



Digital scenographies of contemporary music: Between didactics and spectacularization

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ABSTRACT

By rejecting the notion of polarized notes and clear pulsation, contemporary music has experienced, for about fifty years, a rupture with the public that has never been seen before in the history of music. In response, the young generation of composers seems to us today to want to affirm with vigour a new path, driven by the desire to compose complex, demanding, adventurous music, without however giving up on opening up to new and wider audiences. This double requirement results in a reformulation of two aspects of their work: one aesthetic, the other communicative: the aesthetic dimension is played out in the continually redefined relationship between scholarly and popular arts as well as in the multiple influences, hybridizations, mutations favoured, throughout the 20th century, by storage and distribution media and multiplied today by digital dematerialization and the Internet; the communicational dimension concerns how to rethink the relationship between contemporary music and audiovisual media and more particularly the possibilities offered by digital image and sound technology to reformulate the situation together. Today, several international ensembles take into account this dimension of digital scenography, offering composers creative and technical support in this field. This staging is in fact a mediation that facilitates the work's access to the public, which is now entirely part of the work (according to Antoine Henion's analyses defining music as a sum of mediations). This mediation can have pedagogical and/or performance dimensions that underlie a redefinition of "musical". Indeed, we see the emergence of new forms of multi-modal works where the relationships between the different modalities are continually being re-examined. Thus, in some cases, the image or spectacularization can take precedence over the music and become a screen to listen to and in others facilitate and explain it.

Keywords: Digital music, Hybridization, Digital scenographies, Didactics, Spectacularization.

Background

By rejecting the notion of polarized notes as well as that of clear pulsation, contemporary music of 20th century scholarly tradition has experienced, for about fifty years, a rupture with the public that has never been seen before in the history of music. As early as the early 1960s, in response to this situation, young composers tried to rediscover this link by often renewing themselves with certain forms of atonality and regular pulsation. If this reaction¹ on its side could also lead to new impasses with conservative currents proposing a sterile return to the past (such as neoclassicism), several directions have been proposed to overcome this historical moment (minimalism, spectralism, post-modernism, saturnalism) without however escaping certain effects of “ghettoization”.

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This double requirement results in a reformulation of two aspects of their work: one aesthetic, the other communicative: the aesthetic dimension is played out in the continually redefined relationship between scholarly and popular arts as well as in the multiple influences, hybridizations, mutations favored, throughout the 20th century, by storage and distribution media² (disc, radio, TV) and multiplied today by digital dematerialization and the Internet.

The communicational dimension concerns how to rethink the relationship between contemporary music and audiovisual media (video, radio, press, etc.) and more particularly the possibilities offered by digital image and sound technology to rethink the concert situation. Indeed, digital technology seems to us, in the context of the concert, to represent a particularly promising opportunity to facilitate access, for a neophyte audience, to music considered difficult. Nevertheless, this mediation carries risks of spectacularization which can lead, in its extremes and contrary to the desired goals, to an inability to listen.

This approach is in line with Antoine Henion’s work (Henion, 2007), which highlights the central role of mediation in musical creation. Indeed, for Henion (2007), music, the abstract art par excellence, needs a series of intertwined mediations (music theory, score, instrumentalist, conductor, concert, recording, specialized magazines) to be born in the world. Thus, it is not possible to access in the end a “pure music” independent of any mediation. In this sense, for the author, music is indeed a “theory of mediation”. Mediation, which is the place of creation itself and not a communicative supplement to a work “in itself”. In this continuity, Pascal Krajewski, in a recent book (Krajewski, 2018), wonders if the hybridization of art with new media would require inventing new ways of accessing its understanding.

Digital re-territORIZATION: a new generation seeking to “get out of the ghetto”

Today we are witnessing multiple re-territorizations (Harry Lehmann, 2017, who on his part speaks in a convergent sense of deinstitutionalization) linked to digital technology that concern several planes simultaneously such as aesthetics (hybridization of styles, popular and learned music), the fragmentation of audiences (encouraged by widespread downloading as well as phenomena linked to new economic models such as the “long tail”), innovative production methods that redefine the relationships between artists and institutions (public institutions or cultural industries), media relations that go beyond the notion of “musical” towards new hybrid and multi-modal forms.

Two themes seem particularly relevant to us to shed light on this new mapping of contemporary musical creation:

a. Simplicity/complexity, a real false debate?

In 2007, Nicolas Darbon (2007) addressed the issue of the dialectic of simplicity and complexity that he develops in the spheres of scholarly and popular music. It should be noted, for our part, that this dialectic is combined differently according to the three moments of the musical fact: those of composition, interpretation and hearing. Thus, the complexity of composition does not directly imply a complexity of interpretation or hearing. From this point of view, each level does not have a direct impact on the others. Much more central is the composer's strategy to take into account the participation of the performer and the listener by grading the difficulty of understanding the work.

On the other hand, the complexity of the work is often confused with the richness of the work, although this does not in any way prevent a certain simplicity of access. Composers like Xenakis or Ligeti have thus been able to develop an extreme complexity of detail writing (micro-polyphonies) while preserving simple forms at a higher level of musical perception (Ligeti's static music, Xenakis's sound clouds). The regular pulsation of John Adams's music ("Short Ride in a Fast Machine" for example) does not prevent great polyrhythmic complexities, counterpoint and timbre. Conversely, this regular pulsation allows the composer in this case to accompany the listener through these complexities without losing him. The simplicity of Steve Reich's phase shift process does not prevent a great difficulty of interpretation and a certain complexity of the sound result. From this point of view, works on information theory applied to creation, such as those pioneering Abraham Moles (Moles, 1973) or those produced in the field of psychoacoustics (Pele, 2012), inform us about the associations and dissociations made in musical cognition.

Similarly, the question of the richness of the work refers as much to its subtlety and its different levels of apprehension as to the multiple connotations that point towards an exterior of the work itself. Here, the contribution of the theory of relevance developed by Sperber and Wilson (1986) can be particularly useful to shed light on this aspect of things. Relevance theory, in fact, develops the notions of costs and cognitive effects. The first refers to the effort required for interpretation, the second to all the proposals that can be inferred from an initial proposal associated with a given context. Relevance is said to be high when, for a certain cognitive effect, the cost of obtaining it is low. The effort made to interpret the indices (its cost) is directly dependent on the recognition of the issuer's informative intent.

b. Generalized hybridizations

The dematerialization of audio media has accelerated a trend linked to the history of storage and distribution media, that of the demultiplication of the musical offer and the cohabitation of multiple musical genres (Tournes, 2008). The hard drive of today's young music lover contains thousands of audio files that combine multiple aesthetics and music from different periods. This multiplicity of supply encourages multiple crossbreeding and hybridizations that leave no genre unscathed. Thus, scholarly music and industrialized popular music have been influenced and fertilized for several decades now.

By the late 1970s, composer and producer Brian Eno had a career in pop music and experimental music at the same time (his label "Obscur" produced the flagship of English minimalist composers in the late 1970s). It was largely inspired by Erik Satie's (1917) concept of furniture music to give birth to the ambient movement. Similarly, he transposed John Cage's ideas of chance into musical composition for the artistic production of main stream groups (such as Talking Heads (1978, 1979, 1980), David Bowie (1977, 1977, 1977, 1979, 1979, 1995)

or U2 (1984, 1987, 1991, 1991, 1993, 2000, 2009) by applying random strategies in the musical direction of studio musicians as well as on sound processing and mixing techniques. Fausto Romitell, a post-spectral music composer who died in 2004, did not hesitate to introduce the sound of electric guitars into his music and dreamed of making the symphony orchestra sound like the punk band The Clash. On his side, Glenn Branca (died in 2018), who came from the visual arts and became a no-wave icon, discovered micro-tonality and intonation with his symphonies played by orchestras of dozens of electric guitars³.

In addition, a composer like John Zorn make jazz, chamber, noise and metal records, works for large orchestras or conceptual works of game pieces coexist in his plethora of recordings⁴. In compositions such as “Spillane” (Tzadik, 1999), he used collage techniques of different musical styles, going so far as to change style almost every time (“Speedball” or “You Will Be Shot” in the album “Naked City”, 1990). In the same vein, the Toulon composer Jean-Michel Bossini for his fifth string quartet “Broken Times” (2005) brings together multiple learned or popular musical genres and musical languages from different periods.

The French composers Franck Bedrossian and Raphael Cendo, initiators of the saturalism movement, developed an aesthetic of saturation and invented multiple ways of noising the orchestra's instruments. For his part, the Austrian composer Bernhard Lang develops a writing technique linked to the intensive use of short loops applied to the orchestra (he develops electronic tools for this purpose: the LoopGenerator and the Visual LoopGenerator), referring as much to the American minimalists of the 1960s (Steve Reich or Terry Riley) as to the techno music or experimental cinema of Martin Arnold⁵.

These multiple connections have made it possible to revitalize contemporary scholarly music through a return to energy, a new search for efficiency and a solicitation of the body (as can be seen, among other things, in the music of Stefan Prins⁶ in Belgium, Alexander Schubert⁷ in Austria or Julien Malaussena⁸ in France), which is new for composers who are still too often inclined towards far too cerebral approaches to music.

Scenographies of contemporary music: between didactics and spectacularization

The selected examples propose specific situations where the image and scenography are at the service of sound with the function of facilitating the listening and understanding of music considered difficult. The pedagogical dimension is therefore important. Some spectacularization effects are to be noted which can in some cases be positive (lighting of certain musical aspects, extension of the “musical” towards new multi-modal forms), in others more problematic (where the visual takes precedence over the sound and colors the perception until it obstructs its listening) or finally fold the whole on more classical forms where the music is used for extra-musical purposes such as narration or the different components of the show itself.

Didactic approaches

“Vermont Counterpoint” (Steve Reich, 1982) is a piece for three alto flutes, three flutes, three piccolos, pre-recorded on tape, plus a solo part played live. The piece consists of four sections composed mainly of canons between short repetitive melodic motifs that gradually substitute notes for silences and whose counterpoint combinations produce multiple resulting melodies.

The dynamic visual score was designed by Jason Freeman to highlight the complex structure of the piece by showing the different loops played simultaneously and their progressive developments.

a. *Visual score: Vermont Counterpoint (Steve Reich), Jason Freeman*

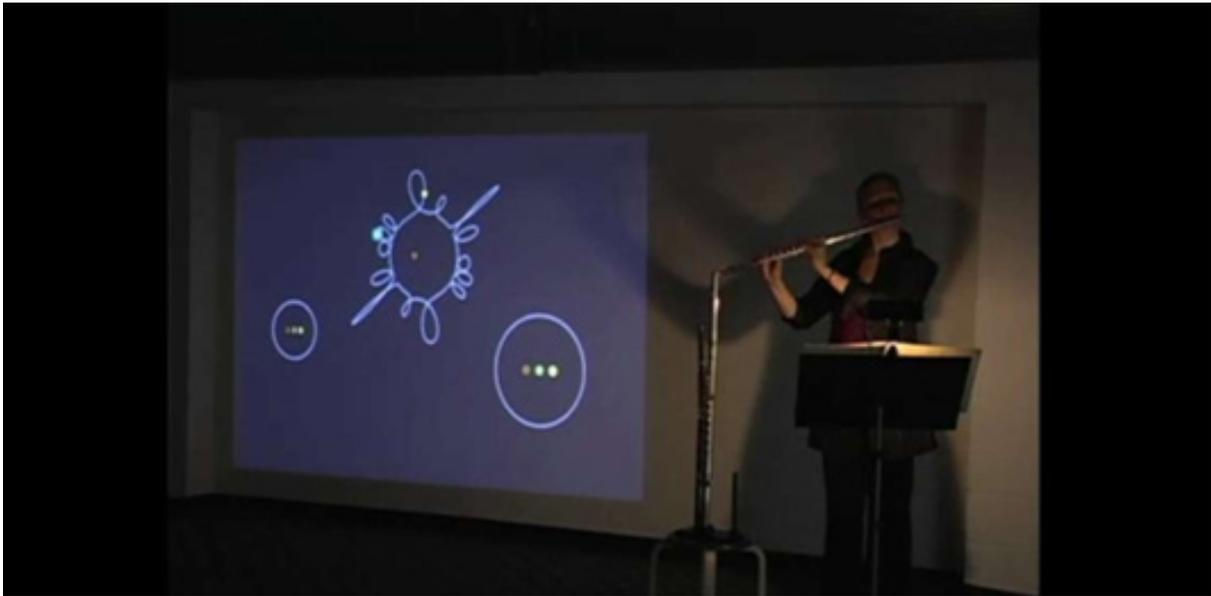


Figure 1. *Vermont conterpoint (Steve Reich), Jason Freeman* (<https://vimeo.com/55320578>)

Each of the three groups of colored dots represents the three piccolos, the three flutes and the three alto flutes, while the blue dot represents the part played live. The three rings represent the voices played by the three main groups of instruments, and each loop of the rings represents a note. The height, opening and width of the loops are determined by their volume, height and duration.

The transition from a solfegetic representation (the score) to a graphic and dynamic representation makes it possible to highlight the processes implemented and the relationships between the different loops. This graphic work is the result of an analysis of the initial text and proposes an interpretation that directs the listener towards compositional processes. This pedagogical and communicative effort is supported by the use of an “a-musicological”⁹ representation (dynamic graphics) that allows an audience not trained to read musical scores to access the heart of the work. The graphic representation also allows a complete visualization of the entire work at the same time, thus facilitating the anticipation of the different mutations of the loops and their interrelationships, placing the listener in the same position as the performer facing the work.

b. *Process visualization: « Piano/Video Phase » (Steve Reich), David Cossin*

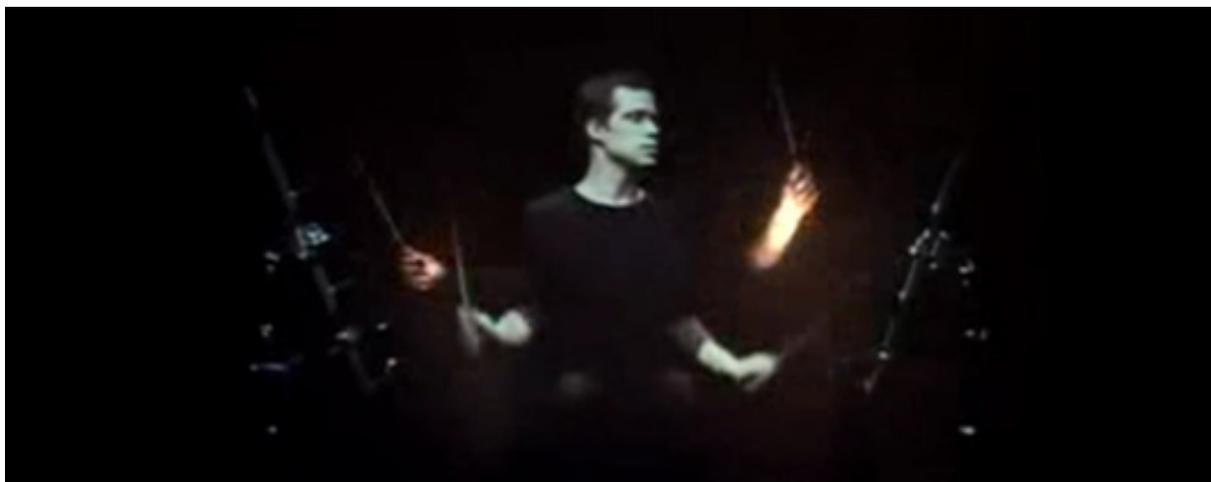


Figure 2. « *Piano/Video Phase* » (Steve Reich), David Cossin
(<https://www.youtube.com/watch?v=8zAcUBZ2yvc>)

“Piano[/]Video Phase” was born because I wanted to realize an idea I had on this piece. I wanted to find a visual representation that would show the sound effect that is created [by the phasing process] (David Cossin’s interview with Fiona Digney on October 19, 2008).

Initially designed for two pianos, “Piano Phase” (Steve Reich, 1967) implements the phase shift technique that Steve Reich used over nearly a decade at the beginning of his career. This one has the particularity of presenting an extreme simplicity of design, a great difficulty of execution for the performer, a certain sound complexity for the listener. Two musicians play the same music cell. The former keeps a fixed tempo while the latter gradually accelerates to shift its cell from eighth note to eighth note. The progressive shift of the same melodic-rhythmic cell played with the same timbre (the piano) produces a multitude of resulting melodies in constant evolution, thus respecting one of the axioms of minimalism: to produce complexity with an extreme simplicity of means. When the cell of the moving musician perfectly re-synchronizes with that of the fixed musician, the piece is finished, having exhausted the sound possibilities of the initial material, the duration and shape of the piece being entirely subject to the unfolding of the process.

David Cossin (percussionist) proposed a version of this piece transcribed for marimba and video. The imagined device consists of a display surface on which is projected a video of David Cossin playing the first fixed motif of the piece. On stage, Cossin is present behind the screen, a lighting system focused on his arms allows the spectator to see the superposition of the recorded musician and the musician playing the moving part live. Thus the shift of the two voices is reflected by the shift of the musician in the background and the one recorded by the video.

The same process is therefore applied to the image and sound, the resulting melodies being highlighted by the visual shift in the movements of the filmed musician and the same live musician. The overall process of the piece is thus explained by the proposed mechanism and reinforces the radicality of this piece composed and structured around a simple but inexorable process. The image does not harm listening but on the contrary makes explicit the compositional process that could otherwise be partially masked by the common identity of the two voices. The visual modality thus compensates here for an element (the evidence of the process) obscured by the nature of the sound modality (where the timbre identity is the essential condition to produce these resulting melodies).

2.a. Towards a gestural revolution: “Generation Kill” (Stefan Prins, 2012) - Nadar Ensemble



Figure 3. *“Generation Kill”* (Stefan Prins, 2012) - Nadar Ensemble
(<https://www.youtube.com/watch?Y=IgObICWu4uI>)

2. Spectacularization of the musical

Four performers with video game controllers, 4 musicians behind the screens, 4 video projections. “It’s a war fought by the first generation of playstation” (Stefan Prins).

The play was composed in response to the viewing of documentaries on the Second Gulf War (2003), the use of video games in military training and the pervasiveness of portable videos among journalists covering the event.

Stefan Prins proposes here a research on the instrumental gesture modified by digital technology. Four musicians (violin, cello, electric guitar, percussion) are installed behind transparent screens. In front of them, four operators/interpreters manipulate image and sound processing software using video game controllers. They can record, replay and manipulate the sounds and video recordings of musicians produced moments before. An improvisation game is then set up between the musicians and their virtual doubles projected on the transparent screens.

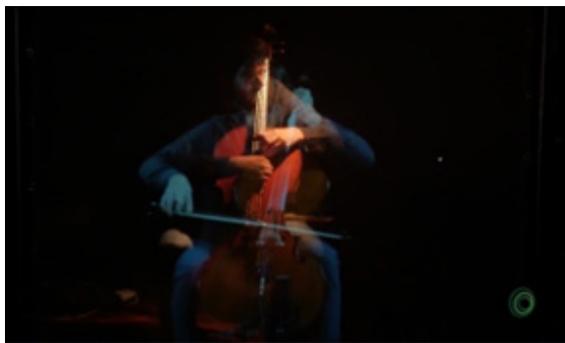


Figure 4 and 5. « *Generation Kill* » (Stefan Prins, 2012) - Nadar Ensemble
(<https://www.youtube.com/watch?v=IgObICWu4uI>)

Technology here brings new forms of musical creation, an instrumental play between a musician and his recorded double controlled by an operator/performer of the image/sound software. As the recordings can be slowed down, accelerated, edited according to the software manipulators, this technical mediation produces a de-correlation between the gesture and the sound result that creates new augmented or decreased gestures based on three fundamental internal relationships: extension, complementarity and transformation (tracks that the composer will develop in other pieces like *Piano Hero #1* and *#2*). It should be noted that these rules of the game are always highlighted for the spectator by the device itself (all the actors are visible to him: the musician, the operator/interpreter, the video projection).

2.b. De-correlation gesture/sound: “*Exit to Enter*” (Michael Beil, 2013) - Nadar Ensemble



Figure 6. « *Exit to Enter* » (Michael Beil, 2013) - Nadar Ensemble
(<https://www.youtube.com/watch?v=vxuwaN9yP9U>)

The de-correlation between the gesture and the sound emitted is pushed to its extreme with Michael's play "Exit to Enter" (performed and directed by the Nadar Ensemble).

Here the scene is divided into three spaces. The one on the left (for the viewer) is dedicated to the projection of four videos, the one in the centre is occupied by performers, the one on the right, which remains in the background, is dedicated to musicians playing live. The sounds produced are only instrumental and the piece does not use real-time processing or electronic sounds. The game will therefore only be played on a de-correlation of the gestures and sounds of a classical chamber ensemble.

However, this de-correlation is taken to its extreme with several cases:

- video musicians or performers play an instrument without any sound being heard,
- video musicians or performers play an instrument while musicians on stage emit sounds from other instruments,
- sounds are heard, while video musicians or performers simulate the playing of invisible instruments.

This de-correlation is therefore made here in the relationship between what is seen and heard and not by real-time electronic processing as is most often the case in digital scenographies. This known identity between the source and the sound result allows for even stronger de-correlations (such as when the instrument played in the video and the instrument played live are unrelated).

2.c. Light: "Codec Error" (Alexander Schubert, 2017) - Ensemble InterContemporain

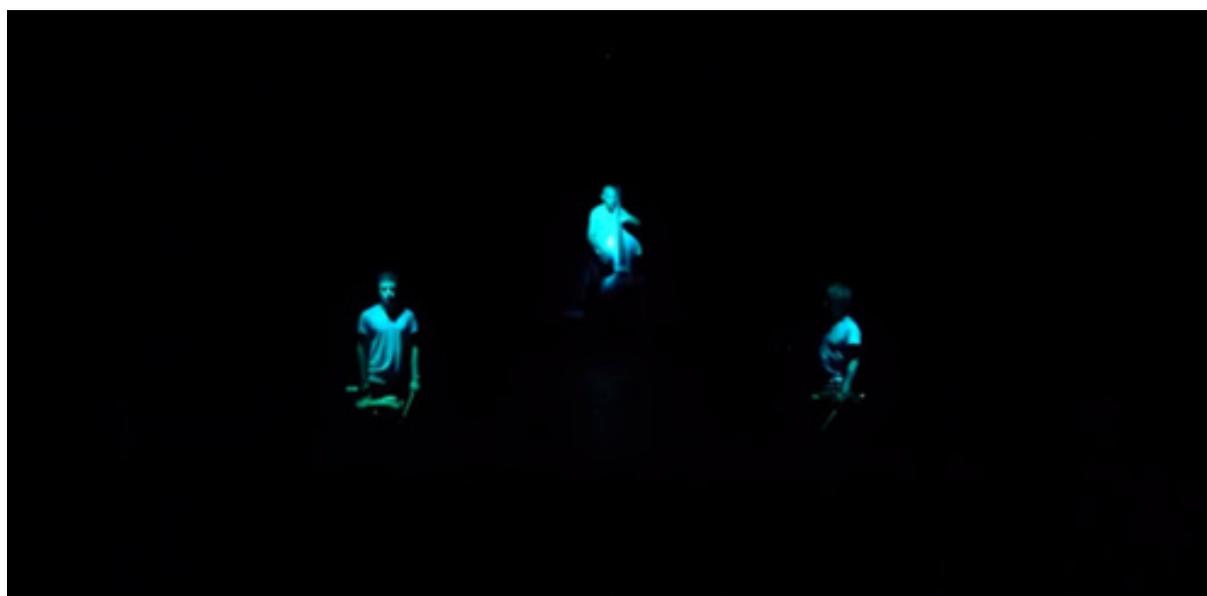


Figure 7. « Codec Error » (Alexander Schubert, 2017) - Ensemble InterContemporain
(<https://www.youtube.com/watch?v=YcwyqVLisAw>)

Here, the staging is mainly built around the use of light. Three musicians are positioned on the stage in total darkness. The lighting effects focused on each of the musicians highlight the effects of a very rhythmic music. The music/lighting game thus makes it possible to highlight certain rhythms already present in the music or to create new ones in the relationship between light and sound. If these plays of light could be achieved before digital, they did not reach the degree of precision (particularly rhythmic) that digital offers, which makes it possible to write

polyrhythmic light/sound very precise. Stroboscopic effects are based on a double reference: that of nightclubs and that of a specific effect called “Flicker” developed by some experimental film directors such as Tony Conrad (but also found in Brion Gysin’s “The dream machine” (1958).

At the limits of music?

Thus several international ensembles (such as Nadar Ensemble, Decoder Ensemble, PlusMinus Ensemble, Ensemble InterContemporain) now take into account this dimension of digital scenography, offering composers creative and technical support in this field. This staging is in fact a mediation that facilitates the work’s access to the public, which is now entirely part of the work (thus in line with Antoine Henion’s analyses defining music as a sum of mediations). As we have seen, this mediation can have pedagogical and/or performance dimensions that underlie a redefinition of ‘musical’. Indeed, we see the emergence of new forms of multi-modal works where the relationships between the different modalities (image, sound, gesture, text) are continually being re-examined. Thus, in some cases, the image or spectacularization can take precedence over the music and become a screen to listen to and in others facilitate and explain it.

In this article, we have focused on examples where musical thought is at the heart of the work and where it is deployed through digital staging. In this case, we can say that the musical extends beyond the domain of sound, compositional logics, rhythmic, melodic, harmonic relationships; musical forms can be highlighted by other modalities. These digital productions then become new forms of analytical scores that in turn modify the auditory perception of the musical work.

Notes on Contributor

Since 2007, **Herve Zenouda** is a lecturer at the UFR Ingemedia of the University of Toulon where he teaches sound design and interactive writing. His thesis was published by L’Harmattan in 2008 under the title *Les images et les sons dans les hypermedia artistiques contemporains: de la correspondance a la fusion* (Images and sounds in contemporary artistic hypermedia: from correspondence to fusion). He was previously a musician (as a drummer, on the French punk scene in the late 1970s (Stinky Toys, Loose Heart, Guilty razors) as well as on the following new wave (Modern Mathematics, Modern guy, Elli and Jacno), composer (Vies secondes, Demain, des l’aube, Notes et Fragments, with Elisa Point: Lessons in grief.. joy of life classes) and producer (L’ange (Michele Bokanowski, 2003), Pour un pianiste (Michele Bokanowski, 2005), La condition captive (Christine Groult, 2007), Post-Minimalism: 4 countries / 19 composers (Divers, 2007), Michele Bokanowski (Michele Bokanowski, 2008), Etoile Absynthe - Chant d’ombre (Michele Bokanowski, 2010).

Steve REICH in his interview (“Textes et entretiens, musique en creation”, 1997, Geneve, editions Contrechamps,) say that the minimalism revolution was a counter-revolution.

In his book, Ludovic Tournes *Du phonogramme au mp3, une histoire de la musique enregistree, XIX-XXIe siecle* (2008, Paris, Editions Autrement) recounts the unprecedented series of innovations in audio recording media throughout the 20th century and their impact on musical creation.

Notes

Hallucination City - Symphony for 100 Guitars (2001).

Lacrosse (1978), Archery (1979), Hockey (1980), Cobra (1984), Xu Feng (1985).

Martin Arnold is an Austrian director born in Vienna (Austria) in 1959 known for his found footage films mainly built around a systematic work on the loop (“Piece touchee” (1989), “Passage a l’acte” (1993), “Alone”. “Life Wastes Andy Hardy” (1998).

Generation Kill (2012)

Point Ones (2012), Codec Error (2017)

Introduction au timbre et a l’energie (2014)

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