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Musings on the Democratic Potential of Fixed-Media electroacoustic music

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Abstract

Although electroacoustic music was known in the first half of the 20th Century for its liberation of sound, not much has been stated about its social impacts. This research focuses on some singularities of the creational and reception processes in electroacoustic music. Since composers have the potential to become performers as well as instrument designers, electroacoustic music is perhaps the first genre that blends its compositional process with performance practice and instrument design into the same structure, which can be modular, mutable, and custom designed for each piece. In terms of reception of artworks, Fixed-Media works (aka Acousmatic Music) in particular resignify the concepts of copy and reproduction in electroacoustic music. The theories and studies of Walter Benjamin, especially his understanding of the theories underpinning film and photography, are central references for this research as they can be applied to electroacoustic music. Thus, this text focuses on the political, social, and cultural changes found in Fixed-Media musical works, from independent composers' music creation to todays audience's access to the original work.

1. The composer of acousmatic music

Fixed-media works (i.e., tape music/acousmatic music) have been associated with the idea of immutable artworks, which are considered by some as rigid and inorganic in comparison to traditional instrumental performances. Therefore, although many composers still work in this category, much has been said about it being obsolete (Brummer et al., 2001, p. 5). Nevertheless, electroacoustic music[1] has been also positively associated with the idea of sound/listening emancipation and with a form of art that embraces every sound as potential material for creation (Stockhausen, 2000, p. 88-89). Regardless of these criticisms, not much has been stated about the social impacts and outreach potential of electroacoustic music. In this respect, Simon Waters (2013, p. 56) states that "[u]ntil recently, electroacoustic composers have been less interested in the social and cultural than the acoustic construction of their music."

For these reasons, this text presents some reflections on the social aspects of electroacoustic music composition, with an emphasis on particularities in the processes of creation and reception. As a result, we investigate the question of the tripartite aspect of the full control of the artwork, the composer's interchangeable roles, and the artwork's potential for democratic consumption.

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[1] In this paper the term 'electroacoustic music' will be approached almost exclusively as fixed-media works (tape music, acousmatic music, etc.). Similarly, the term 'composer' is directly associated with composers of electroacoustic music.

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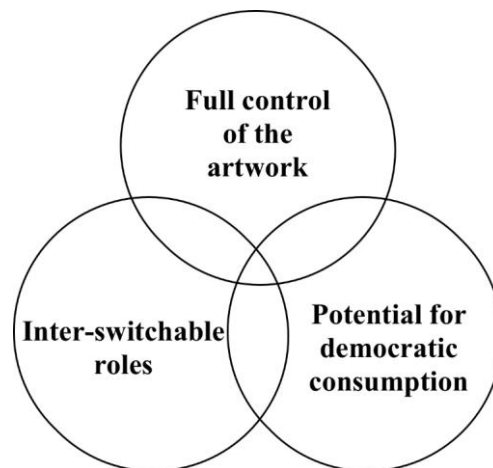
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Fig. 1 – The complex network of Electroacoustic Music Composition.

The consequences of these particularities are that electroacoustic music has inaugurated a new compositional process not yet seen in the history of music. One might state that this has occurred due to the advent of recording, as affirmed by Jean-Claude Risset (2003, p. 2): "[t]he invention of recording has turned ephemeral sounds into objects that can be reproduced in the absence of their mechanical cause." One of the outcomes is that it has resignified the concept of recording. In the 20th century, the acculturation process of sound recording was quite closely associated with the roots of its own word: in French, *recorder* connotes the idea of "bringing to remembrance"; in Latin, *recordari* translates plainly as "to remember." In this regard, Acousmatic music is not a simple 'remembrance'; it is the actual work of art (here we are consciously avoiding to use the word 'masterpiece', for reasons which will be discussed in relation to Walter Benjamin's ideas).
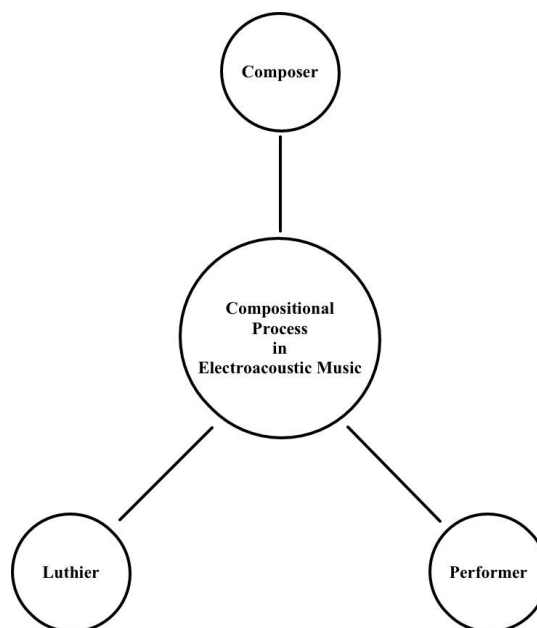

Fig. 2 – Creative process in Electroacoustic Music.

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Traditional practices of *creation* and experiences of *reception* have been rethought in electroacoustic music. For the first time, artists have near-absolute control over the artwork, from the construction and performance to a somewhat democratic consumption of the artwork. This occurs due to electroacoustic music composition's high complex creative process, which places the composer as also the performer and luthier of a work. Consequently, the artist alone assumes, many times, several interchangeable roles in the creative process.

One might add that, because of this creative process, electroacoustic music is perhaps the first genre that blends compositional process, performance practice, and instrument design into the same structure, which can be modular, mutable, and custom designed for each piece.[2] This process has non-linear characteristics, in that it may be difficult to accurately define each role as traditionally divided (i.e., composers create a work, while performers are in charge of its interpretation and diffusion). It is more useful to approach electroacoustic music composition as a chaotic, atemporal and complex creative network involving many tasks deriving from this three main roles. Moreover, one might say that composers of electroacoustic music behave similarly to percussionists, in that they need to learn and develop techniques on many different instruments. Percussionist deal constantly with different instrumental forces – marimba, timpani, djembe, berimbau, drums, etc. Electroacoustic music artists also deal with a large collection of devices – microphones, computers, DAW, plugins, synthesis and control software (PD, Max, etc.), eurorack modules, etc. This resonates with Miller Puckette's statement that "(...) the computer has been the one addition to the classical orchestra since the advent of percussion early in the twentieth century" (Puckett apud Agon, 2006, p.1). However, unlike the development of percussion practice, electroacoustic composition represents an important social shift. It is becoming more independent from formal institutions, especially in the last two or three decades, during which electroacoustic music has moved from traditional spaces (e.g., radios and universities) to alternative ones (e.g., composers' private studios, or even pubs and bars). Morton Feldman ironically noted signs of this shift in 1987, stating that: "One of the first things a university does is to feel that they have to build up their electronic studio" (Feldman, 1987, p.752). Today, free, open-source, low-cost commercial software and DIY or open hardware systems are powerful tools that contribute to greater autonomy in the creation of musical works, especially from a practical and economic perspective. These shifts lead to a social experience akin to the studio routine of film makers. This automatically leads us to Walter Benjamin and his essay 'The Work of Art in the Age of Mechanical Reproduction.'

2. Walter Benjamin's theories applied to acousmatic music

Walter Benjamin's theories presented in his well-known essay 'The Work of Art in the Age of Mechanical Reproduction' (1936) will be briefly applied to electroacoustic music within this section. More specifically, we will analyse four concepts introduced in his essay: *ritual*, *reproducibility*, *authenticity* and *aura*. In the following passage, Benjamin argues that:

> (...) for the first time in world history, mechanical reproduction emancipates the work of art from its parasitical dependence on ritual. To an ever greater degree the work of art reproduced becomes the work of art designed for reproducibility. From a photographic negative, for example, one can make any number of prints; to ask for the "authentic"

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[2] Harry Partch would probably be the equivalent in the instrumental music domain.

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print makes no sense. But the instant the criterion of authenticity ceases to be applicable to artistic production, the total function of art is reversed. Instead of being based on ritual, it begins to be based on another practice-politics. (Benjamin, 1969 edition, p.224)

One needs to be aware that *aura* is a concept used by Benjamin in 1936. As we know, electroacoustic music was non-existent in 1936, except for experimental adventures and inventions, such as the Theremin and other electric instruments. In terms of repertoire, the earliest electroacoustic musical works can be traced back to 1939 with John Cage's *Imaginary Landscape nº1* or perhaps to 1948 with Pierre Schaeffer's *Études aux chemins de fer*. Because of this, we must bear in mind that the use of the concept of *aura* in electroacoustic music must be translated and interpreted to fit with the context. Another important interpretation is that Benjamin approvingly quotes Leonardo Da Vinci on the subject of the superiority of painting over music (Chapman, 2011, p. 244). Da Vinci (1452–1519) was overwhelmed with the shifts in visual arts technology in his lifetime (the use of oil paint and canvas) which elevated painting to a whole different status. So, for the first time, painting was not purely decorative in the sense that it had previously been used, as ornamentation for walls or vases. In a similar way, Walter Benjamin was thrilled with the technological inventions and advances in film and photography. Sound was regarded by him as a complementary tool for film making. It is important to consider that Benjamin did not live to witness the development of technology in sound devices, such as multitrack and editing possibilities, leading to the digital era. One must have this in mind while connecting Benjamin's theories to electroacoustic music composition.)

With the loss of what Benjamin calls *aura* and by removing the *ritualistic* aspect of a work, the concept of 'masterpiece' and 'copy' no longer exist in acousmatic music. As occurred in photography, one might say that the concept of *authenticity* comes close to an end in acousmatic works. Listeners in music have the possibility to access the original work, considering that the copies themselves retain all sonic qualities. This shift is a mark in the history of music of which many (both musicians and audiences) are still not fully aware. In this regard, for instance, it becomes senseless to glorify the idea of *authenticity* in Iannis Xenakis "Concret PH" (1958). The key point here is that this work, among other acousmatic pieces, has been, in Benjamin's words, "designed for reproducibility."

In addition, it is important to interpret Benjamin's idea of an art not based on *ritualistic* perception. By *ritual*, one might immediately think of concert appreciation. The idea of an artwork not based on *ritual* is that it does not depend only on the socio-*ritualistic* situation of a concert to exist. Notice that the experience of a concert is naturally not extinct, just as the film industry relies on both home entertainment centres and movie theatres for mass diffusion. They provide different perspectives on the artwork, although the work is the same.

3. Analysis

To oppose the idea of acousmatic works with the loss of *aura* and *authenticity*, let us quickly exemplify with a typical *ritualistic* performance in live-electronics environment. Let us investigate Luigi Nono's *A Pierre. Dell'azzurro silenzio, inquietum* (1985) for contrabass flute (G\), contrabass clarinet (Bb), and live-electronics. According to the "Fondazione Archivio Luigi Nono Onlus",[3] this work was premiered by Roberto Fabbriciani (flute), Ciro Scarponi

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[3] http://www.luiginono.it/opere/a-pierre-dellazzuro-silenzio-inquietum/#tab-id-1

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(clarinet), and Hans Peter Haller (electronics) from the Experimentalstudio der Heinrich-Strobel-Stiftung des Südwestfunks.[4] Luigi Nono also participated in the sound-diffusion. The performance instructions indicate several standard procedures in live-electronics, such as the use of delay, filtering, pitch shifting, spatialization, and reverb.
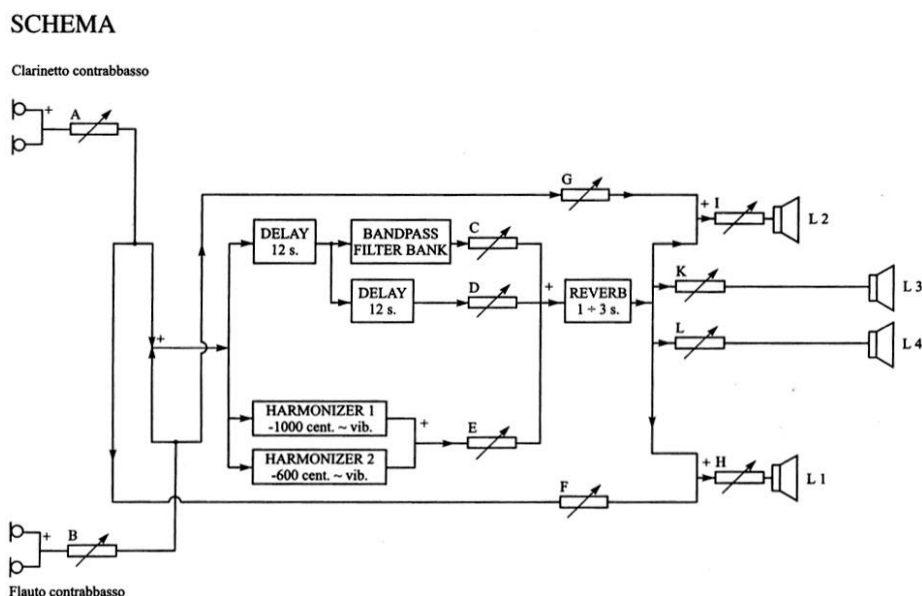
Fig. 3 – Audio processes in "A Pierre".

Also, it is known of Luigi Nono and the EXPERIMENTALSTUDIO des SWR's preferences of authentic technological apparatus. Performances of Nono's music are still conducted by the EXPERIMENTALSTUDIO in Freiburg, Germany, with the original equipment, and with people that worked closely to the composer – something that Roberto Fabbriacini referred to as the "Nono Tradition" (Fabbriacini, 1999, p.10). We are talking already of performance *authenticity*, just as it is done today in Medieval and Renaissance musical performance practices. *Authenticity* in electroacoustic music immediately requires special attention to instrumental preservation and maintenance. Examples include equipment such as Publison DHM89 for delay and pitch shifting, the Halaphon for spatialization (in Luigi Nono's *A Pierre*), or the prototype for the Filter and Ring modulator generator from Peter Lawo for Karlheinz Stockhausen's *Mantra* (1970). Although many digital versions of these works exist, one can argue that all the mentioned equipment contributes to the work's *aura*. Aside from all this equipment, it is important to clarify that Luigi Nono relied on the *hic et nunc* for the performance of this work, i.e., "(...) its presence in time and space, its unique existence at the place where it happens to be." (Benjamin, 1969 edition, p. 220) In other words, *A Pierre* retains its *aura*.

Let us now analyse a traditional acousmatic work. *Tapewalk I* (1981) by American composer Cort Lippe presents several interesting aspects of electroacoustic music composition. It is a stereo work composed at the Institute of Sonology, Utrecht, in the Netherlands. In the compositional process of this work, Lippe affirms that:

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[4] Nowadays known as the EXPERIMENTALSTUDIO des SWR (Freiburg, Germany).

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> A computer, using stochastic procedures, was involved in every level of the composing process, from sound-synthesis algorithms to higher-level compositional decision-making. All programs were written by the composer in an assembler or high-level language and used in a real-time context. (n.d.)

From this statement, one can extract two important ideas about the work in question: its loss of *aura* and the symbiotical character of the compositional process. To address the first point, (i.e., that *Tapewalk* could be interpret as a work without *aura*, in the Benjaminian sense), one can easily download the original high-resolution file in the composer's website.[5] As long as a pair of good quality loudspeakers is available, the fruition of the work can be simultaneously accessible to a large number of people. It might still be dependent on the *ritualistic* aspect, but in a different way, perhaps similar to that found in bronze sculptures, which recognises as originals a certain number of copies. Compared to *A Pierre*, there is also a substantial difference in the understanding of *authenticity*. Nono's work exists nowadays in what we might call a museum: highly protected inside the EXPERIMENTALSTUDIO's building by their Tönmeister and all original instruments and equipment. The figure below proves that: the Publison DHM89 exposed as a museum object.

Fig. 4 – Publison DHM89 exposed inside the EXPERIMENTALSTUDIO des SWR (Freiburg, Germany).

In this matter, we can affirm that audio equipment and software used in live-electronics have a certain connection with the maintenance of its *aura*. Secondly, *Tapewalk* was created within a complex virtual and digital domain. Since it is no longer attached to the *aura* of the original instruments (i.e., the computer), its compositional process blends the traditional notions of creation and interpretation. The quality of sound and the overall sonic gestural characteristics are both composed and performed by its creator. The same could be said about acousmatic works in general, since "[w]ithout question, sound design is an integral, and highly significant component of composition: in electronic music much of the lutherie of electronic instruments and sounds is virtual (...)" (Lippe, 2014, p. 38). In fixed-media electronics, the recording process embeds the sonic qualities within the final mix. It frees the composer from the necessity of equipment maintenance and preservation, allowing better longevity and distribution of each

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[5] https://www.cortlippe.com/compositions.html

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work. Not only does this enhance the notion of *aura* and offer great potential for democratic diffusion, but it also proposes a highly complex compositional system.

4. Conclusion

It was the loss of the *aura* in fixed-media electroacoustic music that inaugurated a new (acousmatic) concert experience. Although not a consensus among composers of electroacoustic music, it is natural and expected of a global artistic community to resignify new forms of art. For instance, Benjamin argues that: "One of the foremost tasks of art has always been the creation of a demand which could be fully satisfied only later." (Benjamin, p. 237) This is echoed by Stockhausen: "New means change the method; new methods change the experience, and new experiences change man." (Stockhausen, 2000, p. 88-89). It seems that the community of artists and scholars that work with electroacoustic music are constantly seeking – whether consciously or not – to consolidate electroacoustic music with the distinction of an independent art. It is important to point out that the very same question was pointed out by Walter Benjamin about photography:

> Earlier much futile thought had been devoted to the question of whether photography is an art. The primary question – whether the very invention of photography had not transformed the entire nature of art – was not raised. Soon the film theoreticians asked the same ill-considered question with regard to the film. (Benjamin, 1969 edition, p. 227)

The idea of electroacoustic music losing its *aura* alerts us to possible impacts on the whole concert *ritual*. When talking about *Kontakte*, for instance, Stockhausen states that "(...) concerts would be made non-stop in the same way some cinema performances are, (...) the program would have neither beginning nor end, and the audience could arrive and depart as it wished." (apud HEIKINHEIMO, 1972, p. 119). Stockhausen points out the possibility of experiencing electroacoustic music as is done in visual arts, via sound art and sound installation formats, and not anymore in the traditional Italian musical stage.

In contrast, we have seen that live-electronics works have a "here and now" (*hic et nunc*) aspect in their foundation, i.e., a necessity for their "presence in time and space", retaining important aspects for *authenticity*. With this in mind, one might ask if a possible MaxMSP software version of *A Pierre* could be accepted as an original representation of the piece? Also, could the MaxMSP version of Stockhausen's *Studie II* (HAJDU, 2018) be regarded as an example of the possibility of a musical work without *aura*? One could argue that the original tape retains its *aura*, and not the digitalised version. On the other hand, *Pluton* (1988) by Philippe Manoury (1952-) is an example of a work fully constructed in the digital domain, more specifically in Pure Data, programmed by Miller Puckette himself. And yet, does the digital domain have an aura?

Thus, traditional routines of creation and the many experiences of reception have been revolutionized in electroacoustic music. For the first time, artists have complete control over the artwork, from the construction of the work to the democratic consumption of the masterpiece. If not an influence, electroacoustic music has pioneered changes in the political, social, and cultural aspect of music. From independent composers' music creation to the

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audience's access to the original work, fixed-media musical works currently represent one of the most accessible artwork forms in music.

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