme note, "the *GRM Experience 2* project is in particular a response to his wish to work over time at GRM for a collective creation"<sup>27</sup>. Mika Vainio, born in Helsinki in 1963, is best known as a member of the experimental techno duo Pan Sonic, with Ilpo Väisänen, active from the mid-1990s to 2010. Before *GRM Experience*, Vainio had released several solo albums under his own name or aliases such as ø and Philus, published by Sähkö, Touch, and Wavetrap.

He often confronted his sound world to the one of other musicians among which Alan Vega, Charlemagne Palestine, Carsten Nicolai and he claims that his personal path has been strongly marked by the various influences of precursors like Pierre Henry, Luc Ferrari or Kraftwerk and Throbbing Gristle.<sup>28</sup>

Unlike Fennesz and Vainio, Christian Zanési, born in Lourdes in 1952, has a strong institution-based creative background. After a musical training at the university of Pau, he studied with Pierre Schaeffer and Guy Reibel at the Conservatoire National Supérieur de Musique in Paris from 1976, before becoming a member of GRM in 1977, and its responsible for concert programming from 2002. His musical production is entirely electroacoustic.

The collaborative realisation of *GRM Experience* was divided in two weeks of residence at GRM over the summer of 2003. During the first week, the three composers worked individually, each in one of the three separate locations of studio 116, on preliminarily exchanged sources. Zanési provided a disc with about thirty of his own sounds, while Fennesz and Vainio's materials were taken directly from their commercial CD releases. Each composer was free to work from his own sounds as well as from the two others' sources, and some materials were recorded specifically for the occasion, such as piano strings swept with a brush or the voice of Stefanie Schüler, journalist at the adjacent RFI Allemagne<sup>29</sup>, gently reading her radio bulletin on the Second Gulf War which had begun in March the same year<sup>30</sup>. Although discussions could occur during this first stage, it is not before the second scheduled week that the three composers actually worked all together in a shared location of studio 116, confronting their respective productions and organising them into the global form.

<sup>25</sup> Fennesz, *Hotel Paral.lel*, CD, Vienna, Mego, Mego 016, 1997; Fennesz, *Endless Summer*, CD, Vienna, Mego, Mego 035, 2001.

<sup>26</sup> Fennesz, *Plus forty seven degrees 56' 37" minus sixteen degrees 51' 08"*, CD, London, Touch, TO:40, 1999.

<sup>27</sup> "Le projet GRM Experience 2 est notamment une réponse à son souhait de travailler dans la durée au GRM pour une création collective." "GRM Experience 2", aforementioned concert programme note, n. p. Translation by Frédéric Dufeu.

<sup>28</sup> "Il a souvent confronté son univers sonore avec celui d'autres musiciens comme Alan Vega, Charlemagne Palestine, Carsten Nicolai et il affirme que son parcours a été fortement marqué par les influences variées de précurseurs comme Pierre Henry, Luc Ferrari ou Kraftwerk et Throbbing Gristle." *Ibid.* Translation by Frédéric Dufeu.

<sup>29</sup> Radio France Internationale.

<sup>30</sup> The first track of the commercially released record Christian Fennesz, Mika Vainio, Christian Zanési, *GRM Experience*, SA-CD, Paris, Signature Radio France, SIG 15001, 2004, is named "Iraq's song". Schüler's voice is one of the first materials heard both in the creation performance and on the record.

Following the creation in Paris, *GRM Experience* has been performed on four more occasions until April 2004 in Amsterdam<sup>31</sup>, Huddersfield<sup>32</sup>, Budapest<sup>33</sup>, and Rome<sup>34</sup>. Zanési recalls that “[the performance] evolved significantly every time, even though the frame was more or less the same. And the stage setup was different as well”<sup>35</sup>. Principally arranged by Zanési between the first two concerts in October-November 2003, a Super Audio CD was published on Radio France’s label Signature in 2004<sup>36</sup>, allowing for a domestic listening in stereo or 5.1. If this release is close to the frame of the earliest performances, it is worth noting that while the concerts were played in a continuous flow, the record is segmented in twelve successive and rather clearly separated tracks and can be listened as an autonomous album, a dissemination format more commonly found in popular electronic music than in electroacoustic art music.

### 3. Musicological and Analytical Implications of *GRM Experience*

No available documentation, as Christian Zanési indicates, subsists from the working sessions of *GRM Experience*. In his PhD thesis on the analysis of electroacoustic music<sup>37</sup>, Pierre Couprie suggests that

a perceptual analysis on a sound object that has no written support else than the recording cannot discard the various accounts of the composer, whether these are directly told, in sound, written, drawn or in a multimedia form. The role of the analyst is to find these out. An interview with the composer can thus provide many indices on the genesis of the work. Furthermore, the artist can even provide to the researcher some recordings or various documents.<sup>38</sup>

In the case of *GRM Experience*, the published SA-CD constitutes an important first-hand source for the musicological study. If no materials such as sound files or written notes are left to document consistently the summer 2003 residence, the method used for the collaboration leads to the consideration of a specific set of sources: the commercially available recordings of the three artists released before their collaboration, in particular those by Fennesz and Vainio from which Zanési could directly extract some of his own working materials.

The listening of *GRM Experience* in a concert hall and an analytical study of its published recording can reveal idiomatic characteristics of the composers’ earlier individual work. For

<sup>31</sup> At Frascati Theater, November 3<sup>rd</sup>, 2003.

<sup>32</sup> As part of the 26<sup>th</sup> Huddersfield Contemporary Music Festival, at Lawrence Batley Theatre, November 22<sup>nd</sup>, 2003.

<sup>33</sup> As part of the *Making New Waves* festival, February 6<sup>th</sup>, 2004.

<sup>34</sup> At Aula Magna of Sapienza – Università di Roma, April 5<sup>th</sup>, 2004.

<sup>35</sup> “[...] ça a évolué considérablement à chaque fois, même si la trame était plus ou moins la même. Et la disposition était différente aussi.” Christian Zanési, aforementioned interview. Transcription and translation by Frédéric Dufeu.

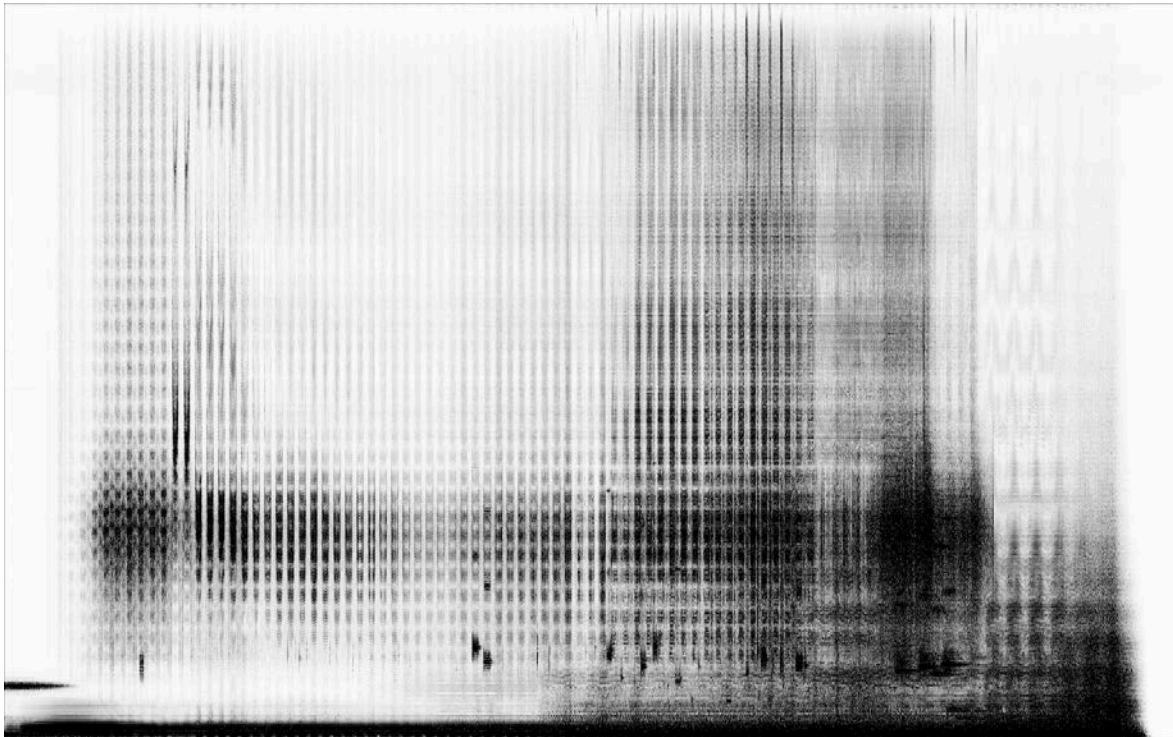
<sup>36</sup> Christian Fennesz, Mika Vainio, Christian Zanési, *op. cit.*

<sup>37</sup> Pierre Couprie, *La musique électroacoustique : analyse morphologique et représentation analytique*, PhD thesis under the supervision of Marc Battier, Paris, Université Paris IV Paris-Sorbonne, 2003.

<sup>38</sup> “[...] une analyse perceptive sur un objet sonore ne possédant pas de support écrit en dehors de l’enregistrement, ne peut évacuer les divers témoignages du compositeur, qu’ils soient racontés, sonores, écrits, dessinés ou sous forme multimédia. Le rôle de l’analyste est de partir à leur découverte. Ainsi, l’entretien avec le compositeur peut fournir de nombreux indices sur la gestation de l’œuvre. Cette première étape ne s’arrête pas là : l’artiste laisse parfois même à la disposition du chercheur des enregistrements ou des documents divers.” *Ibid.*, p. 25. Translation by Frédéric Dufeu.



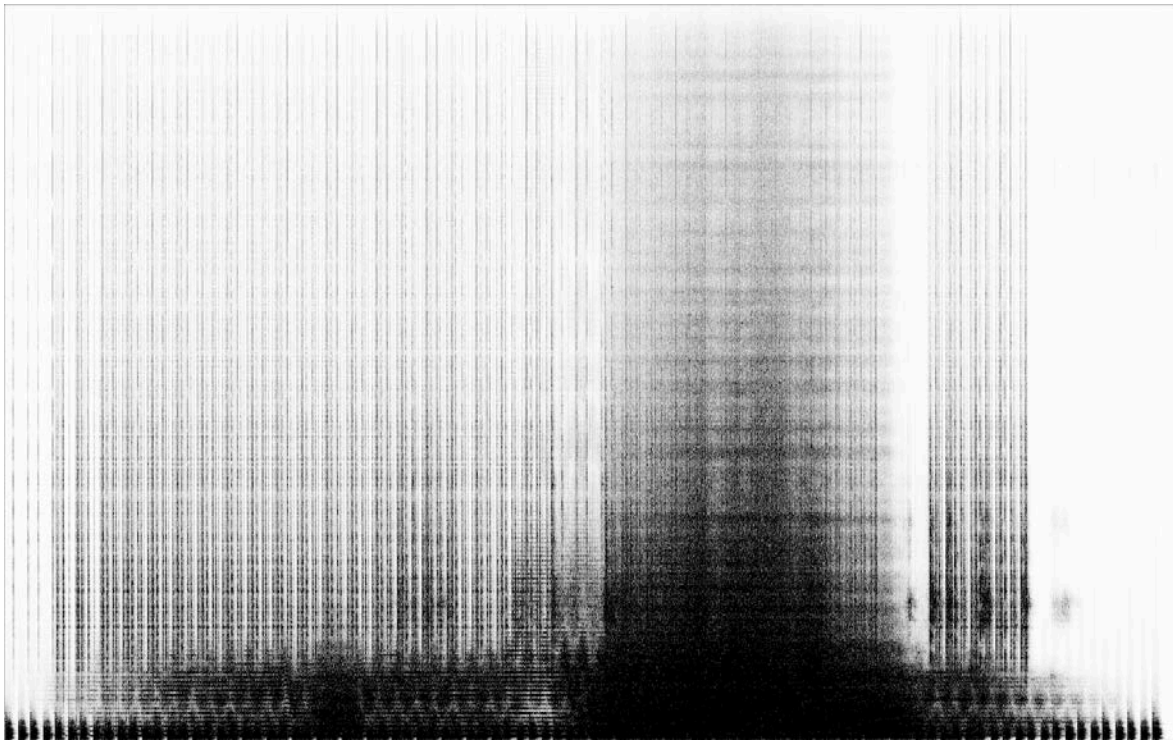
instance, the last of the twelve tracks<sup>39</sup> of the Signature record, “Power”, has a global structure that strongly recalls the form of some of Vainio’s works. After a quiet but tense introduction, a simple binary ostinato, made from electronic sustained sounds with a predominant bass component that appear and disappear over repeated cycles, emerges and maintains itself during five minutes, along with a slow and exponential rise in perceived power achieved with slight but regular augmentations of loudness or event density. Between 6’00” and 7’00”, the ostinato reaches a climax and dissolves into a loud and agitated texture, before the tension decreases and the piece fades out to its end. A piece recorded by Vainio with Pan Sonic in 2003, “Arktinen” (“Arctic”)<sup>40</sup>, follows the same overall scheme. The ostinato is constituted by a drum box and a synthetic bass line looped in a short pattern, while a medium range synthesizer drone slowly grows before suddenly reaching a powerful climax which takes over the basis beat. The overall intensity then rapidly decreases to reach the initial state of the piece. The global scheme of “Power” can be regarded as a structural idiom of Vainio’s contribution. Figures 1 and 2 show sonograms of “Power” and “Arktinen”, respectively.



**Figure 1:** Sonogram of “Power” by Christian Fennesz, Mika Vainio and Christian Zanési. Horizontal range: 0’00” to 9’01”; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Cycling’74 Max.

<sup>39</sup> The twelve tracks of the published SA-CD are entitled “Iraq’s song”, “Dark landscape”, “White landscape”, “Premonition”, “First shadows”, “Transfers”, “Colour”, “Last shadows”, “Waves”, “Traces”, “Nostalgia”, and “Power”.

<sup>40</sup> “Arktinen” is the twelfth and last track of the second disc of Pan Sonic, *Kesto (234.48:4)*, 4 CDs, London, Blast First, Mute Records, BFFP 180BX, 2004.

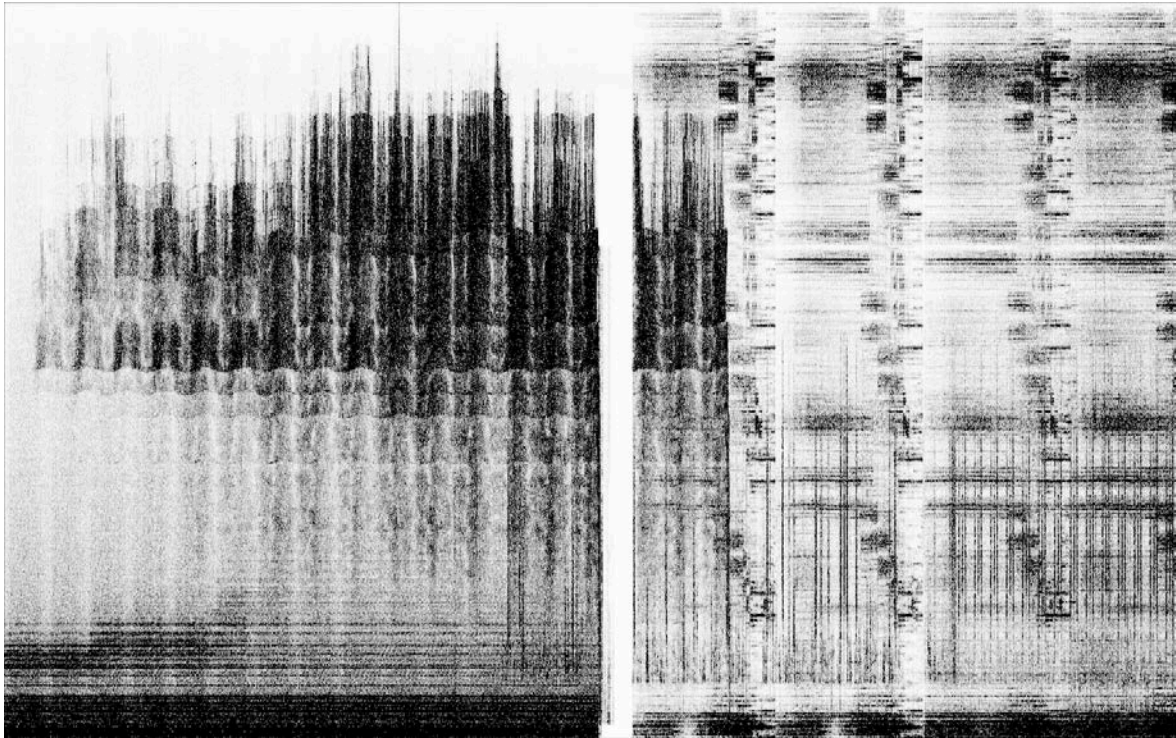


**Figure 2:** Sonogram of “Arktinen” by Pan Sonic (Mika Vainio and Ilpo Väisänen). Horizontal range: 0’00” to 7’41”; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Max.

Another type of idiom can be found in the spectral characteristics of the considered recordings. For the largest majority of recorded music, a sonogram observation shows that the highest part of the spectrum, from 4 or 5 to 22 kHz<sup>41</sup>, contains almost no information that is not due to the influence of events that find their principal components in the lowest end of the spectrum (from 0 to 4 kHz<sup>42</sup>) or to incidental noise from the recording process itself. In other terms, one could state that the highest part of the spectrum is, in most cases, only of interest for sound consideration, not for musically significant events. This is visible, for instance, in figure 2: there is no autonomous event in the high range of the spectrum. However, several sections of *GRM Experience* are strikingly in opposition with this most general case. In the 4<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> tracks of the record, “Premonition”, “Waves”, “Traces” and “Nostalgia”, spectrums contain important zones of high energy in their high-end. “Traces” simply finishes with a short series of clearly audible descending and ascending glissandi between 8 and 14 kHz; a sonogram analysis of the second half of “Nostalgia” reveals a large layer of sound between 16 and 21 kHz – as it is inaudible, one can wonder if this block has been left deliberately or not, following some transposition or harmonisation process. The conclusion of “Premonition” is constituted with a large discrete descending glissando sweeping through the whole range of the spectrum. A sonogram of “Waves” shows even more developed musical events in the high-end spectrum, as seen in figure 3.

<sup>41</sup> For a digital recording with a standard sampling rate of 44.1 kHz, the spectrum is bound to half this value, i.e. 22.05 kHz. The human ear does not perceive frequencies above the order of 16 kHz.

<sup>42</sup> For reference, the lowest A and the highest C of the piano have fundamental frequencies of, respectively, 27.5 Hz and 4186 Hz.

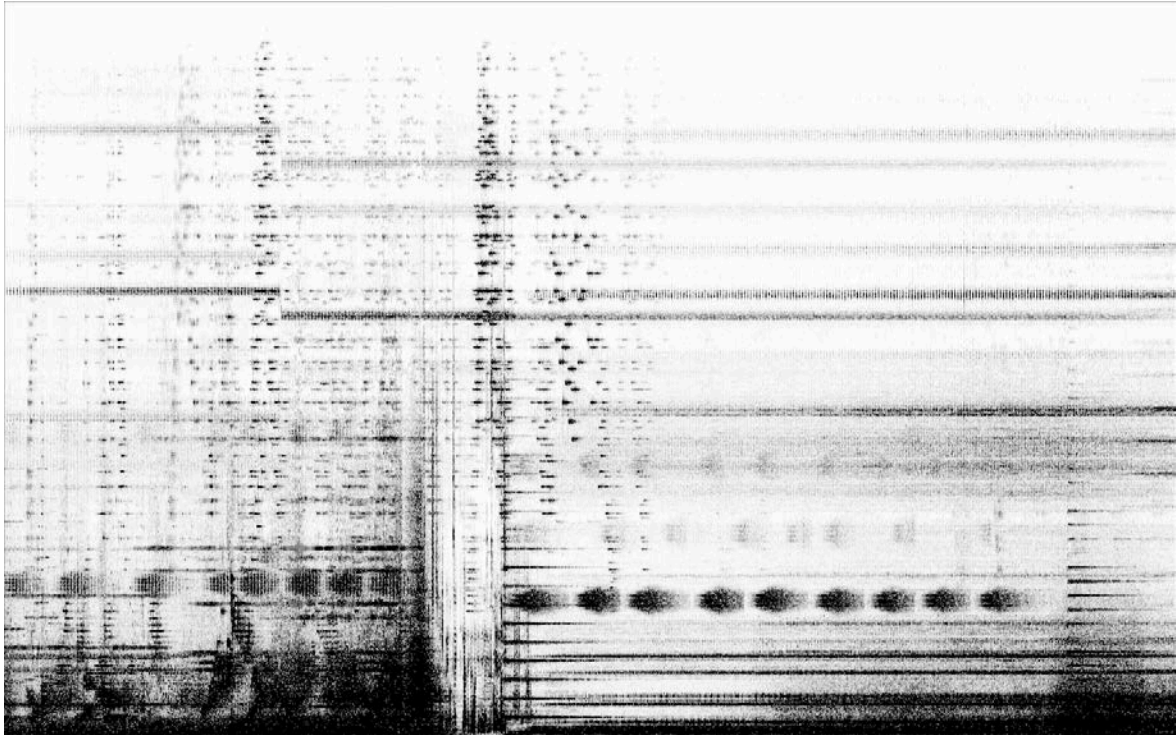


**Figure 3.** Partial sonogram of “Waves” by Christian Fennesz, Mika Vainio and Christian Zanési. Horizontal range: 2’20” to 3’35”; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Max.

If such an important presence of strong and detailed components in a rarely musically exploited area of the spectrum is unusual, even in recordings of experimental music, some of Zanési’s solo works are also characterised by a significant attention given to the whole range of audible sounds. For instance, figure 4 shows a sonogram of an extract of the composer’s *Grand bruit* for tape (1991)<sup>43</sup>, in which many events are visible – and audible during a listening – over the full spectrum range. This global spectral characteristic may be regarded, within *GRM Experience*, as an idiom of Zanési’s practices.

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<sup>43</sup> As published on Christian Zanési, *91 98 01*, CD, Paris, Ina-GRM, INA C 2018, 2002.



**Figure 4:** Partial sonogram of *Grand bruit* by Christian Zanési.

Horizontal range: 12'00" to 13'10"; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Max.

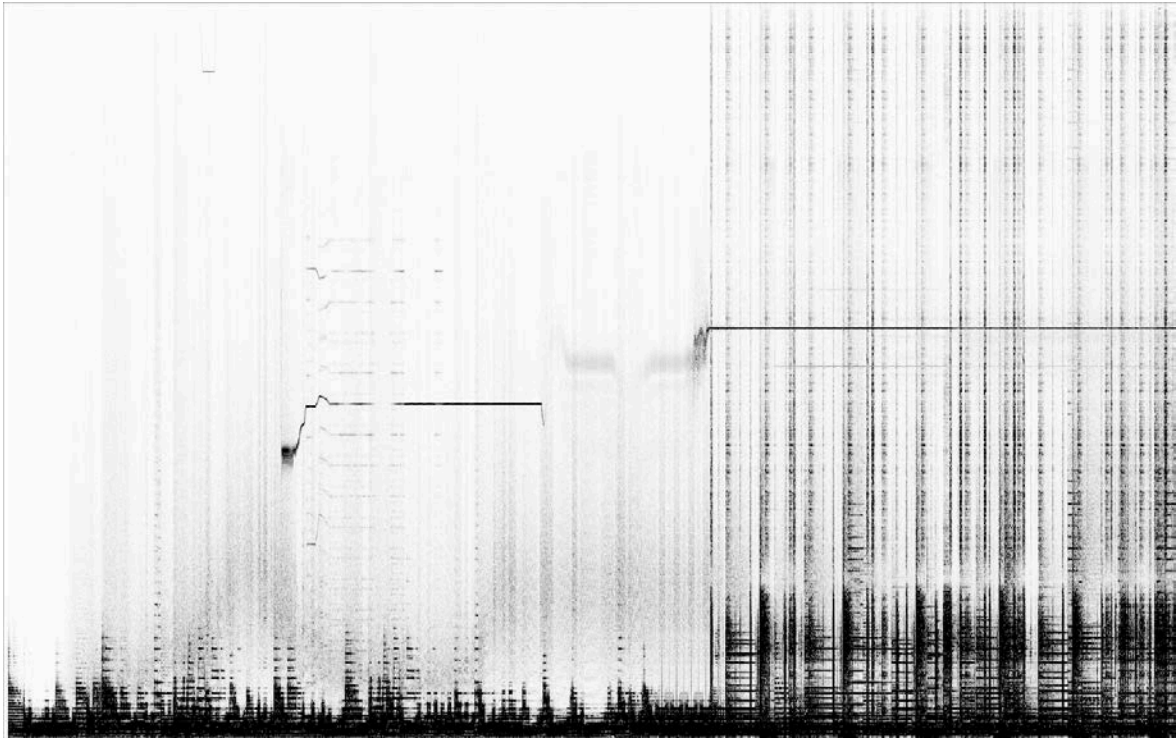
Personal materials from Fennesz and Vainio's compositions released before *GRM Experience* can be directly identified along the listening of the work. The creation in Paris as well as the commercially published record begin with the superposition of Stefanie Schüller's voice, mentioned earlier in this article, with a guitar sequence extract from "Aus", the last track of Fennesz's first solo album, *Hotel Paral.lel*<sup>44</sup>. Figures 5 and 6 show sonograms of the first minutes of "Aus" and "Iraq's song", respectively. In addition to some editing cuts and the integration of other materials, some transformations of the original file are immediately visible: the first high glitch component has been erased; the second high component, appearing constant in the second half of the original file, is slightly modulated in the collective version. More drastic transformations of this material appear later in "Iraq's song", which eventually dissolves in a reverberated texture. From 2'00", some noises characteristic of Vainio's sound world start to appear, before filling the whole sound space and taking over the voice and Fennesz's guitar material.

Interestingly, some punctual sounds based on a processed guitar, appearing in the coda<sup>45</sup> of the third track of the *GRM Experience* disc, "White landscape", were to be later included in Fennesz's "Transit", composed with David Sylvian and published on his next solo album, *Venice* (2004)<sup>46</sup>. From a musicological point of view, a detailed analysis of *GRM Experience* could involve a systematic inventory of the individual long-term materials of each of the three composers, and the elaboration of a map describing, in the chronology of the work, the distribution of their respective contributions in terms of raw materials, sound transformations, and articulations through the global form.

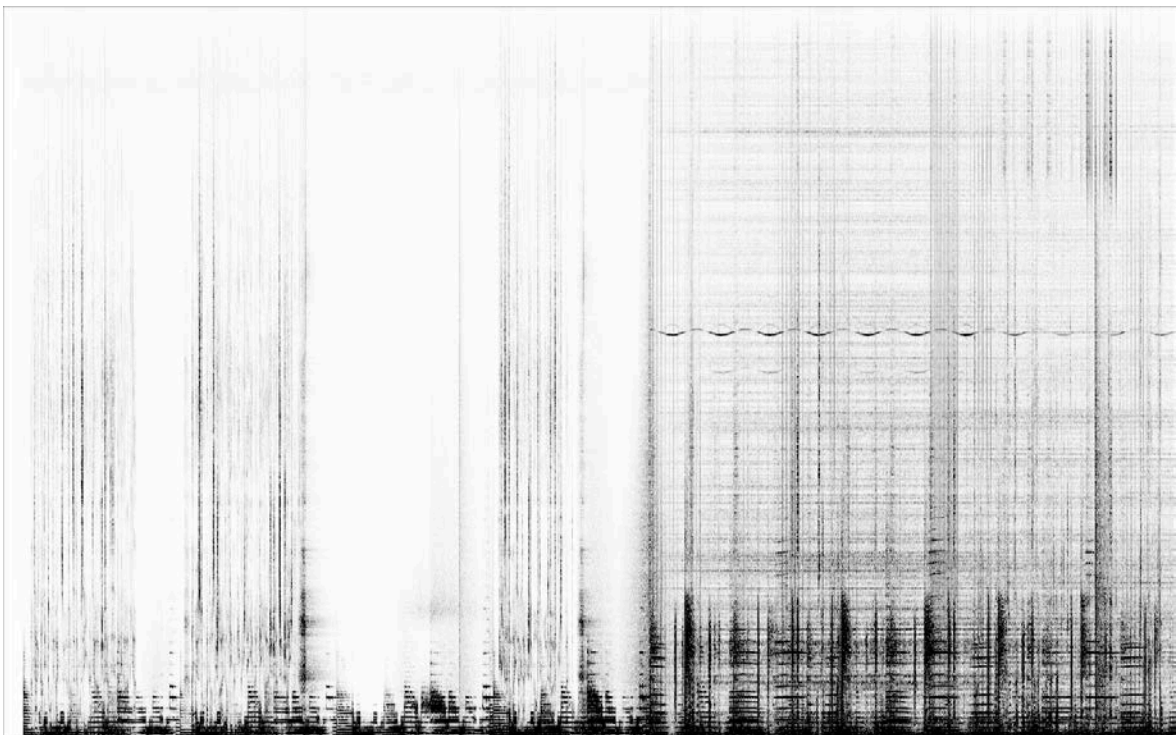
<sup>44</sup> Fennesz, *Hotel Paral.lel*, *op. cit.*

<sup>45</sup> From 3'10".

<sup>46</sup> Fennesz, *Venice*, CD, London, Touch, TO:53, 2004. The liner notes of *Venice* mention two locations and periods for the recordings: Venice, July 2003 and the Amann studios in Vienna, January-February 2004.



**Figure 5:** Partial sonogram of “Aus” by Fennesz.  
Horizontal range: 0’00” to 1’00”; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Max.



**Figure 6:** Partial sonogram of “Iraq’s song” by Christian Fennesz, Mika Vainio and Christian Zanési.  
Horizontal range: 0’00” to 1’00”; vertical range: 0 to 22.05 kHz (linear). Sonogram realised in Max.

## Conclusion

If the general delimitations of electroacoustic art music and popular electronic music can be regarded from different criteria that do not themselves lead to definite typologies, *GRM Experience* succeeded in gathering, within Pierre Schaeffer's institution, three artists that belong to usually rather distinct spheres of creation and diffusion. In this matter, the creation of the work has had implications well beyond 2003: in her monograph dedicated to the history of GRM<sup>47</sup>, Évelyne Gayou highlights an important impact within the host radio.

In February 2005, *Présences*, the annual festival of Radio France created in 1991, launched a new concert formula by delegating four days to GRM for elaborating an *electronic* programme. The artistic director of *Présences*, René Bosc, appointed Christian Zanési as the artistic director of these days. This confidence of Radio France towards GRM, for the programming of these [...] entirely electronic days, finds its origin in the success of a first concert, organised by GRM on October 11<sup>th</sup>, 2003 and entitled *GRM Experience*. Christian Zanési had then taken the challenge to play live alongside two famous musicians of the electronic scene, [...] Mika Vainio [...] and [...] Christian Fennesz.<sup>48</sup>

According to Zanési himself,

it was a beautiful experience, because it was a kind of historical step [...]. For GRM, it was the sign of a widening, and the beginnings of something to come, which was the opening of our studios, the broadening of our concerts, which eventually brought the benefit of renewing the audience in both ways [...]. People come [...] knowing that there will be a very interesting concert sound. And they also discover kinds of music that are usually not in their listening area. [...] A virtuous circle was created, and truly the starting point of all this adventure, which changed considerably our point of view at GRM [...], comes from *GRM Experience*. So, *GRM Experience* is a small event, but a very important one.<sup>49</sup>

Several other projects, which do not necessarily inherit directly from *GRM Experience*, have brought together electroacoustic art music and popular electronic music through the years 2000. Among these, Mathew Adkins's *[60]Project* (2008)<sup>50</sup> resonates in many regards with Fennesz, Vainio and Zanési's work<sup>51</sup>. The composer describes his project, created to celebrate the 60<sup>th</sup> anniversary of musique concrète and eventually mixed in studio 116c of GRM, as follows:

<sup>47</sup> Évelyne Gayou, *Le GRM. Groupe de Recherches Musicales. Cinquante ans d'histoire*, Paris, Fayard, 2007.

<sup>48</sup> "En février 2005, *Présences*, le festival annuel de Radio France créé en 1991, inaugure une nouvelle formule de concert en déléguant quatre journées au GRM pour l'élaboration d'un programme électronique. Le directeur artistique du festival *Présences*, René Bosc, nomme Christian Zanési directeur artistique de ces journées. Cette confiance accordée par Radio France au GRM, pour la programmation de ces [...] journées complètement électroniques, trouve son origine dans le succès d'un premier concert monté par le GRM, le 11 octobre 2003, sous le titre *GRM Experience*. Christian Zanési avait alors fait le pari de se produire en direct devant le public en compagnie de deux musiciens célèbres de la scène électronique, [...] Mika Vainio [...] et [...] Christian Fennesz." *Ibid.*, p. 275. Gayou highlights. Translation by Frédéric Dufeu.

<sup>49</sup> "[...] c'était une belle expérience parce que ça a été une sorte de pallier historique [...]. Pour le GRM c'était le signe d'une ouverture, et les prémices de quelque chose qui allait advenir, qui était d'ouvrir nos studios, d'ouvrir nos concerts, et finalement qui a eu comme bénéfice un renouvellement du public dans les deux sens [...]. Des gens qui viennent, [...] qui savent qu'ils auront un son de concert très intéressant. Et d'autre part ils découvrent des musiques qui n'étaient pas dans leur zone d'écoute habituellement. [...] Un cercle vertueux s'est créé, et véritablement le point de départ de toute cette aventure, qui a considérablement modifié notre point de vue au GRM [...], vient de *GRM Experience*. Donc, *GRM Experience* est une petite chose, mais une chose très importante." Christian Zanési, aforementioned interview. Transcription and translation by Frédéric Dufeu.

<sup>50</sup> Mathew Adkins, *[60]Project*, CD, Montreal, Empreintes Digitales, IMED 0898, 2008.

<sup>51</sup> I wish to thank Monty Adkins for pointing out his project after my talk at New York University.

From the outset, the involvement and the contribution of sound materials by over 60 of the world's leading electronic composers and sound artists were essential. [...] The project had two distinct pre-compositional stages. Each of the participants was initially asked to contribute one sound object or a short improvisation with a sound object. [...] For the second stage, I asked all the participants to create a variety of sound treatments based on any of the sound material. [...] Some decided to focus on a small number of sounds and develop short or in some cases extended phrases, whilst others set out to utilize all of the material in a variety of imaginative means.<sup>52</sup>

Adkins then edited and mixed the received materials so as to “assemble imaginary ensembles of musicians”<sup>53</sup>. Among 66 participants from both spheres of electroacoustic art music and popular electronic music were Christian Fennesz and Christian Zanési.

Through their collaboration, Fennesz, Vainio and Zanési introduced many materials that are characteristic of popular electronic music, such as guitar riffs, steady synthetic drones, heavily saturated noises, within a large form also involving complex spatialisation as the GRM Acousmonium permits. As the most experimental part of popular practices largely relies on an important work of sound exploration and transformation, as it is often disseminated, like electroacoustic art music, on a recorded support and without the intermediation of a score, electroacoustic music studies may well approach such works with their existing and to be developed descriptive and analytical tools. Among the perspectives raised by a first exploration of *GRM Experience*, the deployment of a musicological analysis beyond a given self-contained work leads to consider the development of methods for investigating sound materials and processes over larger corpuses, whether these are attached to individual long-term work-in-process paths or to collective creations.

## Acknowledgements

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