

# Art Music Composers & Interaction

## A Call for Aesthetic Discussions

Mathieu Lacroix  
Independent researcher  
Norway  
lacroixm@live.com

### ABSTRACT

In mixed music, interactivity and liveness have been buzzwords for the last 50 years. This article proposes the community to discuss more the aesthetic influences of interactivity instead of focusing on the technological aspect. By discussing compositions in a more holistic manner, this author believes that we can gain a better understanding of the affordances of interaction.

### KEYWORDS

Mixed music, live electronics, composition

## 1 INTRODUCTION

Mixed music is a style of music in which electronic and acoustic sound sources co-exist within the confines of the classical music recital [1, 2]. In other words, it is a style of music in which electroacoustic and contemporary music co-exist. The relationship between the electronic and acoustic sound sources varies from piece to piece, and the piece's performance within a concert context is essential. Although the term mixed music is often used in English, sometimes it has also been called live electronics, and the boundaries between several names are fuzzy [3, 4]. At the heart of the genre lies this idea of *mixite*, meaning blending in French [1].

The history of mixed music has been mainly about musical and technological innovation. Since the Darmstadt generation, definitive history has rarely been written down in many stylistic shifts and schisms. In the case of mixed music, the published articles tend to focus on innovation, especially in the technology field. This is often due to the post-WW2 technological revolution and the polemics of the Darmstadt generation. The point of this article is to start a discussion on the role of these polemics and how they have affected our view of liveness within mixed music. Arenas should discuss interaction within the arts and the aesthetic issues related to it. In many European countries, research has now expanded to include knowledge through the arts, giving us as a community a different outlook than traditional research [5, 6, 7, 8].

My point is not to point any fingers at specific institutions, groups or composers but to collectively make us discover what are the effects of these discussions, as well as help lead an era where a view of institutions from around the world is perhaps more

important than before within the very euro-centric views of mixed music. Is liveness and interaction in mixed music important? Why or why not? How can these insights and discussions affect how we discuss, perform and compose this music?

A conference and workshop on the relationship between man and machine seem like a good place for this discussion. This workshop is about innovative computer-based music interfaces, and I believe these questions about the aesthetics of these interfaces are important to discuss. I do not mean to discredit any theoretical or technological research in this debate, but I want to underline the importance of discussing how these new technologies influence our art. After all, our field is directly tied to the arts.

## 2 HISTORY

Although no history of mixed music has been written (yet!), it is safe to say that the genre mainly came of age in Europe. American composers such as Davidovsky have played a significant role. However, the music of Stockhausen, Boulez, Berio, Nono, and others has established the genre. The construction of IRCAM in the late 70's [9] especially consolidated the development of tools, thoughts and ideology in Europe. IRCAM and other similar institutes throughout the world have been the main pillars of education within mixed music, both when it comes to in-person education but also most of the central literature on the subject.

For example, much of the French institutional literature mentions the role of the RIM (*réalisateur en informatique musicale*, often called computer music designer in English) and assumes this person is always present. In large parts of the world, the role of the RIM does not exist [10]. Many invited composers to these institutions have little to no understanding of electronics [11]. Nevertheless, it is mainly about these composers that we hear through the literature, especially about the technological breakthroughs related to the research around their pieces. The truth is that these situations of several RIMs for one composer are a luxury few people in the 21st century will ever have. For Jupiter (1987), Manoury was helped by a team of over ten [12]. Although the technology was much more complicated and less user-friendly at the time, a budget of ten people was still considerable. There are relatively few composers that would get such a luxury today, and only within a select few institutions. The SWR Experimentalstudio, for example, can have several RIMs working on a project [13]. However, these are still luxury situations that do not necessarily reflect reality outside Europe and parts of North America. The standards of practice and aesthetics still vary from region to region. This can be problematic within an academic context, but one can also see it as giving richness to the genre.

Articles and commissions from influential composers must obviously act as calling cards for the institutions, but they also highly

---

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

Veröffentlicht durch die Gesellschaft für Informatik e.V.

in K. Marky, U. Grünefeld & T. Kosch (Hrsg.):

Mensch und Computer 2022 – Workshopband, 04.-07. September 2022, Darmstadt

© 2022 Copyright held by the owner/author(s).

<https://doi.org/10.18420/muc2022-mci-ws02-342>

influence how we view interaction, especially real-time electronics, as an essential aspect. Young composers are often stuck reading the same articles and debates due to the genre's lack of generally accepted historical records, repertoires and histories. Some of these debates are also now historical artifacts, such as Risset's skepticism towards real-time interaction due to a lack of possibility to simultaneously oversee and control so many variables [14]. Much of the teaching of standards as a RIM, for example, happens outside of any formal context [15]. Hence, discussions on the aesthetics of synchronization strategies are often privately between experts, making it perhaps more difficult for younger RIMs and composers.

It is worth noting that more articles are now being written about the repertoire from various parts of the world [16, 17, 18]. However, most basic educational classes on electroacoustic and contemporary music are still mainly Eurocentric despite describing themselves as emancipatory, emerging and innovative [19].

### 3 LIVE VERSUS FIXED

There is no doubt that tape was often quite restrictive to musicians, especially early on [20, 21, 22]. However, the "tyranny of tape" may be overdriven as it may serve a valuable and necessary function depending on the aesthetics of the composer. These aesthetic debates continue to influence how we discuss and analyze this music. For example, Hagan [23], Croft [24], Frengel [25], among others discuss at length varieties of liveness in what they write. Hagan classifies how "live" certain pieces are without going into the details of how they function. This might serve as an interesting analytical or pedagogical perspective for a comparison between pieces. However, without explanation, it does not seem meaningful and focuses on the technology instead of discussing the art. Such classifications may be seen as equaling quality with the amount of interaction instead of holistically discussing (and debating) a piece's aesthetics. I believe analyses that discuss the affordances from the interaction to be of more pedagogical and artistic interest, such as [2, 26, 27].

There is also an aesthetic debate that is relevant here on when live electronics (or score following, etc) are relevant and when tape can be relevant. Neither of them is inherently better, the same way that we luckily do not tend to consider twelve-tone music inherently better than anything else. Everything has its place and time, which is vital to discuss, especially within a pedagogical context for students. The main issue with tape was (and still is) how it may be too rigid for certain aesthetic ideals. In that case, I would argue that the problem is not necessarily tape but perhaps the poor implementation of electronics. If a piece is poorly orchestrated, we do not blame a specific instrumental group, we blame the composer's lack of orchestration skill, and we should do the same in the case of electronics. Conservatory education is often far behind when teaching younger composers to use electronics, and it still seems accepted that composers have poor skills in electronics. I believe this will be remedied in time, primarily as more composers are used to working within DAWs and digital environments from a young age. Many universities are including more programming within their curriculum, which might change this in the coming years. Additionally, some universities, such as L'université de Montréal, have classes specifically on mixed music, which shows the many difficulties of the genre (this is discussed a bit in [28, 29]).

Many pieces function better considering their aesthetics with fixed media instead of live electronics. For example, the music of composers Alexander Schubert and Pierre Jodkowski can be argued to depend on the rigidity of the fixed media files they use [2]. They use fixed media (video and sound) to create a beautiful tension at the center of their aesthetic and philosophical ideals.

The contrary is true as well. Many pieces by Manoury would not function aesthetically with fixed media. These pieces are often much more rooted in the classical recital (to infer Tiffon's [1] definition of mixed music), with their references to the post-romantic repertoire in performance practice. On the other hand, Schubert and Jodkowski's music is more inspired by modern electronic and rock music. Hence the rigidity suits it. Neither of these styles is inherently better, and I would argue that each of these composers has understood orchestration with electronics within their aesthetics. This is not diving into post-modern indifference but understanding that the goal post moves depending on the artistic ideal. How has the choice of interaction and liveness influenced the composition and its performance? Why has the composer (and/or RIM) chosen this type of interaction? For some composers, the interaction between the electronics and acoustic instruments is not of primordial importance [30, 31].

Another important aspect of this debate relates to the compositional process and how one prefers to work. Live electronics and fixed media give various advantages and disadvantages from a compositional and performance perspective. Additionally, fixed media (generally) needs less maintenance. Whatever one prefers, the truth is that most modern pieces mix elements of live electronics and fixed media together to harness these various affordances, consciously or not. Why choose when one can have both? The composer's literacy level with electronics or specific programming environments may influence the choices made. In the context of a residency or other more time-limited possibilities, aspects of pragmatism also may play a prominent role which should be acknowledged.

### 4 PERFORMERS

In recent years, there has been many articles and theses from the performer's point of view [22, 32, 33, 34, 35, 36]. According to these performers, conservatories are often ill-equipped to be able to teach this music to their students. Numerous professors have little to no experience with electronics, so it is difficult for them to teach it to their students. The worst-case scenario is that this type of contemporary music is not even mentioned in their curriculum. There are also many challenges for students interested in mixed music. The institutions often cannot provide logistical help to their students that want to explore this music. If the pieces include live electronics, they must often find their way around faulty MaxMSP patches that do not work [32]. It is unrealistic to expect students (and performers) who often have no education in electronics to fix the patches themselves. It is also often not possible for performers to take programming classes as they might not be available at their conservatory, or their curriculum might already be overfilled. The additional requirement of a sound technician can also make mixed music recitals for young performers prohibitively expensive and, at worst uncomfortable. Classical musicians have used years to rehearse playing without amplification. Including a sound technician

may be highly uncomfortable for some of these performers. It may also be an uncomfortable situation for the sound technician since they might not be used to acoustic music ideals.

Within a pedagogical framework, fixed media pieces are often much more accessible to younger performers as they require less technical know-how and equipment. One can think of fixed media in another way: it is much easier for solo musicians to tour with a fixed media piece than live electronics. Pieces that require a RIM can often be more prohibitively expensive, and some institutions also require that some pieces require their RIMs, making them even more expensive and complicated logistically.

Although many performers also love live electronics and score following, these pieces can be more complicated for them to rehearse at home, if possible. Several performers also specifically say that “solo” pieces do not exist within the repertoire as they almost always require a RIM, making them closer to chamber music [34].

## 5 CONCLUSION & DEBATE

So then, what is the point of this article? I believe it is time for the real-time and deferred discussions to stop within the context of mixed music. Within my work as a scholar, I have chosen to discuss these issues from the aesthetics perspective and discuss them as synchronization strategies [2]. I believe this may give a more holistic view of the various perspectives in the bigger picture both within poiesis and aesthesis [27]. I believe it is more interesting to discuss the affordances of interaction and especially how we can use innovative new technologies to further our artistic goals. Although interaction and liveness can be artistically interesting, they do not imply artistic quality alone as Stroppa critiqued [37]. Technological innovativeness and progress do not mean artistic quality, and we must keep reminding ourselves and our community. Similarly, music is not superior because it is post-tonal or minimalist. Pärt and Schönberg created masterpieces because of the context in which they created their pieces and how their compositional techniques were innovative within that context.

Mixed music pedagogy has many other issues which must be addressed to get this music more out there so that students and performers can hear it. Shouldn't we concentrate our efforts there instead of writing the same analytical articles on aspects of liveness? Moreover, does the audience care if everything was live or not? Is it not more important that the performance moved the audience and showed interesting artistic ideals? I believe that by opening up more aesthetic debates and discussing the artistic aspects of our practice, we might renew more interest in mixed music, which is vital to recruiting new composers, RIMs and performers to assure the sustainability of this music. We must work together to have a broader appeal and visibility.

## 6 HISTORY DATES

Sent in June 2022, revised July 12th 2022, revised July 28th 2022.

## REFERENCES

- [1] Vincent Tiffon. 2005. Les musiques mixtes : entre pérennité et obsolescence. *Murgia*, Vol. 12, 3, 23-45. <https://www.jstor.org/stable/405914015>
- [2] Mathieu Lacroix. 2022. *Deus Ex Machina: Synchronization Strategies in Mixed Music*. PhD Thesis, Music Department, Norwegian University of Science and Technology
- [3] Simon Emmerson. 2018. Introduction : Music Practice – Reaching Out With Technology. In *The Routledge Research Companion to Electronic Music*, S. Emmerson, Ed, 1-18. Routledge, New York, NY.
- [4] Thom Holmes. 2020. *Electronic music and experimental music: Technology, Music and Culture* (6th ed.). Routledge, New York, NY.
- [5] Annette Arlander. 2010. Characteristics of Visual and Performing Arts. In *The Routledge Companion to Research in the Arts*, M. Biggs & H. Karlsson, Eds, 315-332. Routledge, New York, NY.
- [6] Henk Borgdorff. 2006. *The Debate on Research in the Arts* (Vol. 2). Kunsthøgskolen i Bergen, Norway.
- [7] Henk Borgdorff. 2012. *The Conflict of the Faculties: Perspectives on Artistic Research and Academia*. Leiden University Press.
- [8] Darla Crispin. 2014. “Scaling Parnassus in Running Shows”: From the Personal to the Transpersonal Via the Medium of Exposition in Artistic Research. In *The Exposition of Artistic Research: Publishing Art in Academia*, M. Schwab & H. Borgdorff, Eds, 139-152. Leiden University Press.
- [9] Christian Merlin. 2019. *Pierre Boulez*. Fayard, Paris.
- [10] Sabina C Acosta. 2016. *Pour une écriture multimedia dans la composition musicale*. PhD Thesis, Université Paris VIII.
- [11] Carl Faia. 2014. *Collaborative Computer Music Composition and the Emergence of the Computer Music Designer*. PhD Thesis, Music Department, Brunel University.
- [12] IRCAM. 2003. *PMA LIB: Les musiques électroniques de Philippe Manoury*. Multimedia DVD. IRCAM.
- [13] Daniel Biró, Jonathan Goldman, Detlef Heusinger and Constanze Stratz. 2019. *Live Electronics in the SWR Experimentalstudio*. Wolke Verlag, Hofheim.
- [14] Jean-Claude Risset. 1999. Composing in Real-Time? *Contemporary Music Review* 18, 3, 31-39. 10.1080/07494469900640331
- [15] Laura Zattra and Nicolas Donin. A Questionnaire-Based Investigation of the Skills and Roles of Computer Music Designers. In *Musicae Scientiae*, Vol. 20-3, 436-456. DOI: 10.1177/1029864915624136
- [16] Mariana Arocha and Adina Izarra. 2009. Relationships Between Instrumental Music and Electronic Resources in the Venezuelan Repertoire of Mix Music. In *Proceedings of the Electroacoustic Music Studies Network Conference 2009 – Heritage and Future – Buenos Aires, 22-25th of June 2009*.
- [17] Marc Battier and Lin-Ni Liao. 2018. *Electronic Music in East Asia*. In *The Routledge Research Companion to Electronic Music*, S. Emmerson, Ed, 49-76. Routledge, New York, NY.
- [18] Alizera Farhang. *Electronic Music in Iran: Tradition and Modernity*. In *Proceedings of the Electroacoustic Music Studies Network Conference 2009 – Heritage and Future – Buenos Aires, 22-25th of June 2009*.
- [19] Michelle M. Stead. 2016. *Learning to Listen: The construction of Listening in Electroacoustic Music Discourse*. PhD Thesis, Western Sydney University.

- [20] Elizabeth McNut. 2003. Performing Electroacoustic Music: A Wider View of Interactivity. *Organised Sound* 8(3), 297-304. 10.1017/S135577180300027X
- [21] Mari Kimura. 2003. Creative Process and Performance Practice of Interactive Computer Music: A Performer's Tale. *Organised Sound* 8(3), 289-296. 10.1017/S1355771803000268
- [22] Suzu Enns. 2017. Towards a Self-Sufficient Approach for the Electro-Acoustic Clarinetist: A Resource for Performers and Educators. PhD Thesis, Music Department, McGill University.
- [23] Kerry L. Hagan. 2016. The Intersection of 'Live' and 'Real-time'. *Organised Sound* 21(2), 138-146. DOI: 10.1017/S1355771-816000066
- [24] John Croft. 2007. Theses on Liveness. *Organised Sound* 12(1), 59-66. 10.1017/S1355771807001604
- [25] Mike Frengel. 2010. A Multidimensional Approach to Relationships Between Live and Non-Live Sound Sources in Mixed Works. *Organised Sound* 15(2), 96-106. DOI: 10.1017/S1355771810000087
- [26] Michael Clarke, Frédéric Dufeu and Peter Manning. 2020. *Inside Computer Music*. Oxford University Press, Oxford.
- [27] Laura Zattra. 2003. Science et technologie comme sources d'inspiration au CSC de Padoue et à l'IRCAM de Paris. PhD Thesis, Music Department, Université de Paris-Sorbonne (Paris IV).
- [28] Pierre Michaud, Olivier Bélanger and Lucas Paris. 2015. Le projet Q-Live. Journées d'Informatique Musicale, May 2015, Montréal.
- [29] Pierre Michaud and Alain Bonardi. 2018. Comparison of Tools Recently Developed at Paris 8 and Université de Montréal Favoring Collaborative Approaches in Mixed Music Pedagogy. International Conference on Mixed Music Pedagogy, McGill University, Montreal, Canada.
- [30] Roger Reynolds. 2004. Compositional Strategies in The Angel of Death for Piano, Chamber Orchestra and Computer-Processed Sound. *Music Perception: An Interdisciplinary Journal*, 22(2), 173-205. DOI: 10.1525/mp.2004.22.2.173
- [31] Roger Reynolds. 2004. Epilog: Reflections on Psychological Testing with The Angel of Death. *Music Perception: An Interdisciplinary Journal*, 22(2), 351-356. <https://doi.org/10.1525/mp.-2004.22.2.351>
- [32] Sebastian Berweck. 2012. It Worked Yesterday: On (re-)Performing Electroacoustic Music. PhD Thesis, Music Department, University of Huddersfield.
- [33] Shiau-Uen Ding. 2006. Developing a Rhythmic Performance Practice in Music for Piano and Tape. *Organised Sound*, Vol. 11(3), 255-272. DOI: 10.1017/S1355771806001518
- [34] François-Xavier Féron and Guillaume Boutard. 2018. Instrumentalists on Solo Works with Live Electronics : Towards a Contemporary Form of Chamber Music ? In *Live-Electronic Music: Composition, Performance, Study*, F. Sallis, V. Bertolani, J. Burle & L. Zattra, Eds, 101-130. Routledge, 6 New York, NY.
- [35] Xenia Pestova. 2008. Models of Interaction in Works for Piano and Live Electronics. PhD Thesis, Music Department, McGill University.
- [36] Xenia Pestova. 2018. Approaches to Notation in Music for Piano and Live Electronics: The Performer's Perspective. In *Live-Electronic Music: Composition, Performance, Study*, F. Sallis, V. Bertolani, J. Burle & L. Zattra, Eds, 131-159. Routledge, New York, NY.
- [37] Marco Stroppa. 1999. Live Electronics or... Live Music? Towards a Critique of Interaction. *Contemporary Music Review*, Vol. 18, 3, 41-77. 10.1080/07494469900640341