

Performing Technology:  
User Content and the New Digital Media



Performing Technology:  
User Content and the New Digital Media:  
Insights from the Two Thousand + NINE  
Symposium

Edited by

Franziska Schroeder

**CAMBRIDGE**  
**SCHOLARS**  

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**P U B L I S H I N G**

Performing Technology: User Content and the New Digital Media:  
Insights from the Two Thousand + NINE Symposium,  
Edited by Franziska Schroeder

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Dedicated to the three most important boys: Pedro, Lukas and Max.



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# INTRODUCTION

Dear Reader.

This volume was spawned by the invigorating discussions during the 2009 edition of the *Two Thousand + symposia* series. Since 2006 this series has invited researchers from fields as diverse as music, architecture, design, philosophy, dance and technology to discuss issues around performance and technologies. The series has been running alongside the Sonorities Festival of Contemporary Music in Belfast (more on the series can be found here:

[www.sarc.qub.ac.uk/~fschroeder/Symposium/index.htm](http://www.sarc.qub.ac.uk/~fschroeder/Symposium/index.htm)).

The *Two Thousand + NINE* symposium focused on user-generated content. The writings included in this volume have been selected in the context of this theme. The original call for the symposium was intended to foster discussions around design processes and creative practice strategies. It can be said that dissemination of “content” has been challenged dramatically by environments such as Facebook, Youtube and SecondLife as these introduce notionally open platforms that live off content created by users. Although user-generated content has fulfilled the engagement requirement of many social networking environments, the question emerges in relation to the role of creative practice in a context which promotes malleable, transitory and user-led media. In a world of post-personalisation, digital media is faced with issues of locality, context and mobility. Although numerous applications have been built on creating environments within which personal preferences, approaches or visions can be implemented, the question of how design processes and creative practice strategies address these new media is still unanswered. Presenters at the symposium tackled questions such as how notions of open form and interactive media relate to user-centred interaction design, what the shift from object to environment might imply for contemporary artistic practice, as well as questions about the development of design strategies for addressing rich media environments that incorporate user-generated, locative content.

I have deliberately not grouped the chapters together by themes such as ‘dance’, ‘virtual worlds’, ‘music performance’ or ‘computer games’, but

have chosen to arrange the chapters according to alphabetical order of the authors' last names. I imagine that each reader will be approaching this volume in a very different order anyway; that each of you will have a particular way of reading that is suited to your current interests and research priorities, and with this in mind I wanted to leave the chapters in a more 'random' order, rather than impose an artificial suggestion for possible ways of reading. The ideas and critical positions you will find in this volume are the following:

**Choinière** positions the body as a vehicle for examining design strategies in dance. In particular, she argues for a new understanding of the body in dance, situating the body (the collective or embryonic body) in states of destabilisation and fragility and thus allows for the deconstruction of the hierarchical body.

**Fernandes'** and **Jürgens'** work takes as a starting point for the discussion on user-generated content the 'inter-contamination'; that is, the creative potential that lies in the contact zone of various disciplines. They examine a very particular transdisciplinary project, the *Transmedia Knowledge Base project (TKB)*, which serves to document, structure and annotate digital dance pieces in order to examine underlying choreographic thinking. The project is intended to allow for a deeper insight into dance practices.

The co-authored work by **Kazuhiro** and **Tanaka** explores how users engage socially with music; specifically, the authors consider how creators conceive of participatory forms of music in order for the act of music making to become a collective activity.

**Magruder's** chapter provides a great overview of the rise of online sharing communities, in particular SecondLife. The author examines the architectural theory of Vitruvius, especially the specific formulae for building structures based on notions of *firmitas*, *utilitas*, *venustas*. This chapter elaborates on Magruder's own work *The Vitruvian World*, which is a fine example of the hybridisation of virtual, physical and networked space.

**Millward** addresses the relationships between sound, moving image and emotive intent; in particular, the author looks at the phonaesthetic relationship between image and sound. He elaborates on his own multimedia work *From Anger To Sadness*, a work that investigates the motions of

emotionally motivated vocal folds and represents these as abstracted 3D moving images.

The following chapter by **Newman** investigates the role and place for the performance artist in virtual worlds. The formation of social and intimate bonds in virtual environments, in particular in SecondLife, are scrutinised while the authors reminds us of the risks of love and the future of the physical body.

**O'Dwyer** examines a kind of collective experience of place by looking at the role of the portable audio device. She argues that the personal listening experiences which these devices create produce a networked, collective experience of place, transforming non-place into a ludic sphere for social interactions. O'Dwyer considers the device as an active producer of place as opposed to the common view of the device absenting a user from place. The users not only shape, but also become shaped by the technology.

**Renaud's** work on sonic travel in the network examines the design of the network and the rendering of its nodes as part of the musical process. In the author's own work the nodes send signals around the network and thus the acoustics of the network become integral to the compositional design in which the network not only creates sonic reflections but also a complex instrument in its own right.

In my own paper (**Schroeder**) I examine listening attitudes in network music environments. I address the theme of user-generated content by looking at a specific network composition entitled "Netrooms" which relies on the users to generate sound materials that are used in the performance. The main focus of the paper is to contemplate how the nature of the network reveals the nature of our own listening.

**Traynor's** chapter examines the notorious Oklahoma City band "The Flaming Lips" and their ground-breaking album *Zaireeka*. User-generated content is discussed in terms of this particular user-centred album, a social album and interactive multi-disc listening experience where listeners are asked to play four discs simultaneously and synchronised on four different audio systems. *Zaireeka* was inspired by the 'Parking Lot Experiments' of the late 90s, and different elements of the same song were reproduced on different discs. Traynor argues that this infamous album is challenging our preconceived assumptions of recorded music and listening environment.

**Waters'** work problematises the notion of content in technologised environments; in particular the author looks at the relationship between 'content' and 'container' as well as notions of noise and resolution, overload, supplement, arbitrariness and mutability, emergence, collaboration, authorship and ownership, and silence and absence. Waters convincingly argues that content is not only contingent on the active input of participants; but also, that it can be characterised as having emergent properties in the same way that a musical instrument emerges through means of its use.

The final chapter by **White** considers video games as an art form rather than as a simple form of entertainment. The author points out the necessity for the tactile engagement of the users and thus agency, and he argues for a breaking of the separation between the real and the virtual world; for the user and machine to be treated as distinct entities that become embodied. White says that video games need to allow for a tactile disruption that eventually can lead to a distinct realisation within user.

As an editor I had the pleasure in collating above articles that represent current thinking across a variety of fields. I have found the articles exciting and beneficial for my own area of research and they certainly have shed some new light on the issue of user-generated content in new digital media environments.

I hope you enjoy.

—Franziska Schroeder  
Belfast, October 2009

# CHAPTER ONE

## THE *SONIC COLLECTIVE BODY* AS A STRATEGY TO INVEST NEW DESIGNS AND NEW REALITIES

ISABELLE CHOINIÈRE

### 1. Introduction

This article explores the means by which we can develop new design strategies in the context of evolution in actual dance, through the influence of 20<sup>th</sup> and 21<sup>st</sup> century technology and its impact on perception.

By applying a performative, adaptive and evolutionary strategy generated by user-generators equipped with sensors among other things, we discuss the notion of an enlarged/sonorous body, of the technological sound device integrated through the development of the concept of the Collective Body. This term gains its full meaning when applied to a re-evaluation of the notion of the Interval, particularly with the dissolution of the psycho-physical barrier that is characteristic of the Collective Body.

We also propose the notion of the ‘Collective Sonorous Body’ as an integrating element born out of a new way of learning, of a new experiential understanding of the body, and not as ones duplicate or element of superposition. This ‘Collective Sonorous Body’ is generated by the existence of a strategy of design and creation based on the renewal of being born. Through this concept, we invest the notion of performativity, one experimenting with *new realities*, not the one leading to representation. This other corporality integrates the phenomenon of reality transformation brought about by these new ways of learning.

## 2. Research Strategies

To reach this aim, we have opted for a research strategy that investigates the manner in which the infusion of technological thought in actual dance/performance could find applications in developing new choreographic/performative models. Our artistic experimentation is based on a strategy of sensory experience and perceptual renewal: how will 20<sup>th</sup> and 21<sup>st</sup> century technology be able to open the path to a new perceptual synaesthesia<sup>1</sup> formed by proprioception of the real body and exteroception of the mediated body?<sup>2</sup> According to our hypotheses, this research could initiate a relationship that enriches the potential of experiential corporeality (we propose this approach as a means to move beyond the instrumentalization that diminishes the dancer in relation to technology.)

We also discuss the concept of interval and of the dissolution of the psycho-corporeal barrier – a theory developed by Suely Rolnik, cultural critic and psychoanalyst – as a connecting and integrative learning technique that, propelled by technology, leads to the destabilization of our sensorial cartography. This will, in turn, create a ‘vibratory’ relationship, (thus transformative and inter-connective) between performers and public which will also lead to experiencing new realities. This state of interconnection is also a prerequisite to the ‘recognition’ between bodies, which itself depends upon the dissolution of the psycho-corporeal barrier. The ‘recognition’ between bodies would, in part, be explained by the ‘mirror neuron’ phenomena developed by Italian neuroscientist Giacomo Rizzolatti (2005). This other performative configuration based on learning by direct contact and on a remote basis promotes the experience of a creative process inside a shared relationship and also promotes another design strategy. This interval, in accordance to the Japanese Ma, is a moving time-space, an empty space to be inhabited, *a* possibility. For the Japanese people, all potentiality resides in emptiness, that of *a* becoming. For Suely Rolnik, potentiality resides in the state of fragility, of reciprocal psycho-corporeal resonance, which creates an intercommunication, the organization of a vibratory collective body. This new design process and these creative practical strategies will result in another enlarged corporeal representation typical to the new corporealities issuing from the sensorial and perceptual destabilization created by the media.

### **3. The principles behind the construction of the Collective Body and its vital link with the notion of interval.**

This paper will try to answer to this question : “Why is this question of 'interval' so important in our times? How does the idea of 'interval' insert and develop itself in post-modern (*early 60's to late 70's*) and actual/new dance (*early 80's to present day*)?”

Modern Dance is a “*global designation for the whole scenic dance that has broken off with ballet and popular entertainment.*” (Banes, 2002) It was invented in the United States through the coming of three great women in the dance world: Loïe Fuller, who threw the foundations of Modern Dance in 1890; Isadora Duncan, and next Ruth St-Denis, who held a school from 1915 to 1930. ‘*In the early Sixties, when Yvonne Rainer uses the term “Post-Modern” to qualify the work that she and her peers present at the Judson and elsewhere, she uses it firstly and foremost in a chronological sense*’ (Banes, 2002). Post Modern Dance was invented in the United States and its main actors were, among others, Merce Cunningham – who began, as soon as 1944, to propose an approach which radically contrasted with Modern Dance -, Lucinda Child, Steve Paxton, Deborah Hay, Trisha Brown and Yvonne Rainer. As of Butoh, it can be considered Japan’s Post Modern Dance.

From the breaking point of the Sixties, time of the Judson Dance Theater where every rule was questioned, to the consolidation of Post-Modern Dance, in the late Sixties-early Seventies, into two main streams, the analytical and the metaphorical – when experimentation would step aside to see ‘identifiable’ styles emerge – we would find the same questions asked by the choreographers: what is Dance? Where, when and how must it be executed? In the Eighties, although “New Dance” choreographers still passionately took part in the debate on the nature of this medium, they clearly distinguished themselves from their postmodern predecessors by their interest in the SIGNIFICATION of Dance. For reasons that relate to history of avant-garde as well as to the spirit of our time, the Eighties witness the urgency of seeking content in Arts, and in this, Dance is no exception (Banes 1985).

This fundamental path that dance traces in regard to this notion of 'interval' – strongly inspired by the Japanese notion of *Ma*<sup>3</sup> – lies within a profound syncretic process. To us, it is the product of a “cannibalistic” dimension in the positive and integrative meaning as seen by the Brazilian people. The ‘resounding collective body’ that we experiment with is

interested by the potentiality existing in the interval of the collective body and retains some strategies belonging to Paxton's tactile body (he developed the Contact Dance Method), Brown's fluid body and the Butoh's introspective body.

The technological times in which we live have broken the idea of distance as we knew it in the Renaissance period – the Times of Vision (de Kerckhove, to be published in 2010). We exist in multi-sensorial universes where our consciousness of the whole is instantaneous (Weissberg, 1988). Technology becomes the catalyst of the sensorial renewal process by installing a permanent destabilization made possible by electronic media due to the fact that several universes have moved closer together (Rolnik, *Figures nouvelles du chaos*, 2007). What ensues is a constant reorganization of our senses among themselves – our sensorial mappings – where we find ourselves in an exacerbated state of being, of life, of “presence”; a state of openness and sensorial and perceptual listening which Suely Rolnik names “state of fragility” – a state which results from these reorganizations – and which will become the condition for the experiential state. This state of fragility is essential in order to permit the “vibratory” (Rolnik, 2007)<sup>4</sup> or so called “resonant” communication occupying this interval as conceived by the Japanese.

Artistic revolutions in dance, notably American post-modernist and Japanese-Butoh (abbreviation of *Ankoku Butoh* or “*la danse des ténèbres*” (*in french*)<sup>5</sup>), rebelled against the institution. It was essential to question all choreographic referents, especially the time-space relation as well as the subjects of structure, relationship and organization. These revolutions have also questioned phenomena such as “presence”, “conscience” and “reality”. Throughout these periods, several body aesthetics emerged: let us recall

the rebel body (Duncan), the barbaric body (Nijinski), the mystic body (St-Denis), the dynamic body (Humphrey), the chthonian body (Wigman), the pulsating body (Graham), the articulated body (Cunningham), the tactile body (Paxton), and the fluid body (Brown) (Boisclair, 2007 quoted in Crémézie, 1997)<sup>6</sup>.

This tendency to use the dominant quality of the body as an instrument of representation is frequent in art and, according to Christine Palmiéri (Boisclair, 2007 quoted in Palmiéri, 1997), ‘becomes an intersubjective space for moving identity exchanges, transforming itself through the layers of a collective fable’<sup>7</sup>.

In light of this research regarding the interval, the fluid and tactile bodies are the ones that particularly interest us. We would add to that two other types of body aesthetics: the introspective body (Butoh), of which the recent work of dancer Hideyuki Yano (1943-1988) is a witness, and the collective body (Lygia Clark - Brazil). According to cultural critic Louise Boisclair (2007), our personal research seems to develop another kind of dance aesthetic: being “the trans(e)dance”, an expression of her own invention, comprised of the combination of trance, or *trans* (recalling the trans-disciplinarity of our research and corporeal work), dance and (e) for energy, electronic, elasticity and electricity.

This ‘Collective or Embryonic Body’ - as named in the beginning of the process - we are developing is of the resonant collective genre, using somatic practice strategies in order to make room to for the renewing of proprioception and exteroception. It is interested in the existing potentiality of the collective body and integrates some of the strategies used by Paxton’s tactile body, Brown’s fluid body and Butoh’s introspective body. According to Louise Boisclair, one must understand this

larval body [original word “larvaire” in french] in terms of “embryonic body”. This qualifier does not refer to individual dancing bodies, which are more energetic and malleable; rather, it defines this enlarged sonorous body, in a new born state, inchoate, unfinished, always looking to develop and balance itself out. This embryonic body, creature from an enlarged sonorous body, represents a state of fluid gestation in perpetual movement...<sup>8</sup> (Boisclair, 2007).

For Boisclair,

the spectator internalizes the work, experiencing a full loss of bearings, in a mental and corporeal space enlarged by this capture.” Technologies, used in such a way, would facilitate “the apparition of a physical as well as digital creature, visual and sonorous, a collective body composed of individual bodies connected as an enlarged sonorous body, as if the whole was becoming the reflection of invisible exchanges between human beings inside the intimacy of physical, energetic, kinetic bodies on one side, and digital and sonorous on the other side<sup>9</sup> (Boisclair, 2007).



Fig.1 Images Meat Paradoxe / creators : Isabelle Choinière and Dominique Besson  
Photos: Jean-François Gratton / Shoot Studio Montreal 2008

It is interesting to understand how Trisha Brown has constructed her fluid body. In fact, she works on the beginning and the end of the movement in dance. Influenced by the machine of the industrial period, she reflects on the notion of series and withdraws every transition between movements

The temporal logic is disturbed: the beginning of a movement of a body part takes over from a former unfinished one ... This game about the unfinished, the relieving and deviation creates a surprise effect which constantly restarts the movement.... The choreographer creates a movement that she herself qualifies as multidirectional.... (Fontaine, 2004)<sup>10</sup>.

For Guy Scarpetta (Fontaine, 2004 quoted in Scarpetta, 1992), it is a body irredeemably 'transitory'<sup>11</sup>. For Geisha Fontaine, 'it installs another configuration.'<sup>12</sup> Steve Paxton, inventor of the contact dance and of the 'tactile body', is an improviser who 'uses tactile, kinaesthetic and proprioceptive sensations as bearings rather than the repeated and memorized movement, or points in space that are fixed' (Boucher, 2005).

The counter-culture of the sixties pushes dancers such as Paxton and Brown towards other types of training. 'Alexander, Bartenieff, Body-mind Centering, Feldenkrais, Trager somatic practices as well as martial arts reveal a new consciousness of posture, movement and body moving in relation with gravity and space.' (Boucher, 2005) Applied, these techniques develop fluidity of movement, body consciousness and stress elimination. Integrated, they question the 'Interval'.

Through dancer Hideyuki Yano's contemporary work on Butoh, the introspective body of this form of dance develops a very interesting relationship with the notion of interval. To Yano, 'past, present and future being one, time flows in every direction. ... Since distance is interval, it is simultaneously spatial and temporal: one can move it, project it into the past or the future'<sup>13</sup> (Yano, 1983 quoted in Fontaine, 2004). Thus, for him, memory isn't a necessity anymore since the past is here.

This working method creates new circuits between corporeal and psychic memory, between experience and conscience.

For Yano, when choreography surpasses geometric and chronometric operations, 'it reaches the poetic soldered joint of time and space. It is like Japanese calligraphy which displays, by the blackness of the ink, the paper

itself on which it must, in the single sweep of the brush, reveal a thousand of other possible sweeps'<sup>14</sup>(Yano, [without date] quoted in Fontaine, 2004). This way of weaving the creative gesture has much in common with the different levels of revelation that technology, as referred to in the present context, can display.

#### **4. The sonorous collective body: a connective and integrative learning strategy**

We will introduce the somatic practices via the exteroception created by the new technologies we use. In other words, how exteroception renews our sensorial and perceptual experience. Somatic practices are centered on being conscious of the body in motion. They are about learning about the process of synergistic interactions between consciousness, movement and the environment. They are the experiential study of corporality.

In our research, the collective body represents the orgiastic figure, essential for the dissolution of the psycho-corporeal barrier; thus, the notion of non-docility and of loss of bearings, of control that we are developing through this reference to the orgiastic. From our point of view, it is a risky experiment. The orgiastic also speaks of the loss of compartmentalization of the body and of the senses and, accordingly, of another organization of body and senses and, eventually, of its structure and design. Therefore the sexual aspect – the part involving the physical body, its place and role – will also be deconstructed. Hans Bellmer with his 'dolls' and with his drawing called 'Céphalopode, années quarante, dessin au crayon', is a good example of deconstructed representation and was an inspiration for us.

The Collective Body is a self-organizing state: the body self-reorganizes through sensation itself. Here are some images (fig.2) showing a choreographic application of this deconstruction of the hierarchy of the body:

What makes taking this direction interesting is the fact that it leads to altered states. This altered state constitutes a loss of bearings. The Collective Body is a means to reach this second state.

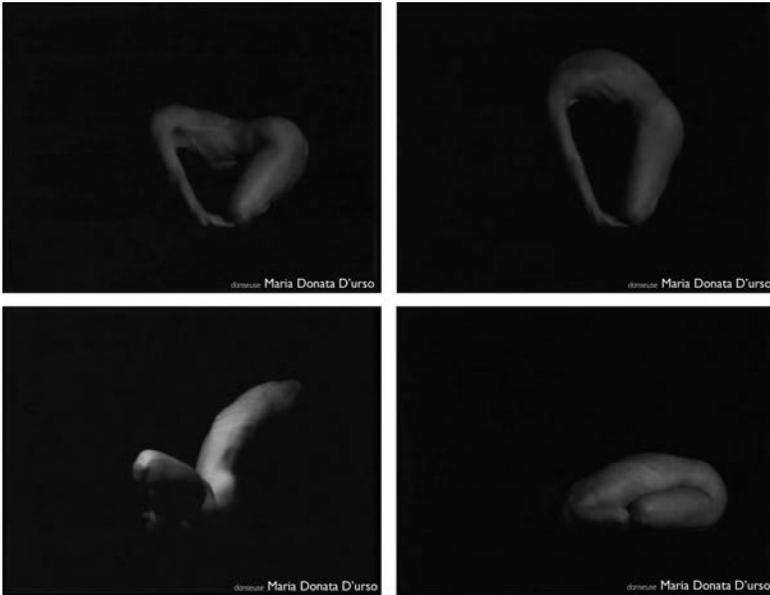


Fig. 2 Maria Donata D'urso. Creation : Pezzo O (due)

According to Laban (2007) in *La Maîtrise du mouvement*, and Michel Bernard (2001) in *De La création chorégraphique*, dance is an organization of the movement by the dance itself; these authors speak of the intelligence of the body. Dance is thus subjective and affective. This definition of dance and of *dance-ality*<sup>15</sup> (Bernard, 2001) has re-channeled our interest in pure sensation and senses, and has also organized an experience about revisiting the hierarchy of the body. Our work speaks of taking a distance from the code; it aims at de-structuring corporeal codes. It is a reasoned disturbing of all senses, of eroticism vectoring the body. According to Lacan, the body is covered by language. The body is 'normalized', the code is written into the body. The orgiastic goes further than the code, because it breaks the hierarchy. It is a non-linguistic state, a different organization of the senses.

It is at this point that Giacomo Rizzolatti's researches on mirror neuron systems seem of interest, because they bring forth an explanation about this "intelligence of the body" and the non-linguistic state we refer to. It is this non-linguistic state that is called upon to transmit knowledge from one

dancer's body to the next. It is also a neuroscientific theory which takes over from Suely Rolnik's psychoanalytical one; it would explain, at least in part, this space of "vibratory" recognition and influence that leads to states of learning and transformation, even from a distance.

The present findings strongly suggest that coding the intention associated with the actions of others is based on the activation of a neuronal chain formed by mirror neurons coding the observed motor act and by "logically related" mirror neurons coding the motor acts that are most likely to follow the observed one, in a given context. To ascribe an intention is to infer a forthcoming new goal, and this is an operation that the motor system does automatically<sup>16</sup> (Rizzolatti, 2005).

During the last phase of our experimentation in Spring 2008, we experimented with a creative process that is even more de-compartmentalized. Our goal was to create an 'evolutionary' content that would lead us to re-experience role sharing while creating the Sonorous Collective Body. The composer, by enlarging the concept of sonorous body, found herself playing the complementary part of user-generator. Two systems were used together (Fig. 3). The technological devices used to achieve this result remain largely invisible. The first device is a wireless microphone system for each of the dancers, hidden beneath black turbans they wear. The second device is the "Ring", an original computer programme created by the work's composer Dominique Besson with Olivier Koechlin and Antoine Schmitt designed to spatialize sound (Fig.4). Dominique Besson is a soundspace specialist. The spatialization tool called the Ring is a real time instrument used for spatial composition. It enables its user to drive, in public, sound sources detected on the stage or pre-recorded in the studio.

We have been able to observe that this 'symbiotic' sharing of the collective body leads to an extension of the proprioceptive as well as the exteroceptive relationship, while at the same time participating in the enrichment of an experiential corporeality. Of course, this result was achieved only because of the nature of the composer's artistic participation. Her experience as a musician (through her breath and the complexity of her pianist's touch) lead her to involve herself at the levels of supra-sensitive (concept similar to Brazilian artist Helio Oiticica's *Supra-Sensorial*<sup>17</sup>) and hyper-intimate, in the reality as much as mediated level.

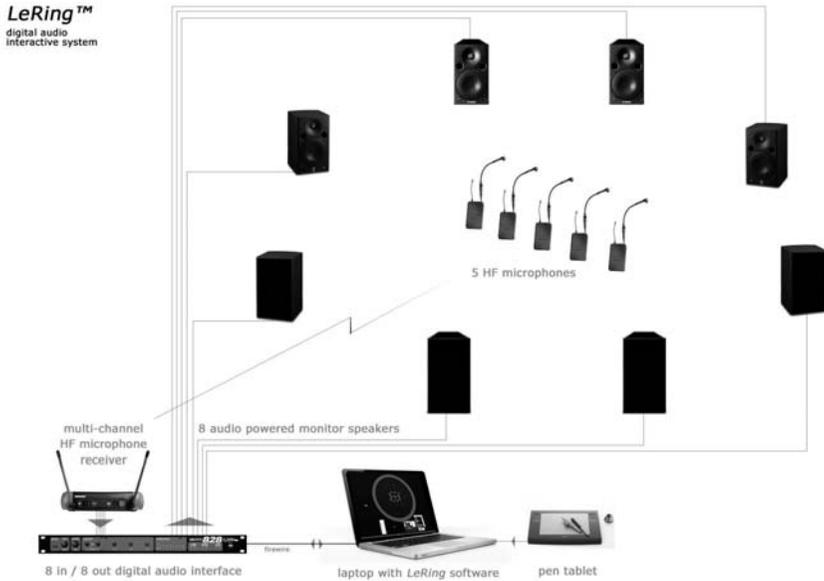


Fig.3

The event of these *real and mediated new relational dynamics* has modified the psycho-corporal state of both composer and dancers. We could feel the existence of a mutual influence in this process. Used for our new developments, the Ring follows

the direction of an open system for real time spatialization equipped with functions of gradual memorization of the signal and trajectories. Being thus interfaced as real time data inside the Ring, the five sound sources generated by the dancers can be driven through space and time...Today it is possible to observe sound matter, to project it through physical space, to manipulate its components; in a word, to organize it (Fig.5). This new driveability reintroduces movement inside the compositional practice and makes it possible to observe the birth of new forms, intelligible but not always foreseeable (Fig. 6) <sup>18</sup> (Besson, 2009).

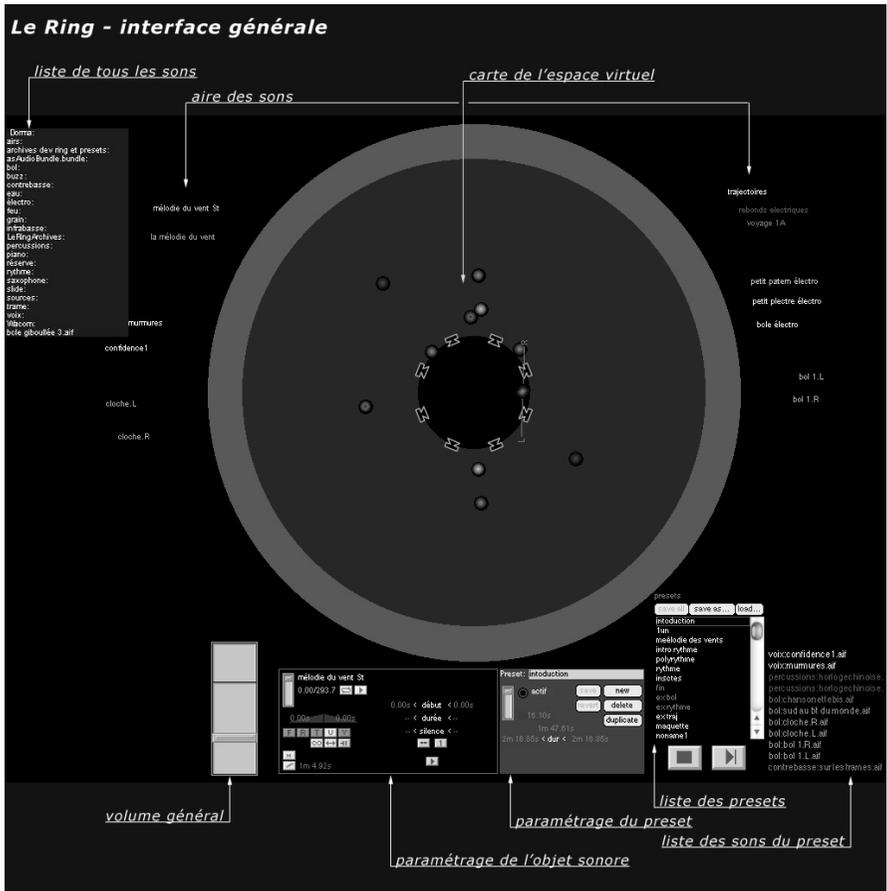


Fig.4, Composer Dominique Besson with Olivier Koechlin and Antoine Schmit, *Ring dispositif*, 2007.

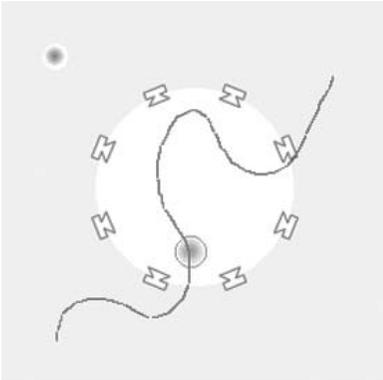


Fig.5

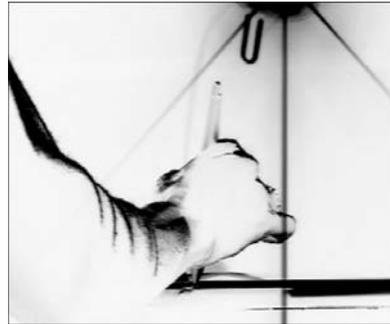


Fig.6

By asking the dancers to control their breath and by taking into account new relational parameters obtained by a kinaesthesia and a proprioception inherent to the dynamics of the Collective Body as a whole, we introduce 'a change of bearings by making something very intimate solid through sound: the inside perception of the movement' (Besson, 2009). In order to achieve musical results of a symbiotic magnitude, Dominique Besson reintroduces movement into the compositional practice through,

(...) types of sound objects that, once animated with a life of their own in their spatiotemporal reiteration, form the sound space. In other words, it means organizing a time that opens and reveals the body. By letting the collective body go at its own pace towards creating the sound object, we open a form. Regarding the sound object, their exchange enables one to observe the birth of new forms that are constantly renewed, but circumstantialized.... Thus, we obtain a polymorphic and changing sound object characterized by a certain elasticity and which regulates itself like a body. Its projection inside physical space, its bursting forth from the circle of eight speakers acts in return on the proprioception of the dancers, involving an awareness of what is being created collectively. (Besson, 2009).

We think that this approach enables us to enrich the potential of the experience of corporeality rather than being stuck inside the causal process. The composer expresses this idea in a very touching way in the following words:

In this fashion, we obtain a kind of moving form, animated, living, self organizing in an organic way: a sonorous body.' ... 'In such a situation,

we must learn how to read movement by going around the limits of the perception of simultaneous phenomenon, how to get our bearings inside the space of the choreographic figure so we can reinterpret it by molding it inside the acoustic space by projecting, enlarging it ... The collective body is very sensitive and reactive to its sonorous body, as if it would inhabit it, extend itself in it, discovering its length, its infinity. There is something here akin to flux, to sap rising, spreading or colliding ... It is necessary to be able to decompose every choreographic figure ... live them from the inside, in order to identify in a muscular way to the object of the research so as to optimize the spatial movement during performances. The composer becomes, in this context, the interpreter of the collective body. The relationship that develops among the dancers is intimate, almost affective. ... The particularity of this writing is that its time is shared, dictated by the body and that things never reproduce identically... this experience once more feeds our imaginary by opening new horizons to us (Besson, 2009).

## 5. Conclusion

It takes time for changes in proprioceptive modes to occur and it also takes time to understand and assimilate the exteroceptive effect of technology on perceptual and sensorial modalities, and, in our case, to understand the transformation that is taking place. It is also important to review the different modes of production and kind of research necessary if one really aims to address the questions of meaning, aesthetics and corporality in these times of change that may be unsettling, but which are often rich in inspiration, in revelations ...

## References

- Ascott, R. (2006) 'Syncretic Reality ; new media in the technoetic culture'. Paper presented in the Conference : *Toward a Science of Consciousness*. Tucson, Arizona, U.S.A.
- Banes, S. (1985) 'Festival International de Nouvelle Danse ; Montréal 1985, 19 au 29 septembre', Montreal : *Edition Parachute*. p. 52
- . (2002) *Terpsichore en baskets ; post-modern dance*, Paris: Edition Chiron.
- Bernard, M. (2001) *De la création chorégraphique*, Pantin, France : Edition Centre national de la danse, Collection Recherches.