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17 FEB 2012    **Editorial** Astrid Söderbergh Widding, Lars Gustaf Andersson, John Sundholm

### + Original Articles

### + Thinking Practice

### - From Sign to Signal

15 JUN 2012    **Foreword** Bodil Marie Stavning Thomsen, John Sundholm, Ulla Angkjær Jørgensen

15 JUN 2012    **Signaletic, haptic and real-time material** Bodil Marie Stavning Thomsen

15 JUN 2012    **Pulse on pulse: modulation and signification in Rafael Lozano-Hemmer's *Pulse Room*** Merete Carlson, Ulrik Schmidt

15 JUN 2012    **Hacking the aesthetic: David Haines and Joyce Hinterding's new ecologies of signal** Andrew Murphie

15 JUN 2012    **Bodies and real-time interfaces: in video performance and interactive digital 3D installation art by VALIE EXPORT and Jette Gejl Kristensen** Ulla Angkjær Jørgensen

15 JUN 2012    **A cinema of presence and proximity: Gunvor Nelson's collage films and the aesthetics of the signaletic material before the electronic signal** John Sundholm

15 JUN 2012    **Connect and immerse: a poetry of codes and signals** Jesper Olsson

15 JUN 2012    **Sound [signal] noise: significant effects in contemporary sonic art practices** Thomas Bøgevald Bjørnsten

15 JUN 2012    **Creation and erasure: music video as a signaletic form of practice** Mathias Bonde Korsgaard

15 JUN 2012    **It has not been—it is. The signaletic transformation of photography** Mette Sandbye

15 JUN 2012    **Screens of intensification: on DIY concert videos of Lady Gaga and the use of media interfaces as tools of experience intensification** Carsten Stage

15 JUN 2012    **Experience in-between architecture and context: the New Acropolis Museum, Athens** Annette Svaneklink Jakobsen

15 JUN 2012    **The disruptive aesthetics of hijacking urban space** Thomas Markussen

15 JUN 2012    **From signal to signification in interactive environments** Jonas Fritsch

15 JUN 2012    **Immediation as process and practice of signaletic mattering** Christoph Brunner

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## FOREWORD

Since the 1990s there has been intensified focus on the concepts of performativity, the relational, and affect in the humanities. Scholars from different fields have in a variety of ways embraced these notions in their accounts of contemporary culture, and as such they also form the backdrop of this thematic collection of articles entitled *From Sign to Signal*. It seems, however, as if today's media situation—the globally evident usage of media technologies—requires a new theoretical approach in order to deal with the intersections of technology and aesthetics, since in these cases the sign often falls short. It has therefore been the ambition of this collection to invite scholars within the humanities to take part in a discussion on the implications of a gradual shift from a (linguistically framed) paradigm of the sign to a new paradigm connected with media augmented environments. As the term for this new paradigm we have chosen the “signaletic material”, coined by Gilles Deleuze in his book *Cinema 2: The Time-Image* (1989).<sup>1</sup> Deleuze developed this notion in order to stress that film in his view of contemporary or modern cinema had altogether eliminated classical (literary) thoughts of plot and narration. Toward the end of *Cinema 2* it becomes clear that the notion of the “signaletic material” might be developed to cover all kinds of filmic and electronic material as well as the emerging new media technologies.

This collection consists of short, exploratory and suggestive essays on this interesting subject. Bodil Marie Stavning Thomsen's article,<sup>2</sup> originally prepared in 2008 as a paper for an international conference, raises the question whether embracing and developing Deleuze's concept might make it easier to understand and interpret various forms of art and culture from the 1960s till today—a time span during which the media has become an integrated or transforming part of life. Stavning Thomsen's article also formed the

basis for another conference, “Event, Signal, Affect” (2010) at the Faculty of Arts, Aarhus University, in which two key scholars in the field, Brian Massumi and Erin Manning, took part. Some of their further elaborations of the deleuzian, guattarian and simondonian philosophical concepts such as affect, signal and event have inspired many of the papers presented in this cluster. In fact, some of the papers were first presented at that conference. Other contributions have been added in order to expand the scope, feature different art forms, and challenge media theory.

All fourteen articles pertaining to this cluster respond to the question how embracing the concept “signaletic material” might broaden an understanding of contemporary media and the methodological consequences this may have, but also describe the specific sensations and affective involvements that each case study raises. Amongst them are video art and experimental film in the 1960s and 1970s, transversal experiments within poetry and writing, music dealing with implications of “new media” from the 1960s till today, digitally remediated film and photography, electronic art installations, the concept of music video in a broader media perspective, interactive installations and artistic interfaces, as well as media-and-body involving blogging, and finally architecture and political activism in city-spaces. What is common to all articles is an interest in describing intermediary, transversal and relational events taking place thus forming new ideas about time, space, bodies and the interrelations of these concepts.

In light of deleuzian film theory and the claim that the strength of the time-image of modern film is the escape from the logics of representation and narration, Bodil Marie Stavning Thomsen suggests in her article<sup>3</sup> that the so-called “signaletic material” of the film medium might also be

stretched to new media and the ability to create haptic surfaces, real-time relations and interfaces. As an example, Jon Kessler's art installation *One Hour Photo* (2004) is analysed, which again and again documents the sensation of real-time on the world's television screens on 9/11 by a simple videorecording of N.Y. postcards attached to strings in a mechanic installation, in order to show how a sign can be transformed into a signaletic material with the ability to alter haptic sensations.

The article written by Merete Carlson and Ulrik Schmidt<sup>4</sup> investigates Rafael Lozano-Hemmer's art installation *Pulse Room* as an interface in which the visitor is invited to take part in a relational subject-object intimacy transmitting the pulsing energy of her beating heart to the flashing of light bulbs. Carlson and Schmidt are especially pre-occupied with examining the relation between signifying processes and non-signifying material dynamism.

Andrew Murphie's article on the electrical art installations of Joyce Hinterding and David Haines<sup>5</sup> argues how their work can be seen as signal-work where new sensations are produced outside of the normal "syntax" of models of aesthetic experience. Murphie talks of "hacking" the aesthetic as a technical tampering with the aesthetic from within that challenges some aspects of thinking about both aesthetics and political ecology.

It is the body-machine interface that is the concern of Ulla Angkjær Jørgensen's article<sup>6</sup> on a video performance by VALIE EXPORT and an interactive digital 3D installation by Jette Gejl Kristensen. The article examines how the signal produces an aesthetic of the interface that can be said to be the moving virtual environment created by the encounter of body and machine.

In his contribution, John Sundholm<sup>7</sup> argues for the importance of the signaletic as a figure for approaching film and moving image history. He shows how the signaletic mode is an essential trait of the experimental film tradition, but also how sign and signal constitute different aspects of moving image media. The signaletic is not only a question of which technology or media that is being used but also how it is used. The latter point is stressed through an analysis of four moving image works made by Gunvor Nelson.

A similar—media-archaeologically reflected—point is made by Jesper Olsson who deals with the experimental scene of literature.<sup>8</sup> The article presents 1960s avant-garde poetry and art by Åke Hodell, Peter Weibel, and Henri Chopin, analyzing how codes and signals were employed in order to shed light on contemporary media aesthetics. Olsson is in particular concerned with how the act of reading is transformed through immersion in sound and through intersensorial address.

Likewise Thomas B. Bjørnsten<sup>9</sup> in his article approaches the signaletic through a discussion of recent sound art, arguing that in fact noise is the most productive trope for exploring contemporary sound art. Through an analysis of works by Toshiya Tsunoda and the producer team Basic Channel, Bjørnsten shows how the sonic signal and noise constitute the means by which sound and music may be opened up toward further potential signification.

In Mathias Bonde Korsgaard's article<sup>10</sup> the affective potentials of music videos are addressed in identifying the music video as a signaletic form of practice. One of the key features of video is the audiovisual modulation, and Korsgaard demonstrates through an analysis of the music video "WTF?" how even the human body is treated as an electronically or digitally coded *signal* and not as a representation. Thus, according to Korsgaard, music videos are an integral part of the contemporary audiovisual signaletic regime.

The transition from analogue photography to digitally produced and distributed images is likewise the topic of Mette Sandbye's article.<sup>11</sup> She argues that the concept of the signaletic enables an analysis of the new forms of photographic practices. Due to digital technology and Internet distribution, photography has reached a new social regime, as it were, creating relational situations and affective involvements between bodies and the photographic material. The new digital practices of the Internet display the presence and enable an experience of time being felt rather than preserved.

In his article, Carsten Stage<sup>12</sup> uses DIY images and films uploaded from a Lady Gaga concert in order to demonstrate how the felt sensations of a moving body and its levels of intensity are very much produced in relation to the projected screen

images of Gaga. The sensation of a real-time collective experience is fused with an individualized immediate real-time auteurism meant for another collective platform, namely the blog-sharing on the Internet. The signaletic material in this mediatized event is combining all those levels to one, becoming a concert event in which bodily traces are inscribed onto the rendered and documenting material.

Annette Svaneklink Jakobsen analyses the experience of architect Bernard Tschumi's orchestration of the relation between moving bodies inside the New Acropolis Museum in Athens and the ruins of the Acropolis outside as seen through the Museum's transparent glass.<sup>13</sup> A signaletic experience is created as the building becomes an experiencing field, or an interface between a here-and-now sensation of the body moving in relation to other bodies *and* the building's close surroundings, perceived through the glass facade.

Thomas Markussen's main concern<sup>14</sup> is to show how recent art interventions detour public awareness of the functionality of city space by attributing unusual or uneasy expressions to usual purposes. By using a signaletic non-representational approach he argues how contemporary interventions by the British art collective CutUp might be seen as a political negotiation of what public space is and how it could be sensible to its users in new ways.

A media-art installation in the city of Dresden by Markus Kison, *Touched Echo*, is the case study for Jonas Fritsch's article.<sup>15</sup> He discusses the possibility of exploring the affective workings of this art work in relation to Gilbert Simondon's ideas of the "signal" and of "pre- or transindividuation". It is Fritsch's point that this allows us to "ask questions about *how* we experience, what *makes us* experience, and what might be termed the conditions of emergence of experience"—rather than just focusing on what we experience and what sign(s) we read.

In his article, Christoph Brunner<sup>16</sup> proposes the term "immediation" to cover the immediacy of aesthetic sensation and the event as located in everyday life. It is a term to "grasp the midst of bodily shock" and to coin perceptual emergence. Through the example of the interactive media environment *Panoscope* by Luc Courchesne, Brunner discusses the application of this concept and how it is meant to facilitate the understanding of

how signals, matter, sensation, and thought can be seen to operate on the same plane.

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## Notes

1. Gilles Deleuze, *Cinema 2. The Time-Image* (Minneapolis, MN: University of Minnesota Press, 1989), 280. p. 29.
2. Bodil M.S. Thomsen, 'Signaletic, Haptic and Real-Time Material', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18148>
3. Ibid.
4. Merete Carlson and Ulrik Schmidt, 'Pulse on Pulse: Modulation and Signification in Rafael Lozano-Hemmer's *Pulse Room*', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18152>
5. Andrew Murphie, 'Hacking the Aesthetic: David Haines and Joyce Hinterding's New Ecologies of Signal', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18153>
6. Ulla A. Jørgensen, 'Bodies and Real-Time Interfaces: In Video Performance and Interactive Digital 3D Installation Art by VALIE EXPORT and Jette Gejl Kristensen', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18149>
7. John Sundholm, 'A Cinema of Presence and Proximity: Gunvor Nelson's Collage Films and the Aesthetics of the Signaletic Material Before the Electronic Signal', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18150>
8. Jesper Olsson, 'Connect and Immerse: A Poetry of Codes and Signals', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18614>
9. Thomas B. Bjørnsten, 'Sound [signal] Noise: Significant Effects in Contemporary Sonic Art Practices', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18615>
10. Mathias B. Korsgaard, 'Creation and Erasure: Music Video as a Signaletic Form of Practice', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18151>
11. Mette Sandbye, 'It has not been—it *is*. The signaletic transformation of photography', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18159>
12. Carsten Stage, 'Screens of Intensification: On DIY Concert Videos of Lady Gaga and the Use of Media Interfaces as Tools of Experience Intensification', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18161>

*Foreword*

13. Annette S. Jakobsen, 'Experience In-Between Architecture and Context: The New Acropolis Museum, Athens', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18158>
14. Thomas Markussen, 'The Disruptive Aesthetics of Hijacking Urban Space', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18157>
15. Jonas Fritsch, 'From Signal to Signification', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18155>
16. Christoph Brunner, 'Immediation as Process and Practice of Signalitic Mattering', *Journal of Aesthetics and Culture* vol. 4 (2012) <http://dx.doi.org/10.3402/jac.v4i0.18154>

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## Signaletic, haptic and real-time material

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### Abstract

This introductory article to the following “cluster of articles” proposes to apply the term “signal” as a theoretical and analytical category for a new approach to the bearings of electronic and new media in particular. As the term “sign” was formerly developed from linguistics, the term signal was developed from Norbert Wiener’s writings on mathematics and cybernetics. The electronic signal is a technological fact dating back to the telegraph that in a substantial way set the agenda for contemporary (popular) culture (electronic music, youth, and performance culture) and further facilitated the digital code and the Internet. In this article, as well as in the following articles, the term signal is above all applied in its broader sense to explore possible signaletic modes and characteristics in contemporary art and new media culture. It is thus a key point that technological implications could never be causal to aesthetic variations and cultural modes. Departing from this, this article explores artistic and cultural manifestations from the 1960s and onward in the light of the signal in order to analytically grasp the changes or supplements to the sign that in a contemporary culture is bringing new forms of events and affects to the fore.



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Today it seems obvious that a major attraction of digital, global media is the transmission of “real-time” signals, where the singular message is of minor importance. The connectedness to other people and places through electronic devices and signals has become a common denominator very different from reading signs in books, newspapers, galleries, or approaching the sign as a visual representation. According to McLuhan, all media are spatial extensions of human senses, so the book extends seeing and radio extends hearing.

One could add that film extends seeing, listening, and our sense of physical movement and time, not necessarily connected to the representation of space,<sup>1</sup> that video and television extend seeing and listening, as well as the sense of physical movement and real-time through direct transmission, feedback operations, and so on,<sup>2</sup> and finally, that the Internet and cell phones extend seeing, listening, movement, and interface embodiment in an ubiquitous hypermediated global space.<sup>3</sup>

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In our current realization of the “global village,” the real-time control of digital interfaces has superseded earlier ideas about time and space, where time was measured according to the movement of bodies in space. Space is no longer the stable grounds for measuring time as movement, creating linear narration coordinated by cause and effects. The linguistic sign prioritized linearity, the ability to differentiate between past, present, and future time, as well as cause and effect relationships. The prevalence of the electronic signal and the ability of digital technology to synthesize waves by codes and to create interfacial relations between (in Anna Munster’s phrase) “being in the body and representing/mapping the body from the outside”<sup>4</sup> can hardly be understood within the parameters of classical time and space. Since the “presentness”<sup>5</sup> of the transmitting electronic television signal from the 1950s and onward fostered the outlines of a globalized world that related former disparate places and bodies,<sup>6</sup> the demand for affective, relational situations created in the gaps between actual and virtual sites has gradually proliferated.

So, this gradual transition from a sign regime, based on the letter to a regime based on the electronic signal and the digital code has been in the pipeline for a long time, since the experience of the electronic signal of television and video was already one of “liveness,” when the iconicity of the filmic image yielded for grids of dots and lines. With the feedback and replay function of analog video technology, the images could follow the waves of the electronic signal and through the energy of light, which was always present as dots of “salt and pepper”, the video could contract and render time visible as matter.<sup>7</sup> With the advent of digital programming, synthetic images no longer carried the indexical impression of light and the perception of real space. On the other hand, the contraction of time-matter proceeded much faster and the impression of duration as a spatial phenomenon could be created. So what we identify as the real-time signal of new media is in fact created by reducing intervals of time, as Maurizio Lazzarato explains it, “Digital technology permits all wave-formed phenomenon’s to continue and to crystallize, from which the complete perception is composited.”<sup>8</sup> This new media situation has to be considered in all analyses of media and art, because the affective

involvement of the user in real-time transmission and interface controlling is the ubiquitous actuality. Real-time interface signals create new kinds of affective involvements between bodies and bodies and machines. Truth no longer resides in the index by way of media (e.g. light as trace of an actual “having-been-there” in the photograph).<sup>9</sup> On the other hand, digital coding has made communication very direct, immediate, and very close to, for example, oral, face-to-face authentic experience.<sup>10</sup>

In art production, the ability to digitally record something in fast motion and replay it in normal speed has been used in artistically skillful ways to investigate and give value to the affective and vibrating qualities of sense and perception. Bill Viola’s *Five Angels for the Millennium* (2001) and Lars von Trier’s *Antichrist* (2009) are able to give credibility to the experience of actualized time. It has been suggested that the “truth” of the “indexical rhetoric of cinema’s pre-digital photochemical past thus survives in the digital age, albeit now recast in the form of the temporal indexicality of the real-time surveillant image.”<sup>11</sup>

In this article, the procedures of “the signal” will be traced from the filmic time-image to the vibrating pattern of electrons in “live” video and further to the real-time digital interfaces in order to qualify Levin’s notion of the “temporal indexicality” of digital coding. The key question will be: How can real-time interfaces produce affective connections and encounters between actual spaces, sites and bodies and signaletic renderings of these?

## THE “SIGNALETIC MATERIAL” OF NEW MEDIA

According to Gilles Deleuze, the sense of transformation was produced in the film media in two ways: first, as movement of images with represented space functioning as the stable ground for the actions of the protagonist and, second, as free-floating signifiers of “pure time,” no longer related to the cause-effect chain of narration nor to the representation of space and movement. But even this latter type, termed the time-image by Deleuze, could not escape the media features of film—being recorded or “canned” information.<sup>12</sup> This might be the reason why Deleuze is very engaged in explaining how the automatism of film

images entails problems for the linguistically oriented French film criticism and at the same time makes him favorably disposed toward electronic media (television, video, and information technology). To grasp the material of film media, Deleuze proposes the term “signaletic material” (*matière signalétique*), which:

includes all kinds of modulation features, sensory (visual and sound), kinetic, intensive, affective, rhythmic, tonal, and even verbal (oral and written). [...] But, even with its verbal elements, this is neither a language system nor a language. It is a plastic mass, an a-signifying and a-syntactic material, a material not formed linguistically even though it is not amorphous, and is formed semiotically, aesthetically, and pragmatically. It is a condition, anterior by right to what it conditions. It is not an enunciation, and these are not utterances. It is an *utterable*.<sup>13</sup>

Deleuze prefers Charles Sanders Peirce’s semiotics to Christian Metz’s failed ambitions to apply linguistic semiology to cinema, as Peirce was well aware that “the language system only exists in its reaction to a non-language-material that it transforms.”<sup>14</sup> In the aforementioned introductory statements to *Cinema 2: The Time-Image*, Deleuze makes it clear that it is his main purpose to pave the way for an alternative understanding of modern film in which time, like rhythm in music, actualizes the composition as a direct sensation of time. With modern film (starting with Italian Neo-realism and French Nouvelle Vague), time can be sensed directly as pure time, since images and their relations no longer refer to the story told as a (changing) whole. As time in modern film “is out of joint” with the movements, actions, and affects of bodies in represented physical space, images can be thought provoking through compositions where virtual time can dominate actual as well as represented space. In his conclusion of *Cinema 2: The Time-Image*, Deleuze’s resistance to understanding cinema in terms of narration and semiology surfaces once again, as he continues his line of argument concerning “the signaletic material” and states that “[c]inema is not a universal or primitive language system (*langue*), nor a language (*langage*)” but a “non-linguistically formed ‘content’.”<sup>15</sup>

We should identify Deleuze’s research into the “signaletic material” of cinema as succeeding Walter Benjamin’s interest in the automatic move-

ment of film in “The Work of Art in the Age of Mechanical Reproduction.”<sup>16</sup> Benjamin’s vision of the reproductive (or automatic) qualities of film is continued in Deleuze’s positive vision on electronic and digital media, since film, the “automata of movement, made way for a new computer and cybernetic race, automata of computation and thought, automata with controls and feedback.”<sup>17</sup> He succeeds in extending the impact on the “signaletic material” of cinema, in describing electronic media (tele, video, and numerical) as follows:

The organization of space [...] loses its privileged directions, and first of all the privilege of the vertical which the position of the screen still displays, in favor of an omni-directional space which constantly varies its angles and co-ordinates, to exchange the vertical and the horizontal.<sup>18</sup>

He continues to characterize the image as constantly being cut into another image, being printed through a visible mesh, sliding over other images in an “incessant stream of messages,” and the shot itself is less like an eye than an overloaded brain endlessly absorbing information.<sup>19</sup>

This description comes very close to Lev Manovich’s view of the image in new media, that it “in a traditional sense, no longer exists.” The “sequential scanning—circular in the case of radar, horizontal in the case of television” never gives us a simultaneous representation (an image), but only “tracks on a surface.”<sup>20</sup> Maurizio Lazzarato adds time to this description:

The division in lines or frames is just a *graduation in time*: the opening or closing of the *time-window* that internally marks the active periods of the continuing flow of electrons. The image is in this way a living and dynamic field of energy, an oscillation that only seems fixed to the extent that it exceeds our capacity to a degree to perceive small units of time.<sup>21</sup>

Thus the “image as sign” has through the works of Benjamin, Deleuze, Manovich, Lazzarato, and others increasingly been replaced by “the signaletic material” that became present on the surface of the video-screen as electronic lines and dots, leading neither to a representation of time nor space but to a becoming of time itself in the live signal and further to time as the dominant vector

of digital variation, even within the production of images.

In elaborating on the aforementioned Deleuze-citation, Anna Munster concentrates on “the way in which a dynamic between sequential and non-sequential variation (chronological and non-linear time) begins to function as a set of temporal coordinates for digital aesthetic production.”<sup>22</sup> In describing a “general shift from a located, spatialized aesthetics to a distributed, temporal aesthetics,” she states that,

[i]t is as if images can no longer be located as distinct sets of coordinates upon a grid providing them with place and context in a system. They are now laid out on a plane, to be organized principally by directions and speeds in time: backwards, forwards, fast, and slow.<sup>23</sup>

I would argue that those dots, lines, and “salt-and-pepper” noises of the video that can also be seen as pixelations on digital surfaces indeed are the denominators of the paradigm of the signal or “a distributed, temporal aesthetics.”<sup>24</sup> Those variations on the surface plane can otherwise be described as “haptic” in the theoretical tradition arising from Alois Riegl, Gilles Deleuze, and Félix Guattari, as well as Laura U. Marks.<sup>25</sup> However, in a new media framing the “haptic” surfaces have scattered all over, surpassing the inscription of the materiality of the grid in the tradition of avant-garde minimalism or abstract aesthetics.<sup>26</sup>

The “signaletic image” has indeed exceeded the grid in a way that was only dreamt of by Deleuze but that—on the other hand—was well under way in the video technology. What—according to Lazzarato—characterizes the video image, could apply for electronic and new media in general: “A place, a movement space for time as such. It is no longer quite simply about an image that is going to be seen but about an image in which you interfere, with which you work (a time of events).”<sup>27</sup>

The social and cultural implications of the signal could be further expounded by Lazzarato’s coining of the term “immaterial labor,” which describes the cybernetic computer control of labor in a post-Fordist industrial culture and also the intellectual and creative labor that everybody produces creating subjectivity in a consumer culture (fashions, artistic markers, norms of behavior, etc.).<sup>28</sup> In a wider context, the widespread use of the term “performativity,” which

also marks the transformation from sign value to a valuation of signal matter in an ongoing process of transformation and repetition without beginnings and endings, might also be seen in the context of this new paradigm of the signal. Erika Fischer-Lichte, Judith Butler, Jon McKenzie, and Philip Auslander are among the many (visual) cultural analysts who have critically reminded us of the key feature of repetition and recording within the (accumulative and transformative) value of performance and performativity.<sup>29</sup>

Thus, this article proposes to establish a general distinction between sign (and object) and signal (and interface), where the latter refers to the real-time transmission of electronic and new media in particular, since manipulation, feedback operations, and control are integrated parts of both the electronic signal and the digital code. The increasing transition from the sign as prevalent mode to the signal has occurred since the 1960s. The electronic live signal had certainly an overwhelming impact on the art scene at this time—both in the avant-garde as well as popular culture, especially in the music scene—but it is only recently that the operations of the signal has become ubiquitous in all art- and media-genres.

## THE SIGNAL IS THE MESSAGE

With digital electronic media, the famous saying of Marshall McLuhan, “the medium is the message,”<sup>30</sup> becomes with Malcolm Le Grice strikingly true as each “component of the image, normally assumed to be a ‘pixel’ or single point of the image is stored as numerical data giving precise value to its intensity (or luminance) and color (or chrominance)” within the software program. “The flow of information is inscribed in a (non-discursive) mathematic language and can neither be grasped as matter nor light,”<sup>31</sup> but we can with Maurizio Lazzarato understand all electronic and new media images as “transformations and combinations (compositions) of intensities, energies and fields that are played out in the flow of power. Electro-magnetic power in the case of video, optic power in the case of the telematic algorithmic flow of the computer.”<sup>32</sup> So when we in the field of literature, art, and media would like to analyze new media and its implications to older media (i.e. remediation; Bolter and Grusin)<sup>33</sup> on both a broad scale and on a small scale, it might be

relevant to remember just how Norbert Wiener expressed himself in 1948, inspiring McLuhan in 1964 and Nam June Paik in 1966. Wiener wrote, “the signal, where the message is sent, plays an equally important role as the signal, where the message is not sent.”<sup>34</sup> It is striking that Wiener stresses “the signal,” not “the medium” as McLuhan did. This seems far more precise considering that the newest innovation of digital, global media and art alike is the control of “real-time” signals, where the interfacing of signals is the message that affects us. The (electronic) signal and the importance of being “connected” in “cybernetic space” is our new common universality that slowly supersedes dominance of the (linguistic) sign.

This increasing emergence of the regime of the signal have had vast effects. Theories of the event have become predominant in aesthetic and cultural theories, and laws of copyright are being undermined. The signal is not just that by which messages are sent or fictions created. Nor is the viewer/reader/listener inserted in the waves of the signal. We should rather understand the “signaletic interface” as the creation of situations in which the flow of information infinitely could generate actions and thus creative time.<sup>35</sup> The software carries information and information is

software, just as images and the things they used to portray can no longer be separated. Thus, understanding the features of the electronic signal might prove to be the “missing link” to a clearer understanding of many contemporary artworks. The first work selected here shows the procedures of the signal as an aesthetic marker in making the sensation of it visible, audible, or felt. The second work is chosen in order to enable or provide a possible realm of understanding the operations of the interface as an embodied fold between virtual and actual time.

### JON KESSLER, *THE PALACE AT 4 A.M.*

Jon Kessler’s *One Hour Photo* (2004)<sup>36</sup> has been exhibited as a part of *The Palace at 4 A.M.* in venues such as the Danish Museum of Modern Art, Louisiana, 2008.<sup>37</sup> This example clearly marks the transference from sign to signal and in doing so it stresses one implication of the signal: the haptic, time-transmitting surface of the monitoring screen. We are looking at (Figure 1) the monitored real-time digital filming of postcards showing the World Trade Center in Manhattan. In simulating the pilot’s perspective from one of the suicide flights toward the World Trade Center



Figure 1. Jon Kessler: *One Hour Photo* (2004). Detail from installation © Jon Kessler.

on September 11, Kessler has placed different postcard icons of New York on strings attached to a motor that slowly lets various perspectives of the twin towers pass before the camera as they are transmitted real time to the camera monitor. This process leads the visitor to consider the threefold relation between

- (1) The 3D illusion of a photographic sign (a NY icon).
- (2) The vivifying scan of the surveillance camera.
- (3) The “signaletic” transmission of the real-time filming process on the monitoring screen.

Kessler’s work, created in the aftermath of 9/11, lets the exhibition visitors witness the transformation of sign to signal as a traumatic event, since the appearance of the haptic opaqueness of the screen is marked as a result of this passage. The image as sign disappears for another sensation: the haptic sense of the scanned now on the real-time surface. This procedure also makes Kessler’s work a performance, since the sign as a representation of a real physical object in space is transformed to a doing, a scanned happening, showing the (Figure 2) “signaletic material” of digital video. The optical mastering of 3D space is transformed into a transmission report to be played and sensed over and over again. So, the bodily time-based movement in space, which Deleuze and Guattari call striated space or mapping of space in order to territorialize land, has been partly replaced by smooth or nomadic space, where space is just as unknown to us as time.



Figure 2. Jon Kessler: *One Hour Photo* (2004). Detail from installation © Jon Kessler.

Framed differently, Jon Kessler’s work reminds us that space as based upon cybernetic time procedures has to be explored as haptic space, i.e. as time, coded to electronic signals. But when looking on this artwork as a performative installation in real physical space we also get a sensation of how our own body—positioned equally as the (absent) photographer, flight-captain and the viewer—is inscribed into the interface folding between the 3D illusion of space to the 2D surface of a real-time illusion. The repetitive performance of *One Hour Photo* in other words shows us the operations of embodied involvement, in which the (illusory) space of a sign (the postcard) is transformed to the (illusory) real time of the signal. So even though we know that the postcard is only representing 3D space as a sign (a postcard) and might share the opinion of D.N. Rodowick that the “video image” is a “discontinuous, fluctuating and pointillist” signal, that is ignorant of “both spatial and temporal unity,”<sup>38</sup> the viewer’s performative interface with the installation is bound to create some kind of affective involvement created in the “space” between the two image forms. This performative installation has the potential of forming an event, in which the infinite, repetitive relation created between the sign and the signal has implications for the viewing body. Jon Kessler’s work in other words describes the embodiment of the observer by giving the viewer the active role of observer and receiver at the same time.

### HAPTIC SENSATIONS OF “NOW-HERE”

We know that real-time transmissions relate distant places and spaces by means of the scanning of the signal. Local time (chronological time in a specific place on earth) is made obsolete in real-time transmissions, as evidenced by all TV viewers on 9/11. But the sense of “liveness” of real-time immediacy is produced as we, the users, witness the electronic surface scanning of the signal. Filmic “reel-time” was effectively replaced by electronic real-time with Nam June Paik’s installation, *Point of Light* (1963), in which the sound signal of a radio was sent through a TV-receiver and thereby transformed to an electronic signal of light. This light on the radio transmitter could be switched on and off by the guests in the gallery witnessing one of the first signaletic performances

of the transmitted “now.” Time could now be presented directly as “liveness” or “event” within the signal, as became clear in many of the manifestations of the 1960s.

Since then the art scene has witnessed various artworks, mostly within the performance scene, where similar kinds of “signalitic events” or “live” decoding of electronic signals are essential for the sense of real-time experience. This “live” decoding is identical with sensing the “now” of the signal, the scan, the re-wipe, or the transmission as electronic lines, salt-and-pepper dots, or digital pixels on the monitor. Time as real-time, as intensity or “now-here” (as opposed to “nowhere”), has become one of our most familiar experiences of time with new media.

This is the “haptic event” of new media. The term haptic has recently been applied to documentary film, video, and new media by Laura U. Marks.<sup>39</sup> She bases her work on Austrian art historian Alois Riegl’s separation of “optic” and “haptic” art in his book *Late Roman Art Industry*,<sup>40</sup> in which he uses the Greek word “haphē” (meaning to grab, to touch) to make explicit the capacity of visual perception to experience a kind of “touch” when looking at patterns, carvings, and details in woven materials, like some ornaments and carpets. The optic capacity is active whenever visual decoding is more oriented toward lines and perspective in depth. The haptic quality is normally found in surfaces seen at close range.

Gilles Deleuze and Felix Guattari also explore the “haptic” in their collaboration *A Thousand Plateaus* describing the nomadic qualities in rhizomatic structures.<sup>41</sup> In Chapter 14, haptic or smooth space is described as a possible response to variations and changes in physical spaces as well as artistic ones, when lines are active *between* dots and points, and do not create conjunctions and connect one point to another. A haptic line has no beginning and no end, and its law is variation. It has expression, but no form, and it creates repetition and rhythm without symmetry. Relating this to the haptic surfaces of new media, the electronic transmission has become inseparable from the salt-and-pepper dots or digital pixels that obstruct illusionary depth.

In Deleuze’s book on Francis Bacon, the haptic as an analytic term is explicitly used to characterize Bacon’s special kind of expressionistic realism.<sup>42</sup> So while Laura U. Marks is relating

the haptic to an almost physical encounter with the screen surface as body, Deleuze relates haptic compositions and affects to expressionistic art after Cezanne. With new media this difference between the two interpretations of the haptic has been effaced. And this effaced condition, where haptic compositions and surfaces can actually have various layers of meanings within the sensation of an embodied “now-here,” must be one of the key points for an exploration of the signal’s bearings in a broader mode.

### THE INTERFACE AS A FOLDING THAT CREATES AFFECT

In her chapter on “Interfaciality,” Anna Munster is very precise in describing the interfaces between humans and machines as “the interstitial space between matter and code,”<sup>43</sup> in which the affective quality experienced in viewing a film (i.e. the sensing of “the signalitic material”) becomes a folded experience. In the interface “[m]atter has become a substrate readable and accessible only in the third person, and the third person is a perspective rendered by the machine.”<sup>44</sup> She interprets this technological rendering of the body positively. Like Benjamin and Deleuze before her, she acknowledges that the technological “impersonal process of subjectivity” contributes indeed to the definition of affect, but it is important to understand that information aesthetics operates with “expressive dearth” rather than excess.<sup>45</sup>

To better understand the interface as a folding in the “the interstitial space between matter and code,” I would like to refer to Bill Viola’s description of video-artist Peter Campus’ method, created in the 1960s. Viola is inspired by Campus’ dissociation of the live surveillance camera from the eye and thereby making it “an extension of the room.”<sup>46</sup> This statement can be exemplified in Campus’ installation *Interface* (1972). In this work the visitor entering the gallery room was filmed by a video camera positioned behind a big glass rectangle, which like a mirror reflected the visitor’s body. Thus, the mirror representation was doubled by the projected filmed representation of the same body, as the video camera formed a short circuit connection with a projector standing on the same side of the glass rectangle as the

visitor. Bill Viola comments on this and other works from Campus:

Video literally evokes the third person. Co-existing with one's own self-image is an inherently paradoxical, tautological situation. Up to this point it had only been a philosophical conundrum described in literature, but now, with the advent of live camera, it was given palpable form. Through the new technology, Campus was able to experience himself from outside himself—to objectify his subjectivity and to directly engage his Double [...].<sup>47</sup>

So, in this way video art should also be acknowledged as an anticipation of contemporary interfaces as “a topological mapping of self as a pattern of microcompositions traversing the gaps between interiority and exteriority.”<sup>48</sup> In fact, it is this interfacial folding between an actual body (experienced from the inside) and a virtual body (experienced from the outside), that for Munster paves the way for affective sensations “between sensing and rendering”<sup>49</sup> and thus makes new media accessible to aesthetic creations of many kinds:

Affect arises relationally and is produced out of the difference between being in the body and representing/mapping the body from the outside. Affect sustains the singularity of sensing and of representing as a differential experience of embodiment, one in which alterity has a place. And in any interface between bodies and technology we will always encounter this difference. Informatic affect is a process of subjective bodily re-composition that occurs in relation to the alterity that pattern and code renderings open up for us.<sup>50</sup>

Munster is inspired by Brian Massumi's use of the term affect that theoretically derives from Deleuze's readings of Spinoza. Therefore it is important to recall Massumi's constant warning that affective sensations are not somehow directly related to new media interfaces producing 3D immersive sensations. On the contrary: affect can easily arise from analog art works and 2D relations, and Massumi seems to be favorably disposed towards haptic spaces and a “diaphanous surface that's everywhere and nowhere at the same time, a dimensionless semblance of lived space.”<sup>51</sup> What interactive art and interfaces can do according to Massumi is to “take a situation as its

‘object’” and open “micro-intervals” in creating “performative envelopes” or “dynamic or operative frame[s].”<sup>52</sup>

I think it is reasonable to state that all manner of interfaces of new media has the potential to create affective encounters of many kinds. As long as a folding relation between in Munster's words “being in the body and representing/mapping the body from the outside” is created, the way can be paved for new understandings of how identity patterns might be created in the new societies of control. The concept of “individuality” might, as Deleuze proposes, be replaced by “dividuality,”<sup>53</sup> and this might be an improvement. Apart from the ability to create affective encounters within the folded operation of the signal, new electronic and digital media can also bring the sensation of affective involvement within the experience of the signal to the forefront. This can be done—as showed with the example of Jon Kessler's *One Hour Photo*—by emphasizing the haptic surface experience.

## WHAT CHARACTERIZES THE SIGNAL?

The photographic indexes and New York icons are transformed into digital video signals before our eyes in Jon Kessler's *One Hour Photo*. It is the media transformation from sign to electronic signal that is the main aesthetic event in this work exploring the new haptic surface of user interfaces. In Peter Campus' *Interface*, the folding operation of the interface is explored in a way that elucidates the affective involvement within the embodiment (an outside view is experienced from within and visa versa).

In his article “The Apparatus—a World unto itself,” Peter Weibel discusses how modern art (and especially the avant-garde) in the twentieth century has certainly been intrigued and inspired by the machine.<sup>54</sup> The possibility of real-time transmissions of digitally encoded electronic signals has not only given access to the quality of the signal itself as a material that could be explored through the haptic surface. It has also given access to interfaces in which the real body can interfere with ones own body or other virtual bodies in “pure” real-time encounters in a hyperspace in which according to Deleuze “space [...] is born from time.”<sup>55</sup> Such space is by now familiar to us. This space has no depth, since hyperspace is

constructed within the electronic time of the signal. However, the sensation of the signal might appear as haptical surface space in contemporary real-time transmission and art alike. If the proposed change from sign to signal has to be taken into account some profound theoretical issues surfaces. The signal and its operations has to be described in detail, and a media-archaeological perspective also have to substantiate how the prevalence of the linguistic sign was attributed to the Gutenberg galaxy, literary syntax and grammar, and the illusion of perspective of depth in painting. Modern Western civilization has obviously predominated by prioritizing the optic over the haptic and the individual over the “dividual.” In contemporary culture narration as a forthcoming, historical production of memory according to the operations of the sign has gradually been superseded by rhizomatic grids of modulating haptic surfaces. This has to be analyzed in relation to the a-syntactic transmissions of the electronic signal. The perspective of Western thinking based on a topologically centralized eye and corresponding gaze from the outside has to be reflected in relation to the new interfaces in which the image-screen has been replaced by affective folding between inside and outside.<sup>56</sup> The everywhere and nowhere of perspective outside narration has been transformed to a quest for the “now-here” of the “live” man-machine interfaces. New kinds of sensations are changing individuals to “dividuals,” and the increasing, haptic noise of the signal deserves interpretation.

## Notes

1. Cf. Gilles Deleuze, *Cinema 1: The Movement-Image* (Minneapolis, MN: University of Minnesota Press, 1986); Gilles Deleuze, *Cinema 2: The Time-Image* (Minneapolis, MN: University of Minnesota Press, 1989).
2. Cf. Nam June Paik, ‘Cyberated Art’, in *The New Media Reader*, ed. Noah Wardrip, Fruin and Nick Montfort (Cambridge, MA: MIT Press, 2003); Peter Weibel, ‘The Apparatus World—A World unto Itself’, in *Eigenwelt der Apparaten-Welt. Pioneers of Electronic Art*, ed. David Dunn (Linz: The Vasulskas, 1992); Gene Youngblood, *Expanded Cinema* (New York, NY: Dutton, 1970).
3. Cf. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001); John Tomlinson, *Globalization and Culture* (Cambridge: Polity Press, 1999).

4. Anna Munster, *Materializing New Media. Embodiment in Information Aesthetics* (Hanover and London: University Press of New England, 2006), 142.
5. Mary Ann Doane, ‘Information, Crisis, Catastrophe’, in *New Media, Old Media: A History and Theory Reader*, ed. Wendy Hui Kyong and Thomas Keenan Chun (New York, NY: Routledge, 2006).
6. See Arjun Appadurai, *Modernity at Large* (Minneapolis, MN: University of Minnesota Press, 1996); Tomlinson, *Globalization and Culture*.
7. Maurizio Lazzarato, *Videophilosophie. Zeitwahrnehmung im Postfordismus* (Berlin: b\_books, 2002), 67 (my translation).
8. Ibid., 111.
9. Roland Barthes, *Camera Lucida* (New York, NY: Hill and Wang, 1981).
10. Tomlinson, *Globalization and Culture*.
11. Thomas Y. Levin, ‘Rhetoric of the Temporal Index: Surveillant Narration and the Cinema of “Real Time”’, in *CTRL [SPACE] Rhetorics of Surveillance from Bentham to Big Brother*, ed. Thomas Y. Levin et al. (Cambridge, MA: MIT Press, 2002).
12. Paul Ryan, *Cybernetics of the Sacred* (New York, NY: Anchor Press, 1974).
13. Deleuze, *Cinema 2: The Time-Image*, 29 (Deleuze’s italics).
14. Ibid., 29.
15. Ibid., 263.
16. Walter Benjamin, ‘The Work of Art in the Age of Mechanical Reproduction’, in *Media and Cultural Studies. Keywords*, ed. Meenakshi Gigi Durham and Douglas M. Kellner (Malden, MA; Oxford and Victoria: Blackwell, 2001).
17. Deleuze, *Cinema 2: The Time-Image*, 264.
18. Ibid., 265.
19. Ibid., 267.
20. Manovich, *The Language of New Media*, 99–100.
21. Lazzarato, *Videophilosophie*, 2002, 72; Lazzarato’s italics (my translation).
22. Munster, *Materializing New Media*, 173.
23. Ibid., 174.
24. Ibid.
25. Cf. Alois Riegl, *Late Roman Art Industry*, trans. R. Winkes (Rome: G. Bretschneider, 1985); Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (London: Continuum, 2004); Laura U. Marks, *The Skin of the Film. Intercultural Cinema, Embodiment, and the Senses* (Durham and London: Duke University Press, 2000); Laura U. Marks, *Touch: Sensuous Theory and Multisensory Media* (Minneapolis, MN: University of Minnesota Press, 2002).
26. Cf. Rosalind Krauss, ‘Grids’, in *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge, MA: The MIT Press, 1985).
27. Lazzarato, *Videophilosophie*, 79.
28. Maurizio Lazzarato, ‘Immaterial Labour’, in *Radical Thought in Italy: A Potential Politics*, eds. Michael

- Hardt and Paolo Virno (Minneapolis, MN: University of Minnesota Press, 1996).
29. Philip Auslander, *Liveness. Performance in a Mediatized Culture* (New York, NY and London: Routledge, 1999); Judith Butler, *Bodies that Matter* (New York, NY and London: Routledge, 1993); Jon McKenzie, *Perform or Else. From Discipline to Performance* (New York, NY: Routledge, 2001); Erika Fischer-Lichte, *The Transformative Power of Performance: A New Aesthetics* (New York, NY: Routledge, 2008).
  30. Marshall McLuhan, *Understanding Media; the Extensions of Man* (New York, NY: McGraw-Hill, 1964).
  31. Malcolm Le Grice, *Experimental Cinema in the Digital Age* (London: BFI Publishing, 2001), 268.
  32. Lazzarato, *Videophilosophie*, 87.
  33. J. David Bolter and Richard A. Grusin, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 1999).
  34. Paik, 'Cyberated Art'.
  35. Cf. Lazzarato, *Videophilosophie*, 81–86.
  36. Cf. [http://www.jonkessler.com/works/onehourphoto\\_m.htm](http://www.jonkessler.com/works/onehourphoto_m.htm) (accessed November 23, 2011).
  37. Jon Kessler, *The Palace at 4 A.M.* (New York, NY: Charta Books, 2007).
  38. D.N. Rodowick, *The Virtual Life of Film* (Cambridge, MA and London: Harvard University Press, 2007), 137–8.
  39. Marks, *The Skin of the Film; Marks, Touch*.
  40. Riegl, *Late Roman Art Industry*.
  41. Deleuze and Guattari, *A Thousand Plateaus*.
  42. Gilles Deleuze, *Francis Bacon: The Logic of Sensation* (London: Continuum, 2003). See also Bodil Marie Thomsen, 'Alt stof udsender "billeder". Om det visuelle som begivenhed', in *Fluglimier. Om Deleuzes filosofi*, ed. Mischa Sloth Carlsen et al. (København: Museum Tusulanums Forlag, 2001).
  43. Munster, *Materializing New Media*, 139.
  44. *Ibid.*, 141.
  45. *Ibid.*, 140.
  46. See <http://www.artinamericamagazine.com/features/peter-campusimage-and-self/> (accessed November 23, 2011).
  47. *Ibid.*
  48. Munster, *Materializing New Media*, 143.
  49. *Ibid.*, 142.
  50. *Ibid.* A more elaborate analysis of Campus' *Interface* can be found in Bodil Marie Stavning Thomsen: 'The Haptic Interface. On Signal Transmissions and Events', in *Interface Criticism. Aesthetics Beyond Buttons*, ed. Christian Ulrik Andersen and Søren Bro Pold (Aarhus: Aarhus University Press, 2011).
  51. Joke Brouwer, 'The Thinking-Feeling of What Happens. An Interview with Brian Massumi', in *Interact or Die!* (Rotterdam: V2\_Publishing/NAi Publishers, 2007), 85.
  52. Brouwer, 'The Thinking-Feeling of What Happens', 86.
  53. Gilles Deleuze, 'Postscripts on Societies of Control', in *CTRL [SPACE]: Rhetorics of Surveillance from Bentham to Big Brother*, ed. Thomas Y. Levin et al. (Cambridge, MA: MIT Press, 2002).
  54. Weibel, 'The Apparatus World'.
  55. Deleuze, *Cinema 2: The Time-Image*, 264.
  56. Cf. note 4.

# Pulse on pulse: modulation and signification in Rafael Lozano-Hemmer's *Pulse Room*

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## Abstract

This article investigates the relation between signifying processes and non-signifying material dynamism in the installation *Pulse Room* (2006) by Mexican Canadian artist Rafael Lozano-Hemmer. In *Pulse Room* the sense of pulse is ambiguous. Biorhythms are transmitted from the pulsing energy of the visitor's beating heart to the flashing of a fragile light bulb, thereby transforming each light bulb into a register of individual life. But at the same time the flashing light bulbs together produce a chaotically flickering light environment composed by various layers of repetitive rhythms, a vibrant and pulsating "room". Hence, the visitor in *Pulse Room* is invited into a complex scenario that continuously oscillates between various aspects of signification (the light bulbs representing individual lives; the pulse itself as the symbolic "rhythm of life") and instants of pure material processuality (flickering light bulbs; polyrhythmic layers). Taking our point of departure in a discussion of Gilles Deleuze's concepts of *modulation* and *signaletic material* in relation to electronic media, we examine how the complex orchestration of pulsation between signification and material modulation produces a multilayered sense of time and space that is central to the sensory experience of *Pulse Room* as a whole. *Pulse Room* is, at the very same time, a relational subject-object intimacy and an all-encompassing immersive environment modulating continuously in real space-time.



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**Keywords:** *electronic media; signaletic material; signifying processes; modulation; Rafael Lozano-Hemmer; pulse; sensation; space; time*

According to art historian Edward Shanken "[o]ne of the most interesting developments over the last four decades has been the use of electronic media by artists to transform or translate between

various forms of energy."<sup>1</sup> Unlike static forms such as photography, painting, and sculpture, the electronic artifact—in the broad sense including film, electronic light art, sound media and digital

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media—is essentially processual, “energetic”. It does not merely record or reflect energy, but “transforms” and “translates” it from one source to another and throughout the entire medium as a total “field of energy”.

Hence, the material nature of the medium has not only changed with electronic media from something that merely records energy in a static form and reproduces information by analogy, to something that has become essentially dynamic and continuously effective in our own surroundings. Apart from its ability to “transform or translate between various forms of energy” the electronic medium has itself become the source of a *new* energy, produced in and by the medium alone as an incessantly pulsing, flickering, vibrating matter.<sup>2</sup>

The understanding of electronic media as generator or producer of energy entails significant implications for the aesthetic experience and conceptual understanding of electronic art in general, including digital art. For instance, the production of energy cannot be understood as a result of external processes outside or before the situation in which the energetic material is being produced. The energetic production is not the result of a representational or signifying process that has now taken form in the electronic material, but something that has its sole origin in the medium. It is produced and transmitted *in* the medium, and the changes taking place are due to variations in the material distribution *in* the electronic medium in question.

The production of new energy in electronic media is thus comparable to what Gilles Deleuze, in specific relation to the cinematic image, has called a *signaletic material*.<sup>3</sup> A signaletic material constitutes a first, a-signifying production of energy. This material may potentially become representational or signifying. But utterances, narrations and representations “only exist in [their] reaction to a *non-language-material* that [they transform].”<sup>4</sup> In D.N. Rodowick’s words, movement images, including electronic images, are being produced “anterior to all signification. The most that can be said about them is that they do not yet signify. However, they are ‘signaletic,’ producing signals or representama, since matter is already ‘luminous’ or a fundamental appearing.”<sup>5</sup>

No matter what the electronic medium signifies or transmits, its representational elements will

necessarily manifest themselves through basic modulations in a signaletic material. This energetic production, which constitutes the “fundamental appearing” of the electronic medium, is continuously transforming and varying the image displayed in the medium, but it does so in a continuous variation that is taking place in *real* space-time. The signaletic material is characterized, says Deleuze, by a “modulation of the object itself”,<sup>6</sup> and modulation “is the operation of the Real, in so far as it constitutes and never stops reconstituting the identity of image and object.”<sup>7</sup>

Thus, the material properties of electronic media—i.e. electromagnetic energy (light) and mechanical vibrations (sound)—have themselves not only become sources of a pure, energetic production taking place before any representation or signification. Because of its material dynamism alone, the electronic medium will always and in itself organize a *specific spatio-temporal situation* by way of a modulatory variation in the real object as energetic medium: the electronic medium produces its own space-time. When the electronic medium becomes an object of sensation, it therefore has a capacity—unlike non-electronic media such as sculpture and painting—for producing at least three different spatio-temporal situations simultaneously, three “worlds”, each with their own characteristics and origin: first, as already suggested, the electronic medium is capable of what we, by slightly expanding a formulation by Deleuze, could call a *direct presentation of real-space-time* produced by and in the signaletic material as a “plastic mass”.<sup>8</sup> Second, it has the capacity for a spatio-temporal *representation in real-time* (real-time mediation); and third, it is able to produce an *indirect representation of space and time* (recording, narration, playback). What is often referred to as real-time electronic media, e.g. television or the webcam, may transmit images and information in real-time, but they will still only present real-time indirectly through a spatial representation. What real-time mediation produces is a *relative* real-time, determined by a temporal connection in the medium between two disparate spatial conceptions—real and mediated space. Real-time in the electronic medium is only *produced directly* by the spatio-temporal modulations of the real that are taking place in the signaletic material. This is the real real-time aspect of electronic media: the modulatory flow of a

signaletic material, filling up and resonating throughout the experiencing subject's own time-space; the pure, immanent production of energy that sets the real world in mediatized vibration.

Because of this triple production of space and time, electronic media have a strong potential for creating complex and layered aesthetic situations. Many recent art works have explored this potential thoroughly, especially within interactive media-installations. *Pulse Room* (2006) by Mexican–Canadian artist Rafael Lozano-Hemmer is a profound example of this.

## PULSE ROOM

*Pulse Room* is a large-scale installation featuring 100 clear incandescent light bulbs suspended from the ceiling in a regular, grid-based structure at a height of 3 m. Each bulb flashes in an individual, repetitive pulse. Together the bulbs compose a coherent event characterized by the tension between the grid-based order of the bulbs and the dazzling chaos of light generated by their random, non-synchronized pulsations. *Pulse Room* displays a “total” spatio-temporal event under continuous variation, a pulsing “room” of light surrounding the visitor.<sup>9</sup>

In a dark corner of the exhibition room, however, one bulb stands out from the grid.<sup>10</sup> It is suspended lower than the others (about 1.7 m off the ground) and positioned in front of a metal sculpture with two handles. When the visitor grips the two handles, the pulse is detected by a computer and sets off the single bulb in front of the sculpture.<sup>11</sup> As long as the visitor holds the handles, it flashes in the rhythm of his or her pulse. After letting go of the handles, there is a momentary blackout in the entire room. When the flickering field of light comes on again shortly afterwards, the pulse representing the heart pattern of the visitor has been transferred to the first bulb in the grid where it now beats in unsynchronized irregularity with the flashing pulses of the other most recent 100 participating visitors. Each time someone touches the handles, a new heart pattern is sent to the first bulb pushing the other pulses in the grid on step forward.

This overall structure of the installation enables various perceptual relations between the visitor and the work, which accordingly will affect his or her sense of space and time. These experiential

differences are the result both of specific, often quite subtle, compositional nuances in the work and of perceptual variations in the visitor's perspective on various aspects of the work. Of greatest significance here is the difference between the visitor's experience by the sculpture-interface in the dark corner of the room, and when he or she is situated out in the flickering field. At the most basic level, the visitor's experience by the sculpture-interface is characterized by a subject–object relation to the static sculpture with its firm handles and the single bulb isolated from the rest of the grid, potentially producing a sense of *localization* in the room. In the total field of flickering light, however, this sense of local subject–object relation will most likely dissolve into a more ambient experience directed towards the entire, large-scale installation as a flickering surround.

In this way the spatial experience in *Pulse Room* is intricate, marked as it is by a tension between a relational subject–object experience by the sculpture-interface and an ambient sensation of the work as a flickering whole.

However, this tension is not alone due to contrasts between different spatial properties of the work. It also depends strongly on the work's production and distribution of electric energy and the sense of time it organizes. Indeed, the distribution of luminous energy in *Pulse Room* has quite different aesthetic potentials by the sculpture-interface and in the space-at-large: While the subject–object experience by the sculpture-interface orchestrates the temporal distribution of electric energy as a process of signification and representation, the ambient sensation of the work is rather related directly to the temporal experience of luminous energy as the non-signifying modulation of a “pure”, signaletic material. Hence, as aesthetic potential in *Pulse Room* tension is basically organized around the simultaneous perceptual effect of spatial contrasts *and* of differences in the organization of its energetic material as a tension between two different spatio-temporal modes of energetic production.

## INTIMATE RELATIONS AND SIGNIFYING PROCESSES

The ambiguous co-presence of signifying aspects and material modulation is present on various

levels of the installation. The semiotic ambiguity is in fact already a basic, phenomenal quality of the pulse itself. A pulse is indeed a multifaceted phenomenon: it is a repetition of short-duration stimuli measuring time without symbolic reference. It is a regular beat with a strong rhythmic potential. It is a paradigmatic example of a signal transmitting simple information. And it is a fundamental sign of life, an index of the living organism. In *Pulse Room*, Lozano-Hemmer activates all these semantic, formal and material properties of the pulse so as to invite visitors to engage themselves in the sensory complexity and semiotic ambiguity of the situation.

On the one hand, *Pulse Room*, as described, produces a chaotically flickering light environment of pure, energetic modulation. But at the same time, *Pulse Room* is strongly imbued with symbolic meaning. When biorhythms are transmitted from the energy of the beating heart to the flashing of the singular light bulb, it gives the individual visitor a clear and unmistakable impression of being represented directly and in real-time in the flickering display. In addition, this direct link between the body as living organism and the “organic” light patterns formed by the flashing bulbs further charges the installation as a whole with unambiguous metaphysical connotations. Thus, apart from the a-signifying, modulatory repetition on a material level, the pulse in *Pulse Room* is furthermore articulated through a double representation: a subjective signification—with each light bulb representing the individual lives of the visitors—and through a symbolic reference to mankind in general where the pulsations as a whole represent a fundamental “rhythm of life”.<sup>12</sup>

Thus, the visitors in *Pulse Room* are invited to take part in a complex event that continuously resonates between different layers of modulatory and signifying repetitions. At the very same time, *Pulse Room* is profoundly subjectified as a sign of life and a machinic generator of its own space-time.

The events with most evident symbolic meaning are produced around the sculpture in the dark corner of *Pulse Room*. The encounter with the sculpture immediately calls on an action—reach out, touch—and when the visitor grips the two handles, there is a certain physical sense of proximity, which strengthens the experience of directly handing over the pulse of the beating

heart. The signifying process initiated by this action has several stages or levels.

During the initial transmission of biometric data, there is a sense of ephemeral enclosure or intimate space prompted by the physical contact between subject and object. The defined light is right in front of you and occupies your field of vision, thereby intensifying the pulsing contrast between light and darkness, and contrary to the total field of pulsing light in the room, this beating effect arises from just one point. Furthermore, another signifying level is added during the transmission as soon as the bulb flashing in front of the visitor is understood as a representation of his or her actual heart pattern. The act of touching is now realized as the starting point for a *real-time mediation* of energy, which is projected on to the medium by the visitor as a perceptual effect.

During this process there is a change in the subject-object relation that is crucial to this feel of subjective mirroring. The visitor’s relation to the work from this particular position began as an encounter with the sculpture as physical structure (object), but has now evolved into a subject-interface situation, by means of which the visitor projectively animates the light bulb and creates an intimate situation of facing a visual appearance of his or her pulse.<sup>13</sup> The flashing of the bulb is thus not just initiated by the visitor’s touch, but displays in symbolic form a direct, energetic transformation of a qualitative property of this touch: the measurable pulsation in the palms, the rhythm of the body. This representation is heavily loaded with symbolic meaning: What you see in front of you is a copy of your own pulsing heart.<sup>14</sup>

The bulb only flashes as long as the visitor holds the grips. Thus, as soon as the visitor has (actively) taken hold of the grips, she has to stay in the same (passive) position in order to prolong the situation and maintain the sense of proximity with the sculpture-interface. To begin with, the relation established in the visitor’s encounter with the sculpture is not itself temporally structured, but merely launches the registration process as an open interval in time, an “empty moment”, a waiting for something (else) to happen. But as soon as the singular bulb in front of the visitor starts to pulse with light and the sculpture becomes an interface, a distinct and specific temporality is constituted.

At this point, the visitor has a significant sense of having *impact*: your presence matters, you affect the room. A rhythmic structure, originally present latently in the body, has now started to resonate in the medium. The real-time effect produced here is thus relative, derived from and essentially defined by the physical presence of the subject. The experience in front of the flashing “mirror bulb” is an experience not only of *proximity* (space) but also of *simultaneity* (time) between the subject and its close surroundings, which intimately anchors the subject in a local, particular time-space. *Now-here*, something is added to the piece and the subject enters the circuit, thereby articulating the situation as a specific *place* and a particular *moment*.

### SPACE-AT-LARGE AND THE MODULATION OF THE REAL

The process of real-time registration as a generator of a particular time-space (“place” + “moment”) is ephemeral and will end as soon as the participant takes his or her hands off the handles. Yet the *effect* of proximity and simultaneity is prolonged into the medium through a representation of the particular situation. The repetitive flashing of the singular bulb has become a sign of the now lost intimacy between closely synchronized pulses. As such, the visitor’s bodily presence, and the very particularity and locality of it, is projected into the medium as a recording.

Accordingly, the temporal focus shifts from an experience of real-time mediation to a recollection of it as a past situation that is now being continuously repeated; that is, from a representation in real-time to what we previously called an indirect representation of space and time. This “pulse-loop” becomes a reminder of the particular interaction process as a past, subjectified situation, a former now-here.

In this subtle transition, the sense of impact and participation diminishes. When the visitor releases the handles and triggers a transitory darkness, the subjective quality of the situation weakens and a third experience of time and space is initiated. The movement from simultaneous representation to delayed reproduction is also a movement from a time defined and shaped by the subject and the computer-organized interaction program, to a less subjectified and less organized time. As soon as

the pulse in the grid becomes a continuous loop, its possible future ending no longer has any obvious effect in the temporal formation of the process. The looping of the recorded pulse has made way for both a less teleological and less subjectified time. What before was a restricted duration defined by the subject, an intimate being-with, has made way for the experience of an objective, unrestricted duration as the pure passing of time: a direct presentation of time.

This experience of a direct presentation of time is, at least potentially, greatly intensified as the visitor leaves the local place of registration and enters the larger space with the multiple pulsing bulbs. The subject-object-relation established during registration now dissolves into an a-figurative, subject-field-relation between the visitor and the pulsing environment as an open, dynamic whole with no obvious figure-ground-segregation. When the visitor leaves the sculpture and moves into this flickering field of light, the local feel of proximity and impact changes for a basically *environmental* experience, an ambient sense of being *in* space-at-large as a vibrant whole.

Here, the visitor will no longer relate so much to the pulsing of each of the bulbs, and their signifying potential, but rather constitute an ambient experience of being surrounded by the entire field of energy as a pulsing mass, a “pulse room”. What before was a series of (recorded) particular situations initiated by the subject, has now turned into a coherent and complex mediated whole encompassing the visitor with no reference to anything outside itself as spatio-temporal duration.

What pulses in the room is no longer a collection of subjectified representations, each with their particular spatio-temporal origin and symbolic identity, but the signaletic material itself. What before was an isolated sign of a past now-here, is now taking part in a pulsing production of a new energetic mass by way of a modulation of the real. However, in experience this direct relation to the signaletic material will not necessarily replace the signifying qualities of the pulses entirely. The pulse room as a collection of subjective reproductions, as an “anthropomorphic archive”, is present as a potential, which the visitor at anytime may project into the pulsing material through his other recollection of the subjective registrations. However, the dominating effect in the

space-at-large is the sensation of flickering light as a modulatory field of material energy.

This argument differs from the common understanding of *Pulse Room*, where signifying and representational properties are read into all aspects of the work. Beryl Graham's reading is a prime example:

In *Pulse Room* the human presence is particularly elegant: each small personal spectacle of electric energy slides gently into the community pool, and when each flicker shuffles off the end of the grid, there is a sense of loss and evanescence. The tension between individual egoistic spectacle, and co-operation, is a fascination in Lozano-Hemmer's work...<sup>15</sup>

In this understanding, *Pulse Room* solely creates variations on the experience of human presence; as respectively a personal spectacle and a community pool. But as our analysis indicates, the transition from the sculpture-interface situation to the environmental situation in the room at-large is potentially more radical than this. At the sculpture-interface every detail of the event is directed toward the experience of human presence, but in the flickering environment you will have to *recollect* and focus intentionally on this sense of presence to maintain the experience of it. More likely, the dominating effect when being situated in a field of flickering light is not that of signification. The environmental experience of being surrounded rather constitutes itself without any relation to subjective presence. It is a concrete, non-anthropomorphic sensation of the electronic medium in its fundamental appearing as energetic material pulsing in space and time.

## PULSE ON PULSE

The difference between signifying aspects and a-signifying modulation persists as a fundamental tension during the visit to *Pulse Room*. This article has emphasized the importance of recognizing how the continuous separation and interlacing of these levels is the main factor in the constitution of *Pulse Room* as an ambiguous aesthetic situation: a "pulse on pulse" experience.

Initially, the article discussed the different representational and material properties of electronic media in general. What the analysis of *Pulse Room* shows more profoundly is how these

different properties call for various ways of engaging with the work. We simply relate differently to signifying processes than we do to a-signifying modulation. They facilitate divergent sensations of space and time, different modes of experience.

When focusing on signifying aspects, the energetic material is assigned with a *relational* order. The signifying event becomes teleologically and chronologically structured. This is not only the case in narrative structures. Interactivity generally accentuates a relational order because it orchestrates variations in the medium in relation to the acting and performing subject. The event becomes a sequence of hierarchically organized sections that continuously refer back to its origin in the particular moment and place of its initial becoming, whether the sequence represents this moment and place in real-time or reproduces it as a former situation.

Although signifying aspects in the electronic medium are the direct result of modulations in a signaletic material, as described by Deleuze,<sup>16</sup> signaletic modulation is essentially of another kind. It is generative, emergent. Modulation in the energetic material is an open process without beginning, climax and end to define the formal structure of the actions and movements in the medium. It is fundamentally decentred, flowing, vibrating, pulsing, with no determinable cause or by becoming its own cause (self-generation, emergence). It produces what Deleuze and Guattari have described as an in-between; a flowing, pulsing or vibrating intermezzo.<sup>17</sup> No matter what might change in the medium on the signifying level, taking the relational process from (the representation of) one particular moment to another, the energetic flow of the electronic medium does not change. It modulates. It does not produce anything new, but perpetually modifies itself into the new in continuous variation.

The crucial difference between material modulation and signifying aspects in this sense is thus not so much that between representation and non-representation, but rather their different, but simultaneous spatio-temporal organizations. This is the complex parallelism present not only in the experience of *Pulse Room*, but also in electronic media in general. On the one hand electronic media may translate and transform energy from a local, spatio-temporal situation to another, confronting the subject from somewhere outside his

or her own time-space. And on the other hand it produces its own energy and spreads it out around the subject and into the surroundings as a continuous modulation of the real.

## Notes

1. Edward A. Shanken, *Art and Electronic Media* (London: Phaidon, 2009), 21.
2. This process has an historical origin in pictorial projection and the development of the screen causing what Peter Weibel has described as “a paradigm shift” in painting in the last half of the nineteenth century “away from the representation (of light) to the reality (of light). [...] A picture represents light, a screen receives light and radiates it. Light was no longer captured but diffused. The artwork became the generator or emitter of real light.” Peter Weibel, “Zur Entwicklung der Lichtkunst/The Development of Light Art”, in *Lichtkunst aus Kunstlicht/Light Art from Artificial Light*, ed. P. Weibel and G. Jansen (Ostfildern: Hatje Cantz, 2006), 86–87.
3. Gilles Deleuze, *Cinema 2: The Time-Image* (London: Continuum, 2005), 28. For full citation see Bodil Marie Stavning Thomsen’s introductory article.
4. Gilles Deleuze, *Cinema 2: The Time-Image* (London: Continuum, 2005), 28.
5. D.N. Rodowick, *Gilles Deleuze’s Time Machine* (Durham and London: Duke University Press, 1997), 42.
6. Deleuze, *Cinema 2*, 26.
7. *Ibid.*, 27.
8. *Ibid.*, 35ff.
9. By using the term “visitor” we wish to emphasise the multi-sensorial aspects of experiencing *Pulse Room* in contrast to visually oriented terms such as viewer, beholder or spectator.
10. *Pulse Room* has been exhibited several times in different settings and the aesthetic effect varies slightly according to the particular exhibition space. This article describes the setting of the installation in Manchester Art Gallery in 2010–2011. For further information, videos and pictures from the various exhibitions see: [http://www.lozano-hemmer.com/pulse\\_room.php](http://www.lozano-hemmer.com/pulse_room.php) (accessed May, 2012).
11. We refer to the structure of the two handles as “the interface” or “the sculpture” with reference to “Pulse Room’s manual” available at: <http://www.lozano-hemmer.com/texts/manuals/Pulse%20Room.doc> (accessed May, 2012).
12. Lozano-Hemmer himself refers to the end scene from the Mexican film *Macario* (1960) by Roberto Gavaldón—where the protagonist Macario visits Death in a dark cave filled with candles representing the individual lives of all mankind—as a direct inspiration for *Pulse Room*. [http://www.lozano-hemmer.com/pulse\\_room.php](http://www.lozano-hemmer.com/pulse_room.php) (accessed May, 2012).
13. This “mirror effect” in the medium is augmented considerably by the very form of the incandescent bulb. The fragile organic form of the bulb connotes the shape and size of the heart and the “body” of the bulb resembles the human body with its exterior surface and a core of a beating pulse. Likewise the bulb is suspended between heart and eye level encouraging a sensation of direct mirroring.
14. Visitors frequently express this immediate impression of being directly reflected in the pulsing light by saying “that’s me”, “I’m all heart”. [http://www.lozano-hemmer.com/pulse\\_room.php](http://www.lozano-hemmer.com/pulse_room.php) (accessed May, 2012).
15. Beryl Graham, ‘Delicate Controls’, in *Recorders: Rafael Lozano-Hemmer*, ed. R. Lozano-Hemmer. (Manchester: Manchester Art Gallery, 2010), 16.
16. Deleuze, *Cinema 2*, 28.
17. Gilles Deleuze and Félix Guattari, *Thousand Plateaus* (Minneapolis: University of Minnesota Press, 1987).

# Hacking the aesthetic: David Haines and Joyce Hinterding's new ecologies of signal

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## Abstract

Award winning Australian electronic artists David Haines and Joyce Hinterding's installation work is discussed as "signal-work." Their work reconfigures signal within original assemblages involving subtle audio, high resolution video (both recorded and animated), kilometers of coiled copper wire, antennae or home-built electronics, electrostatic disturbances, the like of very low frequency radiation from the Milky Way, and cross-signal processing. The article develops a context for thinking about the work in terms of Whitehead's process philosophy, as this is relevant to media theory, as well as concepts of plural ecology and ongoing differentiation drawn from Bateson and Guattari. Signal processing is seen as key to all this. The article argues that in Hinterding and Haines' signal-work new sensations are produced, outside of the normal "syntax" of some models of aesthetic experience. This challenges some aspects of thinking about both aesthetics and political ecology.



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"It was hacked everything."

(David Haines, discussing Hinterding and Haines' installation, *Purple Rain*)

You sometimes smell the electricity, or feel the force of signal, in Australian artists Joyce Hinterding and David Haines' installation artworks.<sup>1</sup> Perhaps no other artists process electricity and signals from as many different sources. They work with electrostatic disturbances in the atmosphere (Hinterding's *Electrical Storms*, 1992), very high resolution digital video, home-made capacitors constructed from hundreds of carbon-coated beer glasses (Hinterding's *Siphon*, 1991),

computer game engines, kilometres of copper wire stretched or coiled into antennas, passing satellite signals (*The Levitation Grounds*, 1999–2000), very low frequency signal from the Milky Way (*Electromagnetique Composition for Building, Plants and Stars*, 2007), the low frequency radiation from gallery buildings or their own home, and cross-signal processing between many of these (Figures 1 and 2).

Their art is a kind of contemplative signal-work. Signal is no longer only (or sometimes even) a carrier for channeled messages. Rather signal in itself, in particular signal processing, is foregrounded.

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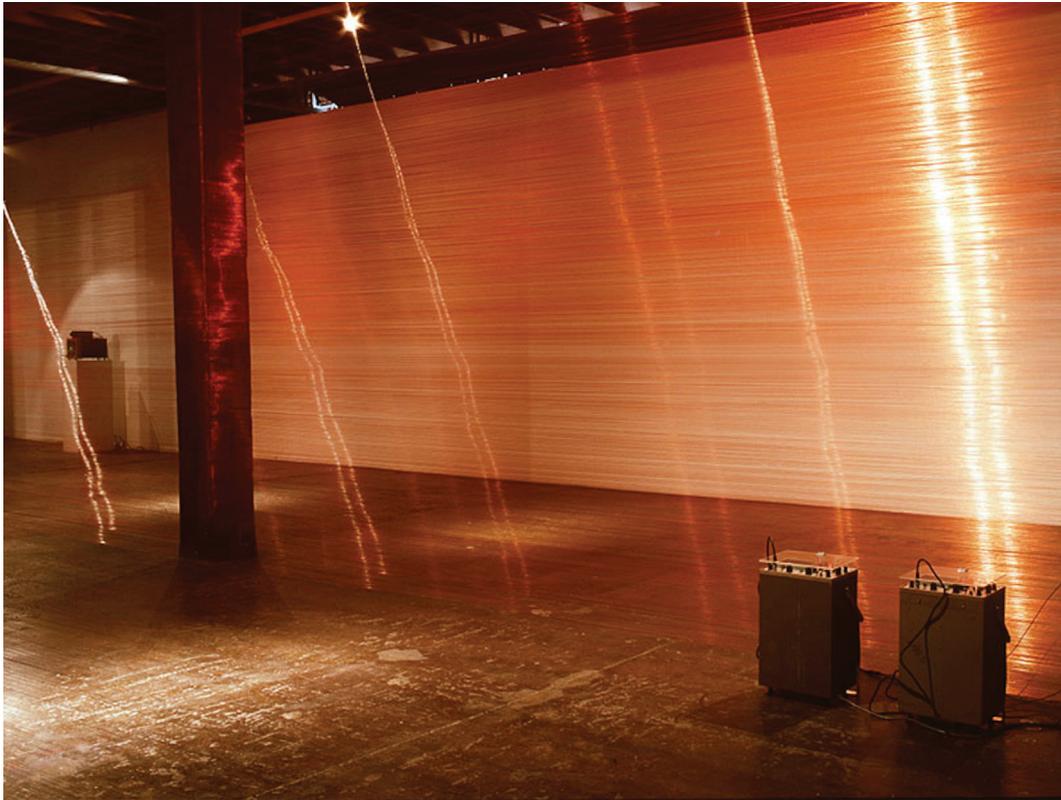


Figure 1. Joyce Hinterding: *Aeriology* (1995). Large-scale detuned custom built antenna. Photo: Ian Hobbs. © Joyce Hinterding.

Signal is experienced as the felt tension between, and transformation of, forces and fields. For example, in Hinterding's *Aeriology* (1995), in which she worked with 20 km of copper wire, electricity/signal seep out from/into huge copper coils and sheets. In such works, electricity and signal still function but often not in the usual way and not where they are usually found. A more recent example is Hinterding's *Fields and Loops* series (from 2010, ongoing). This is a series of drawings that are also functioning electrical circuits.<sup>2</sup>

Hinterding and Haines' signal-work allows us to think differently about the way that art can organize sensation (with sensation itself a kind of variable cross-signal processing across world and body). As such, their signal-work can be seen as a "hacking" of the aesthetic, a technical tampering with, and general re-purposing of, the aesthetic from within. In other words, Haines and Hinterding's work challenges the often given or assumed organization of sensation—in concepts of the aesthetic, in artistic practice or in the experience of the works. In doing so, it also challenges

the easy division of technics, the human, and the natural world (Figures 3 and 4).<sup>3</sup>

Such a breakdown of the division between technics and the natural world produces a strange remix of the forces involved. For example, Haines' large-screen videos draw attention to the sheer technical, signal-processing force of high resolution digital rendering. Yet this technical force is often used to simulate hypernatural events: overly lush vegetation (*Electromagnetique Composition for Building, Plants and Stars*, 2007) or tree branches floating in the air (*The Levitation Grounds*, 1999–2000). Cityscapes are dwarfed by their geographical setting (*Two works for Wilhelm Reich*, 2006). The contents of a house—furniture and clothes—float out the windows and into orbit around the earth (*The Blinds and the Shutters*, 2001).

Hinterding and Haines' mixing of forces also allows us to sense the end—indeed the always impossible status—of that which Whitehead decried as the "bifurcation of nature."<sup>4</sup> This is the false division of nature into the mind/perception on the one hand, and the object perceived on the other. In Hinterding and Haines' work, there is



Figures 2 and 3. Joyce Hinterding and David Haines—stills from *Purple Rain* (2004). Live sound and triggered Digital video, custom built electronics, VHF and UHF antenna, software-based video playback system. Photos: Michael Myers. © Haines/Hinterding.

no easy inside from which to “perceive” or outside to be perceived. There is no final ordering of the world that would accommodate such a bifurcation, especially not via technics. Indeed, they constantly use technics to undo such a bifurcation. For example, in their recent award-winning work, *The Outlands* (2011), Haines and Hinterding used a game engine to construct environments that are navigated, in a darkened room, with a joystick made from a large tree twig. There are two environments navigated in series. One is a dense,

obviously digital environment in which it is hard to find your bearings. This world is shiny, abstract and chaotic. The other is a very different immersive environment, a hostile pseudo-natural world in dark, yet seemingly phosphorescent color. The navigator gets lost in a mass of foliage. Many of the normal activities of gameplay are stripped away. The result is a contemplative if deliberately bewildering experience, a “dream architecture” in which divisions break down. Even the “borders between light and structure start to become [...]

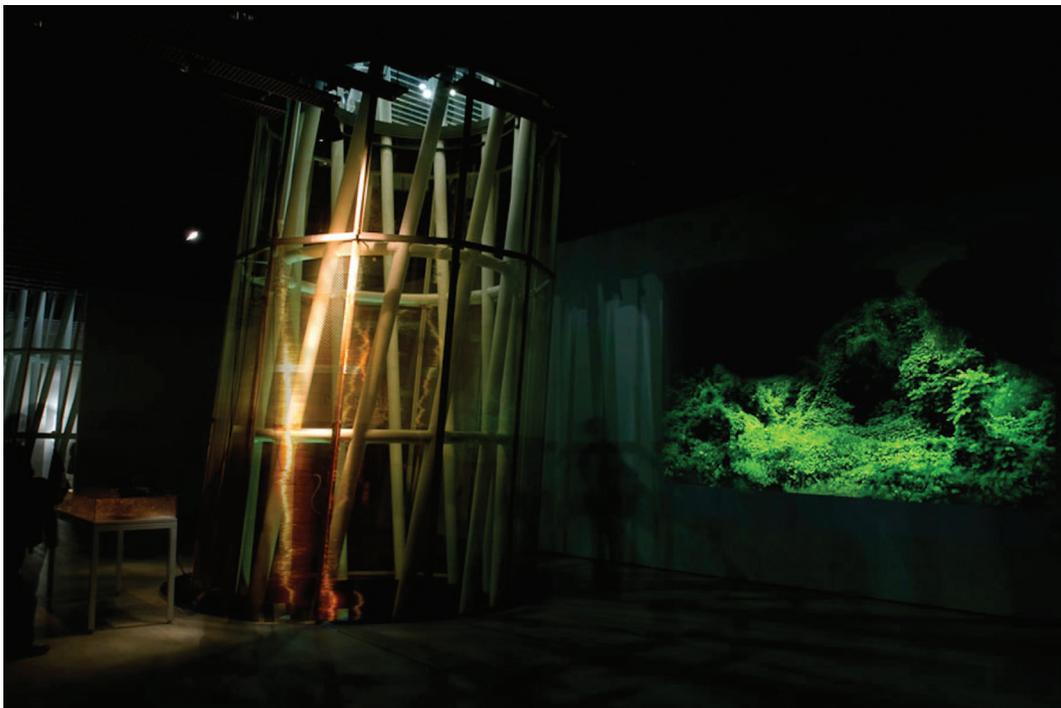


Figure 4. David Haines and Joyce Hinterding: *Electromagnetique Composition for Building, Plants and Stars* (2007). Installation with site-specific live and recorded sound HD video projection. Photo: Michael Myers. © Haines/Hinterding.

ambiguous.”<sup>5</sup> There is no real escape, no finish, no complete aim or objective.

In such work, the technical world—both old (analog) and new (digital)—is returned to the world at large. There is no longer a bifurcation between technics and non-technics or, to put this differently, “artificial” and “natural” technics, “artificial” and “natural” signal or electricity. All these are mutually transformed. Here, all signal can be (and is) processed by all other signals. This gives us a different understanding of the situatedness not only of media art, but all media events. The works enact an understanding of media in which “world”—here multiple worlds—becomes a heterogeneous medium for the “vector transmission” of feeling.<sup>6</sup> I will briefly tease this out via A.N. Whitehead’s process philosophy.

Whitehead presents a little remarked upon but comprehensive “media theory” that resituates media in the world (that is, media events are not “bifurcated” from the rest of the world, in for example a “signal [medium] versus noise [world]” configuration). More dramatically, Whitehead writes of the entire “world as medium.” Whitehead’s philosophy here pre-empts significant aspects of McLuhan’s media theory. The medium is the message indeed, but the medium is also the world. So the very complex signal mixing that is world is the message. In Whitehead’s media philosophy, there is no “bifurcation” between different types of signal (technical or natural, for example). It is all world(s) as medium. All the world is not a stage, as Shakespeare remarked. It is rather signal processing. Within this, individual signals (themselves a mix of previously formed signals) become “vectors of transmission” for the feeling that is central to his process philosophy. Signals gather other signals. They form vectors of transmission that are felt, or that we might say are feelings in and of themselves (“prehensions” in Whitehead’s terms). They come together in a kind of “satisfaction,”<sup>7</sup> as “actual occasions,”<sup>8</sup> then they fall away, although they might be gathered again in the process by new events. In a similar manner to McLuhan (who read Whitehead extensively), Whitehead understands “the human body” within the world as medium as a kind of signal transducer or modulator. The body is “a complex ‘amplifier’—to use the language of the technology of electromagnetism.” Furthermore (and this is perhaps the basis for McLuhan’s later

understanding of the shifting ratios of senses emphasized by different media), for Whitehead “the predominant basis of perception is perception of the various bodily organs, as passing on their experiences by channels of transmission and of enhancement.”<sup>9</sup>

Whitehead’s philosophy helps us understand how, in Hinterding and Haines’ signal-work, electronic technologies can be caught up in the world of ancient or cosmic technical forces. These older/larger forces are also, of course, themselves transformed by the electronic. It is cross-signal processing writ large—at the level of world. Following from this we can say that Hinterding and Haines’ work is profoundly “ecological,” in at least two senses. First, they are obviously very aware of the “natural” environment—or better, world—as context for events. However, their work is also “ecological” in a slightly different way. The work is also “ecological” in that it emphasizes relations and whole system transformations. For example, just as the relations within a entire rainforest are generally dependent upon rain, and transformed by specific events of rainfall, so too, in Hinterdings and Haines’ *Purple Rain*, are the relations and events generally dependent upon, and transformed by, the specific events of television signal that “fall” upon the installation. The transversal forces and transformations within and between different dynamic systems becomes the very substance of the work. As such, their work creates signal events or signal fields that are ecologically plural and mixed—between, for example, social ecologies, ecologies of sensation, J.J. Gibson’s “ecology of perception,” Isabelle Stengers’ “ecologies of practice,” or media ecologies.<sup>10</sup> In this Hinterding and Haines’ work resonates with something like Gregory Bateson’s “ecology of mind.” For Bateson, three signal-fields are intertwined, as “cybernetic or homeostatic systems: the individual human organism, the human society, and the larger ecosystem.”<sup>11</sup> Their work also resonates with Félix Guattari’s more recent “three ecologies”—of self, socius, and environment—that develop Bateson’s thinking. However, Guattari’s three ecologies are really at least six ecologies. All three have two aspects. They have an actual aspect (what is actually there, if constantly becoming something else) and a virtual aspect (the shifting if unperceivable “relational potential,” from which the ongoing

transformation of the actual draws and to which it returns).<sup>12</sup> A very rough example might be the way in which the changing weather actualizes climate. Although here the virtuality of the latter—climate—could not necessarily be equated to “climate” per se, that is, as we know and measure it. Rather it would be that from which all the potential relations and events that come to be “climate” (and subsequently, weather) arise. This would certainly include the deeper virtuality of potential relations created by the weather of the past. Yet, as per Guattari’s three ecologies, it would also include potential relations within and with: other aspects of the environment per se (oceans, cosmic forces, geological factors, ice and snow, etc); technical and social forces (agriculture, mining, government policies, the media’s relation with science); and also the thinking and acting of individual living beings—including but not only human beings. For human beings this might include climate change denial, belief in the concept of permanent “economic growth,” or living sustainably, etc. Haines and Hinterding’s work is profoundly “ecological” in all these senses. Indeed, the open relational potential they structure into their work makes any ecology hard to consider in isolation. Within this inter-ecological transversality, sense—even a sense of the ecological itself—shifts as signals meet and are mutually transformed. Ecology is everywhere in the work, yet difficult to pin down. Signal is at the heart of this. Yet the work reveals signal itself as a series of transversal, field, or (inter)ecological events.<sup>13</sup> Signal is perhaps always cross-signal processing at the level of world.

In sum, if Hinterding and Haines’ works more than hint at a more environmentally engaged future, this is of no fully determined kind. Signal here is not about the confirmation of known worlds but about ongoing ecological transformation. In this context, signal does not primarily “carry meaning” or messages (alternatively, we could say that signal seen this way generates an ongoing plenitude of meanings). Neither does signal here support or maintain the integrity of established media forms/events (again, we could say that it generates a plenitude of media events). Rather signal “worlds” or, better, creates “worldings.”<sup>14</sup> In the process, Haines and Hinterding’s reworking of the world as a series of unexpected signal-assemblages transforms what it is to think/

feel, because here thinking and feeling belong to new, more open ecologies of sensation.

All this is achieved not only by literal assemblage—a hacking of the technologies involved—but also by what I am calling a hacking of the aesthetic.<sup>15</sup> By this, I mean three related things: first, this hacking opens up the ecology of sensations within experience; second, this hacking questions given models—and crucially syntaxes or orderings of process—within which experience is often conceived; and third, this hacking the aesthetic challenges given political ecologies in so far as these rely on such syntaxes and orders.

First, hacking the aesthetic, in order to open up the ecology of sensations, involves reworking technical relations. This reworking of technical relations is often a matter of rerouting or processing signals of all kinds, and it is this signal-processing that more or less directly opens up the ecology of sensations (Figure 5).

For example, in Hinterding’s *Siphon*, a simple capacitor is made from scratch, using hundreds of beer glasses coated in carbon. We smell that capacitor as it functions. In another example, Haines and Hinterding’s *Purple Rain*, live television signal is processed via homemade electronics. These include a digital random event generator (a kind of digital roulette wheel) within a hacked MIDI keyboard. This processed television signal randomly triggers animated videos of mountain avalanches and purple static, differently depending on exactly which television signal is received by antennas in the gallery. Haines suggests that *Purple Rain* “was hacked everything.” Even its sound field was produced via the cross-processing of visual signal that had been redirected into a sound mixer.

Second, to hack the aesthetic is to question given models via technical reassemblage and signal-work. It opens up the way we feel, think about, model, and therefore work with, the relations between sensation and thinking (relations crucial to any formal philosophy of art and to many arguments over the nature of aesthetic experience). This does not only mean thinking new thoughts or sensing new sensations. Perhaps more importantly, it means tearing up the social/philosophical/political contracts for the ordering of the relations between thought and sensation. In admitting outside forces, such as atmospheric electricity, or television signal, to their artworks,



Figure 5. David Haines and Joyce Hinterding: *The Blinds and the Shutters* (2001). Four channel synchronized DVD projection with 5:1 Sound. Photo: Haines/Hinterding. © Haines/Hinterding.

Haines and Hinterding challenge a certain givenness in the nature of assemblages (especially but not only in “new media art”), a givenness often assumed or enforced by social/philosophical/political contract. Their work, therefore, has the potential to challenge, both at macro- and micro-political levels, the very syntax or grammar by which we normally order our experience. Given syntactic orderings (the way that models, rules, or concepts distribute experience across time and space by regulating the concept, and actual flow, of signal transmission) can be reversed or, more radically, redistributed. Hinterding and Haines are the “Gertrude Steins” of the electronic art installation. Theirs is no longer an aesthetic in which, for example, sensation might have to be resolved in the syntactical ordering of the Kantian sublime, in which, after an overwhelming experience, the limits of imagination supposedly give way to the triumph of reason (in a kind of aesthetic cadence to the “complete well-formed aesthetic sentence,” the “grammar” of experience).

Third, hacking the aesthetic challenges given political ecologies in so far as these rely on such syntaxes and orders. It implies that a reassemblage of sensation and thinking involves a broader political ecology. To undo given syntaxes and orders in the relation between sensation and thinking, via signal-work, is a political/environmental

act. Crucially, this is a matter of remaking both actual relations, and the future possibility of relations to come. Given orderings and syntaxes are challenged, politically, in two ways. They are first challenged in the overcoming of their particular obstacles, limitations, and affordances. Second, hacking the aesthetic challenges the attempt to delimit ecology qua ecology—in for example, an attempt to bifurcate, even positively, nature (“it,” the outside to the human, objects of perception) and thinking (“us” in process, technics, and perceptions).

Hinterding and Haines’ works provide such challenges because they maintain a consistency of both syntactic disruption and open experience. This allows us to both sense and conceive, in process, new relations within the ecological mix, just as there are new relations within the signal mix. A consequence is that there is not any neat settling into an “interpretation” of Haines and Hinterding’s work. This is perhaps because one’s thinking must constantly expand (and contract) with the dynamic technocosmic-signaletic ecologies of sensation involved. There is often an unboundedness to the sensations involved, perhaps at times a reconfigured and open-ended sublime without resolution in reason. The body (itself as signal-body, as “complex amplifier” in Whitehead’s terms) senses precisely what is moving through/with/as space—that is, signal force.

As Deleuze and Guattari write, “materials signal forces and serve as symptoms for them.”<sup>16</sup>

In sum, although Haines and Hinterding do hack technologies, they hack much more than technologies. Indeed, they “hack everything,” as Haines puts it. This starts, as Hinterding explains, in their work with “Electricity we didn’t make.”<sup>17</sup> From such beginnings their work “hacks” given

orders, assemblages, and concepts of all kinds (Figure 6).

All in all, Hinterding and Haines’ work undoes a basic political “will-to-sequence,”—a political desire to order the elements of events as they occur, so that they are reduced into a limited and repeatable “making sense.” This undoing is performed in Hinterding and Haines’ signal-work



Figure 6. Joyce Hinterding: *Siphon* (1991). Sculpture; specially constructed glass capacitors. Photo: Ian Hobbs. © Joyce Hinterding.

in favor of an unending, open redistribution or reassemblage. In the video work *House II* (2003), for example, an endless torrent of water pours unceasingly through a large house. In *The Blinds and the Shutters*, the contents of a decidedly modernist house slowly disarrange, float out of the windows, through the forest, and into the stratosphere. Such works render invisible forces perceivable. Again, the works are political precisely in that the forces they gather together and redistribute challenge or even at times pull apart the established or “foundational” ordering of the political. In the process signal itself, often unthought and invisible, is felt as it is redirected. What signal can do (not just “what a body can do,” and here, I will note that a body is signal as much as signal makes up bodies) is rethought. The works follow the traces of massive and complex virtualities—complexes of relational potential—without necessarily returning them to a given frame or sequencing.

It is no surprise then that Haines and Hinterding’s work is full of paradoxical cadences that do not stop or resolve. This accounts for the strange moods of, for example, *Purple Rain* and *House II*. Hinterding says “in both it’s an event that has no beginning, no end and it can’t be stopped and there are strange kinds of nuances in it [...] but essentially it is one that cannot be interrupted.” The forces involved neither resolve nor exhaust

distribution. The paradoxical stasis of flow in *House II* is uncanny, as is the exaggeration of seeming entropy in *The Blinds and the Shutters*, in which the orbit suggest no final entropy or complete dissipation. If there is a kind of resolution this is of the engagement of flow and distribution as eternal return, in signal terms as loop. This can create a kind of peaceful contemplation (Figure 7).

This is often a contemplation that celebrates contrast. In Haines’ two channel video installation, *The Seventeenth Century* (2002), huge clouds of billowing gold smoke on one screen are juxtaposed with time-lapse photography of a city at night on another screen. The affect involved is distributed differentially—crossing between the screens in an interference of chaotic smoke with urban order and vice versa. The glorious gold clouds of differentiation itself—of difference differing—interferes with an urban order that shifts only ever so slightly in time. It is as if the city is both indifferent to and infused by the differentiating gold mass next to it. It demands explanation, yet there is no story. As Anne Finegan remarks:

In Haines’ cinema of immanence there’s no unconscious to be dredged. No narrative, no signifiers [...] rather shifts of intensities pertaining to states [...]. There’s [...] a Deleuzian geology in which the relation is



Figure 7. David Haines and Joyce Hinterding: still from *House II The Great Artesian Basin Pennsylvania* (2003). Single channel projection and 5:1 sound. Photo: Haines/Hinterding. © Haines/Hinterding.

not even one of thing-to-thing, but rather one of surfaces or planes, and speeds and differential flows [...].<sup>18</sup>

In many of Hinterding and Haines' works, there is a series of loops between break and connection, distribution, and assemblage. In this and other ways, they perform what I call a "differential technics" and a "differential aesthetics."

The term "differential" should be understood here in generative terms.<sup>19</sup> "Differential" does not only mean considering already existing differences or allowing everybody to be different. More than this, the differential is a matter of active or intensive difference (which is precisely what signal is in the end). Differentiation is ongoing. Differentiation is also relational, and differential relations (tensions or contrasts) come first (and last). Differentiation makes up the substance of the subsequent individuations we call experience, life, artworks, and so on, with any instance of these always folding back into ongoing series

of intensive differentials. The differential thus refers to active difference as the ungrounding of being—and perhaps the basic milieu of any aesthetic. As Anna Munster notes, this differential milieu comes to the fore in informational art and digital culture. She suggests that "Information itself becomes a differential space for the collision of different worlds [...] differential relations are foregrounded in embodied experience."<sup>20</sup>

Foregrounded differential events—and their technical assemblages—locate creative organization ambiguously. In the work performed by live television signal in *Purple Rain*, for example, Hinterding remarks that "the live interrupts itself, it collapses and comes back again." "Life" here is found in the assemblage of non-organic elements, which may just occasionally allow the organic to be swept up in such assemblage (Figure 8).

Such differential assemblage is of course very open to otherness—and not just that of the human other. Haines discusses *Purple Rain* (to reiterate,

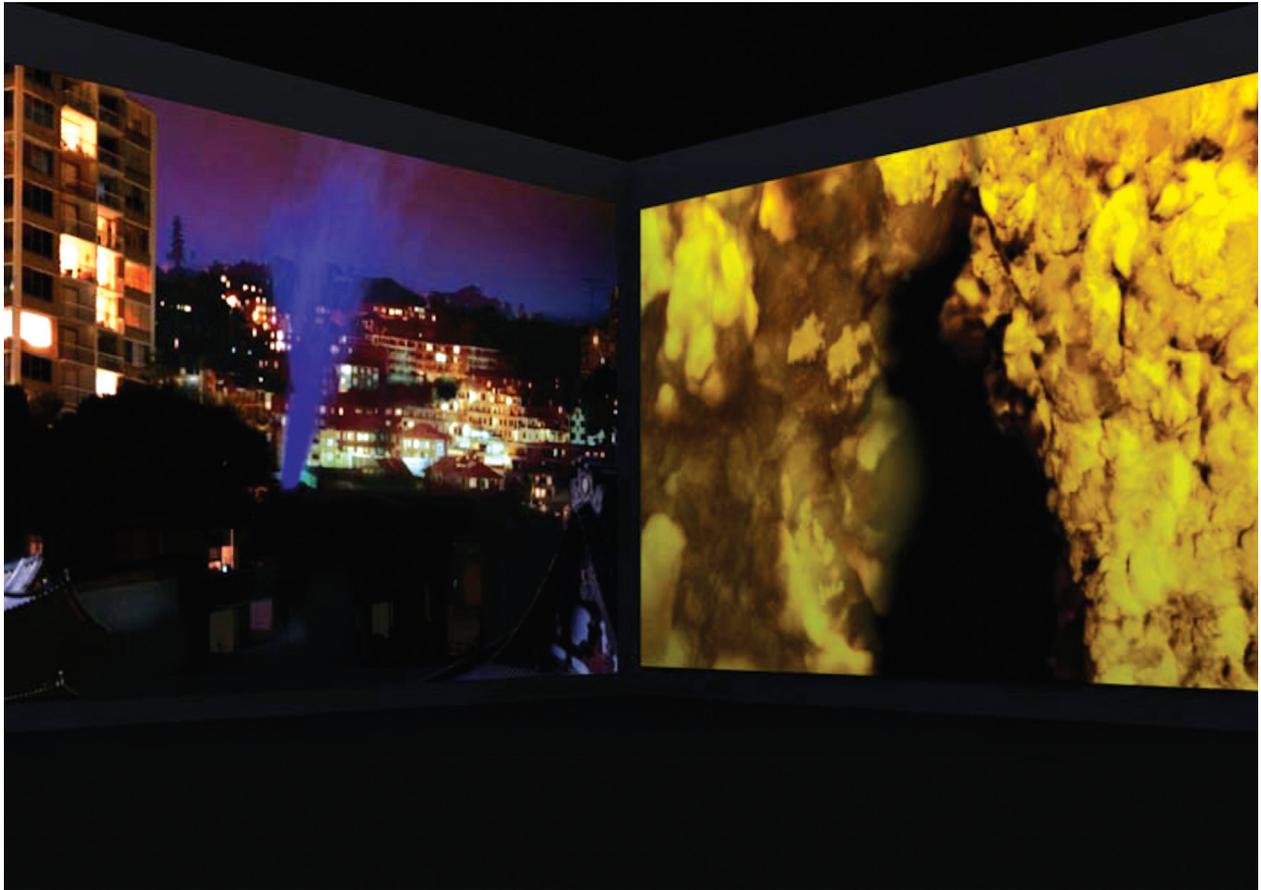


Figure 8. David Haines: *The Seventeenth Century* (2002). Two-channel video installation. Photo: David Haines. © David Haines.

a work in which live television signal was used to assemble sound and image) in the following terms: “I like its otherness even to us. It’s always producing. In New Zealand where we did a lot of the development it sounded really melodic. In Sao Paulo, with lots more antennas, it [sounded] quite Techno. It had quite a percussive [...] base to it.” The original aim was to make it even more open: “we wanted to use [a] VLF antenna to [pick up] the background noise of the Milky Way—[from which we would] create this colour field abstraction.” In *Purple Rain* as elsewhere, representation is often subsumed into an experience of, or play with, the differential forces of signal. There are many possible events that can be triggered, and in most of these, representation falls back into signal. A possibly accidentally formed face may appear—but only faintly and briefly—between more frequent videos of purple static or “rain.” Even the seemingly inevitable progress of the digitally rendered animations of avalanches are interrupted by random signal shifts. The sounds that one hears—and feels—are quite literally those of transduction—the signal transformation of forces.

Such works pose questions concerning the signal tensions or differentials between sound and image, digital and analog, representation and the asignifying force of the aesthetic. One feels these questions in the space. Is the sound producing the image? Is the image producing the sound? We feel the tensions involved because, again, the work is hacking itself at every moment. Hinterding comments that with the “hacked keyboard [...] the three sounds you’re hearing are coming off the video image—we’re getting frame rate [...] and we’re getting vertical sync and we’re getting luminance which is the volume changes.” For her, the “fundamental thing” is that a signal is always an ongoing differentiation of a field, or a conversion between fields.

[...] a sound is going to be translated into electricity [...] the constitution of a television image is also a sound wave that is converted into electricity. That sparks a cathode ray that produces an image [...] it’s all recycling a signal [...] often what we’ve done is reverse the signal paths.

Yet here and elsewhere, something more than the signal paths are reversed. Sometimes it seems that the whole path-world-ordering of the human is

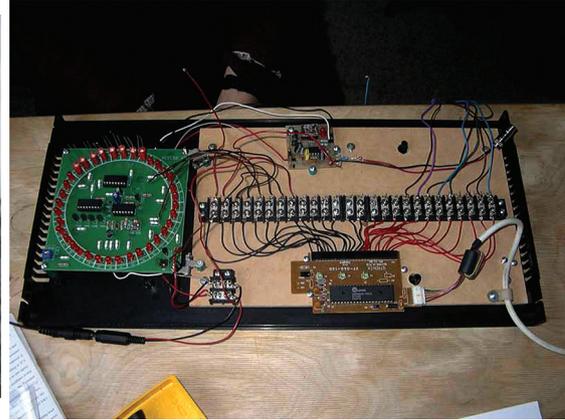
“reversed”—turned back toward our inclusion in an outside (Figure 9).

Here, we can think once again of *The Blinds and the Shutters*, its household objects that return to the virtual ecology from which they must have come, but which we so often do not care to remember. It is an enormous movement, but there is no hurry. The drift toward the virtual seems to sweep you up slowly but totally.

To “reverse signal paths,” as Haines and Hinterding so often do, is again to possibly pull apart the syntax of given aesthetics. It is also to shift the rhythms of distribution in relations, toward what Hinterding calls an “encounter,” via what is often a “fairly reduced environment,” with “something on the outside.” Haines remarks that this is not so much a matter of communication. Rather “all these works are transmitters rather than communicators.” Even “as human beings we’re also transmitters and that goes beyond speech and even beyond language [...] and that’s where the sensation field is a transmission space” (Figure 10).

In Hinterding and Haines’ work this transmission space also involves a rhythmic interweaving: of the audio and the visual; of the spaces; of the different kinds of waves—electronic and sea waves, for example, in the rhythmic floating of the tree branches in *The Levitation Grounds*.<sup>21</sup> For Haines, “it’s like you’re just riffing with different time frames [...] it’s like all the time compressions are available, and then you’ve got a choreography of time available to you and this is another good, invisible material [...] the virtual of time.” These multiple time frames—the rhythms within and between them—perhaps account for the feeling of being in several places at once. Hinterding notes that in *The Blinds and the Shutters*, “you are both standing in front of the house and in outer space [...] as well as listening to all the magnetic fields [recorded] inside the [the artists’] house.”

For Hinterding, the ongoing reconstitution of such strangely multiple experiences via work with signaletic fields is potentially endless. When signals of all kinds are explored, there is a “weird kind of revelation” in which the artists “keep finding more and more” sounds. For example they “start listening in on the broadcast television signal” or to “sounds from [...] polar orbiting satellites.” There are all “these strange kinds of



Figures 9 and 10. Joyce Hinterding and David Haines: still from and setup for *Purple Rain* (2004). Live sound and triggered digital video, custom built electronics, VHF and UHF antenna, software-based video playback system. Photos: Michael Myers. © Haines/Hinterding.

forces that we are inside of and outside of at the same time.”

In the midst of these strange forces, a systematic or ecological transformation is possible, via the new distribution of rhythms made available by what I have called hacking the aesthetic. Again, this is a felt transformation. Even those forces we take for granted are felt within these transformations, if differently. Hinterding, for example, comments that “we forget how powerful broadcast television is, and how many kilowatts of power are coming through the air [...] media images come to us with a literal huge force [...] changing the world.” Perhaps very few artists are as aware of this as Hinterding and Haines. To them, the connections between art, media, and politics (and the forces of distribution) involved are often very clear. For example, they were thinking about *Purple Rain* “around the time that Baghdad was being bombed and you’re thinking it’s all radio signal that’s doing that. And things collapse.

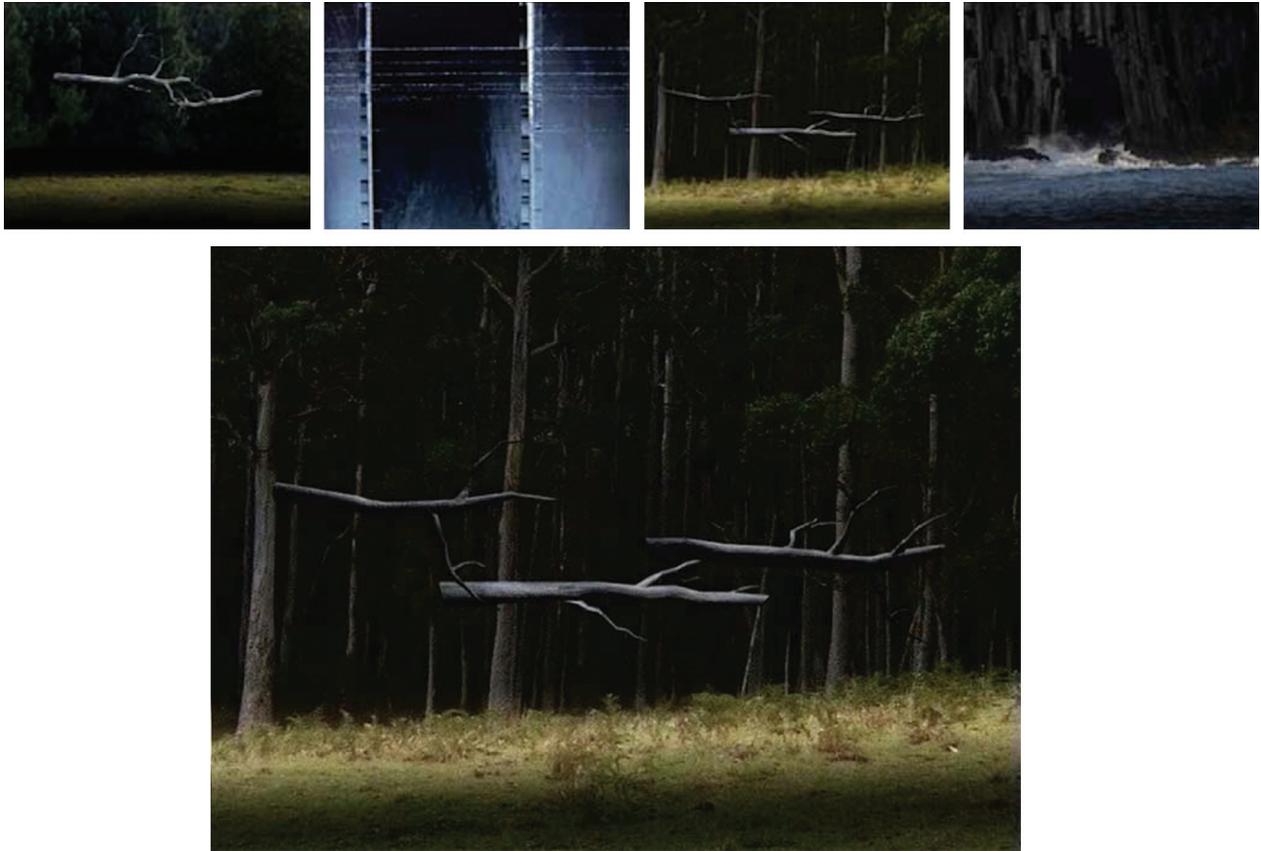
You’re disassembling the world even at the level of concrete particles. It is falling down.”

In general, it is perhaps in the hacking of given distributions and signals, and within the “hacking of the aesthetic,” that we might initially situate a politics of the aesthetic (rather than within the question of representations).<sup>22</sup> Thus, again the importance of Hinterding and Haines’s reverse engineering or hacking, of the uncanny visual couplings and transformations, of the fact that, as Hinterding notes concerning *Purple Rain*, “Everything’s [deliberately] plugged in the wrong way.” Plugging everything in the wrong way makes certain things the more obvious—including the extent to which human, civil distributions are challenged by their fragile vulnerability to their own and outside forces (Figure 11).

The consequences of such open signal-work are many. One is that we feel more fully our ecological partnership with technics. We also perhaps feel that the airwaves interfere with us, bring us rather



Figures 11 and 12. David Haines and Joyce Hinterding: *The Blinds and the Shutters* (2001). Four-channel synchronized DVD projection with 5:1 Sound. Photos: Haines/Hinterding. © Haines/Hinterding.



Figures 13 and 14. David Haines and Joyce Hinterding: *The Levitation Grounds* (2000–2001). Four-channel DVD video installation, stereo and 5.1 Sound. Photos: Haines/Hinterding. © Haines/Hinterding.



Figure 15. Joyce Hinterding and David Haines: *Two Works for Wilhelm Reich* (2006). High definition projection, live sound, custom built Orgone Energy antennae 4 km. Photo: Haines/Hinterding. © Haines/Hinterding.

too many forces, often freed of their content, while satellites are carrying away our given, familiar ecologies. In works such as *House II*, with its endless torrents of water, “we” are dispossessed (the “European” is dispossessed) of the powerful metaphors and habits, the sensations/sense of house/home—the “Heimlich,” the aesthetic as return to home.

In *The Blinds and the Shutters*, this emptying of house and home is of course literal. It is a becoming-satellite. Yet, here, “satellites” do not further our representation of the world. They are no longer the emblem, the very metaphor or literal transport of Heidegger’s “age of the world picture.”<sup>23</sup> Here, the satellite departs from the modern—that age in which we, for the first time, make the world one we think we can picture. Instead, satellites become mysterious unravellers of given sense—they give us sound and image that disrupt our organization of the real. Anne Finegan notes that “Hinterding and Haines haven’t filtered the satellite outputs. They’ve intentionally left the noise and blanks [...] Recalibrate the interface and a different set of patterns, with no recognisable shapes, emerges.”<sup>24</sup> Through the signal-work within Haines and Hinterding’s hacking the aesthetic, satellite signals become partakers in new ecologies of distribution. Satellites pull apart the metaphors, the political “magnetic fields” of picture, of control (of new world orders that depend on these metaphors and magnetic fields).

Haines claims that Hinterding’s sensitivity to materials—to perhaps what I have been calling an open signal-work—leads them to the “outside of aesthetics.” When asked about the strong but non-essentialist relation to the natural world in their work, Haines says of Hinterding, “Joyce is letting in all the parts of the world that are unexpected [...] she’s like a water diviner.”

What is divined? For one thing, in Hinterding and Haines’ signal-work we perhaps find a signal beyond “technics,” as usually understood. We find it in interecological events that will not stop clamoring for a new sense, even if this will not be given. We find it in sounds or electricity that will not be reconciled to the human. The world is returned, or via signal-work, returns itself, and us with it, to new, open ecologies.

## Notes

1. Quotes from Haines and Hinterding are from an interview conducted by me in 2005, unless stated otherwise. Artworks not given individual attribution are by both artists together. Further information/images can be found at the artists’ site at <http://www.sunvalleyresearch.net/?p=340>. See also Andrew Murphie, “Joyce Hinterding and David Haines: High Res Resonations with the Milky Way”, *ACM Computers in Entertainment* 7, no. 2 (2009): 1–16.
2. Jane O’Sullivan, “Hinterding Harnesses New York’s Energy”, *Australia Art Collector*. <http://www.artcollector.net.au/HinterdingharnessesNewYorksenery> (accessed February 28, 2011).
3. Kant’s (much challenged) conception of the sublime, for example, is famously “organized,” with a kind of “syntax” (a sequence of events concluding with the triumph of reason over imagination). See also Howard Caygill, “Stelarc and the Chimera: Kant’s critique of prosthetic judgment”, *Art Journal* 56, no. 1 (1997): 46–51.
4. Alfred North Whitehead, *The Concept of Nature* (Ithaca: Cornell University, 2009), 26.
5. Art Gallery of New South Wales, *David Haines & Joyce Hinterding, Artists—Unguided Tours*, <http://www.youtube.com/watch?v=YdstMcTGijE> (accessed November 10, 2011).
6. Alfred North Whitehead, *Process and Reality* (New York: The Free Press, 1978), 284. See <http://www.andrewmurphie.org/blog/?p=364> (accessed September 14, 2011).
7. Whitehead, *Process and Reality*, 40.
8. Whitehead, *Process and Reality*, 210–11.
9. Whitehead, *Process and Reality*, 119.
10. On fields, see also Andrew Murphie, “Vibrations in the Air: Performance and Interactive Technics”, *Performance Paradigm* 1 (2005), <http://www.performanceparadigm.net/journal/issue-1/articles/vibrations-in-the-air-performance-and-interactive-technics/> (accessed September 21, 2011) and Christoph Brunner and Jonas Fritsch, “Interactive Environments as Fields of Transduction”, *The Fibreculture Journal* 18 (2011), <http://eighteen.fibreculturejournal.org/2011/10/09/fcj-124-interactive-environments-as-fields-of-transduction/> (accessed November 10, 2011).
11. Gregory Bateson, *Steps Towards an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology* (London: Intertext, 1972), 446.
12. Félix Guattari. *The Three Ecologies* (London: Athlone, 2000). See also John Tinnell, “Transversalising the Ecological Turn: Four Components of Felix Guattari’s Ecosophical Perspective”, *The Fibreculture Journal* 18 (2011), <http://eighteen.fibreculturejournal.org/2011/10/09/fcj-121-transversalising-the-ecological-turn-four-components-of-felix-guattari%E2%80%99s-ecosophical-perspective/> (accessed November 10, 2011). On “relational potential,” see Brian

- Massumi, "The Thinking-Feeling of What Happens," *Inflexions* 1, no. 1 (2008): 13–4.
13. J. James Gibson, *The Ecological Approach to Visual Perception* (Boston, MA: Houghton Mifflin, 1979); Isabelle Stengers, "A 'Cosmo-Politics'—Risk, Hope, Change", in *Hope: New Philosophies for Change*, ed. Mary Zournazi (Sydney: Pluto Press, 2002), 244–72 (262); Matthew Fuller, *Media Ecologies. Materialist Energies in Art and Technoculture* (Cambridge, MA: MIT Press, 2005).
  14. Brian Massumi, "Involutionary Afterword: Deleuze, Guattari and the Philosophy of Expression", *Canadian Review of Comparative Literature: Review Canadienne de Littérature Comparée* 24, no. 3 (1997): 755; Brian Massumi, *Parables for the Virtual* (Durham: Duke University Press, 2002), 128–30.
  15. McKenzie Wark, *A Hacker Manifesto* (Cambridge, MA: Harvard University Press, 2004).
  16. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (Minneapolis, MN: University of Minnesota Press, 1980), 479.
  17. Catherine Lumby and Joyce Hinterding, "Systemic Murmurs", *Art + Text* 46 (1993): 48–53.
  18. Ann Finegan, *The Seventeenth Century of Occultation & Surface* (Lawson, Australia: Sun Valley Research, 2002), <http://www.sunvalleyresearch.net/245/the-seventeenth-century-2002> (accessed May 17, 2012).
  19. See also Andrew Murphie, "Electronicas: Differential Media and Proliferating, Transient Worlds", *Fineart Forum* 17, no. 8 (2003), <http://www.andrewmurphie.org/docs/electronicas.pdf> (accessed March 6, 2012); Murphie, "Differential Life, Perception and the Nervous Elements: Whitehead, Bergson and Virno on the Technics of Living", *Culture Machine* 7 (2005), <http://www.culturemachine.net/index.php/cm/article/view/32/39> (accessed March 6, 2012).
  20. Anna Munster, "Digitality: Approximate Aesthetics", *Ctheory* a093 (2001), [http://www.ctheory.net/text\\_file.asp?pick=290](http://www.ctheory.net/text_file.asp?pick=290) (accessed April 20, 2005).
  21. See Ann Finegan, *The Levitation Grounds* (Lawson, Australia: Sun Valley Research, 2000), <http://www.sunvalleyresearch.net/?p=610> (accessed April 20, 2010). Finegan notes that in the depiction of waves in *The Levitation Grounds*, the "potential sublime is dispersed into a scattering. The eye isn't carried onward and up, but scans the surface and follows the sea through the gap in the wall, to meet and rebound from the waves on the other side."
  22. This political signal-work is perhaps related to but not quite the same as the "distribution of the sensible," found in Jacques Rancière, *The Politics of Aesthetics: The Distribution of the Sensible* (London and New York: Continuum, 2004).
  23. Martin Heidegger, "The Age of the World Picture", in *The Question Concerning Technology and Other Essays*, ed. Martin Heidegger (New York: Harper Torch books, 1977).
  24. Finegan, *The Levitation Grounds*.

# Bodies and real-time interfaces: in video performance and interactive digital 3D installation art by VALIE EXPORT and Jette Gejl Kristensen

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## Abstract

This article considers the interface as the physical interaction of human body and technology inspired by the theories of Maurizio Lazzarato, Brian Massumi, and Anna Munster. Through artworks by VALIE EXPORT (*Adjunct Dislocations II*) and Jette Gejl Kristensen (*Hyperkinetic Kayak*) it examines how bodies and advanced technology together perform real-time interfaces in concrete spaces launching complex events of affective encounters.



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**Keywords:** *interface; body; video performance; interactive digital 3D installation; real-time; VALIE EXPORT; Jette Gejl Kristensen*

In her thought provoking essay 'A Cyborg Manifesto' (1991) Donna Haraway strikes a blow for the cyborg. She finds today's machines "disturbingly lively" to an extent that, "have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines."<sup>1</sup> It is the reworking of the nature/culture opposition that makes the idea of the cyborg so desirable to her feminist mindset because the fusion

of human and machine questions the Western subject and therefore presents a liberating potential for women. It would be liberating to tell the human myth from the point of view of the cyborg and throw away the Western myth of origin based on the "natural" family, the original unity, Adam and Eva, that produces specific human relations and leaves the woman/mother to designate nature and man/patriarch to culture. To install the cyborg as the first human instead is perhaps not so far-fetched after all, if we take Nigel Thrift at his word. He explains

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that the human body is characterized by “its un-paralleled ability to co-evolve with things, taking them in and adding them to different parts of the biological body producing something which, if we could see it, would resemble a constantly evolving distribution of different hybrids with different reaches. [...] [The] *human body is a tool-being*.”<sup>2</sup> In the end, this also corresponds very well with the image of the first human and its first tool, the biface or handaxe. The biface fits into the palm of the hand as if it had grown out of the body, the first ever interface.

To consider the human body in its physical interaction with technology is to consider the interface. This article considers works of art—by VALIE EXPORT and Jette Gejl Kristensen—that focus on the live situation of how bodies interact with advanced technology in a signaletic exchange situation. The focus is on that which goes on as it goes on, so to speak. The key concern is not the message being sent, but the mere fact that something takes place in time. The signaletic is understood as the sending and perceiving of sense material over time and the endless processing of that material. The works examine how bodies and advanced technology together perform real-time interfaces in concrete spaces and thereby distribute affective connections and encounters and how the signaletic is rendered in continuous feedback loops.<sup>3</sup>

In 1960s, the Austrian artist VALIE EXPORT (b. 1940) began an investigation into the relations between female body, camera, and screen. These early intermedia works display an interest in the possibilities for time–space dislocations offered by the new electronic media. EXPORT was part of an international avant-garde movement that invented the notion of Expanded Cinema, which was an investigation of film as materiality and process and activated the live context of watching — in bringing together live image and body performance in a situation where the viewing position was activated. Expanded Cinema was deeply influenced by the political movements of the 1960s and wanted to heighten awareness of the structural and political implications of common viewing habits; they also aspired to change these habits.<sup>4</sup> For EXPORT, this resulted in an age-long investigation of the female body as sign and materiality. She saw the use of technology as a way to set the female body free of its hitherto

status as biological essence.<sup>5</sup> Technology offered new ways to open the body to its surroundings and thereby question the status of the subject, rethinking the body in terms of what some today would call post-humanism. Some of her early works can be seen as first steps toward an understanding of the human–machine interface and, perhaps, even easier to understand the matter with, as the computer is not yet involved. By using a simpler and more transparent technology, she exposes the whole operation of human–machine interaction in an almost pedagogical manner; however, the unusual character of her un-habitual imagery can sometimes be hard to grasp at first sight.

*AUTOHYPNOSIS* (concept 1969/presentation at Steirischer Herbst, Graz, 1973) is an early and simple interface that questions mechanisms of reward and punishment in society. It is an interactive video installation that encourages the viewer to step on a pattern of arrows and words on the floor; the words being: I, love, resignation, experience, *medi[tat]ion* (i.e. mediatization), and please note that “tat” in German translates into action! If you crack the code, a signal activates system feedback and the viewer is rewarded in the form of a cheering crowd on a video monitor.<sup>6</sup> The video installation demonstrates how bodies respond to media, and EXPORT makes this point especially clear when she uses the bracketed word *medi[tat]ion* by which she suggests that media acts, or, makes action happen as was the keyword in the 1960s (cf. happening). In this interface, she focuses on making viewers experience actualized time as she has them trigger a sequence of events through their bodily interaction with technology. Another work that focuses on the experience of actualized time is *ZEIT und GEGENZEIT* (Time and Countertime) (1973), though without the active participation of viewers. It is a video installation showing on videotape the act of melting ice played backwards, while an actual plate of ice cubes is placed in front of the video monitor showing the melting of ice in real time.<sup>7</sup> It is the juxtaposition of backward and forward time that makes the duration of time visible to the viewer. In these works, she dealt with technology’s relation with time and the human body’s relation with both.

But let us turn to actual interface situations and the video performance *Adjunct Dislocations II* (1973/1978) performed at the festival Pro Musica Nova in May 1978. The first step toward this

performance was two 8-mm films and one 16-mm film she made in 1973, also called *Adjunct Dislocations*, in which she placed two cameras on her body, one on her chest shooting forward and one on her back shooting backwards. The idea was to make a two-point of view film that would “show” the (invisible) body as the interface between the two opposite shots, placing the moving body at the center of an actual space to prove that, at all times, it is situated in relation with space.<sup>8</sup> She would walk through the city filming back alleys, main streets, stairways, backyards, etc., making up an on-screen multifaceted moving cityscape. But it was still only a film projecting the illusion of movement onto a screen. Even though the screening simultaneously would show three images on the screen, cf. the title *Adjunct Dislocations*, it would only represent an illusion of movement in time, as conventional film technology is, in fact, composed of single shots brought about to move, they are not actually moving themselves (see Figure 1).<sup>9</sup>

It was not until the Pro Musica festival in 1978, when she employed video together with the body in a performance, that she was able to further develop the notion of the body moving in time and space. She utilised the body camera concept to make a live performance, this time with a video camera transmitting the live signal to four monitors placed

between the performer and her audience. EXPORT, with the two cameras attached to her body, would slowly walk to the center of a spiral installation in the middle of the room. Thus, the audience would simultaneously be witnessing the live performance and the live transmission of the performance. The performance captures the essence of video and its relation to time. It demonstrates the distribution of time taking place in the constant movement of the image, the different camera angles cutting the experience of space into a multifaceted real-time transmission, in which time is rendered as un-chronological flow of images on several screens. EXPORT seems to be unfolding video as the crystallization of time according to Maurizio Lazzarato’s analysis with her emphasis on the real-time quality of the medium. According to Lazzarato, video technology is the first to imitate time, to be time, and can therefore not represent the world.<sup>10</sup> Contrary to film, which consists of a montage of still images creating an illusion of one moving image, video is a flow of light on the magnetic tape. It is made up of rasters of dots and lines, a flickering web.<sup>11</sup> To be accurate, video is not a recording technique (though it can be used as such); it is a technique for capturing what is already there, and framing it. It is the endless processing and rendering of time:



Figure 1. VALIE EXPORT: *Adjunct Dislocations* (1973). Expanded cinema. Photo: Hermann Hendrich. © VALIE EXPORT.

The distinctive feature of the video camera is the ability to receive *inputs* and to send *outputs* in real-time. The work of video technology lies in its entirety between input and output: in its connection to power, and the processing, transformation, and recirculation of power so that it may be processed once again.<sup>12</sup>

In the 1978 version of *Adjunct Dislocations*, EXPORT demonstrates that the body belongs to the same modality as the signaletic material rendered by the video technology and that the human body contributes to the endless contraction and distribution of time together with technology. The body is not alien to technology; on the contrary, the body and the time crystallization machines have in common that they act through time. With reference to Friedrich Nietzsche, Lazzarato explains that it is in the body that we should look for more reality, not in the soul (see Figures 2 and 3).<sup>13</sup>

The Danish artist Jette Gejl Kristensen (b. 1963) has worked with 3D technology since 2001 when she first produced the film trilogy *Stone*, *Grass*, and *Fabric*. The films are shown to an audience in a classic cinematic setting. These early films are not interactive, but experiments into whether or not abstract virtual forms can move the material body, and actually, the virtual abstrac-

tion proves to have some physical impact on the body. Her first work *Stone* (2001) gives an overwhelmingly direct sensation of drowning. The 3D signal creates a wave that slowly moves out into the room on floor level, lapping over the viewer's feet and rising up over one's body and a feeling of suffocation occurs when the wave reaches the throat.

In Kristensen's interactive digital 3D installation *Hyperkinetic Kayak* (2009–2010), the computer and the viewer together produce a virtual space as a result of digital signals from the computer's processing of data and the viewer's body movement in the kayak.<sup>14</sup> The installation thus launches a live event. In moving the kayak paddle, the viewer interacts with the computer program and the interaction produces different visual on-screen phenomena creating a 3D virtual environment between the screen and the person seated in the kayak. The computer graphic framework forms virtual graphic icescapes that you sail into as you move both above and under sea level and at intervals beautiful, abstract, and richly colored geometric patterns, sometimes resembling the Northern lights, emerge and move in your direction. You are literally surrounded by sound and image. Under water, the sound is somewhat deep and thick, or like being inside a diving bell,

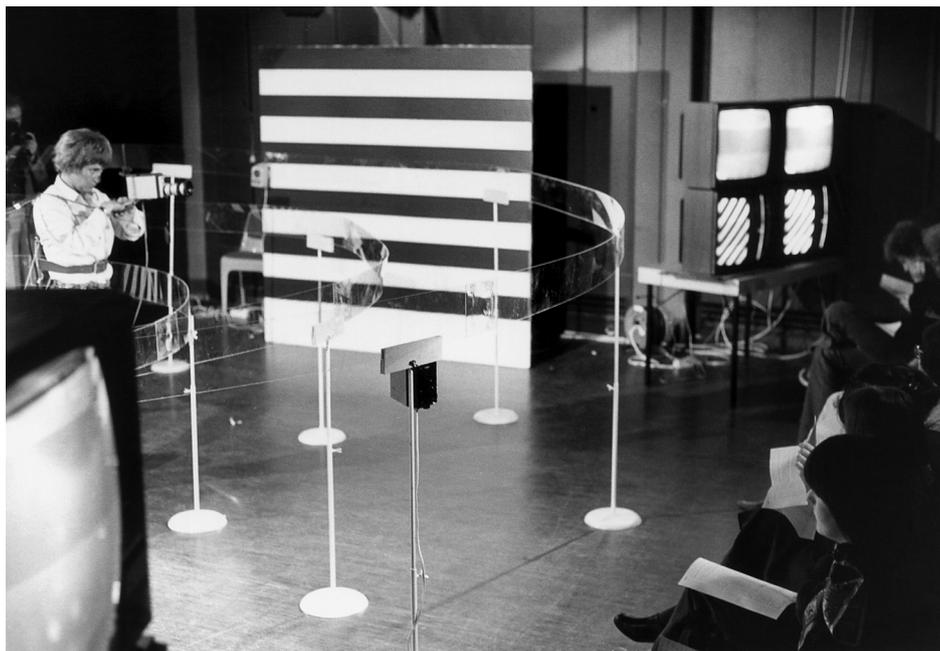


Figure 2. VALIE EXPORT: *Adjunct Dislocations II* (1973/1978). Closed circuit installation, closed circuit performance. © VALIE EXPORT.



Figure 3. VALIE EXPORT: *Adjunct Dislocations II* (1973/1978). Closed circuit installation, closed circuit performance. © VALIE EXPORT.

whereas when you fly into the sky it gets higher and clearer. So, by moving your body in the kayak you move the computer to transmit digital signals that again move your experience in the kayak in a perpetual image making process (see Figure 4).

The two basic techniques used for the computer graphic framework are the wave equation and

volume rendering. The wave equation secures a horizon in the 3D universe and the volume rendering sets the framework for the deep space, and together they create a virtual cube, a 3D coordinate system, with a water horizon inside surrounded by cyber space outside the cube. Inside this virtual universe, the virtual kayak is

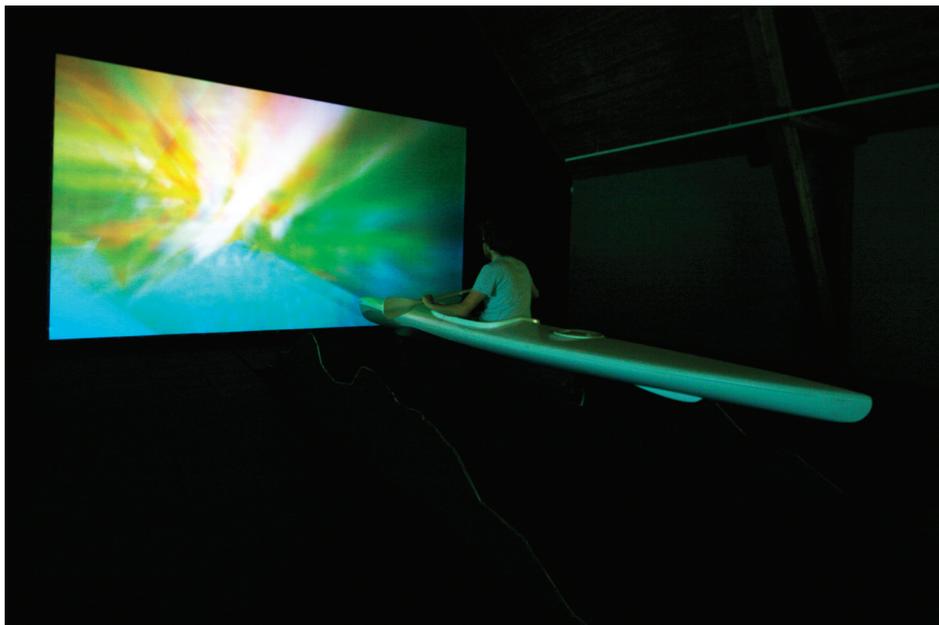


Figure 4. Jette Gejl Kristensen: *Hyperkinetic Kayak* (2009–2010). Interactive digital 3D installation. © Jette Gejl Kristensen.

floating around until somebody gets into its real-life match and paddles away activating the computer. The computer gets online information fed from Greenland. The work is connected to actual measurements of the temperature at Qaanaaq in the North Western part of Greenland, which means that the *Hyperkinetic Kayak* changes with climate change. As the temperature falls or rises, the 3D universe and the movements of the kayak are affected. Every time the computer starts up it collects the current temperature in Qaanaaq, which combines with other parameters such as light, color, sound, reaction time, interaction with kayak, etc., in the volume rendering. The program has seven different main frames from which it chooses randomly, and into which all the variable data are fed creating ever-new oscillations and thereby ever shifting and live visualizations from the data (see Figure 5).

While it is Kristensen's intention that the viewer should not "meet the medium," or see the digital, meaning that the image should not at any stage dissolve into pixels, it is however her aim, that there should be bodily recognition of the movements in the boat and of the sense of moving around in a landscape, the main focus being on the sensory-motor interaction with the computer.<sup>15</sup> In this sense, Kristensen draws attention to the relations between body, computer, and image production. She does not want the viewer

to become absorbed in mimetic representations of landscape, rather she wants to drive the viewer into physical interaction with the computer in a way that makes the viewer aware of his or her own participation in the production of images and the time factor. Like video technology's relation to image making, must be understood in relation to time, according to Lazzarato, so must digital technology, as the computer also produces an un-chronological flow of images, and in both cases the image must be understood as tactile, as it is subject to the tangible interference of the user.<sup>16</sup> In the kayak, it is through the user's corporeal kinetic engagement—the interface with the computer—that the live event is processed and the body's actions continuously rendered by technology (see Figure 6).

The two interface-pieces, one analogous the other digital, however different in technology, demonstrate the production of an event from live material of the body and live transmission of video and computer data on a screen. Neither of the projections can be understood as representations in the traditional sense. As the image is continually updated in real-time, it reflects changes in the referent and must rather be considered presentations of what goes on as we view.<sup>17</sup> Another common denominator is that the body plays an integrated part in the interfacial circuit; in the case of EXPORT it is the performer's own body and in



Figure 5. Jette Gejl Kristensen: *Hyperkinetic Kayak* (2009–2010). Interactive digital 3D installation. © Jette Gejl Kristensen.

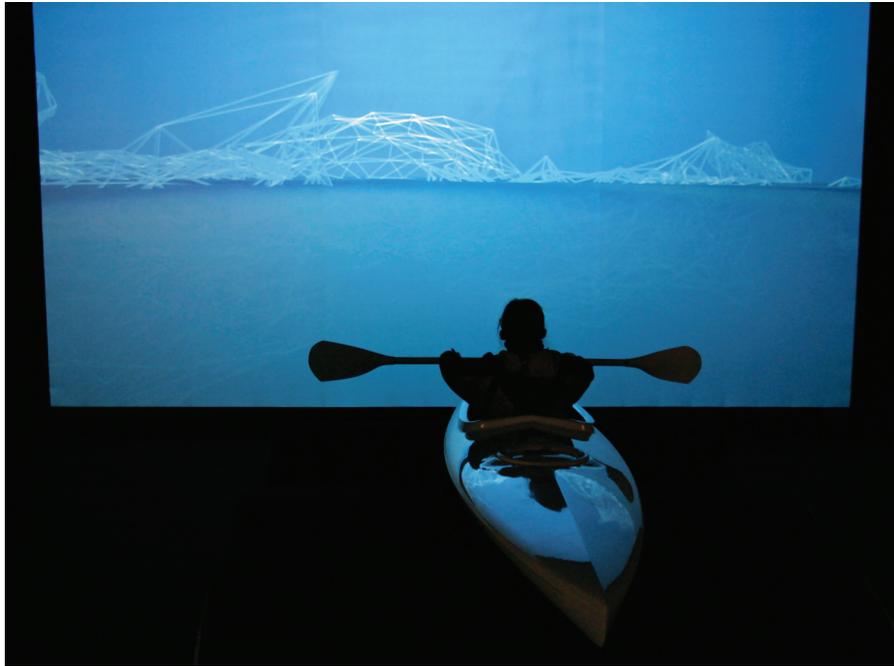


Figure 6. Jette Gejl Kristensen: *Hyperkinetic Kayak* (2009–2010). Interactive digital 3D installation. © Jette Gejl Kristensen.

the case of Kristensen it is the body of the viewer. New media art of this kind points to the sensory-motor interaction of body and environment and it opens the user's eyes to new ways of perceiving and sensing his or her being in the world as an embodied being.

To qualify thoughts on the interaction between humans and machines, Anna Munster distances herself from what is generally thought on the interface. She is trying to get away from the metaphor of the face, or what she calls a *facialized logic*<sup>18</sup> that marks most thinking of the body-computer interaction, as it produces opposition between the human and the inhuman machine.<sup>19</sup> She believes that the Western mindset that privileges the individual subject and its individual visual facial expression as the sign of the soul haunts the way we generally conceive of the computer as alien and inhuman. This again promotes anthropomorphism as a cover-up in computer design to meet alienation tendencies, for instance in phenomena such as the Happy Mac icon from Apple, or "The Norns" from Cyberlife.<sup>20</sup> Contrary to this, Munster encourages a way of thinking about the interface that downplays faciality in favor of thinking of the machine as both a contact surface and disappearance of the space of difference between humans and com-

puters.<sup>21</sup> This marks a shift in the way of thinking, from a preoccupation with what constitutes the difference between artificial and human intelligence to a focus on what the interaction between matter and code *does* to our understanding of embodied life. It is more interesting how digital code relates to bodies and how this relation produces affect.

More specifically, Munster defines the interface as a fold, "a topology and movement of extension and envelopment between body and computer" and compares to the baroque notion of corporeal experience as that which, "extends and intensifies and, in so doing, splits, folds or inflicts away from a sense of the body as bound and closed to the outside world."<sup>22</sup> And she concludes that, "Hence the body-computer interface in new media is typically both intensely embodied and diffusely abstract,"<sup>23</sup> as is the case with *Hyperkinetic Kayak*. The fold is a useful notion as it connects the inner and the outer world and should be thought of as a platform of exchange, an interstitial space between matter and code. But although Munster talks of situations and dynamic processes, she still argues that the relation between human and computer is a case of data (the body), which are "unrepresentable" matter, being translated into code (the computer).<sup>24</sup> As a consequence she maintains

that computer renderings are *representations* of bodies in situations. In this explanatory model, the image will always at some time be fixed in space. She still thinks of the interfacial fold as a figure to bridge the gap between two disparate materialities. But if we take Lazzarato into consideration, and our two art cases, *Adjunct Dislocations II* and *Hyperkinetic Kayak*, and focus on what bodies and video/digital technology have in common: that they both act through time, and that the essential feature of video/digital is the flow of images, then, the interfolding of the outside and the inside world in the interface as a *non-representational* situation for the distribution of affective encounters makes good sense.

Let us return to *Adjunct Dislocations II* and *Hyperkinetic Kayak* and consider how the works can be understood as producer of events rather than representations. At any rate, compared to the previous discussion, it seems fruitless to think of both these works as representing any meaning prior to their own happening. In the philosophy of Brian Massumi, the body in movement is a point of departure, yet it is a thinking of the body that “means accepting the paradox that there is an incorporeal dimension of *the body*. Of it, but not it. Real, material, but incorporeal. Inseparable, coincident, but disjunct.”<sup>25</sup> To Massumi, the body is real, yet abstract, or better virtual, which is suggested by both titles of the artworks, and both works also trigger other concepts central to Massumi, such as affect, sensation, and event.

Seated in the *Hyperkinetic Kayak* the user will move the vessel and activate the computer program causing motions that will affect back at the user. The user’s physical movements are processed in the computer program and are returned in the renderings of the computer. The renderings take the form of a live surrounding virtual landscape and soundscape and it affects the viewer in a perpetual loop of ever-new creations. To be affected is when an automatic response is triggered in the body system; it is an intensity, a suspension, a passion; but it is radically different from emotion, which belongs to another register. Emotion has to do with subjective content and the sociolinguistic fixing of experience in semantic chains of signification.<sup>26</sup> Affect, on the contrary, is a physical reaction that takes place in the body, and yet, it is also that which escapes confinement in the particular body; it is also the body’s

potential for interaction, that which makes us react in the split of a second.<sup>27</sup> Affect is a virtual turning point, a possibility for shift of direction in the system. It carries with it the possibility of turning our habits upside down, a shock to the system.

But a ride in the kayak also confronts the viewer with the fact that his or her movements and doings happen in a specific environment, and how his or her actions are embedded in, and responsive of, that particular environment, how body and surroundings are relational and interdependent, and how his or her senses are synaesthetically connected. Massumi explains the enfolding of the exterior world in the interior, that is, the body’s spatiality (though he would rather think of the body as radically open) to take place through a deep layering of different modes of perception. Thus, *proprioception* provides feedback on the relative positions of bodily parts via muscles and ligaments. Proprioception again is contrasted with *exteroception*, the body’s tactile perception of the outer world (e.g. through sight, taste, smell, touch, hearing, and balance) and with *visceral perception*, which delivers information on the state of the inner organs. Exteroception, the realm of the tactile, belongs to the domain of the skin, which creates the contact surface between the subject and the outwardly perceived objects. Proprioception folds tactility into the body, in the sense that it closes off the skin’s contact with the outer world and thereby joins the epidermis and the viscera. Proprioception translates the easy performance of the body’s encounter with objects into relational muscular memory. It is the cumulative memory of skills, habits, and bodily attitudes. One should imagine that it is through the different layers of senses in the body that communication between the inner and the outer world and vice versa takes place.<sup>28</sup>

In her performance, VALIE EXPORT would have known about the audience watching her from a point of view from where she could not see herself. She would have been aware of this problem, as she had staged the point-of-view of the other in the four TV monitors. The audience would be watching both her performance in real life and the rendering of that same movement on-screen. The performance demonstrates what Massumi calls *mirror-vision* as opposed to *movement-vision*. He refers to our everyday experiences as mirror-vision.<sup>29</sup> Mirror-vision should be

understood as a simple axis in which you see yourself from a fixed point. Mirror-vision is not movable because to see yourself in a mirror you must keep your gaze still. You cannot see yourself move. This is in fact the conscious experience of sight that we move around with in everyday life. It is like seeing from one point on an axis to another. The perspective is simple. You can, of course, change your point of view, but the new viewpoint will also be static. The double-identity structure of the mirror image can quite unproblematically be transferred to an intersubjective perspective. We mirror ourselves daily in one another.

By contrast movement-vision, which we also use, but which is invisible to ourselves, consists of constantly moving positions and hence perspectives. Mirror-vision and movement-vision are discontinuous and the cleft between them cannot be filled, but it may be crossed. You can never see yourself move as others see you move. If you could, you would have moved radically into the position of the other. But since you cannot concretely move outside yourself this cannot be done. Movement-vision is relational and is guaranteed by an observer. However, it is possible for the subject to assume this observer-position *virtually*. By assuming the virtual position, the subject moves outside himself or herself. Seeing oneself as others see one actually means finding yourself on the axis of sight at a tangent to the self and the other, understood both as factual entities and as conditions for identity. It is to enter a space that opens out an external perspective on the relation between the self and the other, on the subject-object axis. The tangential point at which movement-vision meets mirror-vision and diverges from it is the space between the subject and object poles.<sup>30</sup>

*Adjunct Dislocations II* is the acting out of the theory of mirror-vision and movement-vision in time. EXPORT's own position embodies mirror-vision (though with an applied backward sight) and the audience watching the performance both live and mediated embody the movement-vision position, and the whole set-up stages, or illustrates, the virtual capacity of the body, but in "real" life it takes the co-operation of both video technology and several human bodies to make the event visible in time and space.

Massumi asserts that the body is faster than both thought and language. The continuous

transporting of information through the sensory apparatus—the fact that the body is a constantly vibrating, productive organism, radically open to the world, a recipient and producer of happenings, means that the physical body is faster than language or thought. One needs to imagine that the body is a split second ahead of thought. The body is pre-present whereas thought is present, and it is this very ultra-short distance between the two that constitutes the virtual, the potential that is about to happen. The virtual capacities are the body's emergency services. The sensation one sometimes has that something is happening too quickly, or that it's happening before it actually happens, can be attributed to these virtual capacities.

The works stage the opportunity for millions of events to take place, events that cannot be fixed in representations as they are the result of the continuous interaction between humans and machines acting through time. In the Massumian terminology, the pure event is super-empirical, as it emerges in relation to both past and future, it is the virtual pure potential.<sup>31</sup> The aesthetics of the interface can be said to be the moving virtual environment created by the encounter of body and machine. It has shown itself to be both a contact surface and the disappearance of the space of difference between humans and machine, as Munster would say. Through the envelopment of body and computer, or video installation, an intensification of the bodily senses is produced and the viewer will sense his or her own sensing.

## Notes

1. Donna Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 152.
2. Nigel Thrift, *Non-Representational Theory: Space, Politics, Affect* (London and New York: Routledge, 2008), ebook 445 (my emphasis).
3. Bodil Marie Stavning Thomsen in her introductory article for this volume.
4. Roswitha Mueller, *VALIE EXPORT: Fragments of the Imagination* (Bloomington and Indianapolis, IN: Indiana University Press, 1994), 1–3.
5. *Ibid.*, 59. This was also Donna Haraway's point of departure.

6. <http://www.valieEXPORT>. at (accessed July 13, 2011).
7. Mueller, *VALIE EXPORT*, 71.
8. <http://www.valieEXPORT>. at (accessed July 13, 2011) and <http://www.youtube.com/watch?v=R8poj5NXf6c> (accessed July 22, 2011).
9. Maurizio Lazzarato, *Videophilosophie. Zeitwahrnehmung im Postfordismus* (Berlin: b-books Verlag, 2002), 65.
10. *Ibid.*, 14.
11. *Ibid.*, 67.
12. *Ibid.*, 79. My translation. Original German quotation: “Die Besonderheit der Videokamera besteht darin, in Realzeit *inputs* zu empfangen und *outputs* auszusenden. Zwischen *input* und *output* ist die ganze Arbeit der Videotechnologie enthalten: sich mit einem Strom verbunden, ihn bearbeiten, transformieren und ihn wieder der Zirkulation übergeben, damit er neu bearbeitet werden kann.”
13. *Ibid.*, 12.
14. *Hyperkinetic Kayak* was produced in co-operation with computer scientist Peter Møller-Nielsen, Aarhus University and Centre for Advanced Visualization and Interaction (CAVI), Aarhus University, and Rasmus Lunding produced the sound.
15. Conversation with the artist July 8, 2011.
16. Lazzarato, *Videophilosophie*, 91.
17. Lev Manovich, *The Language of New Media* (Cambridge, MA and London: The MIT Press, 2001).
18. Anna Munster, *Materializing New Media: Embodiment in Information Aesthetics* (Hanover and London: University Press of New England, 2006), 128.
19. *Ibid.*, 138.
20. *Ibid.*, 124–125.
21. *Ibid.*, 132.
22. *Ibid.*, 118–119.
23. *Ibid.*, 119–120.
24. *Ibid.*, 139.
25. Brian Massumi, *Parables for the Virtual. Movement, Affect, Sensation* (Durham and London: Duke University Press, 2002), 5.
26. *Ibid.*, 27–28.
27. *Ibid.*, 35.
28. *Ibid.*, 58.
29. *Ibid.*, 46ff.
30. *Ibid.*, 51.
31. *Ibid.*, 58.

# A cinema of presence and proximity: Gunvor Nelson's collage films and the aesthetics of the signaletic material before the electronic signal

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## Abstract

This essay argues for the importance of an intersubjective and impure film theory in which the signal and the signaletic is considered as figures for approaching film. This in order to make the argument that the signaletic mode indeed enables a novel perspective on moving image history. The aesthetics of the signaletic has thus a history preceding that of electronic media, in particular when it comes to animation and experimental film. When constructing such an archaeology, however, dichotomies into sign and signal should be avoided; otherwise, the complexity of many of the films is reduced. In order to illuminate the latter point, four films by Gunvor Nelson is analyzed (both analog and digital), showing not only how both sign and signal interact but also how the aesthetics of the signal and the signaletic material is not dependant on the electronic as such.



**John Sundholm** is Professor in Film Studies at Karlstad University. He has published extensively on experimental film and minor cinema and is the co-editor of several books on memory studies. He is also the editor of *Historical Dictionary of Scandinavian Cinema* (Scarecrow Press, 2012) and *Gunvor Nelson and the Avant-Garde* (Peter Lang, 2003). He has published work in English in journals such as *Canadian Journal of Film Studies*, *Framework*, *New Cinemas* and *Studies in European Cinema*. Together with Lars Gustaf Andersson and Astrid Söderbergh Widding he has written the first history on Swedish experimental film: *A History of Swedish Experimental Film Culture: From Early Animation to Video Art* (National Library of Sweden/John Libbey, 2010). He is also a member of the examination board of the PhD program in Fine Arts at the Academy of Fine Arts in Helsinki, Finland.

**Keywords:** *film theory; experimental film; expanded cinema; Gunvor Nelson; Bruce McClure; Guy Sherwin*

A major problem of film theory is that most theories are derived from narrative fiction film. This dominant position of feature film has resulted in a recurrent presence of narrative and representation as the primary film analytic tools and frames for understanding, which has led to a self-containing discourse and system in which the feature film and its theoretical counterparts, narrative and representation, feeds one another. However, the emergence of an increasingly heterogeneous audio-visual culture has problematized such established film theories. Today, we are

amidst a situation in which different technologies and practices are blended: the film archives that used to be one of the last pockets of resistance against digital technologies utilizes digital technology in order to create digital intermediates when restoring celluloid film;<sup>1</sup> the user friendliness of digital technology has included a vast array of different producers into what used to be a quite exclusive sphere of film producers, which in turn has fostered a growing experimentation with rules and conventions transgressing most of the established expectations regarding the current grammar

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of audio-visual culture. Not to mention YouTube and other online web-communities that have transformed film from being an exclusive object to becoming yet another format for interactive audio-visual interfaces.

Thus, all these recent changes have made the shortcomings of established film theory even more apparent and, therefore, a shift to the “signal” and the “signaletic” is a most welcome reconsideration of the field of contemporary film culture. What if the moving image would be considered within the framework of its effects and sensations that is forcing the viewer to active participation, to sharpen the senses, and to respond in a bodily fashion to film material and technology? Such interfacial dispositions of the moving image material and the viewers are not, however, only a result of a technological transition to the digital, to electronic media, and to the moments of instantaneous indexicality and feedback. Rather, what I want to draw attention to is that a shift to the signaletic, or the perspective of the signal, enables not only a fresh take on the heterogeneous media situation of today but also forces us to reconsider the history of moving image media. While the technological changes have without doubt promoted fresh and novel perspectives on audio-visual culture in general, I am cautious to consider the transition to the signal to be an ontological one or a change caused by technology alone. Many media are still being used according to old paradigms, a reminder of the fact that, although we invent technology, we shape it by using it and thereby assigning meaning to it; the meanings are not inherent in the technology.<sup>2</sup> Thus, the signal is as much a potential, a discourse, and a social way of using artifacts, and therefore an archaeology of the signaletic is as important as the investigation into new forms and modalities of electronic media.

I think we partly got the film theories we have because film theory has not been exercised close enough to actual film practice that is always impure and dialogical. This is evident when looking at current filmmaking: today filmmakers may shoot on digital video but print on celluloid; or, shoot on celluloid, edit digitally, and project in whatever format depending on the time and place for the actual show or exhibition; in addition, out of the same primary footage on celluloid, there may exist short films for theatrical distribution,

digital copies for loops in galleries and museums, or for online streaming or multi-channel installations. Such a heterogeneous situation and practice raises Edward Branigan’s call for an “impure film theory,” which he summarizes into six points:

- (1) grammatical (i.e. film theory should be nothing but a grammar of an ensemble of words);
- (2) intersubjective (i.e. any film theory should not be conceived as fixed but tied to social practices);
- (3) fragmentary (i.e. all film theoretical descriptions become partial and provisional);
- (4) figurative (i.e. the abstract language of film theory are metaphorical transcriptions of concrete experiences);
- (5) connected (i.e. the theories should not be conceived as hierarchical structures but as “heterarchical,” constituting parts in connection with other systems and structures);
- (6) impure (i.e. the theories should not be considered as Theories, being specific to film or to medium specificity).<sup>3</sup>

My main point with bringing in Branigan’s notions is to introduce the idea of the signaletic as a way of establishing a language and a metaphor in order to take a closer look at a particular strand in film practice, which is the experimental film tradition, thereby tracing the archaeology of the signaletic in film. As my material, I will use the Swedish-American experimental film veteran Gunvor Nelson’s two collage films or animations, *Frame Line* (1983) and *Natural Features* (1990), both on 16-mm, the digital video *Tree-Line* (1998) and *Natural Features Times 3* (2011), a digitally reedited projection of *Natural Features* divided into three images as a triptych. This also in order to avoid both a technological determinism and the dichotomization into modern and non-modern cinema, or time- and movement-image that many of the Deleuzian followers are all too keen to reproduce.<sup>4</sup> Thus, I consider sign and the signaletic to constitute two different practices in making and experiencing film, but they should not be viewed as mutually exclusive practices or modes. Just as we may look at an old photograph in a family album and reflect on what it represents, we may equally consider it in terms of the material sensation it evokes: the design of the album itself, the paper, format and color resolution of the image, its connection with the time and place

when it was taken, but also its connection to other similar acts, constituting a part in a network of commemorations included in the vast culture of photographic actions of memory that we become a part of as soon as we open a photograph album. The photograph album as an act is thus a cross-road of both signs and signals in a broad sense. Therefore, I would claim that it is quite counter-productive to stress a Deleuzian dichotomy between classical and post-classical cinema, non-modern or modern cinema, movement- and time-image, something that we should not accuse Deleuze of but some of his all too eager disciples.

### **ANIMATION AND A CINEMA OF FIRSTNESS**

One of the impure modes that really challenge established dichotomies of film theory is animation, and as Tom Gunning has noticed, animation seems to be one of Deleuze's blind spots.<sup>5</sup> This not only because narrative feature film is Deleuze's primary material and backdrop for his reasoning, but because animation is often beyond all the different taxonomies, bringing the moving image back to its basic attraction and experience: the event of movement and the passage of time, the promise of eternal transformations and modulations, the immersion in the spectacle of the moving image—the signaleptic material of the projected film.<sup>6</sup> Curiously enough animation becomes the terra incognita in the Deleuzian narrative, perhaps because his concepts are mostly derived from classical cinema, out of which subsequent diverging forms and aesthetic modes are discerned in order to pave the way for the transition to the birth of modern cinema or to a transition from the movement-image to the time-image. Especially, the latter is developed into a philosophy of the art-cinema narrative and the human condition (much in the same way as Stanley Cavell develops his philosophy into a narrative about classical cinema and the human condition during that era).<sup>7</sup> I would, therefore, rather suggest a reversion of the main strand in the reception of Deleuze's film philosophy that is too often seen as culminating in the time-image. The notion of the signaleptic is thus a mode that would bring us back to the founding moment and event of film, namely movement. Therefore, I will use Sean Cubitt's elaboration of Deleuzian and

Piercean philosophy and his taxonomy in “pixel,” “cut,” and “vector” in order to stick to a more “heterarchical” model and merely considering the cubittian principles as three cinematic principles of the filmic event.<sup>8</sup> Pixel being the sheer appearance and sensation of the moving image material; cut the organization of the same material; and vector the interpretative maneuvers in relating the moving image material to something else. The event itself constitutes the primary moving image happening; as Deleuze also stresses, film is not photographs in movement; it is not a copy of reality but constitutes a reality as such. This is emphasized by Gunning too, who in his efforts to detach film theory from the grip of photography—and the regime of representation and sign—states that motion and projection is not only the “real thing,” that we in fact not “just *see* motion,” but “we *feel* it in our guts or throughout our bodies.”<sup>9</sup> It is this presence and proximity that so many filmmakers wanted to explore who worked with expanded cinema performances or in the tradition of structural film, but that also constitute the early film experience, a cinema of attractions.<sup>10</sup> Thus, “firstness” and “pixel” are the signaleptic moments that are part of any filmic effect, and included in the other principles as well, but which is never reducible to some other principle (just in the same way as firstness is always included in secondness in C. S. Peirce's semiotics, and secondness in thirdness, whereas firstness never may contain secondness or secondness thirdness).

One of the most original contemporary artists of expanded cinema performances is Bruce McClure who emphasizes the very moment of movement and projection through his use of multiple 16-mm projectors loaded with different film loops of slightly variable lengths. In this way, McClure is able to epitomize movement, creating a cinema of firstness or, of affection or that of the pixel, forcing the viewer to participate in the real event of the projection of moving images. This is further epitomized by his use of sound. He connects guitar effect pedals to the projectors, modulating the optical sound track, thus playing with and “on” the sound track of the celluloid loops. Film is thus brought back to its origin becoming “a-signifying plastic mass” that forces the viewer to experience the projection as a physical event, which is reinforced by the aggressively flickering

screen and the loud sound so, both image and sound reverberates in the body of the viewer. As McClure himself expressed it in an interview, one aim is to have the audience feel “the burn” of the performance. This transformation of the moving image experience from that of narrative complementation into sheer physical sensation is also stressed in McClure’s performances while he prefers to delay the very act of showing any image whatsoever in the beginning of his performances. At first, there is only a flickering square on the wall after which images begin to appear, thus reminding us of the fact that moving images are the production of the projector and that the images are only one by-product of the interaction between man and machine, perception and projector. The image is merely one dimension in the signalitic event of the performance, stressing that the film event is not the same as experiencing moving images—as the film experience is mostly conceptualized—but that of being immersed in a live audio-visual projection (Figure 1).

### PRESENCE AND PROXIMITY: LOOK IT MOVES!

Whereas McClure pushes conventional film technology to its limits in his cult of the cinema of firstness, Gunvor Nelson’s work is much more unobtrusive.<sup>11</sup> Her career started in the 1960s in the Bay Area experimental film community, and her work from the 1960s and the 1970s intersects with the major trends of experimental film culture at the time, ranging from expressive explorations of sound and image to lyrical films about the facts of life. Especially, the structural film tradition of the late 1960s and the 1970s may be considered as one strong legacy in the archaeology of the signalitic. For example, Paul Sharit’s flicker film *T,O,U,C,H,I,N,G* (1968) shows a man with his tongue in a pair of scissors, as if someone was to cut his tongue off. Due to the viewer’s active perception, the moving imagery is seen as a tongue being cut off in a repetitive, flickering motion. Another important strand is the multimedia environment of the 1960s and the early 1970s in the Bay Area that did not only foster experiments with various media but also across media and which gave birth to Stephen Beck’s legendary “Beck Direct Video Synthesizer” (1970) and the later “Beck Video Weaver”

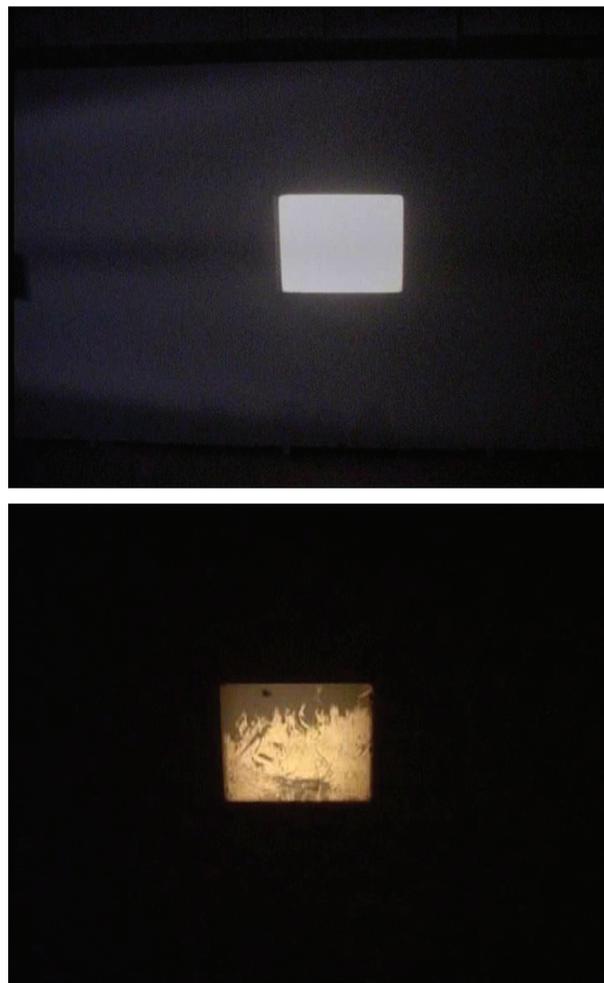


Figure 1. Bruce McClure: *Cycloptically Through the Windowdisks*, performance at Kristinehamn Art Museum, Sweden, 2010. Documentation by Daniel Alegi.

(1973). Beck’s direct transmutations of analog or digital signals had its equivalent and predecessor in the Optical Printer that became a favorite tool among experimental filmmakers for transforming and manipulating the film images that they had shot.<sup>12</sup>

British artist Guy Sherwin’s work addresses similar questions as Sharit’s film although sound is here much more to the fore. His work *Cycles* (1972/1977) consists of sections of paper dots attached to both film leader (transparent film) and the soundtrack, including holes that are punched into the film. When projected, the gaps, or interferences in the filmstrip and its soundtrack, disappear at a certain frequency and creates a coherent audio-visual entity that is reaching up to 72 sound beats per second. Even more radical is

Sherwin's *Sound Cuts* (2007) in which black film is repeatedly cut and rejoined in such a way that the cut is visible, creating a flash of light and a thud of sound whenever the filmstrip is passing through the film gate of the projector. When such loops are projected with several cameras from different angles, a performance of the signaletic material of both the projector and the celluloid film is created.

Both Sharit's and Sherwin's work show how the film material is considered as a signal, a transmission, which may be forever modulated, manipulated in order to create different experiences in which our physiological capacities are tested and in which our aural and visual perception is taken for a ride. In Gunvor Nelson's work, however, all these material imprints are integrated into a vast assemblage of techniques, covering pixel, cut, and vector, thus not leading exclusively to a signaletic aesthetic. Instead, the signaletic becomes one important path and mode, demonstrating that all those technical features that Gene Youngblood, Peter Weibel, and Steina and Woody Vasulka deemed essential for the shift to the code were already there in traditional film.

In their essay "Cinema and the Code," published for the first time in 1989 in Youngblood's name, they distinguish four new features of electronic moving image media:

1. image transformation (in contrast to transition in cinema);
2. parallel event-streams;
3. temporal perspective;
4. the image as object.<sup>13</sup>

Youngblood et al. do state that these characteristics are not exclusive to electronic media and the signal, but that what is new is that they are now within reach of manipulation and modulation by a simple push of a button, whereas to accomplish the same thing with celluloid film was highly time-consuming. What is important for my point in this context, however, is to stress that the devices described by Youngblood may be used both in traditional film and electronic media. This is in order to emphasize the point that it is important to approach the signal and the signaletic as a language for addressing another mode for audiovisual aesthetics and not restrict the language to a certain technological feature.

Gunvor Nelson's first collage film, *Frame Line*, is a 16-mm film shot in black and white. The film follows no narrative except for that it is based on Nelson's experience of returning back to Sweden and Stockholm in the early 1980s. Her encounter with Sweden and Stockholm as places is mostly displayed in the film as an encounter with images of Stockholm and of Sweden (while she was planning the film and applied for using the facilities of the Stockholm film workshop, *Filmverkstan*, she described the film as a series of glimpses).<sup>14</sup> After the initial intersecting shots that show someone kneading dough and a camera that is moving out on the Stockholm waterfront, follows an animated sequence displaying how Nelson is painting over some of the imagery that she has taken of Stockholm. Soon, a set of animated lines appears, superimposed on the footage of the hands that are kneading the dough and the footage of the waterfront (Figure 2).

Already during this first minute of the film Nelson introduces image transformation (by using animation and superimposition), parallel event-streams (cutting back and forth between the dough and the movements out on the sea), temporal perspective (liberating the viewer from a specific position in both time and place, moving freely around as the camera is seeking its way out on the water), and the image as object (inserting animated sequences of whatever visual imagery Nelson picks up during her 22 minutes long journey in the film, manipulating and changing the images, painting, cutting, and reworking the material). These opening moments carry a highly ambivalent and disharmonious soundtrack that consists of various sounds and musical themes, singing voices, and a voice saying "yes" and "no" in Swedish. Especially prominent is a repetitive machine-like sound that is similar to the noise from a turntable when the pick-up has finished the last track but the turntable keeps spinning and the stylus is still picking up the sound.

Already with this beginning, Nelson moves from the regime of the sign to that of the signal, modulating, interfering, and playing with the means of the cinematic, creating a cinematic event that is not transferrable into a pattern of signs and corresponding referents. Rather, by taking a close look at the material at hand and interfering, she creates a signaletic material that the viewer is free to explore, thus supporting the dictum of Deleuze



Figure 2. Gunvor Nelson: *Frame Line* (1983), 16 mm.

that “[i]t is at the level of the interference of many practices that things happen.”<sup>15</sup> But, she is not reducing the film to an “a-signifying mass” either, as she continuously cut and develop the work, but without creating a story line or establishing some other modus that would play down the signaleptic experience, that of audio-visual matter moving and vibrating out of the screen.

With *Natural Features*, Nelson ended her series of five collage films. This work contains no conventional image material, as if shot in a window-like manner using the camera as a registering, representing machine. Instead, the film consists of image and sound-events or happenings, in which objects and images clash with each other creating an endless journey into image and sound. In this way, the film is made to be inherently present; there is no tension between the bygone past of the camera image and the present presence of the animated transformations as in the previous collage films. The animation techniques used are meticulous but raw, including moments of randomness and physical challenges. For example, several of the complex takes in which images are reflected—and often distorted—were shot while Nelson was holding a mirror in one hand and painting a picture that she had attached to herself in the other, thus not being in full control of what was happening. In *Natural Features*, literally everything is moving and constantly changing, though

not in accordance with any predetermined schedule, but in accordance with the principles of animation whereby we as viewers watch the transformation and entanglements of lines and figures. This live-action and live-painting, her way of working with animation was, as Youngblood et al. expressed in their essay, intensely time-consuming and complicated; therefore, it was no coincidence that *Natural Features* became her last collage film. The film was also so saturated with image information that the audience was simply baffled (Figure 3).

It was quite logical that Nelson should return to *Natural Features* reworking it digitally as it already had a “digital look,” being a work of infinite image-transformations that simply ignored traditional parameters of time and space, perspective, and viewer positions, denying the tradition of photography and film as constituting a window out to the world. In *Natural Features*, the surface of the screen is the place where the cinematic events unfold, we are so to speak beyond the logic of the camera and instead immersed in audio-visual events.

In Nelson’s first video work *Tree-Line*, the idea of the camera is, however, reintroduced, making the video into a highly interesting reflection on the transition from celluloid to digital. The video is foremost made out of footage that accompanied Premier’s software at the time and that shows a



Figure 3. Gunvor Nelson: *Natural Features* (1990), 16 mm.

train that is passing by. Besides this sequence, Nelson has added another shot, an image of a tree that she has taken from a book. Thus, the video is completely created out of already existing material (as also the sound of the moving train that is taken from a sound archive). In *Tree-Line*, Nelson places the viewer on this side of the train so it is only possible to see the tree as it occasionally appears in between the wagons as the train passes by. After this primary set up, Nelson starts to play with sound and image, changing perspectives, changing colors, shapes, and the size of the train and the tree, but always returning to the perspective in the beginning: someone watching a train passing by and getting sudden glimpses of a solitary tree. Thus, although Nelson works with software and an electronic signal, there is an ongoing dialectics between sign and signal, representation, and production, in which we move between the two different registers. Thus, *Tree-Line* both simulates the capturing camera of conventional film-representation and is an advanced journey into image transformation, a playing with the software. In fact, in comparison with *Natural Features* on 16-mm, *Tree-Line* looks more like a film when it comes to the language used, but the pixelation of the image reveals the medium that is being used (Figure 4).

With *Natural Features Times 3*, Nelson returns to her signaletic project of creating endless image transformations. The form of the triptych enables her to triple the image information that existed already as a potentiality in the original film, but she has also chosen to slow down the pace of the film. These cuts are, however, not a way of organizing space in the film but merely a device for adjusting the rhythm. The celluloid version of *Natural Features* is, therefore, much more an event of movement whereas the triptych has spatialized the movement due to the projection that shows three distinct images. The images are related to each other as visual image transformations and not as much as an event of movement.

### FROM FRAME TO LINE AND BACK

As I have shown, sign and signal, when considered as language-games in the social field of film theory, need not to be held as mutually exclusive but instead constituting vital elements in any moving image act or event. Experimental film has a long tradition of exploring the signaletic material of film, in particular when it comes to different forms of expanded cinema actions. But, there are also more subtle ways of using the notion of the signal and the signaletic in order to establish



Figure 4. Gunvor Nelson: *Tree-Line* (1998) Digital video.

a more profound relation to some moving image work, as in this case, the work of Gunvor Nelson and her collage films in particular. I consider Nelson to be one of the most interesting intervenors between celluloid and the digital, the sign, and the signal, exploring the whole range of cinematic devices, pixel, cut, and vector and not restricting any of them to a specific medium. In this sense, she is an impure artist in the history of experimental filmmaking.

The title of Nelson's first collage film is telling, *Frame Line*. It suggests that she is liberating film from the idea of the frame as constituting a necessary window out to the world and instead discovers the line, which is one of the main devices in animated image-transformations transgressing the established conventions of time and place in film grammar.<sup>16</sup> The transition from frame to line also entails the transition from that of moving images to movement as such, stressing the point that the projected audio-visual movement is a reality in itself. Film is not a medium for representations but for interventions and experiences. But, Nelson's way is not either to liberate film in full, in order to abandon the regime of the sign or representation. As I have shown, *Tree-Line* is also a return to the act of image representation.

Nelson's most signaletic work, *Natural Features*, is made on celluloid and is a film that pushes animation toward its limits, demonstrating that animation plays a major part in the archaeology of the aesthetics of the signaletic and the signal.

## Notes

1. For an excellent overview, see Giovanna Fossati, *From Grain to Pixel: The Archival Life of Film in Transition* (Amsterdam: Amsterdam University Press, 2009).
2. For a discussion of technological determinism, see *Does Technology Drive History?—The Dilemma of Technological Determinism*, ed. Merritt Roe Smith and Leo Marx (Cambridge, MA: MIT Press, 1994).
3. Edward Branigan, *Projecting a Camera. Language Games in Film Theory* (London: Routledge, 2006), 19-20.
4. This is especially reproduced in numerous essays or book chapters. Deleuze is not always crystal clear on this point either. Damian Sutton, for example, argues that time and movement-image should be considered as two different modes that are not in opposition to each other, whereas, Jacques Rancière claims that we are rather passing "from one side to the other of the same images" and not "from one family of images to another"—thus time- and movement-image are two different aspects, not two different images as such. For Deleuze, the

- movement-image is the prerequisite for the time-image. Damian Sutton, *Photography, Cinema, Memory: The Crystal Image of Time* (Minnesota: University of Minnesota Press, 2009), 40; Jacques Rancière, 'From One Image to Another? Deleuze and the Ages of Cinema', in *Film Fables*, ed. Jacques Rancière (Oxford: Berg, 2006), 113.
5. Tom Gunning, 'Moving Away from the Index: Cinema and the Impression of Reality', *Differences* 18, no. 1 (2007): 29-52.
  6. There is also, I would say, in Deleuze's arguments, a recurrent conflation of plot with film material or the various types of images, i.e. narrative structure or development is often used as the foundation for analyzing or defining different types of images, not the film material as such.
  7. Stanley Cavell, *The World Viewed. Reflections on the Ontology of Film*. Enlarged edition (Cambridge, MA: Harvard University Press, 1979).
  8. Sean Cubitt, *The Cinema Effect* (Cambridge, MA: MIT Press, 2004).
  9. Gunning, 'Moving Away from the Index', 39.
  10. For expanded cinema, see also Ulla Angkjaer Jorgensen's essay in this collection and the seminal catalogue *X-Screen: Film Installations and Actions in the 1960s and 1970s*, ed. Matthias Mihalka (Köln: Walther König, 2004).
  11. I want to stress that my thoughts presented throughout this essay have not primarily risen out of reading theory but are based on my own experience of the collage films by Nelson and of the obvious shortcomings of the existing theoretical work that has addressed her films (including my own).
  12. For an overview of the period see, for example: *Looking for Mushrooms: Beat Poets, Hippies, Funk, Minimal Art, San Francisco 1955-68*, ed. Barbara Engelbach, Friederike Wappler and Hans Winkler (Köln: Walther König, 2008) and *Radical light: Alternative Film & Video in the San Francisco Bay Area, 1945-2000*, ed. Steve Anker, Kathy Geritz and Steve Seid (Berkeley: University of California Press, 2010), in particular the essay by Tony Reveaux, 'A Legacy of Light'. *ibid.*, 104-10.
  13. Gene Youngblood, 'Cinema and the Code', in *Future Cinema: The Cinematic Imaginary after Film*, ed. Jeffrey Shaw and Peter Weibel (Cambridge, MA: MIT Press, 2003), 156-61, originally published in *Leonardo*, Computer Art in Context Supplemental Issue (Oxford: Pergamon Press, 1989), 27-30.
  14. Letter to *Filmverkstan*, May 22, 1980, Archive of the Swedish Film Institute, Filmverkstan-collection.
  15. Gilles Deleuze, *Cinema 2. The Time-Image* (Minneapolis, MN: University of Minnesota Press, 1989), 280.
  16. Frame line is of course also a technical term signifying the unused space in-between two frames on the film strip. Thus, "Frame Line" may also be interpreted as suggesting a film that is in-between the established film grammar.

# Connect and immerse: a poetry of codes and signals

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## Abstract

This article investigates how codes and signals were employed in avant-garde poetry and art in the 1960s, and how such attempts were performed in the wake of cybernetics and (partly) through the use of new media technologies, such as the tape recorder and the computer. This poetry—as exemplified here by works by Åke Hodell, Peter Weibel, and Henri Chopin—not only employed new materials, media, and methods for the production of poems; it also transformed the interface of literature and the act of reading through immersion in sound, through the activation of different cognitive modes, and through an intersensorial address. On the one hand, this literary and artistic output can be seen as a response to the increasing intermedation (in Katherine Hayles’s sense) in culture and society during the last century. On the other hand, we might, as contemporary readers, return to these poetic works in order to use them as media archaeological tools that might shed light on the aesthetic transformations taking place within new media today.



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**Keywords:** *poetry; code; signal; intermediation; sound; embodiment*

“We are in open circuits”, Nam June Paik, 1966<sup>1</sup>

In May 2011, a new film and literary work had its premiere at the small cinema Zita in downtown Stockholm. The title of the piece was *Fjärrskrift* (Distance Writing or Telewriting), and as was soon disclosed to the audience, the main content of the film was actually writing; literary writing composed by the Swedish novelist, poet, and essayist Lotta Lotass.<sup>2</sup> On the screen, from right to left, ran a strip of paper with words and sentences printed on it—words and sentences

addressing communication and desire, signals and noise, oceans and distant shores. It ran in a steady pace, forcing the viewer to adjust her bodily movements, her watching and reading (in a lateral zig-zag pattern) to the workings of the apparatus. The technology that engendered the strip, or part of it at least, was also disclosed to the viewers: to the right on the screen sat the exquisitely sculptural and shining chassis of a teleprinter by the German brand Siemens (model T68), produced in the 1940s (a war child), and now refurbished to meet the demands of a work of poetry 2011—demands shaped by the ubiquitous presence of

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new media, whose machinery is ultimately dependent on code or even voltage differences, as Friedrich Kittler once, famously, declared.<sup>3</sup> Or, as Bodil Marie Stavning Thomsen outlines this crucial cultural transformation in the introduction to this volume: on “the shift from sign to signal”.<sup>4</sup>

In his chapter on telegraphy (or distance writing) in *Understanding Media* (1964), Marshall McLuhan expounded that it “is the artist’s job to try to dislocate older media into postures that permit attention to the new”, and that “to this end, the artist must ever play and experiment with new means of arranging experience, even though the majority of his audience may prefer to remain fixed in their old perceptual attitudes.”<sup>5</sup> Certainly, the multiplication of new media during the last half century has made the artist and poet heed to this call for an experimentation “with new means of arranging experience”. We have learned to enter different spaces of reading and perception through elaborations in digital technology—complex spaces of text, image, and sound as well as more sober remediations of the book. And we have been acquainted with the possibility of pushing poetic practice towards unexpected horizons, for example the use of DNA-code and bacteria as storage and generative devices for literary production in works by artists and poets such as Eduardo Kac and Christian Bök.<sup>6</sup> To put it briefly, the channels as well as the interfaces of literature have (at least here and there) changed in line with the ideas of McLuhan.

What makes Lotass’ piece of telewriting interesting in this context is that she does not only entice the reader/viewer to reconfigure the literary experience and reflect upon the medial and material conditions of reading—this is true for the film as well as for the other materialization of her work as an artist’s book consisting of the full text strip rolled together and placed in a box (reminiscent of a reel-to-reel tape). But her work is, moreover, a reminder of how the use of code and electric signals as a material base for production and dissemination of literature is not restricted, historically, to a contemporary condition of inexpensive computers, wieldy software, and accessible servers. The Siemens teleprinter converts the input of letters and words into a code called Baudot, a forerunner to ASCII, which makes possible the transduction of the writing into electric signals, and which, naturally, affects

the output and the reception. This media archaeological insight, delivered by the poem, forces us to acknowledge a long tradition of encoded and electric writing, from Giuseppe Mazzolari in 1767 and onward—a tradition that is intimately connected to a history of literature.<sup>7</sup>

Here I want, however, to be more modest in my media archaeological ambitions, and return to the electronic and cybernetic era outlined by McLuhan, Norbert Wiener, and others 50 years ago, in order to trace a poetics and poetic practice engaged in a displacement of literature’s alphabetic bias and a transformation of the interface as well as the reading of literature through the elaboration of codes and signals. The field of post-alphabetic writing that was mapped out during the postwar decades through the emergence of new technologies, disciplines, and tendencies in science—television, computers, tape recorders, cybernetics, informatics, molecular biology, and so on—was also a place that attracted artists and poets to *imagine* and *construct* alternative modes of production and reception. I will focus here, more specifically, on a handful of works by the poets and artists Åke Hodell, Peter Weibel, and Henri Chopin, who in different ways, conceptually and materially, with paper, electricity, and magnetic media, explore the signal, rather than, or just as much as, the sign, as a condition and vehicle for poetry and art.

## POETRY OF CODES

The early 1960s witnessed, in the wake of cybernetics, the emergence of the first computer generated poems, by writers and artists such as Theo Lutz, Nanni Balestrini and Brion Gysin; and Lutz’s first algorithmic piece, based on material from Kafka’s *The Castle*, allegedly the first digital poem, actually dates back to 1959.<sup>8</sup> But this interest in codes and algorithms would also infiltrate the more “humanly” based production of poetry. In genres or modes such as lettrism and concrete poetry, for example, images and other forms of writing (braille, musical notation, etc.), as well as a sophisticated play with typography, expanded the field of literary signification. Far more than ornamental, such para- or post-alphabetic elements invited a reflection on how new means of communication and expression emerged in an ever expanding media-ecology.

One is reminded of Katherine Hayles' remark that, "Language alone is no longer the distinctive characteristic of technologically developed societies; rather, it is language plus code."<sup>9</sup>

A good example of this tendency can be found in a transmedial work from 1964–1966 called *Lågsniff* (Low Range Flying), by the Swedish poet and artist Åke Hodell. Materialized as a book, a sound poem, a performance, and a TV-film, the piece had its starting point in Hodell's own past, and, more specifically, in his experiences as a pilot during World War II. In the book version (published in 1966),<sup>10</sup> which I will focus on here, this comes forth in the straight appropriation and juxtaposing of images and forms that in one way or the other refer to the communicative situation of the pilot in the cockpit—tables, diagrams, grids, fragments of maps, strings of letters and numbers, and morse code cover the pages of the book (Figures 1 and 2). This is a communication that

does not allow for semantic vagueness, but which relies on exact data. Otherwise an escalation of distorted feedback loops—of the kind described by Norbert Wiener in his introduction to *Cybernetics*—will entail, and catastrophe lurks around the corner.<sup>11</sup>

Hodell would also crash his aircraft in the southern parts of Sweden in 1941, and after a long convalescence, he changed his path to become a writer. His first collection of poetry was published in 1953. It would, however, take more than a decade before the language of the cockpit (the "electronisms" as he called it) was allowed to enter the space of writing. In 1963 and 1964 he published two books based on a mix of sound poetic score, minimalist typewriting, and collage. Commenting on this transformation (which he had prepared since long, but been advised by others to refrain from) Hodell suggested that the "language of the dashboard could

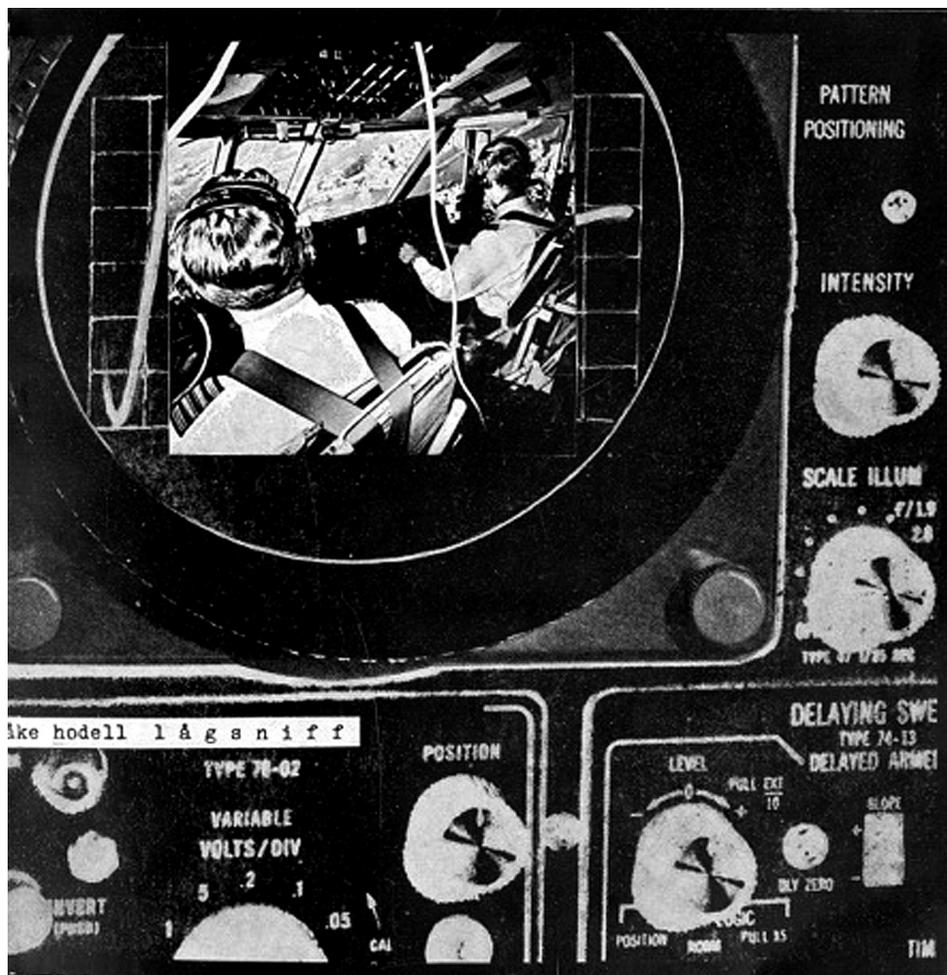


Figure 1. Åke Hodell, *Lågsniff* (1966). Cover of book. © Ann Hodell Smith & Laila Hodell.

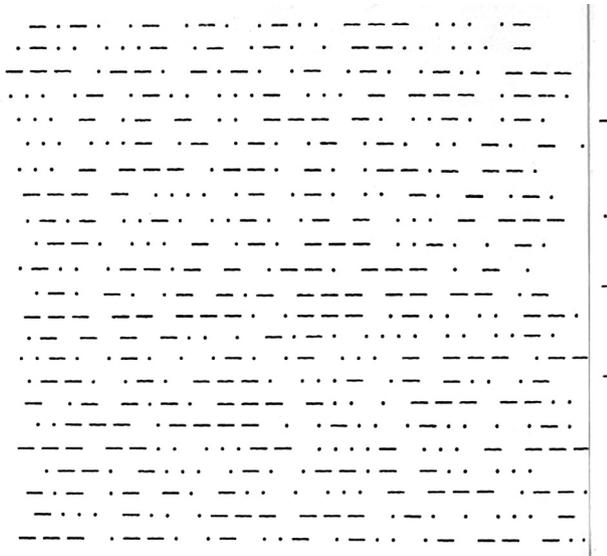


Figure 2. Åke Hodell, *Lågsniff* (1966). Page from book.  
© Ann Hodell Smith & Laila Hodell.

be used [...] and offer something *more* than just data [...] and in a new way convey something about a human”.<sup>12</sup>

What made *Lågsniff* stand out was, then, the insistent use of technical language and codes, and its connection to aeronautics (one of the first areas of application of Wiener’s cybernetics, of course). The language usually encountered in books of poetry is absent, except for a few scattered phrases, such as “enemy attacks”, “OUT-A-SPACE”, “we’re diving”. It is thus a poetry linked to complex technological networks, which remediates an interface for communication where not only verbal representation has been substituted with code, but also where a physically situated observation has been replaced by orientation and action through the processing of signals at a distance. In this regard, the interface of *Lågsniff* evokes, on an allegorical or conceptual level, a set of familiar, contemporary interfaces.

The best way to describe this poem is perhaps to use the concept of *intermediation*, as it has been employed by Hayles, as referring to “interactions between systems of representations, particularly language and code, as well as interactions between modes of representation, particularly analog and digital”. Such interaction is here explored through the technology of the book. And since the idea of the human in this and several others of Hodell’s works is linked to machines and media technologies, one might also include the addendum to

Hayles’ definition: “Perhaps most importantly, ‘intermediation’ also denotes mediating interfaces connecting humans with intelligent machines that are our collaborators in making, storing, and transmitting informational processes and objects.”<sup>13</sup>

The poetry in *Lågsniff* is, consequently, a poetry that evokes new ways of communication theorized in cybernetics and informatics. Still, our approach, as readers, to the codes used in the book will be basically conceptual—some of the strings of letters and numbers are, perhaps, even to be processed by a machine rather than by human cognition. As in visual poetry in general, the reception process of this work is certainly complicated, as it invites an oscillation between two cognitive modes (reading and seeing). But we will not engage here in an act that differs that much from the reading of most books. It is actually quite easy to find other paper based poetry from the period where the embodied reader is addressed in a more complex way—where, for example, one is forced to turn the book upside down or shift the distance to it in order to process its content.<sup>14</sup>

As mentioned above, *Lågsniff* would, however, also materialize as a performance. But the performance was to a large degree dependent on linguistic representation, narrative, and theatrical conventions, even though elements of code are still present—one of the roles is devoted to the telegraphist, whose acoustic signals perforates the performance space and enters the ears of the audience.

In order to find a poetry, which transforms the literary (or theatrical) interface through the operations of code and signals, and which engages an embodied reader in a more thorough way, one might turn instead to a couple of works by Austrian media artist Peter Weibel. In the second half of the 1960s Weibel developed an artistic activity influenced by the Vienna group and Vienna Actionism, and collaborated with artists such as VALIE EXPORT—an activity that combined elements from concrete and sound poetry, performance art, conceptual art, and early media art, using different technologies, materials, and environments to these ends.

Two years after the publication of *Lågsniff*, Weibel produced a piece that he designated as “electric poetry”, and as an “interactive text installation”—designations that manifest a certain

affinity with Hodell's poetics.<sup>15</sup> *Der Lange Marsch* (The Long March) (1968) uses a series of repetitive sentences organized into six groups or stanzas as its linguistic base, of which the first runs: "1. abschaffung der schaffner/abschaffung der verwaltungsvollstreckungsgesetze/abschaffung der verkehrssicherheit" (abolition of the conductors/abolition of the administrative-execution-law/abolition of road safety). These sentences were, however, not presented in written form, but as speech acts recorded on audiotape. The installation as such consisted of four parallel steel plates, laid on the ground within wooden frames, on which push buttons were installed and connected to three tape recorders (Figure 3).

The tape on each recorder contained two tracks (two word groups). The visitor of the installation (the reader or listener) could choose to push one button and hear one part of the text. But if the visitor touched or pressed two buttons from different plates simultaneously, he or she also



Figure 3. Peter Weibel, *Der lange Marsch* (1968). Photograph of "interactive text installation". Permission to reprint from the artist.

activated an amount of electricity—and while advancing along the plates toward a light bulb at the end of the installation, the voltage that ran through the plates increased (eventually to a life-threatening level).

Thus, a reading of Weibel's poem not only engaged the visitor as a viewer, listener, and reader of language (or decoder of code), but also as a "toucher", and to such a degree that pain or injury might become part of the reception. Such a physiological aesthetics were integral to much neo-avant-garde activity at the time.<sup>16</sup> But it is interesting to observe how Weibel uses new communication technology, and a poetics that moves from sign to signal, in order not only to entice the reader to interact with the poem and contribute to its (variable or open) formation or process, but also to establish a completely different interface for the genre; an interface that literally connects and embodies the reader in a way that a book based work such as Hodell's could only hint at. Here intermediation as outlined by Hayles is materialized in a brutal and even sensorially piercing and hurting manner. The cybernetic coupling of human and machine dissolves the humanist subject as the talking animal, even to the point of literal extinction. There is, certainly, an ironic dimension in the final line of the final group of sentences used in *Der lange Marsch*: "abschaffung der sprache"—abolition of speech.

## POETRY OF SIGNALS

A key component of Peter Weibel's poetry installation—and the verbivocovisual, tactile, and kinaesthetic interface it produced—was the tape recorder, a crucial technology for innovative postwar poetics.<sup>17</sup> The literary genre that would benefit most from the emergence of viable apparatuses for magnetic recording in the late 1940s was, without doubt, sound poetry. While the genre's modern progenitors were to be found in the early avant-garde of Futurism and Dada, the genre would blossom and take off in a variety of directions during mid-century due to the possibilities offered by tape. In distinction to the phonograph and the gramophone, the tape recorder was a flexible and easily managed technology—it was actually, the first recording device for amateurs. With it sounds could be captured in a multitude

of environments—it was a portable, a mobile medium—and a tape recording could run on continuously for a long time (much longer than gramophone records), but just as easily be erased and substituted with a new one.

Moreover, and most importantly, tape was susceptible to post-production. A wide array of manipulative techniques were offered to the operator: cut and paste, layering, echo and delay, loops and different speeds of playback and recording, and so on. All these operations would be employed in sound poetry. Usually they were directed against the voice, the basic material of the genre. But also other sound sources were used to expand and differentiate the acoustics of literature. The soundscapes of sound poetry, together with the development of the postwar radio play (or *Hörspiel*), and some early installations and happenings, must be considered as the most important precursors of the ubiquitous presence of sound in art today.

Important to underline here is that tape based poetry is an eminent example of how a poetics of the signal was installed in literature.<sup>18</sup> A recording takes place as a soundwave hits the membrane in a microphone, which generates an electric signal run through a wire onto a tape head that produces a certain configuration or pattern in the magnetic particles on the tape; in playback, this process of transduction is reversed, and the electric signal sets another membrane—that of a loudspeaker—to vibrate, which reproduces a good, but not exact copy of the initial soundwave.<sup>19</sup> Whatever enters our ears is then relayed through a technical system based on electricity and magnetic storage. The signal is key to the practice, and to the materiality of the poetry produced with these means.

One of the most prolific practitioners of sound poetry during the postwar decades was the French poet Henri Chopin. He ran the influential review *OU*, perhaps the first literary publication to include sound recordings (on disc), and he composed a large number of *poèmes sonores*, specializing in a kind of archaeology of the voice. By using microphones and contact microphones in an inventive way he was able to capture subvocal and bodily sounds as well as paralinguistic vocal expressions such as breath, coughs, cries, and smacking of the tongue and lips—the embodied microparticles of language in

action—in combination with the articulated word. As these sounds were converted to signals and magnetic patterns they were manipulated through mechanical operations on the tape recorder. Especially, Chopin employed variation of recording speed and superimposition to construct a strange soundscape primarily based on a materialized and de-familiarized voice of clicks, hissings, chirps, and blips, as can be heard in poems such as “Le corps” (1966) or “Le ventre de Bertini” (1967), in which an acoustic montage, verging on noise, is juxtaposed and contrasted with the classical lyrical tone of poetry and song that introduces the sound poem proper.<sup>20</sup>

Even if the voice as a source of poetry, and the ear as its receiver, is a model of some reputation in history, the strange sounds that are emitted from the loudspeakers in the work of Chopin and others impinge on the acousmatic—or the seemingly sourceless—sound, as it was once defined by Pierre Schaeffer.<sup>21</sup> The effect on the listener is quite disorienting, sometimes even dizzying, leaving him or her searching for a sign, a shard of language, in the subvocal terrains, or a visual correlate to define the sound source, which would render a more stable meaning to what is heard. Since experimental recording methods and manipulative post-production were often supplemented with inventive loudspeaker placements, which contributed further to the sonic invasion of the listener’s senses—that penetrated and embedded him—this effect of disorientation was easily heightened.

As Steven Connor has remarked, we are never passive in relation to sound: “we never merely hear sound, we are always also listening to it, which is to say selecting certain significant sounds and isolating them from the background noise which continuously rumbles and rattles, continually on the qui vive for patterns of resemblance or recurrence.” This implies, moreover, as Connor suggests, the construction of a space with “the ear commandeering the eye to make out the space it finds itself in”.<sup>22</sup> But the acoustic environments that surround the listener in much sound poetry complicate such commandeering, and invite an indeterminate intersensorial or proprioceptive activity of body and mind. In listening to a multi-track piece such as Chopin’s “Hoppa bock” (1970), for example, we are immersed in a soundscape that necessitates an embodied

engagement, but which forces us to leave behind the hope of anchoring our listening in the identification and interpretation of signs.<sup>23</sup> Such a sonic space is more akin to the smooth space of Deleuze and Guattari—characterized by closeness, the haptic, and linkages in “continuous variation”—than to an ordered Cartesian space that places a subject, at a certain distance, in front of a world of logical and ideological coordinates.<sup>24</sup> The intermediation between different representational systems and between man and machine in this kind of sound poetry is based on a poetics of the signal (and the sign) that cannot go on without a body.

### CONNECT AND IMMERSE

In her study on information aesthetics, *Materializing New Media* (2006), Anna Munster brings up the necessity today of taking the body into account in dealing with the production and reception of new media art, and she sets herself the task of constructing “a different genealogy for digital engagements with the machine, one that [gives] us room to take the body, sensation, movement and conditions such as place and duration into account”.<sup>25</sup> A key concept in Munster’s investigation is the interface, or interfaciality. Whether the ears are to be considered as a part of the face is perhaps an open question, but when it comes to issues of space, embodiment, and immersion in relation to the specific qualities of new media art, there is a large amount of affinities and correspondences to be found in the recent history of acoustic arts, as Frances Dyson has shown in a recent work.<sup>26</sup> And sound poetry is no exception to this. If one wishes to describe and analyze a signal aesthetics or poetics of new media, and the various modes of reception they invite, a media archaeological approach would certainly bring up this genre as a crucial finding.

Something similar can be said of the other poetic works from the 1960s that have been discussed above, and which address, on different levels, the increasing mix of language, codes, and signals in the “technologically developed societies” of the late twentieth century. Consequently, a book such as Åke Hodell’s *Lågsniff*, where code and language are juxtaposed on the pages, and where standard readerly habits are challenged, offers a perspective on the forms of production

and reception of new media art and poetry today. And Peter Weibel’s inventive, and chilling, transformation of the interface of literature in his installation *Der lange Marsch* forces us to consider how the body, and a mix of the senses, were activated in the processing of poetry in the 1960s in a manner that if not anticipates then at least opens up channels between earlier artistic practice and new media art. Both of these works intensify the intermediation discussed by Hayles, and they connect poets and readers to networks of technologies for communication. Whether we talk of cyberpoetry or biomedial poetry of the kind encountered in the works of Eduardo Kac and Christian Bök (also DNA-code attracted the sound poets of the 1960s, as can be observed in Sten Hanson’s “La destruction de votre code genetique par drogues, toxines et irradiation” from 1969), there are important analogies and isomorphies to be acknowledged.

Just as Lotta Lotass’ piece of telewriting in *Fjärrskrift* from last year functions as a kind of media archaeological-poetic probe, laying bare the material and embodied conditions for writing and reading in different media, the works by Hodell, Weibel, and Chopin can, consequently, be applied as “tools for excavating the present”, to quote Paul deMarinis in his analysis of new media art through telegraphy, phonography, and optophonetics.<sup>27</sup> Not only literary artifacts of an avant-garde past, these poems might be revisited and used as passages to a contemporary aesthetic condition, “where the interfacing of signals is the message that affects us” (Thomsen).<sup>28</sup> It is a condition that certainly has transformed the ways of writing and reading, creating and viewing (and listening to) poetry and art, although it did not come about in an instant.

### Notes

1. Quoted from the reprint of Paik’s “Cyberated Art”, in Noah Wardrip-Fruin and Nick Montfort, eds., *The New Media Reader* (Cambridge, MA: MIT Press, 2003), 229.
2. For a presentation of the work in (Swedish) text and image, see <http://www.drucksache.se/fjarrskrift/index.html> (accessed March 20, 2012).
3. See Friedrich A. Kittler, “There Is No Software”, in John Johnston, ed., *Literature, Media, Information Systems: Essays* (Amsterdam: G+B Arts International, 1997), 150.

4. See B.M.S. Thomsen, “The Signaletic, Haptic and Real-Time Material”, in this supplementary of *Journal of Aesthetics and Culture*, 2012.
5. Marshall McLuhan, *Understanding Media. The Extensions of Man* (London: Sphere Books, 1967 [1964]), 271.
6. For Kac’s and Bök’s uses of the DNA sequence as an alphabet and the bacterium as medium, see Eduardo Kac, ed. *Signs of Life: Bio Art and Beyond* (Cambridge, MA: MIT Press, 2006), and for Bök: <http://www.law.ed.ac.uk/ahrc/script-ed/vol5-2/editorial.asp> (accessed March 20, 2012).
7. Cf. Siegfried Zielinski, *Deep Time of the Media. Toward an Archaeology of Hearing and Seeing by Technical Means* (Cambridge, MA: MIT Press, 2006), trans. Gloria Custance, chap. 6.
8. For a history of the computer based poem, see C. T. Funkhouser, *Prehistoric Digital Poetry. An Archaeology of Forms, 1959–1995* (Tuscaloosa: University of Alabama Press, 2007).
9. N. Katherine Hayles, *My Mother Was a Computer. Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005), 16.
10. Åke Hodell, *Lågsniff* (Stockholm: Rabén & Sjögren, 1966).
11. See the introduction to Norbert Wiener, *Cybernetics: or Control and Communication in the Animal and the Machine* (Cambridge, MA: MIT Press, 1969 [1948, 1961]).
12. Åke Hodell, “Poesins position. Enkät II”, *Rondo 2* (1963): 5 (my trans.).
13. Hayles, *My Mother Was a Computer*, 33.
14. A Swedish example would be the typewriter landscapes in Bengt Emil Johnson’s *Essäer om Bror Borsk och andra dikter* (Essays on Brother Harsh and Other Poems) (Stockholm: Bonniers, 1964). Cf. my essay “Kneaded Language: Concrete Poetry and New Media in the Swedish 1960s”, *Modernism/Modernity* 18, no. 2 (2011): 273–88.
15. For a documentation and description of Weibel’s piece, see Woody Vasulka and Peter Weibel, eds., *Buffalo Heads. Media Study, Media Practice, Media Pioneers 1973–1990* (Karlsruhe: ZKM/Cambridge, MA: MIT Press, 2008), 714.
16. Such a physiological aesthetics would include pieces ranging from the extremely physical performances of the Vienna Actionists to early sound art and flicker film by Tony Conrad and others.
17. On postwar tape recorder poetics, see my article, “The Audiographic Impulse: Doing Literature with the Tape Recorder”, in Matthew Rubery, ed. *Audio-books, Literature, and Sound Studies* (London and New York: Routledge, 2011), 61–75. The term “verbivocovisual” was coined by James Joyce in *Finnegans Wake* (1939), and re-activated by the Brazilian concrete poets in the 1950s; see, for example, the manifesto “Pilot plan for concrete poetry”, in Mary Ellen Solt, ed. *Concrete Poetry: A World View* (Bloomington: Indiana University Press, 1970).
18. Of course it is in recorded music (a relative to sound poetry) that a poetics of the signal has been most present. For a recent discussion on this topic, and its theory and discourse, see Jonathan Sterne and Tara Rodgers, “The Poetics of Signal Processing”, in *Differences* 22, nos. 2–3 (2011): 31–53.
19. Phenomena such as *remanence* and *hysteresis* forbids that. For an interesting discussion of the former, see Matthew G. Kirschenbaum, *Mechanisms. New Media and the Forensic Imagination* (Cambridge, MA: MIT Press, 2007).
20. Both of these poems by Chopin are accessible at <http://www.ubu.com>.
21. See Pierre Schaeffer, *Traité des objets musicaux* (Paris: Éditions du Seuil, 1966).
22. Steven Connor, “Ears Have Walls. On Hearing Art”, in Caleb Kelly, ed., *Sound* (Cambridge, MA: MIT Press, 2011), 135. At <http://www.stevensonconnor.com/earshavewalls/> (accessed March 20, 2012).
23. Chopin’s poem is available at the CD, *Text-Sound Compositions—A Stockholm Festival* (Stockholm: Fylkingen Records, 2005).
24. Cf. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus. Capitalism and Schizophrenia* (Minneapolis, MN: University of Minnesota Press, 1987), trans. Brian Massumi, 493.
25. Anna Munster, *Materializing New Media. Embodiment in Information Aesthetics* (Hanover, NH: Dartmouth College Press, 2006), 3.
26. Frances Dyson, *Sounding New Media: Immersion and Embodiment in the Arts and Culture* (Berkeley: University of California Press, 2009).
27. Paul deMarinis, “Erased Dots and Rotten Dashes, or How to Wire Your Head for a Preservation”, in Erkki Huhtamo and Jussi Parikka, eds., *Media Archaeology. Approaches, Applications, and Implications* (Berkeley: University of California Press, 2011), 214.
28. Thomsen, “The Signaletic”.

# Sound [signal] noise: significant effects in contemporary sonic art practices

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## Abstract

The article discusses the intricate relationship between sound and signification through notions of noise. The emergence of new fields of sonic artistic practices has generated several questions of how to approach sound as aesthetic form and material. During the past decade an increased attention has been paid to, for instance, a category such as “sound art” together with an equally strengthened interest in phenomena and concepts that fall outside the accepted aesthetic procedures and constructions of what we traditionally would term as musical sound—a recurring example being “noise”. In order to explore the effects and signifying modes of sonic material considered peripheral to established musicological methodologies, other types of discourses have appeared. The aim of this article is to investigate and evaluate such discourses of the sonic arts and to do so from the perspective of a continuum between sound and noise. It is moreover suggested that we consider sound in relation to the concept of “signal” which is exemplified through analysis of actual works.



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**Keywords:** *sound; noise; signal; sonic; signification; virtuality; Tsunoda; López; Fell; Basic Channel*

To begin with noise as a point of departure for discursive clarification might seem contradictory. Most research and literature occupied with noise as phenomenon, concept or broader theme agree that a crucial property of noise is that it cannot be defined absolutely and categorically. Rather than speak about noise one should, at least, speak about multiple noises, which is what sound and media scholar Douglas Kahn does in his seminal book on sound in the arts. Noises are, according to Kahn “interchangeably soundful and figurative, loud, disruptive, confusing, inconsistent, turbulent, chaotic, unwanted, nauseous, injurious.”<sup>1</sup> However, it

is exactly this ambiguous and disorderly nature of noise—keeping in mind the manifold significations it implies as a generic term—that makes it productive as a matrix or trope for analyzing other phenomena through. For instance, the “semantic wealth” of noise can be considered as something which has been “exploited in numerous works on music and sound.”<sup>2</sup> In fact, the occurrences and discourses of noise and noises, along with silence one should note, have proved to be central to the historical and aesthetic taxonomies of twentieth century avant-garde music. This history will not be rehearsed here, though. Instead, noise

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as an avant-garde phenomenon will be compared with the idea and rhetorics of noise emerging as a key component within a different theoretical framework; that of information theory, initially formulated by Claude Shannon in 1948.<sup>3</sup>

While a mathematical theory of communication may appear irrelevant for the understanding of experimental sonic practices, the model which Shannon proposed and developed further with Warren Weaver, would later come to influence the work of “some of the foremost media theorists of second half of the twentieth century” from Marshall McLuhan, to Michel Serres, Friedrich Kittler, and N. Katherine Hayles.<sup>4</sup> And the model and the conceptualizations of noise it involved for modern media theory is, thus, of definite interest when investigating the impact of shifting media technologies on artistic practices of recording and manipulating sound. It is this theoretical and analytical perspective that most obviously seems to relate to an overall discussion of the change from sign to signal. However, I will argue that a productive common ground is to be found between a (post)phenomenologically inspired philosophy of sound and the considerations on signals and systems derived from information theory.

A multitude of other aspects of discourses on noise could be mentioned, but it is the association of these two perspectives with aesthetics that will serve as the main focus for the article—the point being that this composite approach is evident in recent attempts to explain the character of contemporary sonic art practices. Concerning the latter I should specify here that my reference to “sonic art” is meant to cover a range of experimental artistic occupations with sound, from electronic music in the form of album releases to works categorized as “sound art” that might involve installational elements and determined physical locations.<sup>5</sup>

## SOUNDING MATERIALS

An example of the latter type of work can be found in the practice of Japanese artist Toshiya Tsunoda. Tsunoda has investigated the perceptual processes related to aural characteristics of different soundscapes, locations, and objects; carried out, for instance, as recordings of various surfaces through the use of contact microphones capturing the

resonances of metal plates, fences, and asphalt textures.<sup>6</sup> Or, more recently he has addressed the thresholds of human hearing through attention to low frequency sounds with his recordings of underwater currents from the Maguchi Bay.<sup>7</sup> This theme of borderline sonic perception is articulated explicitly on the album *Low Frequency Observed At Maguchi Bay* of which half of the featured tracks only contain frequencies below 20 Hz—the limit of our normal auditory capacity. As a consequence these tracks appear silent to the ear, although the speaker membranes actually vibrate in accordance with the speed of the low frequency sound waves, whereby Tsunoda accentuates and challenges habitual conceptions of silence and audible presence. Moreover, he not only connects his working with sound to characteristics of physical materials but also to broader conceptions of *space*: “We grasp a place or a space conceptually as a map or a model. But when we observe a vibration, every space is constantly trembling. If we pay attention to the behaviour of the vibration, some new phenomenon different from the conceptual map will emerge.”<sup>8</sup> As such, Tsunoda’s practice points toward an alternative perceptual experience produced by a certain framing and awareness of unnoticed vibrational forces and domains of sound which are potentially significant. Rather than aiming at traditional compositional structures of tonality and rhythm, he explores another kind of materiality as well as spatiality of the sonic—using recording technology to enhance our sensory capacity, stretching our ears towards what might immediately be observed as non-musical noise.

The question is, then, how to approach the type of auditory resonances produced by artwork such as Tsunoda’s? One suggestion would be to regard the sounding material in terms of notions of “signal” rather than of “sign”. In the sonic art practice of Tsunoda (a.o.) the noises heard certainly have an effect on the listener, although they do not signify or convey “musical” meaning in a traditional way. Rather, their receptive impact is generated by a non-representational gesture toward actual reverberating materials situated in a “constantly trembling space”; that is, a space in which continuous background noise is potentially about to develop into distinct signals, with or without the use and transmissions of analogue and digital technology.

This, of course, calls for a redefined analytical understanding of the artistic use of non-musical, auditory “fabric”, and currently, though very broadly put, one can identify two strands of theoretical thinking about the effect and “signifying” mode of noise in relation to sonic art practices; on the one hand, this entails a partly phenomenologically informed discourse that focuses on, for instance, embodiment, site-specificity, materiality and physicality of sound. On the other hand, one finds a discourse that deals with the processing and de/coding of sound, inspired by information theory, cybernetics, and theories on digital vs. analogue mediation. An interesting example that falls in line, mainly, with the first cluster of theories is provided by philosopher and critic, Christoph Cox who suggests that we apply what he refers to as a “materialist” approach to a wide range of audio based art. According to Cox, artists such as Tsunoda, Christian Marclay, and Francisco López have “explored the *materiality* of sound: its texture and temporal flow, its palpable effect on, and affection by the materials through and against which it is transmitted.”<sup>9</sup> He furthermore states that these works reveal: “that the sonic arts are not more *abstract* than the visual but rather more *concrete*, and that they require not a *formalist* analysis but a *materialist* one.”<sup>10</sup> Meandering between the philosophy of Nietzsche, Schopenhauer, and Deleuze (among others), Cox both subverts the idea that we should think of music and sound as purely abstract phenomena with an inherent symbolic language, and at the same time claims that “[s]ound is not a world apart, a unique domain of non-signification and non-representation. Rather, sound and the sonic arts are firmly rooted in the material world and the powers, forces, intensities, and becomings of which it is composed”.<sup>11</sup>

In this way, Cox launches his theoretical stance amid two divergent, dominant positions within sonic discourse: one that traditionally considers music as the abstract form of art *per se*, while insisting on its signifying and representational qualities, i.e. its symbolic relation to an overall musical structure and order. And another, that argues for an understanding of music (and sonic arts in general) as something fundamentally asignifying, as “pure sound”, which should be approached through phenomenological manoeuvres

that claim to be non-preconditioned and open, but may lead the auditor into the pitfalls of essentialism or naïve subjectivism.<sup>12</sup>

## NOISE AS SIGNAL AND POTENTIAL

At this point, we should consider the implications of information theoretic and cybernetic notions of signal transmission and noise as being part of a revised discourse on sound, noise and signification. The relation of information theory to sonic art practices can appear to be somewhat distant, but this intentional “detour” is partly motivated by the notion put forward by Bill Brown that “materiality has a specificity that differentiates it from its superficial cognates, such as physicality, reality, or concreteness.”<sup>13</sup> Thus, the perception of sound as “material” reaches beyond the mere physical effect of propagating waves and specific vibrating substances toward a more complex field of signification. At the same time the comprehension of sound as abstract and symbolically related to a recognized and predictable musical system is contested by another discourse which grounds all auditory signals in an undifferentiated field of noise, as hinted at above; a position, which is partly derived from information theory and cybernetic models of communication and which characterizes, for instance, Michel Serres’ influential writings about the topic of noise and signification.<sup>14</sup> This is also, in some respects, the point of departure for both Cox and Aden Evens, the latter of whom argues that we conceive of every significant sound, timbre, and tone as “contractions” of noise. According to Evens noise is, then, “inarticulate, the confused mass of vibration, in which sound relaxes or dissipates. Perception requires a contraction, but noise is the uncontracted. Imperceptible, insensible, and sense-less, noise is the depth which gives to be contracted.”<sup>15</sup>

Before continuing along the line of Cox’ and Evens’ rhetoric another comment should be added concerning Shannon’s original model of communication. According to Jussi Parikka this model became part of “a larger field of modern thought in which noise and incompleteness were beginning to be included as integral to any functioning system. With this theory of communication, noise was on a mathematical level likened to the actual intended message.”<sup>16</sup> And, just as important, with

this model “noise” is both “conceptualized as something programmable” and understood as “a modality of modern communication systems that is by definition non-signifying and deals with *signals*, not signs.”<sup>17</sup> From a basic communicative perspective of acoustics, for instance, noise can be perceived as an interference, a disturbance or annoyance that obscures or cancels the exchange of meaning through a process of signal transmission between a sender and a receiver.<sup>18</sup>

However, as information theory eventually came to suggest, noise should not be described exclusively in negative terms but rather considered as something which adds to the complexity of information: noise infuses into any system of communication or signal transmission process various degrees of uncertainty that enhances the possible outcome of the signal received. Noise is, then, no longer regarded solely as the antagonist of information but rather as a necessary component of it. Also, it should be noted that the reconsideration of the role of noise in cybernetics and systems theories, brought noise as a concept in dialogue with processes of information between, not just a sender and a receiver, but the human body and machines/computers, for instance.<sup>19</sup>

Most important to the context of this article, is, firstly, how the formal models of information theory made clear that the occurrence of noise is inevitable and crucial in any functioning system. And that what follows, ultimately, from this logic is that noise can be seen as “the signal with the highest information-content” since it includes all possible sets of options for a receiver to select between.<sup>20</sup> Secondly, the discussion of information and signal channelling without regards to semantics opens up the analysis of such processes beyond the scope of linguistic meaning. Thus, thinking about sonic art practices through the concept of “signal” allows us to deal with the channelling of sound as significant event, but not related to conventional musical schemes, notation or similar interpretative systems.

## VIRTUALLY NOISE

Bearing in mind the idea of noise as interrelated with the function of signal, we will now look again at Cox’ and Evens’ readings of sonic art practices. Cox has articulated the rather complex signifi-

tion modes of sonic art practices in various ways. According to him, a basic characteristics for works of this kind is that they confront us with a fundamental “sonic flux ... composed of two dimensions: a virtual dimension ... “noise” ... and an actual dimension that consists of contractions of this virtual continuum.”<sup>21</sup> Cox develops his argument, referring to Leibniz and Deleuze, around the concepts of *virtuality* and *actuality*, claiming that Leibniz made it possible for us “to grasp the distinction between signal and noise not as one between *part* and *whole*, *ignorance* and *knowledge* but as one between the *singular* and the *ordinary*, *perception* and *its conditions of genesis*, the *actual* and the *virtual*”.<sup>22</sup> This points to a conception of noise as the ground for any information and any signal to emerge. To quote Cox again, noise is not just a sound among others, a sound that we do not want to hear or cannot hear, but rather “the ceaseless and intense flow of sonic matter that is actualised in, but not exhausted by, speech, music and significant sound of all sorts.”<sup>23</sup> Crucial here is, thus, the articulation of the idea of noise as a field from which significant signals and occurrences can be drawn, as well as the suggestion that certain sonic art practices brings our attention to this field *in itself*; to the “virtual dimension of sound.”<sup>24</sup>

Quite often artists working experimentally with sound recording seem to be occupied with probing this virtuality of sound, as was also the case with Tsunoda mentioned above. His strategy is close to that of Francisco López who is considered one of the foremost contemporary sound artists. López is working, too, with field recordings of various locations and settings, from exotic rain forest milieus to buildings in New York.<sup>25</sup> His releases also include a large number of “Untitled” recordings in which the origins of the sounds heard are unknown. If we consider both Tsunoda’s and López’s interest in un-edited “found” sound as an occupation with background “noise” that would normally go unnoticed, the common denominator for both is the ambition of emphasizing and framing this ever present but mostly unobserved domain of sound as something fundamental, as the *virtual* ground for every *actual* event in any acoustic space and location; something that comes forward, radically, with a piece such as López’s “Wind (Patagonia)” which presents the listener with a continuous recording of wind and

nothing else. This, according to López himself as stated in the cover notes of the album, has to do with: “An appraisal of the richness of the original sonic material. A non-referential intention [...] A passion for drones and their inner universe; that perceptually “invisible” matrix of broad-band noise that is constantly flowing around us.”<sup>26</sup>

A crucial fact which should also be mentioned in relation to this, is how the attention paid to the “sonic field ignored or suppressed by everyday hearing,”—as it has been described elsewhere by Cox—was actually made possible in the first place by real time recording technology.<sup>27</sup> In short, this concerns the influential point made by Friedrich Kittler about the emergence of recording media such as the phonograph which radically changed the fundamental conceptions of sound. Kittler notes that the phonograph did not symbolically transcribe and detain worldly phenomena in coded systems like text or musical notation which transmit “steady” signals to be decoded from a certain order. Rather the recording of sound reveals a different sort of signal as the phonograph registers chaotic “acoustic events as such”, as Kittler writes.<sup>28</sup>

Thus, on the one hand, the possibility of preserving and re-playing such acoustic events through various technologies is essential to the sonic artistic practices of Tsunoda and López; here the auditory signal received by a listener is not one to be scrutinized for conventional meanings but rather a sound event that serves as an approximation to other fundamental dimensions of sensory experience. On the other hand, the technological medium *itself* can also be considered as a source of similar sound events, which will be demonstrated below.

## CONTRACTION AND IMPLICATION OF NOISE

The perspectives referred to above—in connection with the overall theme of a discourse and aesthetics of signals rather than signs—may appear unnecessarily complex for stating something quite obvious about contemporary sonic art practices. Hopefully, at the same time, it should be clear by now why it makes sense to talk about a changed status of sonic signals which exceed the framings of music as a stable system of harmonics

and well-tempered tonality; signals which are instead explained from the perspective of noise.

As mentioned earlier, the relation of the sonic signal to noise is also the main concern for Aden Evens, however, not solely in terms of a sonic art practice focused on listening experiences directed toward the ground of noise itself, as with Tsunoda and López. Rather noise is *re-introduced* by Evens into the field of music as to understand the affective and aesthetic implications of “musical” signals: “Noise is the reservoir of sense, the depth in which sounds connect to each other, the background, the difference whose modulation is signal.”<sup>29</sup> Evens, thus, distinguishes between noise in its “relative sense,” i.e. noise simply heard as “confused” sounds and noise in its “absolute” sense where it is conceived as “the imperceptible, the uncontracted . . . a depth without dimension from which dimensions are drawn.” In accordance with Cox’s thoughts on the topic, Evens’ point is here, that absolute noise is never heard as such, but that one only “hear[s] the effect of noise.”<sup>30</sup> This effect is exactly what we perceive as musical and sonic signals affecting us beyond representational order—as a certain type of perceptual experience closely connected to what Evens calls the “implication” of absolute noise. Implication and contraction is simply what drives music forward in an ever oscillating movement; something, which is effectuated, for instance, when playing an instrument that, following this logic of noise as the source of musical signals, “is a tool for shaping noise, contracting parts of it into perception.”<sup>31</sup> Concerning the question of materiality, this obviously makes sense from the point of view of the live performer, who then shapes the ever present vibrational forces that resonate between his body, the instrument, the audience, the physical space and objects, etc., in the actual acoustic setting. As such, a live sonic performance can be considered as rooted in the material world and the “powers, forces, intensities, and becomings of which it is composed” (cf. Cox, above).

However, as this article moves towards its conclusion, the focus will be on the role of noise in analogue and digital sound processes and technologies. Evens admits that the significant contractions and implications of noise are effectively working not only in live performances but also when it comes to analogue recording media and certain sound synthesizing systems—although

in general he has serious doubts about digital and computational technologies which are seen as “mostly incapable of implication, generally make poor music.”<sup>32</sup> This, the article claims, is strongly dependent on how the sound processing media are in fact used and deliberately so in relation to noise.

### CODA: NOISY CHANNELS AND DIGITAL RANDOMNESS

Evens argues that digital recording and sound production is problematic concerning the expressive qualities of music which are derived from the dynamic interplay and threshold between signal and noise. According to him “the digital deals only poorly with the ambiguity of the limit. For the limit is dynamic, and so resists digital territorialization, refusing to conform to the binary logic that is the sole tool of the digital.”<sup>33</sup> This argument resonates precisely with the efforts of sound engineers and psychoacousticians who have persistently strived to eliminate and control (unwanted) noise in relation to the (desired) clearness of signal. From a digital point of view, then, considerations on signal-to-noise ratio are all about getting rid of noise, whereas the significative effect of musical signals depends on a certain sensitivity to and exchange with noise.

Some artists working within the field of experimental electronic music seem, however, to employ an aesthetic strategy established exactly through intentional modulations and contractions of noise, as discussed above. The producer team Basic Channel (Moritz von Oswald and Mark Ernestus) has during the past 20 years crafted a number of pioneering and, to this day, highly influential music releases ranging from minimal techno to electronic dub reggae. Most of their material has a definite experimental edge to it, an important part of which is the varying use of noise as a deliberate effect in the mix of the synthesized music. And the artist name itself, “Basic Channel,” conveys a near affinity to the workings of signal transmission and noise thresholds. Their productions from the early 1990s were already inspired by dub music’s heavy use of reverb and echo effects, adding an enhanced spatial and ambient quality to the otherwise repetitive beat structures. As Joanna Demers quite accurately describes the characteristics of this music, sound “appears to linger thanks to processing techniques that make it seem

as if a clearly defined pitch or drum attack is travelling through a large space before dissipating several moments later.”<sup>34</sup> Such are substantial parts of Basic Channel’s productions that they appear as a poignant example of the principles, at work, which Evens seeks to describe for musical signals in general in terms of contractions, implications, and modulations of noise. Listening to select tracks, also from Ernestus’ and von Oswald’s later oeuvre, one is struck by the explicit way in which heavy reverberations and echoings “threaten” to take over the distinct sonic signals—i.e. the artificially generated sounds of bass-line synthesizers and drum machines—adding an almost chaotic, organically emergent feel to the overall musical atmosphere. Through mixing processes, kept painstakingly secret by the artists, the listener perceives of the stable electronically produced sonic signals against a constant background of noise which, in turn appears, equally modulated by the signals themselves; as continuing echoes and reverberations of them. In some cases Basic Channel drives this aesthetics to an extreme, as with the piece “Mutism”.<sup>35</sup> Instead of clearly distinguishable tones, pitches, or rhythmical structure, the 5’56” track consists mainly of free flowing noises, rumbles, hisses, and statics which only momentarily indicate a sort of structuring principle. By close listening, one realises that what is heard seems to be, solely, the effects of *lost signals* which together form a series of fuzzy residual noises. As the signals themselves are muted, hence the title of the piece, the most continuous sonic element is a randomly panning white noise frequency which is being modulated into near-tonality but remains on the verge of becoming a distinct tone-signal. As such “Mutism” present its listener with a sounding material that is not accurately musical by convention, but which aspires to be so in a perpetual tension, moving close to and away from the threshold that separates signal from noise.

Another, and concluding, example of an artistic rendering of musical signals in relation to noise would be the production of UK artist Mark Fell, whose use of digital computational processes involves the application of generative systems and pattern recognition. The principle behind his album *Multistability*<sup>36</sup> refers to the ambiguous state of a system that is neither stable, nor completely instable but changes its condition

continuously.<sup>37</sup> This implies a certain type of dynamics which determine the character of the sonic signals we hear, and subsequently generates an experience that could only be accomplished through the use of digital technologies.

According to Evens, digital sound is essentially characterized by a lack of noise, or more precisely by its lack of interrelation with noise. As such, digital sound synthesis demonstrates “a linear relationship between input and output complexity, wherein the complexity of the sound is directly proportional to the complexity of its method of generation.”<sup>38</sup> In other words, digital sound is fundamentally predictable, and therefore excused from noise. However, the noisy “grain” of unpredictability can be infused deliberately into the system, creating a different form of affective, digital sonic experience. And not only, as was the case with Basic Channel, in the form of residual noise-resonances of sound processing, but rather by applying patches that control the sound output through stochastic and random procedures, which is precisely what Fell is doing on his album.

In this way the various tracks on *Multistability* appear simultaneously synthetic, very much “digital” in expression, and erratically surprising, changing from short repetitive patterns to impulsive and chaotic outbursts of compressed sound particles. The otherwise smooth transmission of signals within the “noiseless” digital system is, then, obstructed by the resistance of randomness which results in a haphazard series of sonic signals that comprise another sort of noise or “grain”, eventually reaching the bewildered ear. Although the sonic qualities of Fell’s work are much closer to distinct tonality than the recordings by Tsunoda and López, or the “Mutism” track by Basic Channel, his deliberate method of unpredictability and randomness has a remarkable aesthetic effect; as the sound signals are relocated from inside of the computational system and transferred to the acoustic space, it creates a manifest type of sonic tension, which could only be produced by the interface controls of digital media—the experience of this noisy digitality is, thus, realized between the fundamentally “anti-septic” and predictable signal processing of the computer, and the disorganized outcome of Fell’s artistic application of stochastic progressions.

The works considered and analyzed above, all express the dynamic principles of significant effects emerging from sonic matter as rooted in the constant movements produced between noise and signal. Restating the formulation by Evens, one could readily claim that noise here functions in several ways as “the reservoir of sense, the depth in which sounds connect to each other”, as referred earlier. And so, the intention with this article has been to demonstrate how noise is set to work as an intensification of sonic signals, not merely as antithetical to traditional musical aesthetics, but exactly by opening up sound and music toward further potential signification.

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# Creation and erasure: music video as a signaletic form of practice

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## Abstract

This article addresses the affective potentials of music video, identifying music video as a “signaletic form of practice.” Following Steven Shaviro’s notion of (post-) cinematic affect, the article demonstrates how cinematic affect is most clearly revealed when the images are released from traditional filmic vision—as shown in an analysis of the music video for OK Go’s “WTF?” The article thereby also points towards the central role played by audiovisual modulation in conveying affect in music videos. It is shown how the site of such modulation is frequently that of the human body and how that, in some music videos, the human body is treated as an electronically or digitally coded *signal* rather than as a visual transcription or representation. As such, music video situates itself as an integral part of a new audiovisual regime of signaletic affect.



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In his seminal account of the language of new media, Lev Manovich notes that “electronic art from its very beginning was based on a new principle: *the modification of an already existing signal*.”<sup>1</sup> Here, Manovich identifies two important aspects of the signal: firstly, its pervasiveness in current (electronic) art and communication; and secondly, its essential mutability—the fact that signals, whether analog or digital, are often subjected to some kind of modification and that this modification is often important in itself. As such, the paradigmatic shift from sign to signal proposed in this volume could be comprehended as a shift from the sign understood as a carrier of information or signification to the

signal understood as an object of modulation or modification.

In a somewhat similar fashion to Manovich, French art critic Nicolas Bourriaud observes that today we inhabit a world of “signals already emitted.”<sup>2</sup> As a consequence, aesthetic creation is now based on the modification of these already-emitted signals, or put otherwise, aesthetic creation is now oriented towards postproduction instead of actual production. Bourriaud notes how “[a]rtists today program forms more than they compose them: they remix available forms and make use of *data*.”<sup>3</sup> This means that aesthetic creation today is as concerned with the modulation of preexisting signals or data as it is with the

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production of new signals or data. What is important is not necessarily to create something entirely new from raw materials but rather to transform or modulate the signals already emitted, to use the existing signals as raw material.

Following these observations, this article focuses on music video as a specific signaleptic form of practice. In at least two ways, the medium of music video expresses the tendencies of signaleptic modification and postproduction identified by Manovich and Bourriaud. Firstly, the images of music video often function more as signals to be modulated, distorted or in any other way digitally or electronically manipulated than as actual representational images—what arrests us about music video visuals is not as much the image as an actual representation of reality as it is the image as an affective and ever transforming materiality, the image as “the site of a permanent *scratching*.”<sup>4</sup> In this way, the production of images in music videos is often best understood as nothing but “the first stage of post-production,”<sup>5</sup> and in music video, this has the consequence that what is central to the images is more often the visual aftereffects they have been exposed to than it is what they actually show.

Secondly, the musical recording is “reproduced” in the audiovisual form of the music video, so that any music video is in a way based on the visual reworking of an already existing musical material. Thus, I claim that, as a signaleptic form of practice, the medium of music video has been particularly important for the exploration of the relations between visual and musical signals. In this, music videos are a central component or driving force of what Steven Shaviro has addressed as “a new regime of perception and affect, one that is just starting to take shape in this world of [...] electronic, digital media.”<sup>6</sup> In analyzing Chris Cunningham’s music video for Björk’s “All Is Full of Love,” Shaviro notes how Cunningham’s music videos “articulate a very different logic of sensation than those that dominated most of the twentieth century.”<sup>7</sup> I make the case that this alternative logic of sensation is not only restricted to Cunningham’s music videos but that it is also a more general characteristic of many other music videos. Shaviro has proposed that just like the Deleuzian movement-image gave way to the time-image in postwar cinema, maybe now the time-image is giving way to “a new sort of

audiovisual or multimedia image.”<sup>8</sup> If this is indeed true, then music video certainly plays a significant part in this shift.

Taking my cue from Shaviro’s theories of cinematic and postcinematic affect,<sup>9</sup> I show how certain music videos are best regarded as “*machines for generating affect*.”<sup>10</sup> Music videos often subvert the traditional structures of representational meaning that we confront in other audiovisual media, turning instead towards a concern with modulation, materiality, and the non-representational. With a recent video that features a striking visual effect and actively encourages postproduction remixing as my main example (OK Go’s “WTF?” directed by Tim Nackashi), I show how music video often operates through a constant modulation of its images. While my example is quite new, it is important to note that this tendency to visually manipulate the image is not in any way restricted to recent music videos. Firstly, it has always been a recurrent feature in music video, as can be witnessed by revisiting some of the first writings on the genre. Pat Aufderheide observes that in music video “the very act of image manipulation is the action,”<sup>11</sup> while E. Ann Kaplan notes that with such visual modulations, “the instability of objects becomes the norm; one thing is transmuted into another.”<sup>12</sup> Secondly, the tendency to modulate the moving image is historically prefigured in forms antedating (and sometimes anticipating) the music video, such as early silent cinema, animation, *visual music*, various strands of *expanded cinema*, etc. As such, the visual inventiveness seen in many music videos is more a matter of reinvention than actual invention in and of itself. Thus, the videos discussed in these pages seem to strengthen Gene Youngblood’s suggestion that “[t]here are no digital images that have not been prefigured in painting, film and video,”<sup>13</sup> with music video performing the dual function of experimenting with the image *and* familiarizing certain imaging techniques.

## (POST)CINEMATIC AFFECT

Shaviro’s concept of cinematic affect seems inextricably tied to the bodily materiality of certain cinematic images and sounds. Shaviro links cinematic affect to the non-signifying powers within the image and describes the process through

which films are able to generate affect as follows: “Film’s virtual images do not correspond to anything actually present, but *as* images, or *as* sensations, they affect me in a manner that does not leave room for any suspension of my response.”<sup>14</sup> Speaking of some close-ups from two films by Jean-Luc Godard (a pebble held in a hand in *Weekend* and some coffee swirling in a cup in *Two or Three Things I Know about Her*, respectively), Shaviro notes how there is something in these images that makes them “insist before, and persist beyond, the act of recognition that stabilizes and rationalizes vision,” something which “forces us to stop regarding them *as* referential objects.”<sup>15</sup>

The affective quality of the Godard-images that Shaviro speaks of obviously lies beyond their merely representational function. According to Shaviro, affect comes to the fore when the images endure beyond the time it takes for the viewer to actually decode what they show. If the image outlasts this act of recognition, our attention drifts, and we slowly start to notice the very materiality of the objects depicted, their specific form, and so on. In the Godard example, Shaviro also notes how the images are held for an unusually long time so that duration becomes “an independent dimension of the image and is no longer a function of the time needed for cognition and action.”<sup>16</sup> In this way, the prolonged duration of the images invests them with an affective or bodily quality as well as with another type of temporality, movement having ceased.

However, cinematic affect can be related not only to the material aspects of the images but also to the very flow of images. As Claire Colebrook writes in her book on Deleuze, cinematic vision can function in such a way that “its process of becoming—the disconnection or singularity of its images—is displayed,”<sup>17</sup> and in this process, we are taken “away from actualized objects and wholes to the very flow of images.”<sup>18</sup> Temporal and spatial disjunctions manifest themselves directly in the images and allow us to perceive cinematic images and sounds in their materiality. According to Nigel Thrift, these constant audio-visual re-workings of cinematic time and space are quite effective in generating affect—he writes that “the film and video screen have become a powerful means of conveying affect in our culture,

drawing on a set of historically formed stock repertoires for manipulating space and time.”<sup>19</sup>

What then are these “stock repertoires?” Thrift points to morphing (to which I return below), but within cinematic forms such manipulations of time and space are perhaps most commonly achieved through montage. However, montage functions altogether differently in “signaletic” postcinematic forms than it does in traditional cinema. On this subject, Lev Manovich writes that while “classical cinematic montage creates the illusion of a coherent space and hides its work, electronic montage openly presents the viewer with an apparent visual clash of different spaces.”<sup>20</sup> The way that this is achieved is sometimes through editing, for instance, by means of the occasionally very rapid editing of music video that creates obvious disjunctions in time and space. But, in digital cinema and music video, montage just as often happens *within* the image by means of superimposition, compositing, or other ways of layering multiple images on top of or within each other. This allows for the creation of new forms of space and time, as well as for the complex coexistence of multiple contrasting spaces, speeds, and times within the same image, evident in an entire range of music videos.<sup>21</sup>

### CREATION AND ERASURE: OK GO’S “WTF?”

One such way of layering images in order to create spatial or temporal disjunctions is found in the video for OK Go’s “WTF?” By the use of one single visual effect, this video subtly exposes the very concept of cinema’s way of simulating movement on the basis of chains of individual images. The particular imaging technique applied in doing this seems to be a cinematic replication of the work of photographers such as Harold Edgerton and Thomas Eakins, Eakins’ photograph “Study in the Human Motion” being credited as the original inspiration for the visual style of the video in a “Making of”-video that reveals how the video was simply shot against a green-screen background with the visual effect added in postproduction (Figure 1).

“WTF?” is composed of one successive take without any apparent cuts<sup>22</sup> and the camera does not move once. The band simply moves in and out of the screen, wearing colorful clothes and



Figure 1. Still from OK Go: “WTF?” Director Tim Nackashi and OK Go. © OK Go and Paracadute.

carrying colorful objects while lip-synching to the song. As such, the video would probably seem quite tedious if not for the digital effects applied to the images. In the video, each frame is successively layered in the background, and hereby, the image is constantly layered within itself creating a perplexing kind of multiple-exposure where the performers carry a visual trail of themselves after them as they move around. In this way, the video lets the passage of time constantly and directly manifest itself spatially in the image. The effect is one of simultaneously embedding each passing moment in the background of the image and of partaking in a slow process of erasure, as new frames are layered on top of old ones. In this process, in this ever emergent “flow of images,” the cinematic process of becoming is revealed, and an affective materiality comes forward. In Deleuzian terms, this image-effect could be likened to that of the crystalline image, which involves a “double movement of creation and erasure”<sup>23</sup> in the sense that “[e]ach circuit obliterates and creates an object.”<sup>24</sup> The images of “WTF?” thereby enter into a dual process of creation-erasure, expressing a simultaneous present and past within the same image, a simultaneity of the actual and the virtual.

Through these continual visual multiplications, the images of the video also seem to function in a manner not unlike the way that popular music generally functions. In the video, the image becomes remarkably “polyphonic” and shares some similarity to musical progression in general

where some notes keep lingering alongside others only to become gradually wiped away by the passage of time—here, some images keep lingering only to become slowly erased. The images of the video also enter into a more direct relation with the actual piece of music in question, the song “WTF?”: the image seems to be pulsating, a feature it shares with the pulsating sound of the bass, and the striking character of the visuals also resonates somewhat with the (by the standards of popular music) odd timing of the song in 5/4. Just like there seems to be one beat too many compared to the standard timing in 4/4, there constantly seems to be one image too many. As such, in “WTF?,” we see the image effects and the transmutation of the image rather than the image as just a representation of something—we experience the image as a directly affective, pulsating signal, rather than as a sign that carries a fixed meaning in any traditional sense.

It is also worth noticing the fact that “WTF?” is not without its precedents. While the effect applied to achieve the visual look of the video is surely a digital effect, predigital music videos have experimented with similar effects. Already in The Jacksons’ “Blame It on the Boogie”<sup>25</sup> from 1978 as well as in Amii Stewart’s “Knock on Wood” from 1979 comparable visual multiplications are evident. Similarly, in the video for Earth, Wind and Fire’s “Let’s Groove” from 1981, the performers carry a trail of images after them as they move, as is also the case in Kool & The Gang’s “Get Down on It” from the same year,

and parts of Neneh Cherry's "Buffalo Stance" from 1989. A brief passage of Stereo MC's "Connected" from 1992 also sees the images of the singer being constantly layered in the background, and the technique has also been used after OK Go's video in Shit Robot's "Take 'em Up." This indicates a strong continuity between current digital imaging and predigital imaging in music video, attesting how the modulation of a signal has always been an important part of music video, even prior to the advent of digital imaging techniques.

After the video's premiere, the band initiated a video remix project as their fans were encouraged to make their own remix of the video. On OK Go's website numerous different versions of the video are to be found, all of them made by fans. In these video-remixes, the original video is very concretely treated as a "signal already emitted," with all of these videos using the imagery as a moldable material to be exposed to other visual effects. Moreover, the band has even made an app available for download in which you can record your own images while subjecting them to a modulation-effect that is quite similar to the effect seen in "WTF?"<sup>26</sup> In this way, even the body of

the viewer can become part of the "signaletic modulation" of this video (Figure 2).

### THE HUMAN BODY AS A MODIFIABLE SIGNAL

Such modulation of the human body or of its visual depiction is a staple element of music video. The modulation that takes place in music videos is frequently centered on the key affective sites of the human body, the human face, or the human voice (as, for instance, in Chris Cunningham's videos for Aphex Twin). In this way, the body of the musical performer is often caught in a state of constant transformation. A well-known example is the use of morphing, as famously seen in a section of Michael Jackson's "Black or White" (again with a predigital forebear in Godley and Crème's "Cry"). The effect of morphing is one of destabilizing the image: according to Nigel Thrift, morphing "provides a visible flux of becoming"<sup>27</sup> in that the image never settles on a stable representation of the human body but rather lets it pass through a continual transformation. Vivian Sobchack goes even further in claiming that the ultimate consequence of morphing is that "its very

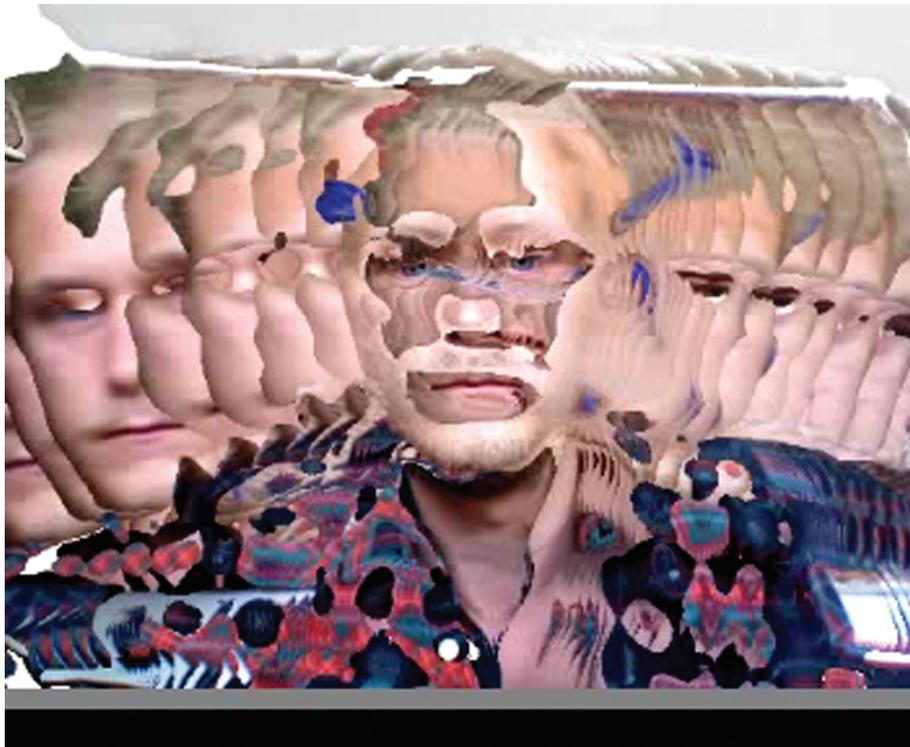


Figure 2. Still from my own "WTF?" made using the downloadable app "Make Your Own 'WTF?'"

fluidity destabilizes dominant Western metaphysics (primarily focused on essences, categories, and identities, including those of gender and race) and dramatizes instead a ‘process metaphysics’ that is less about ‘being’ than about ‘becoming.’”<sup>28</sup> Indeed, the persistent modulation of image, body, and voice in music video means that neither exists in a finite state of being but rather in an endless process of becoming.

The visual modulations seem to have accelerated throughout the history of music video, particularly as the use of digital imaging techniques has increased. Recent remarkable examples of such visual modulations include those videos that apply the effect of data-moshing, for instance, The Presets’ “Are You the One?,” Chairlift’s “Evident Utensil,” and Kanye West’s “Welcome to Heartbreak.” In these videos, the image appears to pixelate out of shape and gradually becomes an abstract texture. At some point, this texture is then somehow frozen and exposed on top of the next image, creating an eerie sense of superimposition and a complex interplay between structure/texture, background/foreground, depth/surface, letting one image merge with another. One image seems to be melting into the next, again in a gradual process of creation and erasure—it is a digitally distorted variant of the effect of morphing applied to the entire image and not just to the human body.

I find that there are two reasons why music videos are open to such visual modulation. The first relates to the cross-fertilizations between music and image in music video. Since the visuals of any music video are created on the basis of a preexisting piece of music, it would seem obvious to think of a music video as a visualization of music. However, in this process of visualizing music, vision also becomes “musicalized” as the images are structured around or react to musical features, as suggested by both Carol Vernallis and Kevin Williams.<sup>29</sup> In most music videos, the image enters into a relation with a musical feature at some point or another, whether it is an aspect of rhythm, melody, harmony, musical structure, or something else. The effect of this musicalization of the image is often that the image becomes multiple in attempting to mirror the multitracked nature of music. Thus, the musicality of the image assists in disrupting the standard ordering of vision as the dominant force of perception in

audiovisual forms, giving birth to a specific kind of “audio-vision” in which music and image mutually remediate each other.<sup>30</sup>

The second reason why music videos seem caught in a visual flux relates to the technical differences between the filmic image (based on celluloid photography) and the video image (based on scanning). Unlike the filmic image, the video image is not a discrete unit but is a signal born from scanning. This means that the electronic video image is infinitely caught in a process of becoming, repeating its own cycle of creation-erasure, since an image based on scanning gradually creates and wipes away its contents in the cycle of each circuit of the scanning process. As Philip Auslander points out, this means that the electronic image “is always simultaneously coming into being and vanishing; there is no point at which it is fully present.”<sup>31</sup> That the image remains fundamentally fluctuating is probably part of the reason why so many videos embody visual transformation.

This seems to continue with the digital image. It no longer exists as an indexical trace of light on a strip of film or of particles on tape but reduces its content to a binary code of 1s and 0s. This also means that the body depicted exists only as code, data, or information and that it becomes even more open to modification—the body becomes established “as a coded body and as a virtual body (i.e. a body that can be recoded and rewritten),”<sup>32</sup> or as a *signaletic body*. The video for Radiohead’s “House of Cards” provides an informative example. This video was not recorded with a traditional camera but instead by aid of LiDAR real-time 3D laser scanning equipment where a laser beam is used to map physical features by detecting the proximity of objects from the sensor. Everything in the video, from the lead-singer to the cityscape, is depicted as an endless array of small blue dots on a black background that are sometimes slowly wiped away, again in a movement of creation-erasure. After its debut, the video has been released online as Google Code to be freely modified by internet-users—allowing anyone to alter the code and create new images. As with the OK Go video, this video is now also a “signal already emitted.” As these examples illustrate, music video is today more an online phenomenon than a televisual one. Music videos are now mainly distributed and accessed online, and new music

video types have come into existence as a direct consequence of this translocation from the TV screen to the computer screen. One of these new types is the interactive music video<sup>33</sup> that allows the user to interact with the image and/or sound of the video in real-time, concretely leaving the modulation of the signal to the user, offering images and music as a partly moldable material.

### SIGNALETIC MODULATION

The continual audiovisual modulations of music video only rarely allow for any stability of meaning. Every other moment, something changes. The aspiring synaesthetic perception offered in music video seems to further strengthen its affective potential—the cross-sensual and multimodal character of music video generates meanings that are more directly affective and less directly “decodable.” What we experience in music videos is thus often a reversal of the usual structuring of sound and image in audiovisual forms—here, we sometimes feel as if the sounds generate the images and not the other way around. While it is of course in many ways an untenable approach to move from a few examples to a general characterization of an entire field of expression (especially one as heterogeneous as music video), one need not see many music videos to feel convinced that such transmutational images as the ones described here hold a special place in music video or, at least, that they are nothing uncommon. The transformations of the audiovisual relation that take place between music and image in music video succeed in effectively changing the usual structures of cinematic space and time, often resulting in some kind of visual multiplication—and this leads to a partial destabilization of the regular patterns of cinematic vision and audition. While other less innovative practices surely exist within music video than those concerned with signaletic modulations and while music video does not at all operate alone in reworking the audiovisual language, it is quite safe to say that music video has always been associated with pushing the audiovisual language of combining sounds and moving images forwards—ultimately suggesting that music video always has been an important site of signaletic modulation and that it continues to be so today.

### Notes

1. Lev Manovich, *The Language of New Media* (Cambridge, MA and London: The MIT Press, 2001), 126.
2. Nicolas Bourriaud, *Postproduction* (New York: Lucas & Sternberg, 2007), 17.
3. *Ibid.*, 17.
4. *Ibid.*, 44.
5. Manovich, *The Language of New Media*, 303.
6. Steven Shaviro, “The Erotic Life of Machines,” *Parallax* 25 (2002): 4.
7. *Ibid.*, 4.
8. Steven Shaviro, *Post-Cinematic Affect* (Winchester and Washington: Zer0 Books, 2010), 87.
9. Steven Shaviro, *The Cinematic Body* (Minneapolis: University of Minnesota Press, 1993); Shaviro, *Post-Cinematic Affect*.
10. Shaviro, *Post-Cinematic Affect*, 4.
11. Pat Aufderheide, “The Look of the Sound,” in *Watching Television*, ed. Todd Gitlin (New York: Pantheon Books, 1986), 125.
12. E. Ann Kaplan, *Rocking Around the Clock* (New York: Methuen, 1987), 74.
13. Gene Youngblood, “Cinema and the Code,” in *Future Cinema*, ed. Jeffrey Shaw and Peter Weibel (Cambridge, MA and London: The MIT Press, 2003), 156.
14. Shaviro. *The Cinematic Body*, 46.
15. *Ibid.*, 29.
16. *Ibid.*
17. Claire Colebrook, *Gilles Deleuze* (New York: Routledge, 2002), 34.
18. *Ibid.*, 31.
19. Nigel Thrift, “Intensities of Feeling: Towards a Spatial Politics of Affect,” *Geografiska Annaler* 86B (2004): 72.
20. Manovich, *The Language of New Media*, 150.
21. Many music videos feature rather complex audiovisual universes of manipulated spaces and times. Such videos frequently slow down, speed up, freeze, or reverse time, at the same time as they fragment, contract, or hybridize several spaces into one. Another OK Go video, “End Love,” is one such video, in that it frequently changes between different techniques for manipulating time in the moving image, from stop-motion to slow-motion to sped-up images and onward, simultaneously falsely masquerading itself as one successive take.
22. In fact, it seems to be a recurrent feature of most of OK Go’s videos that they are composed of one single take or that they seek to give this impression, even when it is not the case. Such long takes in music videos signify both “presence” (the long shot as “unmediated” or “immediate”) and self-reflexivity (the long shot as involving a lot of preparation and as an alien counteract to the traditional quick edits of music video).
23. Gilles Deleuze, *Cinema 2: The Time-Image* [1985], trans. Hugh Tomlinson and Robert Galeta

- (London: Continuum, 2008), 44. Deleuze seems to import the term “double movement of creation and erasure” from Alain Robbe-Grillet.
24. Ibid.
  25. Thanks to Damian Kulash of OK Go for calling my attention to this video by The Jacksons.
  26. <http://okgo.net/2009/12/25/make-your-own-wtf> (accessed May 15, 2012).
  27. Thrift, “Intensities of Feeling,” 76.
  28. Vivian Sobchack, *Meta-Morphing: Visual Transformation and the Culture of Quick-Change* (Minneapolis: University of Minnesota Press, 2000), xii.
  29. Carol Vernallis, *Experiencing Music Video* (New York: Columbia University Press, 2004), 44;
  30. Kevin Williams, *Why I [Still] Want My MTV* (New Jersey: Hampton Press, 2003), 13.
  31. Michel Chion, *Audio-Vision: Sound on Screen*, trans. Claudia Gorbman (New York: Columbia University Press, 1994).
  32. Philip Auslander, *Liveness* (London and New York: Routledge, 1999), 44.
  33. Williams, *Why I [Still] Want My MTV*, 158.
  34. Mathias Korsgaard, “Music Video Transformed,” in *The Oxford Handbook of New Audiovisual Aesthetics*, ed. Claudia Gorbman, John Richardson and Carol Vernallis (Oxford: Oxford University Press, forthcoming).

# It has not been—it is. The signaletic transformation of photography

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## Abstract

Inspired by the concept of “the signaletic,” this article proposes a new understanding of photography as a social and performative device related to everyday life, to communication, and to presence. Today photography is a ubiquitous, social activity to a much larger extent than before the digital revolution and the introduction of the Internet, creating relational situations and communication as well as new affective involvements between human bodies and the photographic, media-convergent technologies. In the light of this epistemological change, the medium of photography demands a theoretical reformulation, and contemporary art works can help us articulate “the signaletic paradigm” in photography. To illustrate this, the article includes an analysis of Christian Marclay’s prize winning “The Clock” and David Claerbout’s “Sections of a Happy Moment”. It is my argument that although the traditional photography, such as the early photography theories by Bazin and Barthes have described, confirmed “what-has-been” (Barthes) and fulfilled a “mumification desire” (Bazin), the new digital practices at the Internet show “what-is-going-on” (presence) and thereby rather fulfills the user’s existential desire to “feel time.”



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**Keywords:** *new media ecology; Web 2.0; digital photography; video art; Christian Marclay; David Claerbout; presence; database*

In 2011, the use and spread of private photographs at websites such as Facebook, Picasa, and Flickr are as extensive as ever before. Millions of photographs of private and apparently insignificant everyday moments and situations are being uploaded daily.<sup>1</sup> Also, in that year, Swiss-American, British-based artist and composer Christian Marclay (born 1955) won the exclusive Venice Biennial “Golden Lion Grand Prize” for his film

“The Clock” from 2010. It is a 24-hour-long film that painstakingly assembles sampled sequences from a massive number of movies to track the viewer through a full day. At the same time, the film is synchronized to real time: that is, to the time in which it actually plays. In this article, I intend to show a connection between several seemingly disparate elements: Marclay’s film and a film by another artist, David Claerbout (born in

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1969); the general development of digital amateur photography; and “the paradigm of the signal,” as Bodil Marie Thomsen names one of the major recent developments within electronic and digital media. I intend to show how we can grasp and use this concept of “the signaletic” about the medium of photography in order to describe and to theorize the new use of digital photography. Departing from “The Clock,” but analyzing another art work more in depth, namely Belgian artist David Claerbout’s video “Sections of a Happy Moment” (2007), I will show how contemporary art works can give insight into what happens with photography in the light of its recent and very radical digital changes. I will argue that concepts such as presence, performance, and even esthetic involvement are much more relevant than realism, nostalgia, and the freezing of time to describe what goes on in the new digital photography. Inspired by the concept of “the signaletic,” I will propose a new understanding of photography as a social device related to everyday life, to communication, to presence, and to the blurring of boundaries between fiction and the real, the body, and the outside world.

## PHOTOGRAPHY AND WEB 2.0

Maybe what’s happening now for photography was always its destiny and fate. But it’s not the end of photography. It’s rather the end of photography *as we know it*. To understand this change, we need *a new media ecology*.<sup>2</sup>

When digital photography became widespread from the mid-1990s, people started to predict the “death of photography,” referring especially to its realism and non-manipulated objectivity, but of course analog photography has always been manipulated to a certain degree. Instead, I will propose that the real change of the conception and use of photography came much later, namely with the Internet, the advent of Web 2.0 and its focus on user-generated content. Especially, vernacular photography has changed dramatically in less than a decade, to such an extent that we can now talk about analog “old photography” and digital “new photography.” When we use these terms it is important to underline that the concept of “new” is very much related to the *use* of photography, which has changed dramatically with the advent of the Internet. Photography is not any

more what it was when both the general public and the following development of a theory of photography during the twentieth century attached the medium to realism, objectivity, indexicality, and a melancholic freezing of the past, preserving it for eternity. Although the “old” photography—as the early phenomenological photography theories by André Bazin and Roland Barthes have described—confirmed “what-has-been”<sup>3</sup> (Barthes) and fulfilled a “mumification desire”<sup>4</sup> to embalm time (Bazin), the new digital practices on the Internet show “what-is-going-on,” i.e. *presence*.

When I look at almost any of the millions of publicly accessible private photograph albums at, for instance, Picasa or Facebook, I am struck by at least two major differences from traditional analog photography albums: first, a specific situation is often depicted in many, almost identical images, sometimes up to several hundred being stored in the albums as an archival database. This presentation is, of course, due to the fact that it is free to take as many photographs as you want of a given situation, whereas before you had to pay for each development of an analog photograph and thus became more cautious about how many you actually took. But the technological development has opened up the possibility to use the still camera in a more “filmic” way, exposing with intervals of a few seconds. In that way, you can make photographs that unfold in time without being a film and many people do indeed use that possibility. These stored photographs thereby enhance the feeling of *experiencing* the moment rather than embalming it. Second, and this, of course, relates to the same technological development, the subjects are often much more apparently insignificant than with “old photography”: a flower, a cat, a half-eaten meal, 50 images of two kids playing in a swimming pool, and 30 images of a cloud crossing the sky. I would propose that these images are presented in public on a global scale in order to communicate the feeling of presence with an audience, known or unknown.

Today photography is much more *a social everyday activity* than a memory-embalming activity, creating presence, relational situations, and communication as well as new affective involvements between bodies and the new photographic, media-convergent technologies such as the mobile phone. Look at people photographing in the

streets at spectacular events as well as in their daily life: the camera(-phone) is often held out in the stretched arm as a bodily extension, whereby we “touch” the world, and the assessment of the photograph immediately following the shooting situation is part of a social act. The medium of photography demands a reformulation in the light of this epistemological change that photographic historians and theoreticians have had problems articulating. Increasingly, everyday amateur photography will be regarded as a performative practice connected to “presence” as opposed to the storing of “precious” memories for eternity, which is how it has hitherto been conceptualized.

In 2001, the first mobile phone camera was put on the market, but it only took on in 2004, the same year that the web platform Flickr was invented. Photography is a very central part of these new digital communities in Web 2.0. Photography is converging not only with the Internet but also with mobile phones. In 2004, 246 million camera phones (mobile phones with digital cameras) were sold worldwide—nearly four times the sales of digital cameras. And mobile phone commercials increasingly highlight the camera. While “analog photography” was directed at a *future* audience (because it took time to have the film roll developed and the images printed), pictures taken by camera phones can be seen immediately by people at-a-distance with mobiles with MMS or email service. In the United Kingdom where around one in two mobiles were camera phones in 2007, “448,962,359 MMS picture messages were sent in 2007, the equivalent of 19 million traditional (24 exposure) rolls of camera film.”<sup>5</sup> The affordances of digital photography potentially make photographic images both instantaneous and mobile.

### “NEW” PHOTOGRAPHY

Within the past 5–7 years, the material base of photography has been revolutionized to such an extent that we can talk about “new photography,” the digital. The future of the medium seems inextricably linked to mobile phones and to the Internet and, to a much lesser degree, to paper images, albums, and traditional cameras. All this indicates that digital photography is a complex technological network in *the making* rather than a single fixed technology. We therefore also need to

rethink the theory of photography. Although photography scholars used to theorize photography as a distinct technology with a “life of its own,” photography has now converged with the omnipresent technologies of the Internet and mobile phones. We cannot theorize or research especially amateur photography without including such media. At the same time, this new media convergence and proliferation of amateur photography does not mean the end of photography, as many proclaimed with the advent of digital photography around 1990, but the end—or at least the radical change—of photography “as we know it,” as Martin Lister states in the quote above. These developments represent a radical moment, a paradigm shift, in the understanding and conception of photography. Instead of words such as index, referent, nostalgia, melancholic freezing, and mummification desire, we need a new conceptual framework to fully grasp and acknowledge the change of the medium of photography with digital cameras, Web 2.0, and mobile phones: a new media ecology, as Lister calls it. Here, the concept of “the signaletic,” as developed in Bodil Marie Thomsen’s introduction to this issue, seems highly applicable to the medium of photography.

While much (earlier) writing on digital photography either focussed on the dualism truth/analog vs. construction/digital or resembled technological determinism by only considering technical affordances, today we must realize that technologies cannot be separated from embodied practices, from *doings*. The specific affordances of technologies shape, but do not determine if and how they can be used and made sense of in practice. This also means that digital photographs can be many different “things” according to how they are made meaningful and performed in specific contexts. Photography must be understood as at the same time a social practice, a networked technology, a material object, and an image. Both the phenomenological version of photography as a *memento mori* and the sociological (Bourdieu) and constructivist approach (represented by especially the Anglo-American school of Discourse Criticism with scholars such as John Tagg, Allan Sekula, and Martha Rosler) must be supplemented by an analytical approach that includes both the practices, the affect, the performative self-construction, and the creation of

“presence,” sociability, and community that is embodied in the digital everyday photography.

It is most remarkable that one of the most widely read anthologies on photography, *The Photography Reader*, opens with the question “What is a photograph?”<sup>6</sup> and that methodology books and readers on visual culture almost exclusively discuss the methods to analyze photographs that already exist as signs to be deciphered—as if they were texts. One of the more recent general overviews of the state of photographic theory is James Elkins’ *Photography Theory*.<sup>7</sup> In this book, the main theoretical foci are (still) the questions of indexicality, truth, and referentiality, that is, the question of what photography *is*. It is highly problematic that photography *as a practice* has been so relatively little discussed in academic photography literature. Technology cannot be separated from the question of performative practice. The performative aspects of photography are obvious not only when people take photographs, staging and posing, but also when editing their photographs, putting them in frames and albums, on blogs, and on websites. An important aspect of photography as performance is to articulate and transmit a feeling of *presence*.

## CLOCKS AND MOMENTS

I will now return to the question of how a work of art can assume the function of articulating sensations and new emotional, as well as conceptual, paradigms, and epistemologies in other ways than descriptive and/or analytical words, i.e. how a work of art can provide us with the insights that academic photograph literature is lacking. There are many explanations behind the allure of Christian Marclay’s 2011-Golden Lion-winning film “The Clock.” First of all, the cinematic experience of floating in a comfortable sofa in a dark cinema room in the middle of the hot, buzzy, and very fatiguing adventure of the Venice Biennial, experiencing a seemingly unending row of clips with famous actors from famous Hollywood films, was fantastic. In that sense, the film can be seen as a tribute to the classic Hollywood film and the film experience *per se*. “The Clock,” which lasts 24 hours, is constructed out of moments in cinema when time is expressed or when a character interacts with a clock, or just a particular time of day, where a clock appears in a specific film. It is

about how time gets lived *in* movies and portrayed back to us. You could even argue that we learn to live out time partly by having seen how it plays out in film. Among the thousands of clips collected and sampled by the artist during several years, the film includes clips from such diverse films as “High Noon,” starring Gary Cooper; “Titanic,” with Leonardo DiCaprio; “Easy Rider” with Peter Fonda; and the Arnold Schwarzenegger action movie “Eraser.” It is, of course, not a real-time movie but rather a simulation of the experience of time passing. At the same time, as the film thematizes time and our constant dependence on and interaction with clocks, it transfers a bodily experience of the passing of time in itself directly to the audience, since the film is synchronized to the real time of the actual playing of it. The film, thus, functions as a clock in itself. So when it was 1.15 PM in the film, it was 1.15 PM in Venice. The film manages to depict the passing of time at the same time as the bodily feeling of *being in* time, in a very original way. In 1907, the French philosopher Henri Bergson wrote *L’Evolution creative* in which he articulated a phenomenological experience of time being divided between the rational, cosmological, measurable time and the sensed, psychologically and personally experienced time, *la durée*: an opposition that has been a focal point for phenomenology during the twentieth century. I would suggest that Marclay’s film simultaneously includes both aspects of time, and in that sense, it points toward an alternative way of understanding the relationship between time and visual media.

But, let me turn to another film that condenses this experience to the medium of photography and thereby brings us even further in the search for an understanding of the new media ecology of photography: “Sections of a Happy Moment” (2007) by Belgian artist David Claerbout.<sup>8</sup> It is a 25-minute-long video consisting of b/w still images of the same constructed family photograph “decisive moment.” In the silent and therefore non-dialogue film we meet an Asian-looking family consisting of what appears to be six family members in the courtyard of a non-descript high rise estate. A little boy has just thrown a ball in the air to what seems to be his sister, who raises her arms to catch the ball. We watch the two children and the other four family members—two men and two women, probably parents and grand

parents—all smiling and looking up in the air at the ball. It seems to be three generations gathered in this “happy moment.” The situation could be seen in any “classical” family photograph, but here it is depicted in hundreds of photographs. The video is a visually complex depiction of that very moment depicted simultaneously with at least 15 cameras from many different angles and mounted into one sequence lasting 25 minutes in perception time but less than a second in depicted time.

Apart from the six figures placed in the middle of the courtyard, five other people can be seen: an old man carrying a plastic bag has stopped to watch the scenery. He is situated a few meters from the group, contemplating them with an empathic smile. Two teenage girls are crossing the square, turning their backs at the group, thereby not watching the ball in the air or the other persons. They seem to be lost in their own conversation, and they are moving out of the “situation frame.” Lastly, an elderly couple is caught in the act of sitting down in each of their plastic chair outside one of the entrances to the high rise building. The fact that they are in the midst of sitting down enhances the photographic momentariness of the situation. Judging from the clothes of the figures it seems to be summer, and since they are all casting long shadows, it is probably late afternoon. The film is in black and white. First of all, this choice removes the attention from the narrative and raises the effect of a moment being sculpted in time, one could say. Second, it raises the contrast between the smiling people and the modernist concrete and almost inhuman architecture that surrounds them. Incidentally, the film seems to articulate a critical attitude toward the ideas behind classical modernist, mass produced architecture.<sup>9</sup> This is also underlined in a sculpture of naked human figures, made in a modernist, vitalistic, almost abstract style that was seen in the middle of the twentieth century, which appears in this high rise building “plaza” as a piece of dead material, contrasting the lively family group.

The film consists of hundreds of different still images of the same moment, each shown between 5 and 13 seconds, and accompanied by a simple, contemplative composition for one piano. The artist has placed at least 15 cameras in and all around the scenario, which is depicted from many

different angles and focus points: as extreme close-ups focusing on the facial expression or bodily gesture, as full-frames depicting all 11 figures in one shot, in frog’s or bird’s eye perspective, etc. Some of the shots are taken from a high perspective inside the buildings. Invoking the gaze of a sniper looking out, but half covered behind a curtain or a glass wall, some of these images add a slightly uncanny feeling to the film: the family is being watched.

## DATABASE TIME IMAGES

As viewers we experience an ongoing moment without beginning and end; one could call it a radical performance of the momentality, intensity, and presence of time itself. It certainly is a family photograph that we see, but we do not relate it to an indexical, nostalgic freezing of the past and a specific memorable moment but much more to a performance of a photographic presence that we experience with our own body over 25 minutes. The “digitality” of the images makes some of them look slightly “paint-brushed” or softened, especially the ones where a cropped or zoomed detail fills most of the screen and where we thus focus on, for instance, the girl’s ponytail or the little boy’s necklace. The black-and-white film appears as a haptic surface where you can sense the materiality of time in itself, as a sculpture of time sculpted out of the very moment via the many cameras used by Claerbout and his crew. The images in the film are not related to narration, but are rather used as signifiers of pure time in order to make the audience “sense” time.

In interviews, the artist has mentioned that he has been inspired by the “time philosophy” of Henri Bergson, especially as it is echoed in Deleuze’s film books and his notion of the “time-image.”<sup>10</sup> And, you can remark that the film is an artistic articulation of the bergsonian *la durée*, the psychologically imagined as well as bodily felt duration of time as opposed to the experience of time cut up in rationally divided frames of minutes and seconds. Actually, the rational time, the clock time, is exactly the subject of Marclay’s film, but synchronizing the filmic time with the perception time, he manages to show how the clock time is bodily experienced as a psychological “durée” just as much as Clearbout’s extended moment. So, by a first look, Marclay’s

film seems to represent the rational time, whereas Claerbout's demonstrates the psychological time. But my point is that they do both at the same time, thereby inviting us to re-articulate the relationship between time and photography in favor of a more presence-oriented conception of time in relation to photography. In different ways, and through film as well as still photography, both films are magical contemplations of time itself and of the possibility of photograph-based media to articulate time. In her introduction to this issue, Bodil Marie Thomsen quotes Maurizio Lazzarato's "video philosophy" in order to use his description of the "haptic" video image to describe "the signaletic image" as: "ein Ort, ein Bewegungsraum für die Zeit als solche. Es handelt sich nicht mehr einfach um ein Bild, das gesehen werden soll, sondern um ein Bild, in dem man sich einmischt, mit dem man arbeitet (eine Zeit des Ereignisse)." <sup>11</sup> Likewise, these two artworks become not only representations of people and situations but also places for contemplation of time as presence.

Both "The Clock" and "Sections of a Happy Moment" could in principle have been made with traditional analog technology, but it is the "signaletic" qualities of digital media that provides them with both the practical tools and the very idea behind the works. One could argue that the "digital epistemology" was needed in order to "think" these works. They explore "the database logic of new media" to use a phrase from Lev Manovich <sup>12</sup>; that is, they collect an immense amount of filmic/photographic database material, which is digitally stored and composed with an archival, repetitive, circular, or "flat" logic rather than structured by traditional, progressive narrative. Manovich:

After the novel, and subsequently cinema privileged narrative as the key form of cultural expression of the modern age, the computer age introduces its correlate—database. Many new media objects do not tell stories; they don't have beginning or end; in fact, they don't have any development, thematically, formally or otherwise which would organize their elements into a sequence. Instead, they are collections of individual items, where every item has the same significance as any other. <sup>13</sup>

In Web 2.0, we can meet 200 almost identical images of two boys playing in a swimming pool on

their mother's private Picasa website, <sup>14</sup> and many private photography websites are structured as such database collections without a beginning or an end. Manovich calls the database the new symbolic form of the computer age: "A new way to structure our experience of ourselves and the world," <sup>15</sup> and he analyzes various art works articulating the "poetics of the database." "The Clock" and "Sections of a Happy Moment" are not constructed around a traditional narrative, but as collections of almost similar or only slightly differing data "objects." It is the transmission of the signal of timeliness in itself that is the message in Marclay's and Claerbout's works. As Saint Augustine famously stated in his *Confessions* (year 398): "What is time? If one asks me, I know. If I wish to explain to someone who asks, I no longer know." Both art works give form to duration, a form that needs to be experienced over time. "Time" is not being depicted as "sign," it is happening here and now—as "signal." "Time" is not the subject matter as much as it is a constitutive matter to be bodily experienced. They manage to make "time" felt; the photographic freezing and at the same time prolonging of time in Claerbout's work and the physical effect of the passing of time in Marclay's filmic work. As Claerbout has expressed it: "In my work I think of the digital as a platform in which past, present, and future are not distinguishable from one another and instead coexist happily." <sup>16</sup> The notion of "the signaletic" is related to the transmission of real-time signals in digital, global media such as in surveillance cameras, for instance. In that sense, the two artworks described are not "signaletic," nor is the abovementioned database of private family photographs. But, it is my argument that they nevertheless philosophically and esthetically articulate aspects of "the signaletic" that we can use to enhance our understanding of contemporary digital photography, as it is used for instance in private Web 2.0 photograph albums.

## PHOTOGRAPHY AS SIGNALLETIC PRESENCE

Digital collections of photographs, for instance, at Flickr and Picasa, can be seen as such archival databases filled with often very similar images. Showing us the signaletic database logic of photography especially, Claerbout proposes a new

understanding of photography that throws light on these Web 2.0 practices. “Sections of a Happy Moment” thus helps us formulating an epistemologically new conception of photography as process, presence, and bodily “affect.” Having formulated this new theory of photography, we will also be able to look back into the history of the medium and highlight the everyday, social, performative, as well as material aspects of photography, which have hitherto been neglected.

I realize that we are just starting to see how the digital production, perception, and use of photography will develop in new and truly ubiquitous ways that we cannot dream of even today and that this development in the near future will have important implications for our very understanding of the thing or phenomenon we call “photography.” Works like “The Clock” and “Sections of a Happy Memory” are still extremely difficult and time consuming to produce, but soon technological improvements will make anyone with a computer able to compile thousands of clips as done by Marclay, or photograph the same moment from a hundred different angles as Claerbout. Therefore, we will see artists pushing technology even further in the years to come, thereby articulating other and new philosophical aspects of technology.

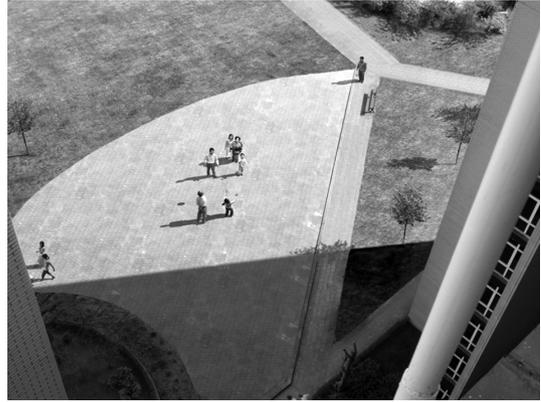
However, as classifications such as Jay David Bolter’s “remediation”<sup>17</sup> have demonstrated, the conceptualization of a new medium is often based on the preceding. Thus, the digital photograph albums that we meet in Web 2.0 are to a large extent still constructed and perceived as the traditional analog precursor. Simultaneously, as they remediate older forms, new media inventions or practices can also shed light on older practices. So the new use of photography we experience with Web 2.0, which—I argue—is conceptualized in “Sections of a Happy Moment,” can actually highlight the aspects of the medium that was always already there: the conception of photography as a primarily social, participatory, and performative phenomenon. More philosophically put, it might change our concepts of what authenticity and identity mean in relation to photography.<sup>18</sup>

To return to my introduction, the way photography is used and presented at social networks like Picasa, Facebook, and Flickr differs from the function of photography described by Barthes and Bazin. Susan Murray has described sites like Flickr this way:

On these sites, photography has become less about the special or rarefied moments of domestic/family living (for such things as holidays, gatherings, baby photos) and more about an immediate, rather fleeting display of one’s discovery of the small and mundane (such as bottles, cupcakes, trees, debris, and architectural elements). In this way, photography is no longer just the embalmer of time that André Bazin once spoken of, but rather a more alive, immediate, and often transitory, practice/form.<sup>19</sup>

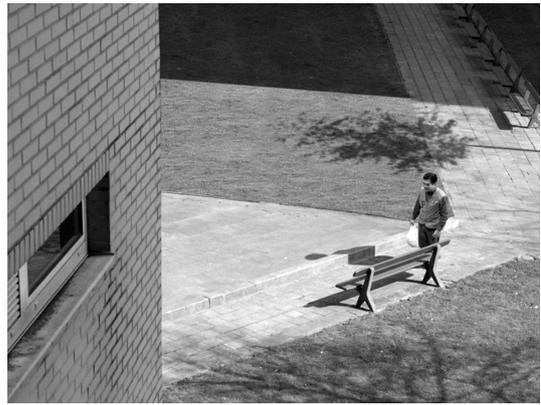
According to Søren Mørk Petersen, Flickr is really about articulating an esthetics of the everyday and the ephemeral. Like Murray he stresses the presence character of the images and the photo sharing at Flickr. His fieldwork demonstrates how people take photographs with their cell phones and upload them directly in order to get a quick and “fresh” comment by other “Flickrs” and that this element—closely related to pervasive computing within everyday life—is the primary function of Flickr. It thereby contradicts Barthes’ and Bazin’s phenomenological connection of photography to death: “[...] when it registers the banal and mundane aspects of everyday life and not least when it is shared, it becomes a practice closer to life than death.”<sup>20</sup> “The practice of mob logging, everyday photography, and photo sharing express a desire to retain the experience and sensation of presence and the affective character of everydayness. Uploading becomes a practice that can negotiate the different sensations of presence and the present.”<sup>21</sup>

In summary, I have described two new “signaletic” databased photograph practices. One, the ubiquitous presence of everyday Web 2.0 photography from mobile phones to social network sites, is extremely widespread but not yet comprehensively theorized. The other practice, the two video works, is self- and media-reflexive “niche products” of the same technological as well as epistemological development, of the database logic as symbolic form. Artists such as Marclay and Claerbout can be said to react to the new media developments; and by exploiting them they are enhancing our understanding of the nature of the media. By bringing attention to their presentation of the photographic construction of *presence*, I hope to have inspired my readers to theorize “photography” differently and to develop a new media ecology, which is now only in embryo.



Courtesy David Claerbout

*The signaletic transformation of photography*



Courtesy David Claerbout



Courtesy David Claerbout

## Notes

1. According to Facebook, February 2010, 2.5 billion photographs are uploaded each month: <http://www.facebook.com/blog.php?post=206178097130>.
2. Media and Photography Professor Martin Lister at the conference 'Private Eyes', Copenhagen University, November 2009.
3. Roland Barthes, *Camera Lucida: Reflections on Photography* (New York: Hill and Wang, 1981).

4. André Bazin, 'The Ontology of the Photographic Image', in *Classic Essays on Photography*, ed. Alan Trachtenberg (New Haven: Leete's Island Books, 1980 [1945]), 237–44.
5. [http://www.text.it/mediacentre/press\\_release\\_list.cfm?thePublicationID=2C4FB155-15C5-F4C0-99FCB4EAAED7A798](http://www.text.it/mediacentre/press_release_list.cfm?thePublicationID=2C4FB155-15C5-F4C0-99FCB4EAAED7A798).
6. Liz Wells, ed., *The Photography Reader* (London: Routledge, 2003), 1.
7. James Elkins, ed., *Photography Theory* (London: Routledge, 2007).
8. Claerbout was also shown at the Venice Biennial 2011, at Palazzo Grassi, with his "The Algiers' Sections of a Happy Moment" (2008), which is a further development of the concept from "Sections of a Happy Moment" (2007).
9. A more in-depth analysis of this critical stance would be most interesting in a thematic reading of the film, but lies outside the scope of this article.
10. Gilles Deleuze, *Cinema 1: The Movement-Image* and *Cinema 2: The Time-Image* (Minneapolis: University of Minnesota Press, 1986, 1989).
11. Maurice Lazzarato, *Videophilosophie. Zeitwahrnehmung in Postfordismus* (Berlin: b\_books, 2002), 79.
12. Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001), chap. V.
13. *Ibid.*, 194.
14. <http://picasaweb.google.com/hstebby47> (accessed November 20, 2011).
15. Manovich, *The Language of New Media*, 194.
16. Artinfo, <http://www.artinfo.com/news/story/31145/ori-gersht-puts-five-questions-to-david-claerbout/> (accessed May 1, 2009).
17. Jay David Bolter and David Grusin, *Remediation. Understanding New Media* (Cambridge, MA: MIT Press, 1999).
18. For instance, as in Christopher Pinney's studies of Indian studio photography, where a heavy amount of staging and image manipulation such as hand-coloring is perceived as authentication tools. His fieldwork in these Indian villages has implications for our traditional Western conceptual connection between concepts such as authenticity, truth, indexicality, and non-manipulation. Christopher Pinney, *Camera Indica* (Chicago: University of Chicago Press, 1997).
19. Susan Murray, 'Digital Images, Photo-Sharing, and our Shifting Notions of Everyday Aesthetics', *Journal of Visual Culture* 7 (2008): 147–63, 151.
20. Søren Mørk Petersen, 'Common Banality: The Affective Character of Photo Sharing, Everyday Life and Prodsusage Cultures' (PhD diss., IT University, 2008), 146.
21. *Ibid.*, 154.

# Screens of intensification: on DIY concert videos of Lady Gaga and the use of media interfaces as tools of experience intensification

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## Abstract

The article is based on the analysis of user-generated videos from a particular event: the Lady Gaga concert in Denmark on October 20, 2010. Within the theoretical framework of a media practice perspective, theories of a media cultural movement from sign to signal, and an affective understanding of the experience of liveness, I argue that the DIY videos do not only attest to the documentation or representation of the concert event, but rather show an urge to feel it, connect to it, and relate to others by sharing it. In that way media and screens can be understood as technologies that under certain circumstances enable intensified relations between bodies, spaces, and significant others. The experiential intensification of the event is established by using media to (1) visually enrich the real-time experience, (2) turn the collective receiver into an individualized and creative real-time auteur, and (3) deterritorialize the real-time experience by sharing it on social media platforms. Furthermore, I discuss two ways of analyzing “the signal” in my material: one focusing on the relation between body, event, and mobile media technology and the other on the formal features of the videos themselves. This distinction is nevertheless purely analytical given that the formal traces of the signal (the sensory turbulence of the videos) are so closely related to the spatially affected camera-body. The body in the space, the camera, and the audiovisual surface is in other words affecting each other, as the signalethic force of the concert-event affects all the three.



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**Keywords:** *DIY culture; experiential intensity; liveness; user-generated concert videos; Lady Gaga*

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### C. Stage

In his book *Liveness* (1999), Philip Auslander writes that it is a common, but nevertheless wrong, notion that liveness is based on a direct face-to-face perception of spectacles, or in other words on the absence of media.<sup>1</sup> The experience of, for instance, a live concert is on the contrary often closely linked to the feeling and sensing of audiovisual signals created by screens, microphones, and loud speakers. In this article I investigate how the liveness of an event may be intensified through mediation. My study is based on an analysis of user-generated videos from a particular event: a Lady Gaga concert in Herning, Denmark on October 20, 2010. I am not primarily interested in Lady Gaga as an artist, but rather in the way Gaga's entourage reveal *their way* of experiencing and perceiving the event through the creation of video sequences recorded with digital cameras and uploaded onto YouTube. I have chosen the concert because of the large number of user-generated mediations, which enables an analysis of how and when media are used at live events.

The documentations from the concert are interesting for several reasons. The various recordings do not only capture the performing body of Lady Gaga onstage, which is filmed extensively, but also the actual representations of Lady Gaga on the big screens that are part of the concert setting. The feeling of liveness seems to be intensified by these screens that offer visual proximity (e.g. facial close-ups) and reproduce an intimate way of watching bodies and faces known from other media (cf. photography, film, TV, etc.). Thus, the videos become mediations of mediations or—as I will argue—intensifications of real-time signals and experiences.

The empirical material was collected by searching the word combination “Lady Gaga Herning Denmark” on YouTube, which resulted in more than 100 videos. These videos are made by members of the audience—or as Jay Rosen would describe them: “the people formerly known as the audience.”<sup>2</sup> The material is in other words user-generated and user-disseminated media productions that offer an impression of how media are used at events, but also of what is considered interesting and worth documenting from the perspective of the concertgoer. The videos are self-documentations, constituting a media practice that goes beyond what is represented in a

singular video. They display what is valued as a remarkable moment and indicate the affective status of the viewer by showing when something fascinating occurs. In other words, the videos enable access to the affective patterns and perceptual peaks experienced by the concertgoers.

### MEDIA PRACTICE, SIGNAL, AND INTENSIFICATION

I will focus on the interconnections and possible positive encounters between an already established media practice perspective,<sup>3</sup> on the idea of a broader media cultural movement from sign to signal,<sup>4</sup> and on an affective understanding of the experience of liveness or presence that is not opposed to mediation or media-saturated environments.<sup>5</sup> According to Nick Couldry, a media-oriented practice perspective is not aiming for what a certain media or media text is saying on a content level, but rather for the actions and social activities that media are involved in.<sup>6</sup> Following Couldry I will analyze the videos as traces of social actions and ask: Why do people document the concert in this particular way? What kind of cultural practice do the videos attest to and what is the meaning of such a practice?

To answer these questions, I argue that the broader shift from a representational to a signaletic media culture—or from sign to intensity can be combined with a media-oriented practice approach.<sup>7</sup> The idea of a movement from sign to signal is inspired by the increasing number of real-time or “immediacy” mediations,<sup>8</sup> which should be understood as continuous electronic impulses creating connections between bodies, screens and spaces in new ways, and not as sign structures that by convention refer to certain contents. The screens and the sound waves at the concert constitute signals that connect the concertgoers to the performance of Gaga in real time; and the use of mobile technologies is a way of trying to qualify, or intensify, the bodily effects of the signals and thus to create a better and more involving experience. The concept of the signaletic is useful for explaining the more-than-representational and affective dimensions of a certain media practice in which media technologies are used to intensify the experience of events.<sup>9</sup> In other words both “practice” and “signal” are concepts that move beyond the

sign structures of the media texts in order to investigate the sensory, affective, and social relations created between bodies, screens, and spaces by means of mediation.

As explained in Bodil Marie Stavning Thomsen's use of the Deleuzian concept, the signaletic material is a type of real-time mediation that connects body and screen. Hence, the understanding of mediation as signaletic material enables to explain the corporeal and affective force that screens have on bodies. Mediations are not only aimed for the brain to understand and decode (as signs), but are rather forces (or signals) which social role is to affect bodily states and to connect bodies with places and other bodies through real-time mediated perception. Therefore, my theoretical interest is, quoting Knudsen and Waade, how "the phenomenological relation between body and place is intensified, vitalized and re-vitalized through performative practices and through different kinds of mediations on, and of, places."<sup>10</sup>

There are several studies on media as experience-intensifying tools.<sup>11</sup> My contribution to the field is to study self-documentations, showing the attention patterns of the producers. Furthermore, I focus on media technologies as intensifiers of already existing real-time signals and media-saturated environments, linking the analysis with the concept of the signal in order to explore the relations between media, spaces, and bodies.

Other key concepts are "experience" and "intensity." According to Albert Boswijk, Thomas Thijssen, and Ed Peelen, a meaningful experience is defined by: (1) involving all one's senses, (2) heightening the level of concentration and focus, (3) altering one's sense of time, (4) being emotionally touching, (5) being unique for the person and creating intrinsic value, and (6) creating contact between the individual and its environment by doing and undergoing things.<sup>12</sup> The way I use the word "intensification" connects it with actions or practices involved in the increasing of these six dimensions of the experience. I focus on showing how the acts of mediation relate to the Lady Gaga concert and how these may be regarded as different ways of intensifying the concert experiences.

Accordingly, the media involved—primarily the big screens and the handheld recording devices—should not only be understood as technologies for

capturing, representing or storing events, but rather as tools that allow for a certain bodily and sensory access or real-time relation. It is nevertheless important to note that my empirical material only allows me to see when and with what focus people start documenting, it does not give me direct access to the thoughts and feelings of the producers.

## THE GAGA CONCERT VIDEOS

Couldry considers mediation as closely connected to the supposedly spectacular, interesting, and special occasions of human existence.<sup>13</sup> A more general intensifying role of the medium during the Gaga concert is therefore based on the fact that mediation is a way of stressing the importance and more-than-normal character of what is being mediated. When something extraordinarily happens, you mediate, hence experiencing the event through a medium confirms that it is a significant experience (Illustration 1).<sup>14</sup>

The mediations at the Lady Gaga concert do also have an experientially intensifying potential: (1) by creating a visually richer experience (through the use of big screens and mobile zoom functions) at the concert and thereby potentially enhancing the feeling of liveness and proximity in relation to the event itself, (2) by turning the spectator into an active and creative one by allowing the establishment of a personal and individualized point of view through the scanning of the event-space with a mobile phone or a digital camera, and (3) by making it possible to share, prolong, and commemorate the experience when uploading personal recordings for public circulation on different media platforms.

### Mediatizing liveness

In opposition to the mediations analyzed later, this section does not only focus on mobile devices but also on the big screens in the concert space. It is quite characteristic for the user videos that they often—especially if the viewer is situated far away from the scene—focus on the screens because they offer a sense of visual closeness and presence in relation to Gaga.

Illustration 2 is a framegrab from a user video, which shows how the big screen and not the actual

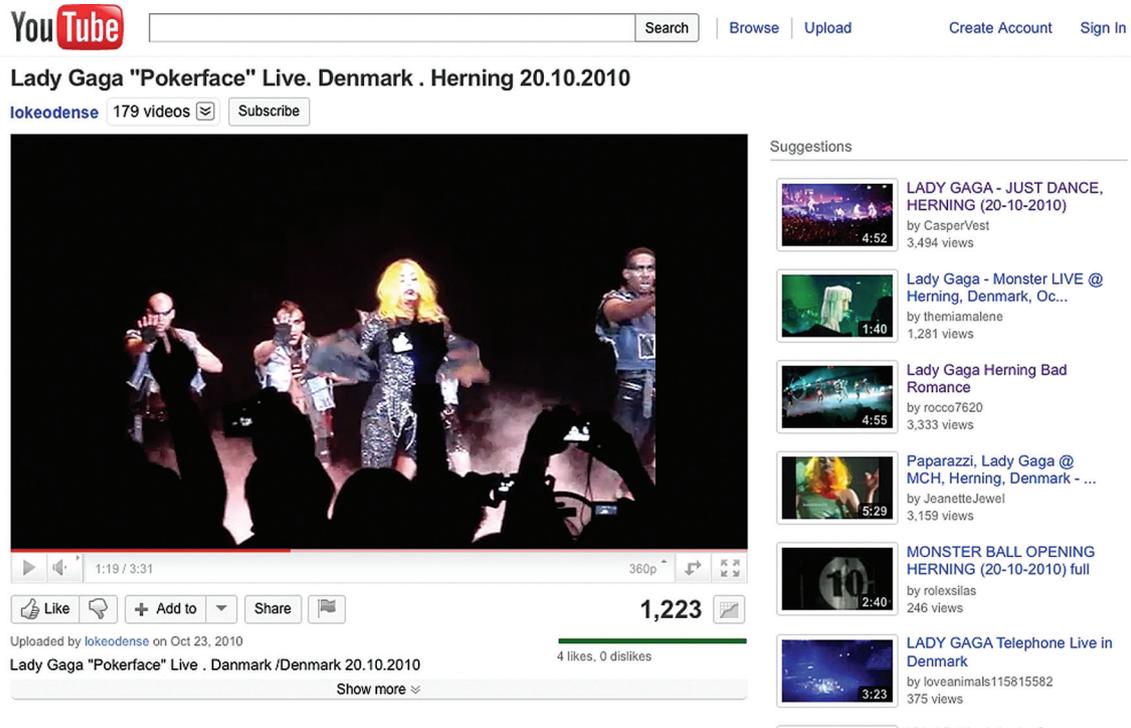


Illustration 1. Gaga as the mediated center. Source: [www.youtube.com/watch?v=uR8qe2OZNHI&feature=related](http://www.youtube.com/watch?v=uR8qe2OZNHI&feature=related).

body of Gaga becomes the center of attention.<sup>15</sup> This is due to the fact that the sense of liveness is often closely intertwined with a feeling of perceptual proximity. Without the big screens visual

closeness would not be an option for the concertgoers filming, it is via the big screens (and the ability to zoom in on the events with the camera) that closeness and liveness can be created.

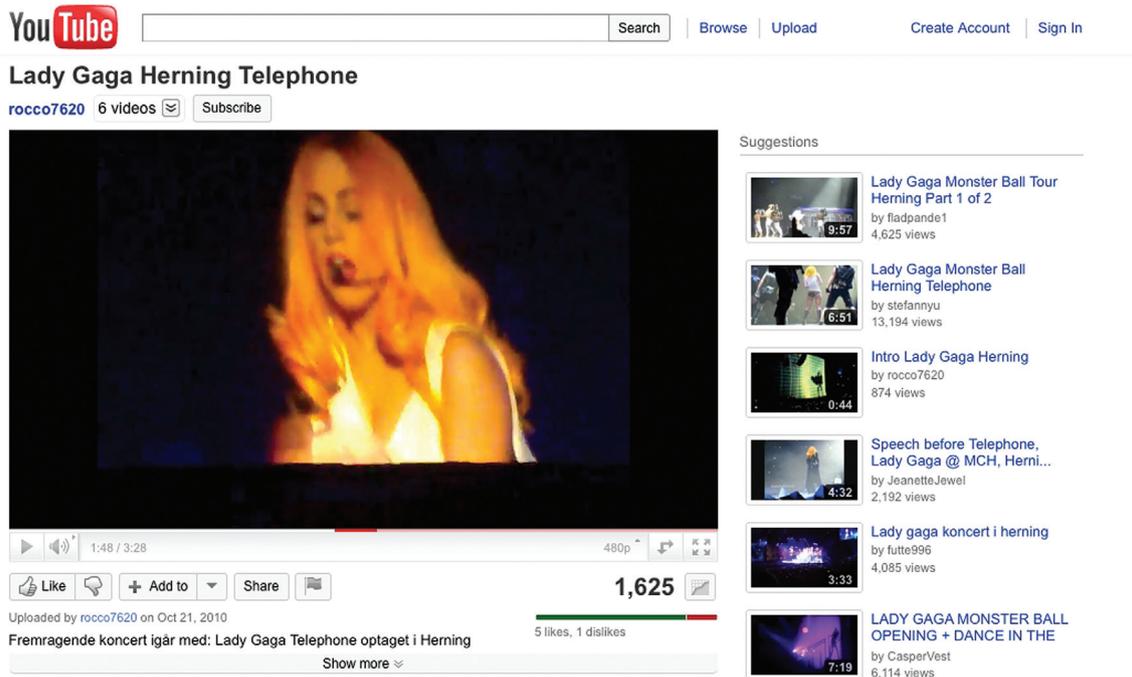


Illustration 2. Video focusing on the big screen at the concert. Source: [www.youtube.com/watch?v=v1tTSpZF\\_6E&feature=related](http://www.youtube.com/watch?v=v1tTSpZF_6E&feature=related).

Philip Auslander's concept of liveness is of use in this context. His aim in *Liveness* (1999) is to transgress the idea of a live experience as being non-mediated, or somehow based on an unmediated relation between the senses and an incidence. This concept of liveness is wrong according to Auslander. First of all, it totally overlooks the intrinsic role of media technologies in the creation of live events and feelings of liveness. Obviously media play a tremendous role in building up expectations and in spreading knowledge about Gaga, and as such the feeling of finally seeing her live—cf. the power of her live presence. This is dependent on the concertgoers having seen or heard about Gaga through previously mediated forms. Looking at the role of media at the event itself, from the commonsense ontological perspective it would still be a live event if we removed the loud speakers, microphones, and the big screens from the concert, but from an experience-oriented and affective perspective the feeling of liveness would certainly be threatened.

Auslander's solution is to define "liveness" as a feeling of presence, of connection, and directness that can be activated both via classic liveness

(physical copresence in space), live broadcasts of events, live recordings, experiences of online copresence with other users, or even with machines (e.g. chatterbots). "The emerging definition of liveness may be built primarily around the audience's affective experience. To the extent that websites and other virtual entities respond to us in real time, they *feel* live to us, and this may be the kind of liveness we now value."<sup>16</sup> As such liveness becomes a mediated concept to the extent that media are involved in the creation of feelings of liveness.<sup>17</sup>

Quite a few of the recordings from the concert focus on the beginning of the concert where a countdown to Gaga's entrance is made on big screens filling the entire space of the scene. They show her body in slow motion, creating a relation of visual fascination between the viewer and the celebrity body (cf. Illustration 3).<sup>18</sup> Here, the occurrence that attracts attention, and triggers the desire to document, is not a body in the room, but a body on a screen in a room, which clearly underlines Auslander's point: feelings of liveness are not opposed to mediation. The use of a countdown slowly increases the affective

Illustration 3. A recording of Gaga in slow motion—and an ocean of mobile screens among the audience. Source: [www.youtube.com/watch?v=G4p8zQ2CfO8&feature=related](http://www.youtube.com/watch?v=G4p8zQ2CfO8&feature=related).

### C. Stage

investment of the audience who begin to scream as Gaga (the body) is suddenly becoming visible as a silhouette behind the screen.

Accordingly, the focus on the big screens in the user videos show how it is the mediated form (Gaga on a screen) that offers the audience a sense of “being-there” or of “presence.” Paradoxically the feeling of being co-present with Gaga is established by putting a screen (and often two) in between the audience and her body.

#### Creative auteurs

The user videos can be described as small “Do it yourself” (DIY) productions whereby otherwise rather passive concertgoers turn themselves into active co-creators of the event by recording and disseminating it online. “DIY media” according to Knobel and Lankshear refer to the increasing number of media productions made by non-professional citizens (e.g. film, music videos, music, animation, games), as opposed to the output from professionalized areas of production.<sup>19</sup> Amateurs and non-professionals are increasingly able to create own media products and even to distribute them on a potentially global scale using social media networks.<sup>20</sup>

According to Jonas Larsen a digital photo should not necessarily be approached as the creation of a media text or a picture with a certain meaning, but also as a creative act—being a body that takes a photo—that carries value itself. In other words media users do not only document something via digital cameras in order to produce signs, but also because the act of documenting has an immediate effect by connecting the producer to the environment and surrounding others.<sup>21</sup> This element of creativity is also important in relation to the concert videos, as they may also be considered as results of a creative process. An example of such an approach is a concert video where the participant starts the recording by focusing on the pulsating lights in the ceiling, which is clearly an attempt to make a personally narrated version of the concert (cf. Illustration 4).<sup>22</sup> This media practice transforms the spectator into a contributor, an individual creating unique media versions of the Gaga concert and thus giving it personal meaning and value.<sup>23</sup> The ability for everyone with a mobile camera to play a part in the mediation of the event makes it possible to change staged event designs into events in which the user becomes a unique producer.<sup>24</sup>

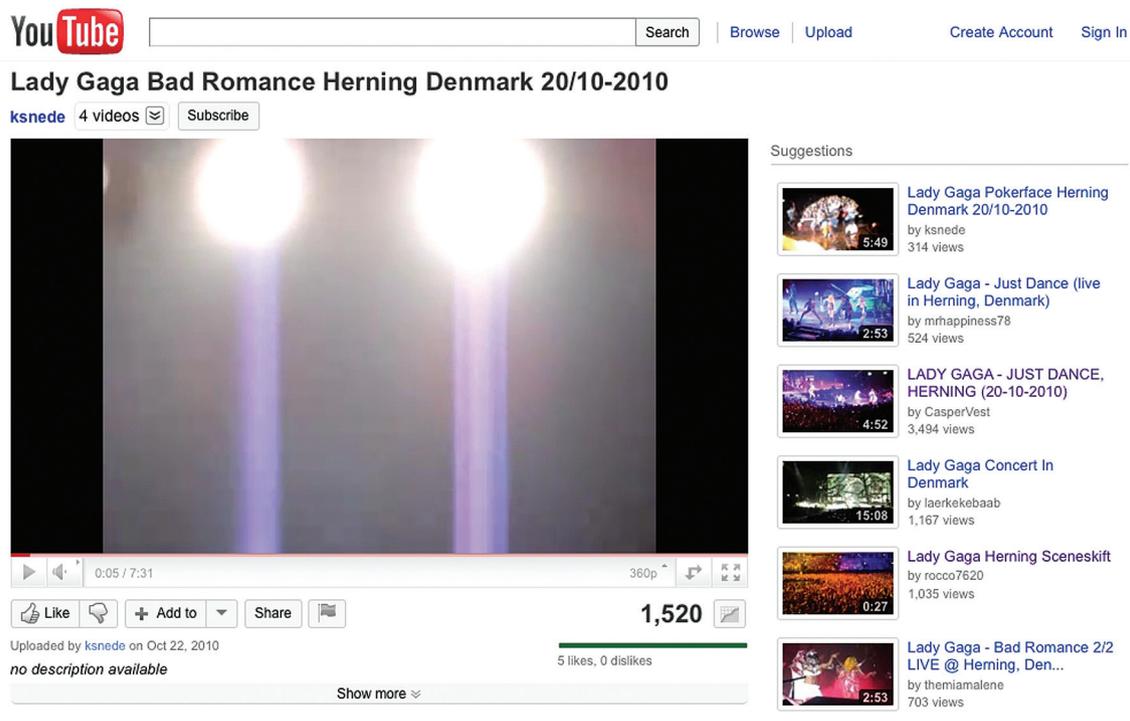


Illustration 4. The concert participant as creative auteur. Source: [www.youtube.com/watch?v=SCWHef09g\\_I&feature=related](http://www.youtube.com/watch?v=SCWHef09g_I&feature=related).

This creative dimension is another example of how the media becomes an intensifying tool, enabling the addition of a layer of creativity or individual authenticity to the experience. Following Britta Timm Knudsen and Anne Marit Waade, this shows that feelings of authenticity and presence is something that “people can *do* and a feeling which is *experienced*.”<sup>25</sup>

### Prolonging, sharing, and deterritorializing the experience

Last but not least I will argue that the movement of the recordings from mobile devices to the social media platform of YouTube also plays a role in the intensification of the concert experience. By uploading the videos they become deterritorialized recordings of live events for others to see and enjoy if they want to get a picture of how it is to participate in such an event or if they want to remember or socialize after having participated.<sup>26</sup> The videos and comments are thus examples of what Jenkins has called “participatory culture,” which designates a media cultural situation where many non-professionals can produce media material and move it between different media

and media platforms (e.g. from a mobile phone to a social media platform).<sup>27</sup>

When looking at the comments placed below the videos on the YouTube interface they are often used to either articulate affective outbursts, to affirm that the writer “was there,” to celebrate Gaga as a musician and performer, to assert a certain bond with the community of Gaga devotees called “little monsters,” to praise the video itself, or to gain information about how it is to attend such an event. By putting a concert video on YouTube it becomes possible to stage oneself as a Gaga fan “who have seen her,” as well as, to socialize and share memories or knowledge among fellow fans and concert participants.

The person who has produced the most socially and relationally valuable video of the concert is the YouTube user called “stefannyu.” He has uploaded a video showing Gaga talking directly to him (and the camera). The clip was taken after he presented Gaga with a t-shirt bearing a personal written statement. The recording shows her first reading the message on the t-shirt and then putting it on and wearing it while performing her megahit “Telephone” (Illustration 5).<sup>28</sup> The video is one of the most watched and circulated from the Gaga concert with more than 13,000

The screenshot shows a YouTube video player interface. At the top, the YouTube logo is on the left, and search, browse, upload, create account, and sign in options are on the right. The video title is "Lady Gaga Monster Ball Herring Telephone" by user "stefannyu", who has 5 videos and a subscribe button. The video player shows a woman with long blonde hair (Lady Gaga) holding a white t-shirt. Below the video, there are controls for play, volume, and a progress bar at 0:40 / 6:50. The video has 13,338 views and 59 likes. The description says "Lady Gaga performing Telephone live in Herring and talking to the audience." To the right, there is a "Suggestions" section with several related videos, including "Lady Gaga - Telephone - Live in Helsinki, Finla..." and "Lady Gaga - Backstage Del Monster Ball Tour".

Illustration 5. Gaga talking to the recording person and inviting him backstage. Source: [www.youtube.com/watch?v=WWOWZC80HBw&feature=related](http://www.youtube.com/watch?v=WWOWZC80HBw&feature=related).

views and 68 comments.<sup>29</sup> Many of the comments ask the user how it was to meet Gaga, and how he managed to get such a good standing ticket. One writes that it is, “Cool that you recorded this epic moment,” another that it is “so freaking cool:) Congrats,” while a third asks him to share the photos that he took of Gaga, while meeting her backstage.<sup>30</sup> “Stefannyu” refuses to upload any pictures, which adds to the feeling of exclusivity that surrounds him due to his encounter with the quasi-sacral figure of Gaga. A space of hyper-importance is created that goes beyond the concert arena and into the backstage area where only Gaga and a few lucky fans have interacted.

The video is clearly treated as quite a trophy that prolongs the experience of being at the concert for the people commenting on it, while adding a certain aura to the person behind the camera. The video and the discussion show that being psychically present at events still carries cultural significance and value, but as Auslander stresses it is important to remember that the prestige connected to physical co-presence is in fact dependent on the amount of mediation that the event receives before and after its actual duration. It is valuable to have seen a concert that has received a lot of media attention, which underlines that the significance of psychical presence is clearly reliant on the mediation processes.

Although being less spectacular, the other user videos also initiate interaction between YouTube users. From the position of the producer the upload of the recordings prolongs the event by turning it into a phenomenon that may be shared and discussed with others. The event thereby gains social significance, because it becomes possible to show that the uploading person was actually there, that he/she had good seats, and more or less developed conversations may emerge. Therefore, social media platforms add another layer to the intensification of the event by making it matter beyond the space and time of the concert itself. YouTube thus gives a prolonged sense of liveness for the concertgoers while also offering a taste of Gaga liveness to those who were not present.

## DISCUSSION: WHAT ABOUT THE SIGNAL?

The main claim of this article is that an interface between a body and an event can create a stronger

relation between them. But how do we know that people do not document because they feel they have to, or that they would experience the event in a more profound and direct way without mediating it? I certainly acknowledge that media can disturb or even block relations between people and between people and places. But, when looking at the videos they seem to function as visually enhancing, as creative and relational tools, bearing no traces of blocking the mediator’s access to the event. Or, to put it more polemically: How can the zooming in on the artist in order to improve the watching of the performer be an act of blockage? How can the creative play by making personal versions of the event also constitute a way of destroying the event? And how can sharing and creating conversations about the event be negative in terms of event appreciation? I find it hard to support the equation of “less media” with “a more authentic event,” without presupposing a kind of worn-out media skepticism that understands mediation as per definition creating barriers between people and events.

User-generated videos from the Gaga concert show that the existence of media and screens at such an event can be analyzed beyond an understanding of mediation as representation or as the encoding of semiotic structures of meaning. Media and screens can also be understood as technologies enabling intensified relations between bodies, spaces, things, and significant others. This focus on the social situation of media acts and the relation between mediator, mediation, and the event is nevertheless only one way of thinking about the signal in relation to the videos of the Gaga concert. Another would be to investigate more closely the shakings, the disturbances of optical clarity, and the visual and auditory “noise” of the videos as traces of the signaletic power of the event.

Through the use of Deleuze and Guattari one could describe the videos as “percepts,” in the sense that they can be understood as blocks of perception processes.<sup>31</sup> Maurice Merleau-Ponty has described mediation as a way of offering “the *gaze* traces of vision (...),” which means that mediation can present a mode of perceiving more than when representing a certain content.<sup>32</sup> Reflecting on painting as a medium Merleau-Ponty claims that it is difficult to say, “*where* the painting is I am looking at. For I do not look at it

as one looks at a thing, fixing it in its place. My gaze wanders within it as in the halos of Being. Rather than seeing it, I see according to, or with it.”<sup>33</sup> As percepts the videos are objects, which encapsulate the process of perception—or the perception of the signaleptic force of the event. And when watching the videos we become aligned with another person’s momentary perception of and reactions to the concert, not (only) to someone’s interpretation or encoding of it. We simply borrow a perceptual position for a while and get access to this person’s past “way of seeing” via the percept-video.

There seems to be two ways of analyzing the signal in my material: one focusing on the relation between body, event, and mobile media technology and the other on the formal features of the videos themselves. This distinction is nevertheless purely analytical because the formal traces of the signal (cf. the sensory turbulence) are so closely related to the spatially affected camera-body. The body in the space, the camera, and the audiovisual surface is in other words affecting each other, because the signaleptic force of the concert-event affects them all. The real-time signal travels from the body of Gaga through screens and loudspeakers to mobile media technologies, camera-bodies, and visual video surfaces—which yet again spark new affective reactions on social media platforms.

## CONCLUSION

The audience at the concert and the producers of the videos all receive mediated real-time signals derived from the media technologies involved in the concert (e.g. the big screens, the microphone, and loudspeakers). These mediations produce signaleptic material and allow the audience to have a feeling of real-time presence at the event. The use of mobile recording devices is part of a media practice, which attempts to intensify or strengthen the affective potential of these real-time signals. The strengthening of the power of the signal is established by (1) documenting and zooming in on the big screens to visually enrich the real-time experience, (2) turning the collective receiver into an individualized and creative real-time auteur, and (3) by deterritorializing the real-time experience through sharing it on social media platforms (cf. Figure 1).

Referring to Boswijk et al. the mediations intensify the experience by making it more meaningful to the concertgoer. But in what way is experiential meaningfulness intensified by means of DIY video productions? The big screens and zoom function on the mobile camera first of all create a higher degree of sensual stimulation and quality by making sure that people can see the real-time movements of Gaga’s face and body (cf. criterion 1 and 2), while the act of

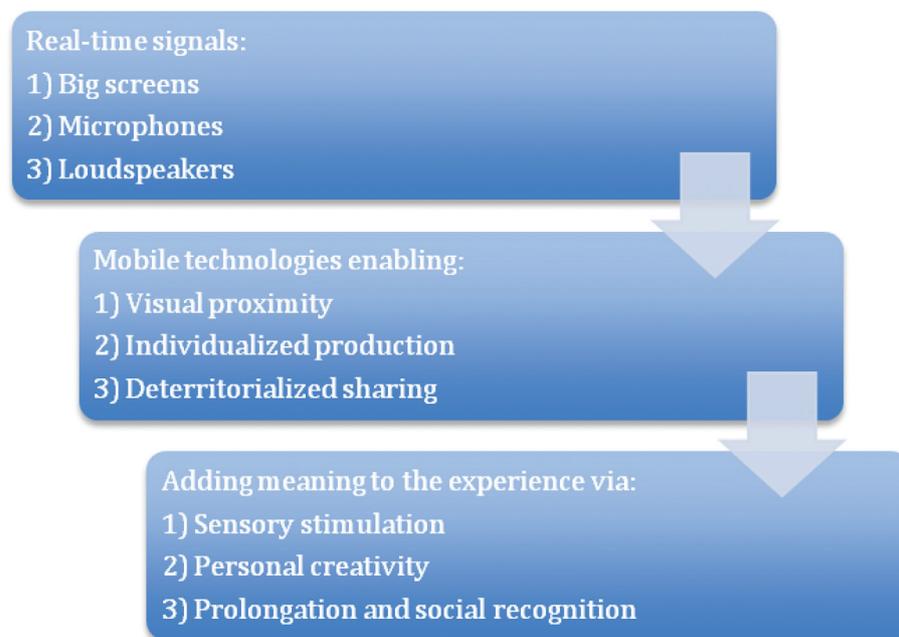


Figure 1. Intensifying real-time signals and experiences.

### C. Stage

mediation—following Couldry—in itself can be understood as a way of making the mediated space more unique or special than unmediated spaces (cf. criterion 5). The creative dimension of making a concert video adds meaning by allowing the concertgoer to create individual contact with his/her environment by the strictly personal choices of the recording process (cf. criterion 6). By sharing the videos the cultural value of the real-time experience is prolonged and the production of intrinsic value (cf. criterion 5) can continue through the interactions between concertgoers and peers. The process of intensification can be visualized in the following way (Figure 1).

The concept of the signal is useful when analyzing the user-generated material because it helps the analyst to focus on the material and the situation of production in a certain way, where the representational logic of coding and decoding is not at the center of attention. In that way the concept not only makes sense when analyzing certain *mediated forms*, but also when trying to understand *why people mediate* in certain situations. My main point in this paper is therefore that the analyzed DIY concert videos do not attest to an urge to represent the event, but rather show an urge to feel it, connect to it, and relate to others by sharing it.

Seeing mediation as the intensification of signaletic material implies that the user driven production is also about connecting, feeling, and qualifying, and not only about coding, interpreting, or storing the event. The analytic potency of the concept of the signal is simply that it directs analytical attention toward the affective, bodily, and relational dimension of the act of mediating. Following this I have shown that the DIY real-time mediation of Gaga should be seen as attempts to intensify and prolong the signaletic power of the event—a power that affects both the camera-body and the audiovisual surface of the videos themselves via the creation of “sensory turbulence.” Accordingly, media also work as technologies of intensification used to qualify the effects of experiencing signaletic material and to enable the creation of individually meaningful experiences.

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# Experience in-between architecture and context: the New Acropolis Museum, Athens

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## Abstract

This article is an introduction to how architecture's context and conditions can be understood as signaletic with reference to Gilles Deleuze's concept of the signaletic material. The understanding of architecture's signaletic material addresses the process of becoming through the potentials of context and the requests towards function and programme, as well as through the methods for creating architecture—all seen as conditional components of a specific work of architecture and, consequently, as part of the signaletic material. A visit to the New Acropolis Museum is analysed to discuss how the potential of the in-between encounters of architecture, context and the experiencing subject can be part of the signaletic material and the process of becoming. This potential is actualised, for instance, in relation to the movement through the museum. The museum architecture affords experiences on potentially several levels spanning from the most pragmatic and functional use of the building as exhibition space, restaurant, book shop, etc. to the awareness of being part of an architectural intentionality as a moving body, a contemplating viewer and as a perceiver of relations between the museum building and its historical and geographical context. In the article the term "visitor" is used to emphasise this complexity of experiential potential that is made accessible by the museum's architectural design.



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**Keywords:** *signaletic; museum; movement; context; Gilles Deleuze; Bernard Tschumi*

Architecture creates and is created within, spatial contexts that allow for actions to take place. In addition to this, architecture creates, and is created within, experiential contexts. The relationality between architecture and context is subsequently

one of correlates. On one hand it concerns a relational process of responding to conditions and circumstances that are already present, and, on the other hand, it concerns the process of causing new conditions and circumstances to

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emerge and to be responded to. This correlation where spaces are outlined and outlining and where experience becomes inseparable from the building involves the presence of an experiencing subject in terms of a participating and sensing user. In this view, architecture works through an in-between building-creation involving both context and user, and through an immanent openness towards a relational exchange between the experiencing user and the architecture. Related to this are the presence and the potential movements of the user's body, without which the whole experiential potential of architecture could not become unfolded. These aspects of architecture are part of the architectural design and part of the architects' conditioning of the experiential potential; how this potential is actualised will depend on the individual user.

The multiplicity that belongs to these factors, the conditioning context of architecture and the conditions and potentials that architecture creates for experience, is what this article outlines as an architectural signaletic material. It regards architecture as a process of becoming through the potential of context, conditions and circumstances, such as requests towards function and programme, the spatial layout, and the processes and methods for creating architecture. All are components of a specific work of architecture's signaletic material.

## THE SIGNALETIC MATERIAL AS PROCESS

Gilles Deleuze defines the concept of a signaletic material in relation to the movement-image in cinema. The signaletic material consists of two processes that are interdependent: differentiation and specification. Differentiation refers to the processual reconfiguring of the whole through its objects and parts, which means that the whole changes with the objects and parts it combines and through which it passes. The objects and parts that are combined, however, are different in kind and possess specific functions and roles in order to constitute the whole and drive the movement-image's sensory-motoric progression. Accordingly, in Deleuze's work on cinema the images are different in kind: the perception-image, the action-image and, in the interval between them, the affection-image.<sup>1</sup> They belong to the

process of specification.<sup>2</sup> Together, the components of the two processes constitute a signaletic material which is a condition; it is a potential for conditioning but not yet conditioning anything specific. It is a virtual utterable, but not an actualised utterance. Subsequently, the movement-image not only creates narration, more importantly, it does so on the basis of its own process of creating potential for conditions and utterance. By understanding cinema's narration as actualising the two interdependent processes, differentiation and specification, Deleuze points towards a continuous becoming of "the signaletic material."<sup>3</sup>

Experiences and events are part of architecture's signaletic material as they are potentially conditioned by, as well as potential conditions of, architecture. In architecture's adaptation of event as concept, the unpredictability of what happens and what is experienced is related to temporality and processual becoming. The significance of temporality and process is for instance apparent in the works of Swiss-American architect Bernard Tschumi. The concept of event plays a key role in the early project "The Manhattan Transcripts," a work that consists of drawings, photographs, and text.<sup>4</sup> Here, the event, and a methodological approach to working with the unpredictability of what happens, is a programmatic element and condition of the work that combined with movement and space creates an architectural narrative in which method and process are essential. This work efficiently points to experience and event as central to architecture, not only as a phenomenological experience afterwards when encountering architecture in a more traditional sense as a specific building, but also as part of the actual process of creation—a condition and a parameter. Experience and event are parts of a programmatic potential as well as form generating factors that introduce an understanding of architectural space as becoming; as process and method, and opposed to a more general conception of space as a three-dimensional continuum or container.<sup>5</sup>

One of Tschumi's most recent works, the New Acropolis Museum in Athens (Figure 1), clarifies the relevance of regarding the conditions of experience and events as part of a signaletic material that works through processes of differentiation and specification.<sup>6</sup> The museum architecture proposes how contextual factors can be



Figure 1. The New Acropolis Museum, Athens. The museum expresses the processuality and relationality between the interior and the context. Here the proximity to the Acropolis Hill with the Parthenon Temple is seen as reflections in the part of the glass façade that encloses the museum's Parthenon Gallery. Photo: Annette Svaneclink Jakobsen.

understood as a conditioning of architecture. Furthermore, it presents an example of how this can be done in a way that integrates context beyond the representational. The architectural approach for integrating context in the design and design process of any building is always complex and raises a lot of questions with regard to how it is possible to design with awareness of the contextual conditions, and how to select which conditions to emphasize—or ignore. In Tschumi's words: "Context is not a fact; it is always a matter of interpretation."<sup>7</sup> It is in the process of selection and interpretation that architecture has often found itself as the creator of a sign (as building) that represents certain delimited characteristics of the constraints that lie outside of the architecture itself: lines and directions that represent some specific content or meaning. Or more literally, communicating signs as in the works of American

architects Robert Venturi and Denise Scott Brown who have adapted the vernacular of American society in terms of commercial signs and billboards in their work. They state that: "The essential element of architecture for our time is no longer space, it's no longer abstract form in industrial drag: the essential architectural element is iconography."<sup>8</sup> This approach belongs to one end of the scale to architectural representation of context, where the sign is radically positioned to architecture as communication. On the other end of the scale, architecture will have to discuss ways of being and becoming with contextual conditions in a manner that transcends the mimetic and representational so that the presence of the user or visitor is actualized not as a subject for receiving communication but as a subject that performs with architecture on a relational level.

The New Acropolis Museum involves the visitor relationally in its becoming. It strikes the visitor (i.e. this writer) as being a traditional work of architecture in many respects: it has a specific function (museum), it is a building (constructed of concrete, marble, steel and glass), and it fulfils specific programmatic needs as a place for exhibiting the archaeological findings of the Acropolis slope and hill. The physical and historical context of this work of architecture and the ways relations between architecture and context perform are however quite significant as a signaletic process that builds on an experience of continuous differentiation and specification in accordance with the visitor's movement through the museum. The experienced relations between museum building and its context change; the visitor's moving body is clearly thought of as a potentially integrated part of the architecture's whole and, therefore, itself a tool to make changes occur.

The visitor follows a prescribed route that leads through the layers of the building, from ground level to the experiential culmination of the visit, the Parthenon Gallery on the top level. This movement route has the instrumental and conceptual aim that it ties the specific encounters with exhibits together in certain logics. It forms an overall architectural narrative; a whole. For the visitor of the New Acropolis Museum the architecture has pre-conditioned the experiences, which are revealed as situated specifications as one proceeds through the museum. The idea and intentions behind the museum building's spatial layout are experienced through the situated encounters with very different types of exhibition spaces and specific ways of bringing the visitor in contact with the exhibits, and not least, with the museum's context, the adjacent Acropolis Hill. The presence of the exhibits' origin, the slopes and temples of the Acropolis Hill, is the most important experiential motif of the museum and is constantly rethought and re-specified; this is due to the short distance between the museum and the Acropolis Hill and due to the actual visual contact, not only from the Acropolis towards the museum but also from the interior museum space towards the Acropolis. The museum's architecture physically interprets this connection by letting transparency, and layouts of movement patterns direct attention to the relational in-between-ness of architecture and context, and, consequently, also

by pointing towards the distance and separation between the Acropolis and the museum. For the experiencing visitor the architecture creates a conditional field of possible connections between the building, the exhibited archaeological artefacts, the adjacent hill, and the body and mind of the visitor. The character of these possible connections is experienced both spatially and temporally, because it is experienced here-and-now in Athens, in the twenty-first century and yet points towards the historic past, to ancient Greek culture.

## EXPERIENCING THE NEW ACROPOLIS MUSEUM

*"The fact is that the beginning always begins in-between, intermezzo."*<sup>9</sup>

The visitor enters the museum in the spatial interval between the museum and the Acropolis Hill, unaware that this is the same interval that he or she will later be guided to look *over*, towards the Parthenon Temple (Figure 2). The entrance plaza points towards the Acropolis site; the excavations below are partly covered with glass as part of the plaza. Between the Acropolis and the museum, between above and below, the arriving visitor is brought from the public area outside and into the interior of the museum. From the entrance space on ground level an architectural setting of the exhibition spaces begins by leading the visitor towards a subway-like threshold and here introducing a visual overview of the vertical layering of the exhibition spaces and, subsequently, of the other visitors already inside, studying the exhibits on different floors. Here, a dominant consciousness of distance between the visitor on one side, literally on the outer side of the entrance threshold, and the exhibition and the other visitors' contemplation of the exhibition on the other side is specified. The visitor crosses the threshold and enters the actual exhibition area. The physical distance, which is emphasized by the combination of a literal threshold and the visual overview given before entering, raises expectations; the act of crossing the threshold performs as an inclusion of the individual visitor. The sense of distance is reversed to nearness in the Archaic Gallery on level two of the museum;



Figure 2. The Parthenon Temple is a significant cultural and historical landmark in Athens. In the New Acropolis Museum, vistas of the temple are integrated in the exhibition experience and part of the architectural design. Photo: Annette Svaneklink Jakobsen.

here, the visitor is invited by the openness of the space to circulate freely among the archaic sculptures. The keyword is contemplation, the possibility of close observations of ancient sculptures, which are placed at the visitor's eye level. This, obviously, addresses the body as a matter of scale and the subject as a face-to-face investigator of our historical predecessors. Whilst informing of and presenting archaeological findings, the exhibition layout addresses the visitor with regard to reflections on matters of identity and body when proceeding from one sculpture to the next, from object to object. The architecture of the space enhances this experience by its openness and fluidity and by letting the columns and lighting system, placed in the ceiling, perform as objectified elements that underline the so to speak pointing character of the architecture.

The process of specification applies to the entrance plaza, the threshold situation, and to the Archaic Gallery—as well as to the circulation system that provides for the movement between them. This culminates where the exhibition route leads into the Parthenon Gallery on the top floor. The visitor enters the Parthenon Gallery beneath the exhibited Parthenon Frieze's west side. Here, the visitor is met with a panoramic view of the Acropolis and the Parthenon temple,

looking over the space in-between them. This entrance symbolically leads into the political context that the museum is also built within: it has been clear from the initial plans for building a New Acropolis Museum, to replace the former and smaller museum at the Acropolis Hill, that a new museum should be large enough and technologically capable of housing the entire Parthenon Frieze, including the parts of it that are currently still exhibited at the British Museum in London. In this sense, the new museum has been built partly as a proof of Greece's ability to take care of its own cultural past, and as a means of applying political pressure on the cultural world, and specifically on the British Museum, to return to Greece what was once removed from the Acropolis.<sup>10</sup>

Apart from this, the setting of the Parthenon Gallery has a very direct impact as an event of a striking experiential quality. It makes a sudden change in the visitor's way of contemplating the exhibits; the contemplative promenade through the exhibition spaces where the objects are presented in a logical order is grounded on a separation between the two parts, the object and the subject, as if belonging to two worlds. In this sense, the contemplation setting is completely surpassed by a real lived experience arising from

the fact that the visitor suddenly finds herself activated relationally in the middle, in-between building and context, where the presence of the Parthenon Temple plays an active role in the exhibition of the Parthenon Frieze. Thus, the historic context no longer belongs to the past but instead to the present experience.

## CONNECTIONS ARISING FROM THE INTERIOR

There are two main aspects of a movement–time relation in Deleuze’s work on cinema; in the movement-image, movement is spatially relating while constituting a whole, and time only indirectly derives from this movement; in the time-image, time presents itself directly and the narrative whole is substituted by temporal circuits.<sup>11</sup> There are also two main ways of considering a movement–time relation in the New Acropolis Museum. There is the preconditioning of a movement pattern, which makes the visitor’s moving body perform as a sensory-motoric means of disclosing the exhibition and combining the exhibition parts to a narrative whole, but there is also the directness of experiencing time when the visitor is placed as an in-between-ness of the relation-awareness that the Parthenon Gallery specifies.

The specific situation that is architecturally staged as a relational process in-between museum visitor, the Parthenon Gallery and the Parthenon Temple points to an expression of the irreducibility and indivisibility that also characterizes the non-representational directness of time, in the circuits of the crystal-image.<sup>12</sup> In the crystal-image, Deleuze refers to Henri Bergson’s understanding of time as itself splitting into present and past, a present which is now already passing and a past which is preserved in the new present.<sup>13</sup> The actual and the virtual are according to Deleuze equally indivisible and indiscernible in the crystal-image; the point of indiscernibility is a small internal circuit of exchange between the actual and the virtual; never divisible, and yet they are split.<sup>14</sup> It is a circuit and a split—or a fusion and a tear: “[...] the visual and the sound do not reconstitute a whole, but enter into an ‘irrational’ relation according to two dissymmetrical trajectories. The audio-visual image is not a whole, it is ‘a fusion of the tear’.”<sup>15</sup> The experience of the correlate between the Parthenon Gallery and the Parthenon

at the Acropolis is the experience of a perfect crystal-image: a crystal-image understood as an indivisible exchange between the two inseparable, yet split, parts of the setting; perfect in a Bergsonian sense as an intuitive experience that stems from an: “[...] *intellectual sympathy* by which one places oneself within an object in order to coincide with what is unique in it and consequently inexpressible.”<sup>16</sup>

When Deleuze’s philosophy on cinema proceeds further into the potential of new, electronic images these:

[...] no longer have any outside (out-of-field), any more than they are internalized in a whole; rather, they have a right side and a reverse, reversible and non-superimposable, like a power to turn back on themselves. [...]. They are the object of a perpetual reorganization, in which a new image can arise from any point whatever of the preceding image. The organization of space here loses its privileged directions, and first of all the privilege of the vertical which the position of the screen still displays, in favor of an omni-directional space which constantly varies its angles and co-ordinates, to exchange the vertical and the horizontal.<sup>17</sup>

Those new images will have to be based on “yet unknown aspects of the time image.”<sup>18</sup> Yet unknown aspects also apply to architecture’s signalitic material since it is a becoming of the conditions and influences that apply to architectural creation at a certain stage of time or in a specific context. The connections of space and time that are performed in the museum bear for instance strong witness of contemporary architecture’s familiarity with the sense and understanding of space and time in cinema and media theory. Cinema was a source of inspiration for the younger Tschumi. Especially Russian filmmaker Sergei Eisenstein and Eisenstein’s montage theories have been a recurring source of inspiration and is traceable in the way the museum invites the visitor to partake in an architectural montage through the processes of differentiation and specification.<sup>19</sup> From the process of the visitor’s body moving through the museum exhibits and thereby creating narration to the directness in experiencing the temporality of the Parthenon Gallery, there is a change in approach to perception. This change obviously involves the status and meaning of the body’s

movement in space. Media theorist Paul Virilio has proposed the term “trans-appearance” to describe perception through real-time media; a term that questions the status of geographical distance, and therefore the status of the body’s movement in space, as it incorporates the idea of negated distance created by transmission media. It is a transparency of time, based on absence and disappearance of spatial grounding and geographical belonging.<sup>20</sup> The literal appearance of the Parthenon as one enters the Parthenon Gallery is not sufficient to describe the experience, the bringing together of visiting subject, the museum space and the vistas towards the temple that the architecture brings forth here. The experience is more one of being part of a becoming here-and-now, which affects the visitor directly by bringing together elements that are actually separate, in space and in time. The museum, the visitor’s own body moving and the history of the site seem to unite in this fluctuating direct expression of time. According to architectural theorist K. Michael Hays, this is a potential, which is also present in Tschumi’s earliest works where there is a mirroring:

[. . .] back to the viewer as marks of a specific, even unique and personal, affective architectural encounter—an event: *this* moment of experience, *this* sensation of architecture condensed *here*, *this* spacing for architecture that happened for *me* just *now*.<sup>21</sup>

While accentuating the distances and proximities, the museum’s location in relation to its context and the exhibits’ displacement from their original context are brought together through visual contact. This experience goes beyond the phenomenological appearance, for it is not only directed towards an encounter between parts but most of all it points towards the correlational ontological becoming of building, context and visitor. Subsequently, the experience includes more than what can be explained by Virilio’s conception in regard to perception, transappearance. Rather, it points towards the processes and becoming of its signaletic material including the geometrical and functional conditions of the Parthenon temple such as the procession along the frieze, interpreted in the museum as the visitor’s walk along the frieze around a core of the museum building, the measurements of which correspond to the walls of the Parthenon where the frieze was originally placed.

In this way, geometrical and functional conditions are rethought and reactivated in the museum.

The architecture of the New Acropolis Museum invites the visitor into this in-between of the museum building and its context; it invites to relate to the literal physical intervals, the distances and proximities, through the visitor’s own experience and conception. The architecture keeps actualizing the visitor as a subject in various types of encounters with the exhibited artefacts, with the present and with the past, by inviting to participate in the apparent fusion of the tear, however, maintaining the parts being just that: split.

## Notes

1. The concepts of image and affection-image in relation to The New Acropolis Museum were discussed in a previous article by this writer: Annette Svaneklink Jakobsen, “Close-up and expanded context: Potentials of ‘image’ – in production of architectural space”, in *The International Journal of the Image, Volume 1, Number 1*. (Champaign: Common Ground Publishing, 2011).
2. Cf. Gilles Deleuze, *Cinema 2, The Time-Image* (London: Athlone Press, 2000), 29.
3. “These components of the movement-image, from the dual point of view of specification and differentiation, constitute a *signaletic material* which includes all kinds of modulation features, sensory (visual and sound), kinetic, intensive, affective, rhythmic, tonal, and even verbal (oral and written)”. *Ibid.*, 29 (italics in the original). See also Bodil Marie Stavning, Thomsen’s article “The Signaletic, Haptic and Real-Time Material” in this supplementary of *Journal of Aesthetics and Culture*.
4. Bernard Tschumi, *The Manhattan Transcripts* (London: Academy Group, 1994).
5. Cf. Bernard Tschumi, “The Architectural Paradox”, in *Architecture Theory since 1968*, ed. K. Michael Hays (Cambridge, MA: MIT Press, 1998), 219.
6. The New Acropolis Museum opened to the public in 2009.
7. Bernard Tschumi, *Event-Cities 3* (Cambridge, MA: MIT Press, 2004), 12.
8. AMOMA and Rem Koolhaas, *Content* (Köln: Taschen, 2004), 150.
9. Gilles Deleuze and Felix Guattari, *A Thousand Plateaus* (London: Continuum Books, 2004), 362.
10. A debate on the Parthenon Frieze and the politics of the topic is found here: <http://www.elginism.com> (accessed November 21, 2011).
11. Cf., Gilles Deleuze, *Cinema 1, The Movement-Image* (Minneapolis: The Athlone Press and University of Minnesota Press, 1986); Deleuze, *Cinema 2, The Time-Image*.
12. Deleuze, *Cinema 2, The Time-Image*, 78.

13. Cf. *Ibid.*, 82.
14. Cf. *Ibid.*, 71.
15. *Ibid.*, 268.
16. Henri Bergson, *An Introduction to Metaphysics* (New York and London: G. P. Putnam's Sons, 1912), 7 (italics in the original).
17. Deleuze, *Cinema 2, The Time-Image*, 265.
18. *Ibid.*, 266.
19. See Tschumi, *The Manhattan Transcripts*, 7 and xxiii.
20. See Paul Virilio, *La Machine de Vision* (Paris: Editions Galilee, 1988); Paul Virilio "Indirect Light", in Paul Virilio. *From Modernism to Hypermodernism and Beyond*, ed. John Armitage (London: Sage Publications, 2000), 57–70.
21. K. Michael Hays, *Architecture's Desire, Reading the Late Avant-Garde*, (Cambridge, MA: MIT Press, 2010), 146–7.

# The disruptive aesthetics of hijacking urban space

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## Abstract

The aim of this paper is above all to provide a more adequate understanding of practices of hijacking urban space as they are exploited in today's art interventions. It is common to trace such practices back to practices of art production that were introduced as early as the 1960s by the Situationists. However, in order to get a clearer understanding of what is peculiar to current interventionist practices, I will argue that we need to shift the focus of attention from this art historian genealogy toward the intervention itself. The techniques used in art interventions today may thus be the same, or at least similar, to those of the avant-garde, but the aesthetic effects achieved by exploiting them are different. In this paper, I will show how a signaletic non-representational approach is central for understanding these aesthetic effects and how they differ from similar practices used by the Situationists and in critical art.



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Over the last two decades or so, artists, designers, and architects have to an increasing degree used the urban environment as their preferred platform for making interventions of various sorts: urban hacktivism, radical cartography, tactical media interventions, guerilla gardening, and so on. In so doing, they have not only raised central questions concerning the domination of consumer society and capitalist interests on our cities but also made many interventionist techniques available for escaping this dominance, for instance, by letting people take active part in shaping the city according to their own idiosyncratic needs and desires. As has been pointed out occasionally, such interventionist techniques often draw more or less deliberately upon critical practices of art production that were introduced as early as the

1960s by the Situationists.<sup>1</sup> However, in order to get a clearer understanding of what is peculiar to current interventionist practices, I will argue that we need to shift the focus of attention from this art historian genealogy toward the interventions themselves. The techniques used in contemporary art interventions may thus be the same, or at least similar, to those of the avant-garde, but the disruptive effects achieved by exploiting them are different. For instance, these effects cannot be properly understood according to the avant-garde project of redefining or broadening the boundaries of art, nor should they be interpreted in the light of the grandiose social utopias or revolutionary hopes so dear to the avant-garde. Nonetheless, it is precisely in the intimate interweaving between aesthetics and the political that an interesting

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answer to the disruptive effects of current interventionist practices is to be found.

In this article, I shall argue that an analytical shift of attention from sign to signal, from representation to non-representational, is central for understanding how aesthetics and the political come together in contemporary interventionists' practices. Ever since the advent of post-structuralism, scholars have struggled to move beyond the limitations inherent in the structuralist idea that aesthetic experiences could be appropriately modelled upon the notion of the sign. Some of the critique raised against the sign is that it presupposes a fixated subject position that is inscribed into a discursive system being definable according to rigid dichotomies.<sup>2</sup>

The justification of such a critique becomes evident if we turn toward interventionist practices. Thus, the disruptive effect of interventions consists precisely in destabilising discursively entrenched subject positions, thereby casting the individual into new processes of subjectification and enunciation. These processes cannot be understood as acts of communication but must be conceived of as signaletic events beyond the level of signs. By signaletic events, I am thinking in particular, in this essay, of affective and sensory modulations that are triggered by interventionists' practices and which may evoke changes in people's ways of saying, doing, seeing, thinking, and being.

The analytical value of the notion of affective modulation lies in its ability to uncover how current interventionist practices in urban space may open up for a new relationship between the aesthetic and political that is distinctly different from Situationism and critical art, even though current practices use techniques similar to these previous art movements. In order to demonstrate the soundness of this argument, I will provide an analysis of two recent projects both of which employ *détournement* as their preferred technique.

The first project is made by the anonymous British art collective CutUp, who uses techniques of *détournement* as an expressive tactic for rewriting the messages of billboards in urban space. In so doing, the billboard becomes a site not only for the communication of messages or signs but also for intensive signaletic events, which—through affective modulation—disrupts people's normal way of seeing and thinking.

The second project is made by the urban hacktivist Santiago Cirugeda and shows how functions of everyday objects such as dumpsters and scaffolds can be detoured so that they become Do-It-Yourself tools enabling local people in a district or neighborhood to create new social roles and modes of affectively engaging with each other in urban space. While both of these projects thus exploit Situationists' techniques and practices, my main argument is that they lead to disruptive effects that are foreign to the work of Situationist art. In order to make that judgment, it is of course necessary to have ground for comparison, which is what the following section will provide by giving some background introduction on how *détournement* was originally conceived.

## FROM DÉTOURNÉMENT TO BILLBOARD HIJACKING AND URBAN HACKTIVISM

The notion of "*détournement*" must be understood as part of a long tradition for making the city a preferred site for critical aesthetic practices. From the Situationists to architectural groups such as Team 10 up until the Reclaim the Streets movement in the 1980s and today's street art, artists, designers, and architects have exploited artistic means for constructing what Thrift calls "counter-publics" to the existing social order.<sup>3</sup> Common to these movements is the idea that life in the city is too often limited by rules of consumerism or capitalists interests that prescribe certain patterns of behavior and feelings while out-ruling others. Typically, access to the inner city, for instance, to living there, is made available only to higher income groups, and the urban environment is often programmed so as to intensify activities of buying and consuming. Urban space is thus enwrapped into seductive visual signs, adverts, and images coding the urban experience according to certain marketing and brand ideologies.

The "society of the spectacle" is a term introduced by Asger Jorn, Guy Debord, Attila Kotányi, and Raoul Vaneigem and other members of the Situationists International as part of their critique of capitalism's influence on urban planning and architecture in the aftermath of the Second World War: "Urbanism is comparable to the advertising propagated around Coca-Cola—pure spectacular

ideology,” said Kotányi and Vaneigem.<sup>4</sup> In particular, the Situationists reacted against the *functional city*, which came out as a result of the Modernist movement in architecture and the planning theory behind which was encapsulated in the so-called *Athens Charter*. Roughly speaking, the *Athens Charter* represented the belief that the modern city should be divided into “zones” defined by their support of basic functions (work, living, leisure, shopping, etc.) and “lines of transportation” that were able to increase productivity and the flow of commodities from the assembling line onto the shelves in the supermarket. Hence, efficiency and economic interest of the industry were often put up high on the architect’s agenda, while places for the spontaneous unfolding of people’s daily life were hard to find as can be seen for instance in Le Corbusier’s original master plan for Chandigarh.

Central to the Situationist critique of the spectacle is the idea that it conceals real processes of exploitation and modes of subjectification.<sup>5</sup> Thus, the society of the spectacle was criticized for turning people into passive consumers (or “spectators”) and for reducing their independence and creativity, while at the same time leaving no room for those groups of society who are not in a position to consume in a manner deemed appropriate, i.e. those Zygmunt Bauman has later defined as “defective consumers.”<sup>6</sup>

Détournement is one of the artistic means heralded by Asger Jorn and Guy Debord for its capability to emancipate people from the power of the spectacle. Basically, détournement has to do with transgressing “the rules of consumerism by stealing and redistributing its products and images,” so that the vacuous promise of a better world become evident.<sup>7</sup> In line with Rancière,<sup>8</sup> one could make a distinction between two forms of critique of the spectacle that may result from the use of détournement. Either détournement can be used to construct expressions that defamiliarize the spectators so that they must take on a distanced critical reflection upon the spectacle’s underlying processes of exploitation. Or détournement can be used to turn the passive spectator, notably the exploited proletarian or worker, into a vital participant who would rebel against capitalist society. In both instances the term “spectator” is used in the sense of denoting a passive subject constrained in its ability to act by a

one-dimensional focus in society on consumerism and capitalist interests.

While such a background understanding makes sense in relation to the aesthetic theories of the Situationists, we should be careful, as Rancière has convincingly argued, not to apply it uncritically onto today’s art forms. First, he says, aesthetic effects rupture the whole idea of there being a determinate link between artistic means and political aims: “there is no straightforward road from the fact of looking at a spectacle to the fact of understanding the state of the world: no direct road from intellectual awareness to political action.”<sup>9</sup> Second, many artists would be reluctant to the Situationist’s idea of instructing the spectator or to use art to dictate a lesson or convey a message: “They simply wish to produce a form of consciousness, an intensity of feeling, an energy for action.”<sup>10</sup> These thoughts are important for understanding the projects by CutUp collective.

## DÉTOURNÉMENT AS BILLBOARD HIJACKING

The media hijacking techniques of the British art collective CutUp bear many similarities with the technique of détournement. Disguising themselves in yellow vests as if they were local authority workers, the CutUp members sneak into urban space where they tear down billboard posters. Choosing the billboard as their preferred medium seems by no means to be a coincidence. The billboard is a spectacle *par excellence*; it has almost become an altar of consumer society for displaying products or campaigns, which is strategically placed in the urban landscape in order to catch the eyes of passers-by and to evoke particular kinds of thoughts and feelings.

By tearing down the billboard posters, CutUp collective do not simply wish to destroy the spectacle. Rather, their tactic consists in reconfiguring it by way of détournement, i.e. cutting up the billboard posters into pixelated pieces, which are then put together again and reconfigured into collages so that entirely new expressions on the billboards emerge: faces that express fear, agony, and anxiety—feelings that are foreign or stands in direct contrast to those commonly associated with the products shown on billboards.

An example of this can be found in CutUp’s hijacking of the O2 billboard on Kingsland Road

in East London. On YouTube, a video documents how members of the group tear down a billboard poster of a mobile phone (see Figure 1). This poster is then cut up and reordered so that all the pieces are made into a close-up image of a screaming face, which is placed onto another poster displaying Transport of London's Needless Jam campaign.<sup>11</sup> The Needless Jam campaign was launched in 2005 to warn drivers that, if they illegally park on the so-called *red route*, they would be fined £100. The red route forms just 5% of London's roads but carries 33% of its traffic. What the campaign aimed at preventing was "careless parking" along the route that would clog up the route and cause needless (traffic) jam.

The artistic intention underlying the creation of a screaming face on the billboard is not obvious. Rather, the reconfigured image makes the viewer wonder, what exactly is the relation between the face and the overall message of the campaign? Apart from this, CutUp's billboard hijacking raises a number of questions relevant for the analysis of image as a site for signaleptic events: How do we account for the disruptive aesthetic effects produced by this reconfigured image? Does the notion of *détournement* adequately capture these effects? What is the effect of this billboard hijacking on the spectator? Wherein lies the political potential of the image (if there is any)? How is the disruptive aesthetic effect of these

images different from earlier forms of critical art? In order to shed light on this set of questions, I will draw upon Rancière's analytical concept of the "intolerable image."<sup>12</sup>

### THE O2 BILLBOARD AS INTOLERABLE IMAGE

In *The Emancipated Spectator*, Rancière introduces the notion of the intolerable image in order to account for the way in which affectively disturbing images can have an emancipatory effect on the spectator. But even more importantly, Rancière's notion of the intolerable image allows us to make some valuable analytical distinctions between the emancipatory effect achieved by using collage in critical art and the effect of collage as used in CutUp's billboard hijacking. All of this will become more evident if we take a closer look at Rancière's reflections upon the intolerable images as found in critical art.

In critical art, the use of intolerable images is premised upon the assumption "that the viewer is incapable of recognizing the relation between image circulation, power, and capital and seeks to lead her or him to recognize the horrors of the world (war, capital, misogyny, etc.)."<sup>13</sup> More precisely, the intolerable image is thought of as being able to "build awareness of the mechanism



Figure 1. CutUP Collective: hijacking of the O2 billboard on Kingsland Road in East London. Hacktivist action documented on YouTube.

of domination to turn the spectator into a conscious agent of world transformation.”<sup>14</sup>

As an example of such an image, Rancière mentions Martha Rosler’s “Bringing the War Home,” a series of collages made out of photographs from the Vietnamese war and advertising images of American life style. In one of these collages, we find ourselves staring at a Vietnamese man standing in the gracious space of a high fashion modernist apartment while holding a dead child in his arms. By using this technique of collage, Rosler literally brings the death and pain caused by the war into the living room of the American consumers. The collage creates a clash between two heterogeneous visual elements, thereby affecting a rupture in people’s normal way of seeing, which calls for an examination of the causes of this sensory form of strangeness.<sup>15</sup>

At the time of its production, it was supposed that Rosler’s art was intended to open the eyes of those who enjoyed the happiness of consumer society to the intolerability of the reality of war and to make them feel guilty about supporting American imperialism with their life style, i.e. the power that among many was deemed responsible for the Vietnam war.

However, while it may be viable in respect to Rosler’s artwork to see it as part of a larger macropolitical narrative structuring and controlling the reception of the image, in CutUp’s billboard, the associative link between the close-up of the screaming face and a political system of beliefs is blurred and therefore cannot be established. One could of course contend that the screaming face of the boy could be interpreted as representing the “dark side” of global capitalism. The scream would thus metonymically represent the pain experienced by all those child workers in the so-called third world countries who are being exploited as a result of the outsourced manufacturing of consumer products. Yet, this associative link is blocked by the fact that the close-up is superimposed upon a campaign against illegal traffic behaviour, not a commercial for consumer products. In this way, the clash between the boy and a traffic campaign creates an ambiguity of contextual information in the image that resists any attempt of identifying the boy as a child worker, of being exploited by brute capitalist forces, and so on. Instead, the spectator is left dangling in an open interpretational gap without a

possibility to decode the content of the image according to any logic of representation.

This is also why the political effect of CutUp’s O2 billboard cannot be grasped by either of the two effects described above: distant critical reflection or active participation. This because, each of these two effects is based upon the idea that political effects always have to do with a struggle between pairs of oppositions, ideological systems, power structures, etc. The reconfigured billboard is irreducible to any such dichotomies, because it refrains from offering an alternative to the existing world order. It is neither a clear-cut socialist critique of capitalism nor an instruction of the spectator to stop consuming. The effect is rather that of redistributing the signaletic material of urban experience, of affectively attuning the body and senses of the spectator into a felt engagement with the screaming face on the billboard without instigating any discursive roles for whom the individual should be or how she or he is expected to behave. The meaning of this intolerable image consists exactly in a felt quality of experience rather than a message. Because of its strong effect on the spectator, the image evokes an aesthetic experience that makes no sense within the existing configuration of the sensible, but which calls for new processes of subjectification. These processes are what the notion of event has been introduced in order to account for, for instance, by Brian Massumi:

What is in question is precisely the emergence of the subject, its primary constitution, or its re-emergence and reconstitution. The subject of an experience emerges from a field of conditions which are not that subject yet [...] it’s not intentional in the sense of already carrying a subject-object polarity. It’s a brewing, the world stirring. It’s a coming event through which such categories will return. Their rearing depends on the event. It’s not the event that depends on their already being in place.<sup>16</sup>

Insofar as it disrupts conventionalized roles for the subject, CutUp’s hijacking of the O2 billboard becomes a paramount example of what Rancière refers to as “art in the aesthetic regime,” or what Malik and Philips more recently suggest should be rephrased as “aesthetics-art.”<sup>17</sup> In contrast to critical art, in aesthetics-art, the intolerable image is not controlled by a structuring narrative or logic of signification. Rather, the intolerable image

makes a shift of analysis necessary away from art's socially driven claims toward its capacity to instantiate a *politics* through its affectively disturbing material.

Politics in Rancière's philosophy must be understood in relation to what is called "the police order." The police order is that system of power in a society that governs the appearance of bodies and organizes places, ways of speaking, ways of being, and ways of doing.<sup>18</sup> In fact, the original O2 billboard could be seen as a sign of the police order insofar as it dictates an appropriate way of acting and behaving in traffic. It prescribes certain roles for the individual, a specific pattern of behaviour for the civic body.

However, CutUp's hijacking of the billboard disestablishes the police order. By way of collage, this intolerable image brings together heterogeneous elements, making a scary-looking screaming face appear that destabilizes the dominating regime of signs. It produces a body and a capacity for enunciation not previously identifiable within this given field of urban experience.<sup>19</sup>

Affective modulation accounts in large part for the disruptive aestheticopolitical effect of the reconfigured image on the billboard. Affective modulation must be differed from what is known as "emotion regulation." Emotions are inherently *representational* phenomena; they are about something, as their primary function is to help appraise this something as being good or bad for the individual.<sup>20</sup> Hence, emotion regulation is to be understood as a transition from one representational state to another. In contrast, affective modulation is not about something; it is not representational or intentional in the sense that a situation or an object is not (yet) associated with them by a subject. Instead, affective modulation should be conceived of as events situated at a signaletic level as they refer to felt changes and transitions in bodily states.

Needless to say, there exists a close relationship between emotions and affects. For instance, fear of snakes is usually accompanied by sudden changes in bodily states (racing heartbeat, swear pouring out in the palm of the hand, etc.), but it is important not to confuse the two. Fear is not reducible to racing heartbeats. It would be more accurate to say that affects such as racing heartbeats serve as part of a more elaborate warning

system and that emotions are what is constitutive for the organism-world relationship.<sup>21</sup>

The hijacked billboard by CutUp collective owes its effect on the spectator to affective modulation, not emotion regulation. Insofar as it blocks any attempt to frame or contextualize the screaming face of the boy, it is impossible to associate its facial expressions with a situation or object, and so emotions is not so much what is at stake here. Rather, its effect resides first and foremost in an affective modulation: the eliciting of a gut reaction or diffuse feeling of being uncomfortable without knowing why. This unsettling feeling is what makes this intolerable image different from critical art, because while critical art works can still be interpreted within and as a reaction against the police order, the intolerable image of the reconfigured billboard has no place within this order.

While this section has focused on *détournement* as an interventionist practice of hijacking and rewriting commercial images in urban space, the next section will look more closely at how *détournement* can also be used to hack the delimitations forced upon urban space by the police order.

## DÉTOURNÉMENT AS HACKING URBAN SPACE

In most cities, urban planning legislation destines the citizen to act according to certain rules and instructions in the sense that it only allows people to experience and do certain things, but not others. These instructions may even be materialized into the physical fabric of the urban environment. The so-called *sleeping policemen* are tiny metal knobs built into the pavement in order to make it impossible for skaters to skate in public areas; benches in parks and public spaces are deliberately designed so that homeless people are prevented from sleeping on them, and so on. Yet, at times, the consequences of legislative power are far from being transparent and often they conflict with the interests of those living in the city. For instance, citizens are typically not allowed to plant a tree at the corner of their street or to construct a seesaw in front of the local café for their kids to have fun while they are drinking a cup of coffee even though the owner of the café and a majority in their community thinks that this is a good idea.

However, Santiago Cirugeda's *Recetas Urbanas* (Urban Prescriptions), which is the second project that I will delve into, shows how *détournement* can be used to hack urban regulations and thereby enabling local people to take active part in the shaping of their city. More specifically, Cirugeda uses *détournement* as an interventionist tactic for stealing and turning everyday objects and products into participatory tools with which people can build temporary installations in urban space of their own wish and desires (Figure 2).

In the *Taking back the street*-project, for instance, Cirugeda invents a set of hacking instructions for transforming dumpsters into urban installations for playful social interactions. While people have to go through long bureaucratic procedures to get a permission to rebuild or transform urban space, local authorities usually have no problem with people setting up dumpsters on streets and squares if they are used for the purpose of cleaning a street, refurbishing an apartment, etc. Cirugeda's urban hacktivism shows that this opens up the opportunity not for breaking, but for bending the law. His hacking instructions thus encourage people to turn dumpsters into, for instance small-scale public playgrounds, swimming pools, parks, and so on. Surprisingly, the dumpster, which is normally conceived of as a highly functional object for destructive actions (throwing out waste, garbage, and obsolete products), then becomes an object for constructive actions and creativity.

Cirugeda's urban hacktivism bears many similarities with practices found within critical design. For example, in the early work of Krzysztof Wodiczko and more recently in projects by Anthony Dunne and Fiona Raby objects are also

cast into public space in order to raise critical awareness of how ideologies and power constrain our everyday life or to spur people to construct counter-publics to the existing world order. Interestingly, Dunne introduces the notion of "aesthetics of use" to characterise the effect that designers want to achieve through this practice. Aesthetics of use thus refers to the idea of inventing a new role for design objects as discourse where functionality can be used to criticise the limits that products or ideologies impose on our actions.<sup>22</sup> Yet, there are subtle differences between the practice of critical design and Cirugeda's.

First, while the objects of critical design are typically new objects and functional prototypes designed to evoke feelings of estrangement and through this feeling raise critical awareness, Cirugeda does not design new objects but explore how already existing objects of society can be employed for new and unintended use. In this sense, his practice comes closer to *détournement* as conceived of by the Situationist as the stealing and transforming of everyday objects.

Second, while proponents of critical design most often has critical reflection as their ultimate goal, Cirugeda practice aims at increasing the possibilities for people to actively take part in changing conditions imposed on their everyday life. At the surface of it, this seems to be identical to *détournement* being used as a technique for turning the passive spectator into a vital participant who would rebel against capitalist society (cf. above). However, despite the connotations associated with the title of the *Taking back the street*-project, Cirugeda does not so much encourage people to rebel against society, but rather to re-appropriate the city without breaking the law.

This interventionist practice should be seen as being inherently aesthetic and political. It is aesthetic in the sense that it introduces everyday objects in order to "redistribute space, time, and forms of activity" and it is political insofar as it subverts the conventionalized relation between who an individual is and what she or he is or does. For instance, the dumpsters affect an opening of a question as what it is to be a citizen and what rights a citizen has for appropriating and inhabiting public space.

Again, it is important to notice that the effect of this interventionist tactic resides in a subtle



Figure 2. Santiago Cirugeda: *Taking back the street / Recuperar la calle* (1997-). Urban Hacktivism. © Santiago Cirugeda.

affective modulation rather than in a feeling of estrangement (critical design) or a social revolt against capitalist society (as dreamt of by the Situationists). The ultimate goal of *Taking back the street* is not the realization of grandiose social utopias through violent acts, riots, or revolution but a non-violent unsettling of the self-evidence with which existing systems of power control and restrict the unfolding of people's everyday behavior and interaction. The disruptive effect of the dumpsters lies in the way in which they cut across hierarchies between practices and discourses working to establish not functional zones, but affective zones of forces and events in the sense of Kwinter where new processes of subjectification are momentary free to take place.<sup>23</sup> By re-appropriating urban space with these dumpsters, people's felt sense of belonging to that space, their affective attunement so to speak, is modulated and matched with new ways of doing and acting in urban space. This fundamentally changes the prescribed roles and places of the police order making it possible for the body to reconnect with other bodies, thereby constructing a new community of relations.

## CONCLUDING REMARKS

In this article, I have argued that even though the CutUp collective and Santiago Cirugeda use *détournement* as their preferred tactic for subverting the power of the spectacle, the emancipatory effect of doing so is different from those envisaged by the Situationists and the proponents of critical art. For instance, the strong expressions of the screaming face affectively engage the spectator in a way that is different from distant reflection and which is also not intended to trigger a social revolt against authorities. It is a third disruptive effect, that of opening a gap between seeing and thinking, thinking and feeling, by introducing heterogeneous objects that defy the denotative logic of representation and sign systems.

Second, while *détournement* for the Situationists and proponents of critical art came to represent an artistic means for fulfilling macropolitical aims, CutUp's reconfigured billboard and Cirugeda's hacking of urban regulations seem to affect the spectator at a more subtle micropolitical level. Its effect is to produce an intensity of feeling, an

energy for incipient actions, without instructing the citizen what to do and what to feel about this doing. As such, the use of *détournement* in current interventionist practices is not to be understood according to logics of transmission or communication but rather according to what Massumi appropriately calls a "logic of affect."<sup>24</sup>

For Massumi, this logic of affect is synonymous with "an event logic."<sup>25</sup> This is because affects are conceived of as felt transitions "where a body passes from one state of capacitation to a diminished or augmented state of capacitation."<sup>26</sup> In Cirugeda's work, the event logic has to do with augmenting the capacitation of the body for connecting with other bodies in a larger social network, while in CutUp media hijacking, it is about the capacitation of the individual body being modulated by a rewriting and redistributing of commercial images. In both projects, the individual body is cast into new processes of subjectification, events where what is at stake is the emergence or reconstitution of the subject. This is precisely why the analytical notion of sign is insufficient for accounting for the disruptive effects of current practices of *détournement*. Because, the notion of the sign is intimately tightened up with the idea of a world where a subject experiences objects and entities according to a pre-ordered system of sign categories. Indeed, this was the core assumption underlying the structuralist school of thought within phenomenology, namely that the subject's intentional stance toward the world was conceivable in terms of representational acts. What I have tried to show in this essay is that *détournement* in interventionist practices opens up toward an affective region of presubjective processes beyond the level of signs and representational acts—at the level of affective events.

Moreover, in the present study, I have also attempted to broaden the analysis of affective events from changes in bodily states to their potential for actions and doings. For this purpose, I have been drawing upon Rancière's philosophy as an analytical framework for explaining that affective modulation must be defined according to two constitutive aspects: an aesthetic and a political aspect. The aesthetic aspect has to do with the way in which interventionist practices affectively modulate people's engagement and sensing of the world. The political aspect, on the

other hand, reside in the way that affective modulation, according to the theory of affect in reference to Brian Massumi may also open up for new processes of subjectification where the individual lives through alternative experiences of who she is, what she's capable of doing, saying, and feeling. The aesthetic and political aspects are entangled and taken together as they account for the disruptive effect of hijacking urban space.

## Notes

1. Cf. B. Holmes, 'Do-it-yourself Geopolitics', in *Urban Act, a handbook for alternative practice*, aaa (eds), aaa-PEPRAV, Paris, 2007, 320. [www.peprav.net/tool/IMG/pdf/URBAN-ACT\\_release.pdf](http://www.peprav.net/tool/IMG/pdf/URBAN-ACT_release.pdf) (accessed January 21, 2011).
2. See e.g. T. Pavel, *The Feud of Language: A History of Structuralist Thought* (Oxford: Blackwell, 1989).
3. N.J. Thrift, *Non-Representational Theory: Space, Politics, Affect* (Oxford: Routledge, 2007).
4. S. Sadler, *The Situationist City* (Cambridge: MIT Press, 1999), 16.
5. Cf. Sadler, *The Situationist City*.
6. M. Zardini, 'A New Urban Take Over', in *What You Can Do With the City* (Montreal: Canadian Centre for Architecture, 2008), 14.
7. Cf. Sadler, *The Situationist City*.
8. J. Rancière, *The Emancipated Spectator* (London: Verso, 2009).
9. *Ibid.*, 75.
10. *Ibid.*, 14.
11. <http://www.youtube.com/watch?v=h7TeLiUuZhc> (accessed February 5, 2011).
12. *Ibid.*
13. S. Malik and A. Phillips, 'The Wrong of Contemporary Art', in *Reading Rancière* (London and New York: Continuum Intl Pub Group, 2011), 111–28.
14. *Ibid.*, 113.
15. Cf. Rancière, *The Emancipated Spectator*, 74.
16. B. Massumi, 'Of Microperception and Micropolitics', *Inflexions: A Journal for Research-Creation* 3 (2008): 4, [www.inflexions.org](http://www.inflexions.org) (accessed May 10, 2011). For a similar use of the notion of event, see *Kwinter Architectures of Times: Toward of Theory of the Event in Modernist Culture* (MIT Press, 2002).
17. Malik and Phillips, 'The Wrong of Contemporary Art', 113.
18. Cf. Malik and Phillips, 'The Wrong of Contemporary Art'.
19. *Ibid.*, 119–20.
20. Cf. A. Moor, 'Theories of Emotion Causation', *Cognition and Emotion* 23, no. 4 (2009): 625–62.
21. J.J. Prinz, *Gut Reactions: A Perceptual Theory of Emotion* (Oxford, USA: Oxford University Press, 2004).
22. A. Dunne, *Hertzian Tales: Electronic Products, Aesthetics Experience, and Critical Design* (Massachusetts: The MIT Press, 2006), 44.
23. S. Kwinter, *Architectures of Times: Toward a Theory of the Event in Modernist Culture* (Massachusetts: MIT Press, 2002).
24. *Ibid.*
25. Massumi, 'Of Microperception and Micropolitics', 9.
26. *Ibid.*, 1–2.

# Immediation as process and practice of signalletic mattering

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## Abstract

*How* is perception a constitutive force in interactive media environments and how does it effect its cultural and social conditions? This question provides the ground for a conceptual and practical development of the term *immediation*. Immediation describes the immediacy of esthetic sensation and locates the event of immediated experience in everyday life. It highlights the immediacy with which digital processes enhance or delimit perception and affect through directly shaping experience. The immersive and interactive media environment *Panoscope*—a 360° hemispheric and fully immersive projection space—offers ways for developing two main aspects of immediation: (1) immediation underlining the creative role of perception as neither subjective nor objective but relational, embodied, and located in everyday life and (2) the reconsideration of the digital not as pure abstraction but a relational process immanent to perception. By unfolding the concept of *digital* or *signalletic mattering*, the coemergence of material conditions and processes of thinking will be emphasized.



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**Keywords:** *digital media; immersion; interaction; signal; embodiment; vision; esthetics; ecology*

Upon entering the *Panoscope* a slight change happens in the way habit wants us to perceive our immediate environment.<sup>1</sup> The usual scanning and ordering are replaced by an immediate attraction for horizontal vision. Seeing 360° video-images of seashores puts vision directly in relation to the vanishing point of the projection's horizon. It seems like feeling the composition of perception in its very immediacy of emergence—as it happens while it happens. A clear differentiation between perceiver and perceived is superseded by a sensation of perception edging into experience.

Such a sensation defines a point of emergence composed by bodily sensation and digital esthetic expression. *How* can we address the relation between contemporary media technologies and human bodies without taking either as predefined entity? *How* can we account for interactive media environments as confined spaces and at the same token as open fields of experimentation? What if we consider such media environments not as “virtual” (as “opposed to ‘real life’”) scenarios but rather as amplifications of digital signalletic processes integral to everyday experiences?

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Following the constitution of experience through digitally enhanced experiences inside the *Panoscope* this article addresses the process of a *grasping* in the midst of a perceptual bodily shock as *immediation*. Putting vision on the edge rearranges the habitual order of sensation, as much as its physical and mental environment. Perception as capturing or groping vanishes reappearing as a quality enabling experience. What disrupts the habit of perceiving inside the *Panoscope* is an immediacy of the perception of perception. Immediation offers the potential to consider signals, matter, sensation, and thought operating on the same plane. Under these circumstances the relation between the human and media shifts toward experiences of *immediate bodying* and *signaletic mattering*.

### PANOSCOPE AS OPERATIONAL TOOL

The artist and designer Luc Courchesne developed the *Panoscope* in 2000. It consists of a 360° projection space equipped with a custom-built single-channel hemispheric projection system allowing for a fully immersive panoramic view. On entering the *Panoscope*, one is completely enclosed in an airy space limited by the concave projection surface. The invention of a hemispheric projection device and a powerful open source and inclusive digital structure enhance experiments with sound and vision across immersive embodied perception (Figure 1).

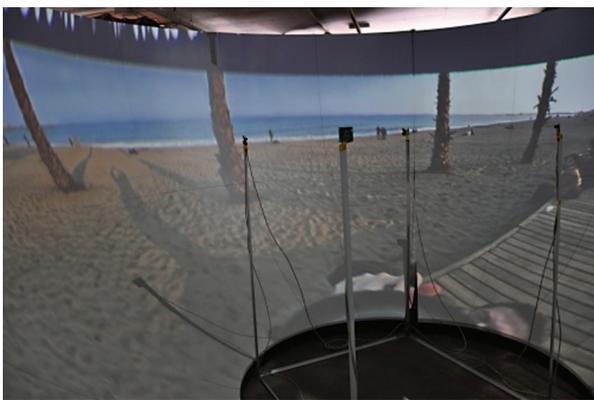


Figure 1. Luc Courchesne: *Panoscope*, “Where are you?” (2010). 360° video-projection, hemispheric projection space and lens, real-time processing through SPIN-framework, motion-capture cameras. Photo: Christoph Brunner.

The *Panoscope*'s dimensions are a diameter of 2 m on the ground and 5.5 m top level with a 360° enveloping wall of 2.9 m:

A hemispheric projector is placed above a downwardly flaring hemispheric screen; it projects an anamorphic disc image composed so the full horizon is placed at about 4/5th of the image radius. From within the installation, visitors see the horizon at eye level all around them, and are immersed in a distortion free projected space.<sup>2</sup>

Visual scenarios used in the *Panoscope* are of various kinds, such as “Where are you?” (2010), a navigable space along *x*-, *y*-, and *z*-axes filled with images and life details consisting of private imagery from Courchesne's own life and important archival material in relation to his biography; “You are here” (2010), a 3D remodeling of a gallery space in Toronto from which one can explore the city; “Immersion, setting sun (after Monet)” (2010), a 360° immersive video experience of different seashores recorded by the artist around the globe; and “Posture Paris/Montréal” (2011), a *Posture Platform* for immersive telepresence. The navigation happens wirelessly through an iPhone-app called “posture pad.” The open source software structure allows for real-time rendering of several users' positions, their motion capture through cameras, and the possibility for telepresence encounters inside the projected scenarios.

Each scenario (or content) has its very own modes of expression and accordingly alters the style of embodied experience. Expression defines the qualitative aspect of an experience that comes to be felt through the experience's actualization. Expression is therefore not to be confused with self-expression attached to a human creative being. Expression is indeed self-expressive but precisely not as volitional human act but as the “affective tone” of an experience itself.<sup>3</sup>

From this point of view, it is remarkable how much the same technological device is able to evoke diverging experiences of embodied perception. In other words, each scenario has its very own means of expression coupled with the subject's real-time encounter, both producing new kinds of experience. To consider interactive media environments as open-ended assemblages—compositions of varying material, social, and mental forces and tendencies—provides a way of thinking and working with such technologies on the

level of emergent perception and nascent experience. Immediation allows for investigating interactive media environments at the level of their perceptual emergence when the potential for non-habitualized modes of perceiving is most palpably present.

On first sight, the *Panoscope* seems like one of many interactive media artworks steeped in discourses on Virtual Reality (VR) remodeling “real-life” experiences. Hence, as Andrew Murphie has argued, VR might be used as a concept instead of a metaphor, enabling experimentations with perception beyond representational models.<sup>4</sup> According to Murphie’s proposition, the visitor of an installation such as the *Panoscope* does not experience “another” world outside of the real. On the contrary “VR creates a totality which (potentially) both overwhelms present perceptive thresholds and creates, rather than represents, a ‘total enough world’ within the world(s) at large.”<sup>5</sup> The problem we face through panoscopic experiences concerns the question of experimenting with the constitution of worlds or events of perception through digital media technologies.

What the *Panoscope* does is to allow for experimentations with perception through its emphasis on the horizon as a limit space of sensation. To arrive at the conception of immediation as a relational process, one has to consider the particular kind of experiences the *Panoscope* produces in conjunction with bodily capacities for experiencing. As a consequence, if the *Panoscope* facilitates experimentations with the constitution of perceptual events, then it might also change the ways we habitually conceive of perception. Accordingly, altering modes of perceiving opens up situated constitutions of perception with the *Panoscope* reworking the more general role of perception in cultural discursive orders. From this point of view, I conceive of the *Panoscope* as a confined and yet open space that is always entangled in a cultural discursive politics of perception through different techniques and technologies.<sup>6</sup> What counts is the mode of engagement with such techniques and technologies enabling alternative modes of perceiving and, therefore, potentially new modes of thinking and living with our technologically enhanced environments. Visual perception is a relational process giving birth to objects and subjects through experience.<sup>7</sup> Relational means to account for perceptual emergence across multiple modes of

existence, without predetermining how these modes operate as part of a particular experience.

The *Panoscope*’s horizontal perspective can be considered as a space in which new conditions of perception become palpable. Immediation takes on the role of a relational operation activating the potentiality for perception through the immediacy of experience rather than through connecting a perceiving subject to a perceived object. Media environments as much as human bodies are not fixed entities with clearly defined capacities. On the contrary immediation enables both media and bodies to differentiate themselves relationally from their prior existence through situated constitutions of perception. The *Panoscope* underlies certain constraints due to its composition (as the human body does as well), but its potential for immediation depends always anew on the situation it engages with (Figure 2).

Immediation delineates the cusp of experience edging into a recognizable perception event. The *Panoscope*’s horizontal edge puts the visitor constantly in the situation of not being able to entirely differentiate between something seen and recognized and something felt but not actualized. Its operations across digitally produced perceptual situations are in between an *affective sensing* and an *emotional recognition*. The assertion that a subject perceives and orders its objectified environment as different from the “self” is challenged by the immediated suspense of a straightforward perceptual order. Immediation outlines a way of coping with different expressive forces of humans and



Figure 2. Luc Courchesne: *Panoscope*, “Where are you?” (2010). Close-up of another user in telepresence mode, hemispheric projection space and lens, real-time processing through SPIN-framework, motion-capture cameras. Photo: Christoph Brunner.

more-than-humans as copopulating actual events of perception.

## AN OUTLINE FOR THOUGHT AND MATTER THROUGH THE DIGITAL

An active embodied engagement with the *Panoscope* by means of immediation and perception foregrounds a domain of digital esthetics beyond human-machine binaries. To understand the relation between matter and thought as a central relay for a conceptualization of immediation, one has to detach the concept of perception from a mere phenomenological (i.e. human-centered) perspective. *Perception* is not of a human nature as such but part of a “worlding”; the unfolding of relational events constituting subjects and objects of perception.<sup>8</sup>

Anna Munster underlines this aspect of perception in relation to digital technologies: “Digital media are quite capable of registering affectively; we underestimate our corporeal capacities if we suggest that the speed and geographical fragmentation wrought by these media lead to dematerialization, indifference or destabilization.”<sup>9</sup> On this point, Munster is aligning with Brian Massumi’s assertion that perception as the mingling sphere of quasi-subjects and quasi-objects is happening on the level of matter and not cognition. According to Massumi, the empirical makes its presence not as an already formed world, but the capacitation of matter to account for experience. The human body memorizes, navigates, and distributes relationally with its environment through the flesh.<sup>10</sup> Hence, mental and cognitive procedures often confined to an abstracting function of the brain put the brain back into the immediate perceptual operations of the flesh. One could say that there was never a body-mind split in the Cartesian sense but only fleshy capacities of differentiating multiple nuances of experience.

The relation between body and machine for Munster reconsiders the digital not as an abstract dematerialization per se but as a *differential*. Munster writes: “To take the differential into account in an analysis of information culture is to reinsert the value of those intervals of non-capture, malfunction and chance fluctuating immanent to materiality *back* into the series of perfect replica” (i.e. the digital code).<sup>11</sup> As a differential, the digital is not a mere code anymore

but itself produces ruptures, breaks, and contingencies related to “vibrant matter” underlining all “digital/analog” processes.<sup>12</sup>

The *Panoscope*’s mode of expression operates on a horizontal level. Different from VR models working with goggles or helmets to provide an all-enveloping sense of immersion the *Panoscope*’s particularity resides in its constraint being a hemisphere. Vision moves from the floor up to the level of the horizon at approximately 90°. Two axis of continuity of vision exist: one is 360°, taking the user as rotating axis. The other is 180° moving from the top-edge along the hemispheric wall across the floor and up again to the other edge of the hemisphere. The top-edge of the projection surface defining the horizon at 90° opens up the actual dimension of emergent perception. It is the horizontality of potential vision that composes its own singular mode of experiencing. Navigating with a full body sensation through multi-dimensional space and entering a hemispheric video of a seashore creates a semblance of an actual perception event and at the same time suspends the habitual ordering capture of everyday object perception. Herein lies another crucial aspect of immediation: it cuts across the habitual constitutions of everyday experiences through perception. The horizon as the limit of visual perception extends and recedes according to the scenario encountered inside the *Panoscope*—and thus extending the confined experience impinging the discursive order of everyday habitualized perception. In the case of the hemispheric videos, a sensation of an enveloping edge of vision arises folding the body right into the projected space without having to enter it. The digitally enhanced perception creates a haptic experience as result of the differential operating across the entire perceptual *ecology*. Immediation defines the ambulatory perceptual emergence of an experience without foreclosing it. From that point of view an ecology is not a system but a relational set in excess of the actualized experience. What passes as effectively perceived is just a fraction of the excessive potential immediate to the embodied engagement with the *Panoscope*.

Experimenting creatively with the excessive potential of emergent perception requires an extension of the material, sensory-motor linkage of perception. Infra-material aspects, such as time and thought, are immanent to perception

and enable practices of being “attentive to the unknown.”<sup>13</sup>

### On mattering

I borrow the term mattering partly from Karen Barad and partly from Isabelle Stengers. For Barad, “matter(ing) is a dynamic articulation/configuration of the world,” whereas for Stengers mattering describes “an idea [that] always exists engaged into a matter.”<sup>14</sup> In either case, a relation nexus can be traced across the domains of thought and matter. Mattering similar to the relationality of perception figures as the activating force for both poles, thought and matter. This conception of matter and thought appears in Deleuze’s reading of cinematic images as movement-image and time-image. Whereas the “movement-image is matter itself, the time-image enabling a perception of time itself relates to thought.”<sup>15</sup>

The *Panoscope* composed of different matter (material, immaterial, and digital) becomes part of a *machinic phylum*. “The *machinic phylum* is materiality, natural or artificial, and both simultaneously; it is matter in movement, in flux, in variation, matter as a conveyor of singularities and traits of expression.”<sup>16</sup> As a machinic phylum, digital media are traces of matter flows producing singularities of experience and expression through perception. In other words, not only perception is subject to expression’s flux, but also material strata co-constituting embodied experiences change from situation to situation. *How* experience comes to pass differentiates the *Panoscope* in its relational potential across all of its constituent levels of mattering. Harking back into Anna Munster’s conception of the digital as differential and interstitial, the mattering aspect of digital media’s machinic phylum moves in and out concrete and abstract mattering, always in relation to the human body and technology but never entirely *of* either of them. Under these circumstances the conception of a human body becomes malleable. In the constitutive process of mattering, it is immediation that accounts for the immediacy of the elements relationally composing an experience. The human body in itself consists of manifold immediating processes. What happens in the event of an immediating experience might therefore be better described as *bodying*.

The reason for underlining matter and perception in their techno-conceptual configurations lies in the fact that the *Panoscope* experiments with what an embodying perceptual experience can do or might become. The *Panoscope* is deeply entangled in digital processes of circulations of signals between numerical encodings and their decodings in actual expressive events of perception. Anna Munster describes digital media as not being dematerializing but of a different quality than analog media:

In exploring the possibilities of machine perception—the alien representation of the digital image, the different speeds of information itself, where instantaneity is coupled with interminable arrests, crashes and system failures—we can begin to see the aesthesia of the digital operate. Digital aesthesia provides a set of conditions for machine perception. But in the new media artwork itself the intensive speeds of embodied interaction and engagement also enter the fray.<sup>17</sup>

The *knot* constructed in this case lies in the close relation between a material notion of matter and an immaterial notion of the term, both depending on and producing each other. The conception of such an emergent constructivism of experience through interactive media defines the core concern of immediation. The constructivism underlying the process of mattering is as material as it is abstract. *Abstract* because there is always more to an experience than we are able to conceive in its perceptual effects. It is experience that coalesces these two streams of mattering, tying them together in relational events of perception.

### Perception as modulation

What defines embodied engagements with the digital is not an abstraction of the “real” into binary code. The digital as always related to matter does not abstract in a conventional sense of the term. It rather modulates *molds* of perception into potential extensions of reality.<sup>18</sup> What constitutes the relation between analog and digital realms is the process of perception as modulation: “For modulation is the operation of the Real.”<sup>19</sup> Modulation constantly reworks the relation between perceiver and perceived and creates relational events of experience. Experience takes on an extended meaning in this context, which

William James' describes as *pure* experience. Pure experience is a plain unqualified actuality. It defines the moment before experience bifurcates into "thing and thought."<sup>20</sup> At this very point of an emergent event, the relational bond between thought and matter is most affectively felt. In other words, its potential for actualization is an expression as a "shock to thought," which "strikes the body first."<sup>21</sup> The digital becomes material through its processual nature and force for expression. In itself, it does not exist but through movements of expression it becomes present in the instance of real-time computation.

Interaction as a human-machine relation falls short of the complex relation between a matter flow of affective expression and its relation to thought as a collective event interlacing bodies and code. Bodies in this context are compounds, things made of other things that are "material, specific, non-self-identical, and semiotically active."<sup>22</sup> Immediation renders bodies into processes of a bodying. In digital media, the production and relation of bodies by means of code and differentiation challenges what a body can do or might become, "it opens up forms of experimentation."<sup>23</sup> The operation of immediation in such processes takes on a double function: on the one hand the challenging aspect requires continuation, that is the seeking of future experiences at the horizon of perception's worlding. On the other hand the continuous experiential meandering depends on envelopes to be part of a process. According to Gilbert Simondon the double process of continuity and enveloping is called *transduction*. For Simondon, transduction is the driving motor of a general process of becoming, which he calls *individuation*.<sup>24</sup> He writes, "by transduction we come to understand a physical, biological, mental, and social operation through which an activity successively propagates inside a given domain, with the help of this propagation through a structuration of the domain over which it operates continuously."<sup>25</sup> Engaging with interactive media art outlines not a mere encounter between defined parts but becomes an individuation in its own right. Such an individuation, operating by means of transduction, cuts across a prior disparity of the physical, biological, mental, and social. This is an "affective engagement"<sup>26</sup> with media as "contractions of forces and through forces bodies are born. Rather than

being solids, such bodies are processes and defined by their internal and external milieus in which they resonate."<sup>27</sup> The birth of such bodies through immediation defines a collective process of experience unfolding transductively.

### Like a thought

Thought never separates from matter, and yet it is different from knowledge and matter. "Knowledge concerns formed matters (substance) and formalized functions, divided up segment by segment according to the two great formal conditions of seeing and speaking, light and language: it is therefor stratified, archivized, and endowed with a relatively rigid segmentarity."<sup>28</sup> Knowledge, the way Deleuze describes it, would consider digital processes of recording and reproducing as endless chains of segmentation, whereas, as demonstrated through Munster, digital matter as differential always comprises intervals of the non-stratified. When the *Panoscope's* horizon puts habitual perception in limbo, heightening the unstable conditions of an emergence of recognized perception, thought alters as integral part of this experience. Thought as practice of immediation is not producing knowledge but edges at the verge of perceptual actuality into *unknown* potentialities of the future. It enables creative abstraction, as a way of being attentive to the unknown. Abstraction not in the sense of a transcendentalizing tendency (such would be closer to knowledge) but rather a technique:

that would go to the limit of what life can do. ... A thought that would *affirm* life instead of a knowledge that is opposed to life. Life would be the active force of thought, but thought would be the affirmative power of life ... Thinking would then mean *discovering, inventing, new possibilities of life*.<sup>29</sup>

Thought and life are intrinsically tied to matter flows. The digital in this configuration functions as a lure of perception actualizing potentials through expression, as a shock to thought. Thought as the edging into virtuality of the actual remodulates the modulation of perception into a potential difference to be felt in a future actualization; it is a modulation of modulation.<sup>30</sup> Thought as part of creative practices is not tied to a subject but is always collective, emerging through its capacity to include unrealized potentials into

actual expressions in and through matter. One could also say that thought is immediate to the process of perception and vice versa.

## PANOSCOPIC IMMEDIATION

At the point of entering the *Panoscope*, an individuation takes off immediately, the enclosure fills the air between the user and the screen; it is charged with relational potential—an activation of thought apprehending potentiality. It is the horizon of human vision that extends or modulates by the multiplication of directions, disallowing gravitation-based navigation in space.<sup>31</sup> While immersed in the *Panoscope*, perception enters a relation with the visual appearances vibrating through the air. Simultaneously, four (in the future eight) cameras capture bodily movements, turning physical movements of the body into digitized flows of matter. The air between camera, body, and screen emerges as the modulating interface, creating an interactive loop by means of a digital mattering. The worlding of perception, while immersed in a seashore landscape, ties in the physical, biological, mental, and social layers of experience, all of them being part of the productive force of digital matter. The control usually attributed to the perceiver ordering the world according to her habit shifts by folding the image onto the surface of the body from the fringes of the “strange horizon.” In the center of an immersive seashore, a time-image occurs making time itself perceptible in its pure mattering effects. The experience of the image opens up a sensation of time moving through matter becoming thought, in other words, perception opening up potential becomings of future sensations in tandem with thought:

The image contains a virtual dynamic, more temporal . . . than spatial in nature. All this adds up to an experience . . . Experiences do not connect geometrically in three dimensions. They connect processually, in many dimensions, including dimensions of felt intensity that inhabit the sight seen, but do not show.<sup>32</sup>

In the projection scenario “Where Are You,” one starts from a 3D grid providing not only Euclidian dimensions but also portals offering other dimensions, infinite in number. On a timeline, one navigates through different moments in Courchesne’s

life from childhood memories back to seventeenth century perspectival painting. The confinement of a human life cycle is broken up and juxtaposed, ready for remix. Here, one can glimpse a major shift in the relation to time through digital media: digital media are able to foreground the disjunctive and conjunctive interplays between a “sequential and non-sequential variation (chronological and non-linear time)” of signals over time, reworking the experience of time itself through a *digital mattering*.<sup>33</sup> The digital materializes in the perception of time disjunctively, weaving experience into a conjunctive singularity. The same accounts for the real-time telepresence option the system provides. The possibility to jointly venture through timelines, images, and immersive animated places defines not a mere audio-visual-mediated environment. The sensation of space and time changes throughout the entire continuum of the assemblage. Such an assemblage layers the local embodied space in each *Panoscope* working with a processual human body, with the digitized co-inhabited spaces. The layering of spaces happens through a direct perception of time, tweaking visceral sensations of space toward new potentials of perception moving across and along processes of digital mattering. The lines and paths throughout the “virtual” environment produce traces, felt traces, and traces or traits inscribed through alternations of code.

## FROM SIGN TO SIGNAL: SIGNALLETIC MATTERING

What we engage with through processes of digital or abstract mattering might also be termed *signalletic mattering*. Immediation in this context delineates the immediacy of real-time signal processes across digital media, fostering the immediacy of “liveness” of interactive media engagements. With a turn toward the signal and away from the sign, we cross the threshold between signifying regimes of signs and enter the realm of digital processes as pulses of signals and signalletic mattering.

In *A Thousand Plateaus*, Gilles Deleuze and Félix Guattari develop a critique of regimes of signs, where signs refer to other signs through endless signifying chains. A similar argument could be made for digital functions of codes, as endless chains of signs referring to each other. The circulation of signs in this case adheres to a *logic*

of representation which is opposed to the emergent quality of immediation. Deleuze and Guattari's major argument for overcoming pure chains of signification lies in the role of *matter* and *function* as opposed to *substance* and *form*: "Functions are not yet 'semiotically' formed, and matters are not yet 'physically' formed."<sup>34</sup> The authors propose a re-investigation of the problematic role of the sign as signifier developing systems of order and capture. Their attempt is not to abandon the sign but to open it up as always relationally intertwined in an ecology, where matter and function precede substance and form. The problem lies in the over-coding of time and the priority given to space in conventional accounts of the sign as referent to a perceptible real: "It is only when the sign opens directly to time, when time provides the signaletic material itself."<sup>35</sup> In relation to digital media a shift from sign to signal enables us to account for the non-representational yet effective quality lodged in immediating processes. Signaletic material for Deleuze defines, as mentioned in the introductory article by Bodil Marie Stavning Thomsen, "a plastic mass, an a-signifying and a-syntactic material" neither to be understood as a "carrier" of "enunciations" nor "utterances"; "It is an *utterable*."<sup>36</sup> The utterable of the signaletic material is not a sign, but the pure potentiality of an utterance or enunciation. This potentiality in relation to matter and function is what Deleuze and Guattari name *diagrammatic* and which here will be considered as "diagrammatic practices."<sup>37</sup> The relation between the signal and matter is a diagrammatic movement, where movement exists in time but does not constitute time: "The diagrammatic . . . does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of reality."<sup>38</sup> The diagram is the immanent field of potential moving through matter, to become expressive in perception. Thought becomes the primary catalyst for diagrammatic tendencies to repotentialize an actual occasion of experience. Time comes up again as the underlying force of signaletic matter, felt in the immediacy of its potential for becoming. A diagrammatic practice is a "pragmatism of the multiple" where felt-thought in the immediacy of action becomes attentive to the unrealized potentials of a machinic phylum in its mattering presence.<sup>39</sup> Diagrammatic practices, to become effective, aim at techniques for perception altering *how* feeling

cuts across all matter of experience, abstract (virtual) as much as physical, biological, or social.

Accordingly, the *Panoscope* is not just an interesting assemblage for the alternation of thinking and feeling in relation to perception. It is essentially an assemblage that needs to be worked with—diagrammatically. While the horizontal conditioning of perception enables a heightened awareness for the relational nature of perception through digital and signaletic mattering, many new lines of potential experimentation take off from here.

## CONCLUSION

Immediation defines a tool for thinking what is happening in the instant of an emergent experience. The relational co-emergence of matter, signals, and thought creates new sensations and bodyings through perception's relational nature. As a diagrammatic movement immediation is a non-representational process of bodying. The diagrammatic outlines a technique for tweaking regimes of signs toward destratifying tendencies, enabling new potential variations of reality to emerge; it is a technique for invention.

*How* perception is playing a central role for contemporary accounts of interactive media becomes apparent along the multiplicity of signaletic processes as part of digitally and affectively engaged experiences. Processes of immediation are crucially related to time. Digital media provide specific ways of activating multiple temporal dimensions in one experience, therefore enriching the felt and actualized potential for future events. From that point of view, the *Panoscope* is a confined zone for perceptual experimentation but its expressive forces leave traces—materially, mentally, and digitally. What has been developed as the double process of mattering describes the co-emergence of material processes and thought through the immediate quality of perception. The creation of worlds is therefore always a kind of following matter flows, not as banal materialism but as signaletic mattering where time provides the signaletic material. Foregrounding time in interactive media environments enables a thinking of the potential of a situation through its future-orientedness. Far from being utopic, immediation emphasizes the immediate quality of differentiation of experience through perception. How an

affective and creative engagement with technologies and human bodies comes to pass is therefore always a matter of capturing forces immanent to a general signalitic mattering.

From a relational perspective, media environments and the human subject do not interact. The idea of interaction would consider either, subject and object, as preformed entities. On the contrary, “relationality pertains to the *openness* of the interaction rather than to the interaction per se or to its discrete ingredients.”<sup>40</sup> Immediation replaces a spatializing conception of interaction and mediation between pre-defined terms. The immediacy of immediation composes a new type of reality, based on the temporal immanence of future becoming in the actual experience. Experimenting with such immediate dimensions requires an attentiveness for the creative force of perception and its transductive operation.

One of the major tasks for a conceptual outline of immediation resides in the speculative and pragmatic poles that each affective engagement with signalitic mattering comprises. *How* can we find means of accounting for experience’s excessive potentiality and compose with it transductively? The proposition made in this article is to constantly follow mattering processes and to develop in their presence ways of speaking and acting *with* and not just *about* or *upon* them. Immediation is an inventive practice of processual creation with our environments and their very own propensities. Such an approach requires thinking *with* what happens and taking encounters with matter seriously in their singular traits and creations.

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## Notes

1. In this particular context, the notion of immediation derives from private conversations with Alanna Thain and Brian Massumi. A first outline of the concept is currently developed as a SSHRC-funding application. For detailed information on the Pano-scope see: <http://courchel.net/> (accessed October 11, 2011).

2. Luc Courchesne, *Panoscope 360°*, <http://courchel.net/> (accessed November 10, 2011).
3. The notion of *affective tone* derives from Alfred North Whitehead. See Alfred N. Whitehead, *Adventures of Ideas* (New York: The Free Press, 1967), 176.
4. Andrew Murphie, ‘Putting the Virtual Back into VR’, in *A Shock to Thought: Expression after Deleuze and Guattari*, ed. Brian Massumi (London/New York: Routledge, 2002), 188–214.
5. *Ibid.*, 193.
6. Jacques Rancière, *Politics of Aesthetics* (London/New York: Continuum, 2005).
7. Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham/London: Duke University Press, 2002), 51.
8. *Ibid.*, 152.
9. Anna Munster, *Materializing New Media: Embodiment in Information Aesthetics* (Hanover/London: Dartmouth College Press, 2006), 159.
10. Massumi, *Parables for the Virtual*, 59.
11. Munster, *Materializing New Media*, 29.
12. Jane Bennett, *Vibrant Matter: a Political Ecology of Things* (Durham: Duke University Press, 2010).
13. Gilles Deleuze, ‘What Is a Dispositif?’, in *Michel Foucault Philosopher*, ed. Timothy T. Armstrong (New York: Routledge, 1991), 159–166.
14. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham/London: Duke University Press, 2007), 151; Isabelle Stengers, ‘Introductory Notes on an Ecology of Practices’, *Cultural Studies Review* 11, no. 1 (2005): 193.
15. Gilles Deleuze, *Cinema 2: The Time-Image* (Minneapolis, MN: University of Minnesota Press, 1989), 17, 31. Deleuze adds: “In everyday banality, the action-image and even the movement-image tend to disappear in favour of pure optical situations, but these reveal connections of a new type, which are no longer sensory-motor and which bring the emancipated senses into direct relation with time and thought. This is the very special extension of opsigns: to make time and thought perceptible, to make them visible and of sound”, *ibid.*, 18.
16. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (Minneapolis, MN: University of Minnesota Press, 1987), 409.
17. Munster, *Materializing New Media*, 160.
18. Deleuze, *Cinema 2*, 27.
19. *Ibid.*, 28.
20. William James. *Essays in Radical Empiricism* (Mineola, NY: Dover Publications, 2003), 39.
21. Brian Massumi, ‘Like a Thought’, in *A Shock to Thought: Expression after Deleuze and Guattari*, ed. Brian Massumi (London/New York: Routledge, 2002), xvii.
22. Donna Haraway, ‘Compoundings’, in *Sensorium: Embodied Experience, Technology, and Contemporary Art*, ed. Caroline A. Jones (Cambridge, MA: MIT Press, 2006), 119.

23. Gilles Deleuze, 'Ontologie-Ethique', Lectures on Spinoza, 1980. <http://www.webdeleuze.com/php/texte.php?cle=26&groupe=Spinoza&langue=1>.
24. Gilbert Simondon, *L'individuation à la lumière des notions de forme et d'information* (Grenoble: Millon, 2005), 24.
25. Ibid., 32 (*my trans.*).
26. Jonas Fritsch, 'Understanding Affective Engagement as a Resource in Interaction Design', Proceedings of *Engaging Artifacts*, Nordic Design Research Conference, 2009.
27. Parikka, Jussi Parikka, 'Media Ecologies and Imaginary Media: Transversal Expansions, Contractions, and Foldings', *Fibreculture* 17 (2011): 36.
28. Gilles Deleuze, *Foucault* (Minneapolis, MN: University of Minnesota Press, 1988), 73.
29. Gilles Deleuze, *Nietzsche and Philosophy* (New York: Columbia University Press, 1983), 101.
30. "At any rate, thought and imagination are the leading edges of this exploratory expansion of potential, because they can wander from the particular present posture even without actually leaving it", Brian Massumi, 'The Thinking-Feeling of what Happens', *Inflexions* 1 (2008).
31. "It seems that the force of gravity lies at the basis of a laminar, striated, homogeneous, and centered space" as opposed to a smooth space of de-stratified matter-flows. In Deleuze and Guattari, *A Thousand Plateaus*, 370.
32. Brian Massumi, 'Panoscopie: La photographie panoramique de Luc Courchesne', *CVPPhoto* 60 (2003): 22–26. English unpublished translation accessed at: <http://www.brianmassumi.com/textes/Panoscopia.%20The%20Panoramic%20Photography%20of%20Luc%20Courchesne.pdf> (accessed July 28, 2011).
33. Munster, *Materializing New Media*, 173; Gilles Deleuze in his work *Cinema 2: The Time-Image* most prominently developed the "direct perception of time through film". Ibid., 27. He describes the time-image as that, "which gives what changes the unchanging form in which the change is produced". Ibid., 17.
34. Deleuze and Guattari, *A Thousand Plateaus*, 141.
35. Deleuze, *Cinema 2*, 43.
36. Ibid., 29. See also the article in this volume: Bodil Marie Stavning Thomsen, "The Signalitic, Haptic and Real-Time Material."
37. The notion of diagrammatic practices has been coined by Sher Doruff, who is continuously developing her own techniques and concepts for diagrammatic practices. See Sher Doruff, 'Diagrammatic Praxis', *JAR—Journal for Artistic Research* 0 (2010), <http://www.jar-online.net/index.php/issues/view/480> (accessed July 25, 2011).
38. Deleuze and Guattari, *A Thousand Plateaus*, 142.
39. Deleuze, *Foucault*, 84.
40. Massumi, *Parables for the Virtual*, 235.

# From signal to signification in interactive environments

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## Abstract

There is no doubt that the shift to real-time interactive and electronic media can benefit from a renewed focus on the signal and a signaletic paradigm in addition to the sign. However, in this article I argue that we must be careful not to simply fall into the idea of one paradigm to simply replace the other. Rather, we should investigate what the fusion between paradigms allows us to say about digital and interactive technologies. This article attempts to do this through a thinking-together of signal and signification as well as affect and emotion based on the work of French philosopher of technology Gilbert Simondon. Through an analysis of the minimal media installation *Touched Echo*, I argue that it is necessary to account for the dynamics of a larger experiential continuum to uncover the affective-emotive relations that occur through the transindividual workings of the signal and signification in interactive environments.



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**Keywords:** *signal; signification; sign; interactive environments; digital technologies; individuation; affect; emotion*

In the following article I would like to propose a re-thinking of the relation between signal and signification through a reading of French philosopher Gilbert Simondon. While there can be no doubt that a move toward a signaletic paradigm can offer important insights into the analysis and understanding of real-time interfaces, electronic media and interactive technologies in contemporary society, such a move raises as many questions as it provides possible answers. As argued throughout this volume, there is indeed a continued need to develop the notion of the signal (or signaletic) as a focal point of analysis in a move

away from the sign in a strictly linguistic sense. Starting from the signal allows us to ask questions about *how* we experience, what *makes us* experience, and what might be termed the conditions of emergence of experience, rather than—or in addition to—*what* we experience. These questions have been explored in a range of new theoretical directions within an increasingly inter-disciplinary research community, among others, but maybe most notably, under the heading of what has been termed an Affective Turn.<sup>1</sup>

One of the reasons for the emergence of this analytic trajectory stems from the fact that new

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media and interactive technologies to a palpable extent have had an impact on our basic conditions for experiencing the world. Concepts like the signal and affect direct our attention to the experiential effects of interactive and digital technologies and have long been an interest in such diverse fields as cultural and critical theory and interaction design with different motives and goals but a range of intersecting interests.<sup>2</sup> Focusing on interactive environments from an increasingly experiential point of view has led to important insights into the way new technological assemblages are modulating our lives on a micro-level with macro-implications. This has made it possible to assess the impact of the technological in terms of the lived and experiential qualities that emerge from the affective encounter between the digital and the analog. Importantly, in most of these accounts the signal pertains to both the human and the non-human, and in particular the way the human and non-human relate in new hybrid assemblages or mixed realities.

While this move has arguably led to important insights and new agendas worth pursuing for a variety of research communities we must be careful not to flush the conceptual baby out with the intellectual bathing water. Importantly, we must continue to investigate how starting from the signal or affect makes it possible to rethink the sign, signification or emotion. How, we might ask ourselves, does a move from sign to signal work its way back: from the signal or the signaletic material to the sign or signification? How would we understand, for instance, text, language and communication signaletically? How can we develop ways of relating the signaletic and the working of the signal to a nuanced understanding of what in Brian Massumi's words could be termed a full "experiential continuum"?<sup>3</sup> In this article, I will argue that it is necessary to avoid a sole focus on one concept, be it sign, signal, affect, signification or emotion, and instead attempt to broaden the analysis of how the signaletic and the affective make felt and persist through signification in what, at least in the discourse on affect and emotion, have been named more "qualified" modes of experience.<sup>4</sup>

To effectuate a conceptual path for this exploration, I propose Simondon's notions of the "signal" and "signification" as a starting point for analyzing the experiential dynamics in relation to this larger experiential continuum.<sup>5</sup> Through and with

Simondon, I outline a theoretical grounding for addressing how the signal and signification as well as affect and emotion always co-exist related through what in Simondon's philosophy is termed the preindividual. The notion of the preindividual is used to describe that which has not taken any determinate form yet but still offers potential for actions in a given situation. Through an analysis of the minimal media installation *Touched Echo* by digital artist Markus Kison I will unfold the experiential dynamics of interactive environments in ontogenetic and processual terms, focusing on the transductive and transindividual relations between signals, signification, affect, and emotion. On the basis of this I will argue that focusing on signification opens a conceptual path for exploring interactive technologies and environments in terms of the individuations and lived relations that occur through our interactions with them in experiential terms.

## AN ONTOGENETIC APPROACH TO THE RELATION BETWEEN SIGNAL, SIGNIFICATION, AFFECT AND EMOTION

The work of Gilbert Simondon has received heightened attention throughout the last decade.<sup>6</sup> There are a number of reasons for this, among others that Simondon's work has been a big source of inspiration for the philosophy of Gilles Deleuze, that Simondon has a particular vocabulary for addressing the technological and that his philosophy is a process philosophy concerned with accounting for becoming rather than being. Today, most of Simondon's work still awaits translation into English, which is somewhat a hindrance for his continued proliferation. This article does not allow for an encompassing introduction.<sup>7</sup> However, a few preliminary remarks are necessary to situate the analytic and theoretical concerns treated in the following.<sup>8</sup>

Simondon's philosophy is a theory of individual and collective individuation with a particular emphasis on the preindividual fields that make individuation possible through transduction and ontogenesis. Individuation is a perpetual process of forces negotiating their future composition and can be conceptualized as a motor of existence. Individuation describes the very process of becoming of an individual, be it biological, psychic or

technical. The process of individuation is a process of dephasing (*déphaser*) from a phaseless state of potential, that is, the preindividual.<sup>9</sup> The preindividual level of experience is the potential and not yet actualised part of each particular individuation. Simondon points out that the force that makes individuations evolve collectively and endure can be named affect. Affect or affectivity is that which “expresses a preindividual charge in a becoming and supports the collective individuation”.<sup>10</sup> The environment holds preindividual forces and various tendencies that might or might not individuate in a given situation. The preindividual level of experience is the potential and not yet actualized part of each particular individuation.<sup>11</sup>

According to Simondon individuals are continually individuating through processes of transduction. Transduction is the “mechanism” driving individuation. Importantly, a Being can never be entirely individuated; there is no predetermined goal that a being can attain in the sense of completion. The notion of an individual does not denote any fixed entity; instead, individuals are processes of ongoing individuation. As a consequence, Simondon’s overall mode of investigation is termed ontogenetic.<sup>12</sup> Different from an ontology primarily concerned with Being, ontogenesis accounts for becoming.

In his oeuvre, Simondon treats the notion of the signal as a central part of his general theory of individuation. In the following this move will be outlined and further developed to unfold the ontogenetic dynamics of the signal in relation to the notions of signification, affect and emotion.

### Toward a notion of signification

In Simondon’s philosophy, the signal pertains to the preindividual field of potentiality that might or might not develop into an actual individuation. However, he stresses the importance to conceptualize the difference between signal and signification since this difference constitutes the faithful (*fidèle*) and essential criteria to distinguish a veritable individuation from the functioning of a non-individuated sub-ensemble (*sous-ensemble non-individué*).<sup>13</sup> Signals, Simondon argues, are either spatial or temporal, whereas the individual—and signification—is both spatial and temporal.<sup>14</sup> Signification is necessary for any individuation to

occur, and the individual is the being that appears when there is signification:

According to the distinction between signals and significations, we will say that there is an individual when there is a process of real individuation, i.e. when significations appear: the individual is that by which and that in which significations appear, whereas between the individuals there are only signals.<sup>15</sup>

Simondon argues for a thinking of signification in experiential terms that do not imply a linguistic or meaning-centered stance. In fact, Simondon stresses that language is not that which permits for man to gain access to significations. Instead, significations permit for language to occur.<sup>16</sup> In a Simondonian discourse, signification does not relate to any higher level of meaning but rather to the occurrence of transindividual relations and individuations. This way, signification is not *of* a Being (*de l’être*) but *between* or rather *across* Beings (*entre/à travers les êtres*).<sup>17</sup>

The way signification works transductively is to relate different signals by functionally integrating different kinds of information in a given system. Rather than the idea of passive reception of a given content, it is necessary to form a transindividual collective with another Being. For signification to occur, signals must form some sort of relation with a system, and for this to happen, the system must be ready to receive the information—the conditions for sense-making must be right:

[...] for signals to make sense in a system they cannot bring to the system something entirely new; an ensemble of signals only makes sense (*n’est significatif que*) on a ground which almost coincides with it; if the signals cover exactly the local reality, they are no longer information, but only exterior iteration of an internal reality; if it is too different, it will no longer be seized as having sense, it will no longer make sense, since it cannot be integrated.<sup>18</sup>

As a result, signification and hence individuation does not necessarily occur when there are signals or ensembles of signals; it depends on how the signaletic ensemble resonates in the meeting with a system. Nonetheless, the signals and information are, of course, necessary for any signification to occur. Simondon relates this to the idea of a form, not as something fixed waiting to be fulfilled, but as

something that emerges dynamically with and as a result of signification:

To be received, the signals must meet *prior forms* in relation to which they are *significant*: signification is relational.<sup>19</sup>

Here, it is clear that the signal does not in itself constitute the relation. In this sense, signification cannot be understood without the signal, but the signal in itself cannot be understood as a separate realm from signification if relations are to occur.

It is important to underline that a Simondonian understanding of signification does not only relate to the human but to the non-human as well. Signification is necessary for individuations to occur in technological, biological, or psychical systems alike. Both the human and the non-human—through the transindividual distribution of signals—must produce significations that can only occur relationally through the force of affect expressing the preindividual charges collectively. Here, the in-between, the encounter is that which completes the processes of individuation—not as an end, but as a new starting point for new ontogenetic becoming.

### Affect and emotion

The unfolding of the dynamics between the signal and signification in Simondon's work is closely related to understanding the relation between affect and emotion. In the chapter, *Individuation et Affectivité* in *L'Individuation Psychique* Simondon thoroughly investigates the relation between affect and emotion as the relation between the individual and consciousness.<sup>20</sup> Simondon stresses that the psychic (le psychisme) is neither pure interiority nor pure exteriority, but a permanent differentiation and integration following a transductive regime of causality and finality. According to Simondon, affect and emotion are the primary modes of experience when describing the relation between the individual and the world framed through the notion of transduction:

Affectivity and emotivity would then be psyche's transductive form *par excellence*, intermediary between clear consciousness and the subconscious, permanent link between the individual to itself and the world, or rather a link between the relation of the

individual to itself and the link of the individual to the world.<sup>21</sup>

According to Simondon, there is no final stage concerning this processual dynamic since it is ontogenetic. In experiential terms, the preindividual always persists in the individuation, which can thus never be seen as substantial:

[...] the individuated being is not entirely individuated, but still contains a certain charge of non-individuated reality, pre-individual, that it preserves and respects [...].<sup>22</sup>

That which persists across the individuation as the relation between the preindividual and the individual is the transindividual. This is the signification of the Being as separated and assembled, alone and as part of a collective, where the individuated Being is both alone and populated at the same time.

Simondon argues, that this must be understood as a relation between affectivity and emotivity. Rather than talking about affective states, Simondon focuses on affective exchanges between the preindividual and individual as central for understanding this relation. Affectivity can be considered the foundation of emotion by taking the charge of the preindividual nature and making it into a support for the collective individuation. In turn, emotions are for affectivity the discovery of a superior order, of a synergy moving to a higher or more stable metastability. There is resonance between both affect and emotion. In fact, Simondon argues that emotion is integrative and "more rich" than affection (affectation).<sup>23</sup>

Simondon's philosophy of individuation offers a conceptual path to unfold the processual conditions of emergence of experience, what makes us experience, through an ontogenetic understanding of the transindividual dynamics of signals and significations. In relation to interactive environments, a Simondonian approach would aim to account for these factors as they might unfold in the interactive event through affective exchanges. An interactive environment holds preindividual tendencies that might or might not individuate in a given situation through the force of affect. If the conditions are right, this might result in an event where significations arise through the interaction, something that would register on an affective level, but would also continue to modulate the experiential field emotionally. This extends the analysis

from the signaletic, or affective, to also include signification and emotions. In the following and final section, I will try to unfold this conceptual trajectory more closely through an analysis of the interactive installation *Touched Echo*.

## TOUCHED ECHO

*Touched Echo* by German digital artist Markus Kison is a minimal media installation in the city of Dresden, Germany.<sup>24</sup> The installation takes the visitors to Bruhl's Terrace back to the night of the 13th of February 1945. On that night Dresden's Old Town was almost entirely destroyed by the allies' air raid in an attack that killed more than 24,000 people. There is a railing on the terrace, which has been equipped with custom-made sound transducers. A simple pictogram shows the date of the bombing and a person covering the ears with the hands (Figure 1).

When you walk onto the terrace and lean on the railing facing the Old Town, a soundscape is transmitted as signals from the vibrating balustrade. The sound, however, is not transmitted through the air. It is transmitted through your arm directly into your inner ear via bone conduction through the skull. The sound travels through and modulates your body as really felt signals before you are consciously able to register the content of the soundscape as explosions and aircraft sounds. This way, you do not perceive content as a passive recipient; you enter into a system with the installation that could not exist outside of the interactive event. To experience *Touched Echo*, you literally have to put yourself in a similar position to the people who covered their ears to escape the horrendous noise of the explosions 65 years ago. But by performing what would normally be a sheltering gesture—a gesture performed to

avoid and protect—you actually gain access to the soundscape.

*Touched Echo* works directly on an affective level of experience. Through your physical posturing, you prepare for the content of the soundscape to come; your body is bracing for the significations to arise in resonance with the signaletic material emitted from the balustrade. In this way, the installation stages an affective encounter where the people interacting with the system and the signals emitted from the system together form a transindividual collective that exceeds both the people and the system, the human and the non-human. What emerges is a relational field that is felt for its resonating potential that might, or might not, through the force of affect, actualize as significations through processes of individuation. These affective exchanges between the preindividual and the individual continuously modulate the formation of the experience of the installation and the space in which it is situated.

In *Touched Echo*, signification might arise on a number of experiential levels through people's interaction with the installation; there can be signification in the resonance between the signals of the system and the signals of the body; there can be signification when this registers spatio-temporally as a perceived soundscape; and there can be signification when both the pre-posturing and the reception of the soundscape enter into relation with the socio-cultural and historical framing of the setup and the city of Dresden, which could also be seen to function emotionally. Rather than perceiving this as different affective states or experiential levels, a Simondonian approach to the analysis would bring to the fore the diverse functioning of all these collective individuations. This complicates the relation between affect and emotion, which should



Figure 1. Markus Kison: Pictogram from *Touched Echo* and a person engaged in the interaction with the installation. Photo: Markus Kison.

be considered relationally in a full experiential continuum. In *Touched Echo*, the railing and the physical movement of crouching down marks an interface between the affective and the emotional, where the immediate experience activates and creates the potential for the continued experience of the installation, a new ontogenetic becoming continuously modulated by the affective encounter. In this way the emotional always has an affective remainder, which continues to function and inter-mix with more qualified modes of experience over time.

*Touched Echo* works transductively to capacitate the public space in which it is situated in a way that can only be actualized through people's participation with the installation. The socio-cultural and narrative framing of the situation and the person's lived history is folded into and modulates the affective experience of interacting with the installation, which in turn uses the technology to activate and make these stories felt differently through a particular performative staging. The people who lean on the balustrade are forced into the role of a performer. By crouching down you perform the gestures of the Dresden inhabitants of 1945 by literally putting yourself in the same (physical) position as them. Through your performance, the past, already a part of the historical feel of the place, enters the present. You travel back in time to the night of the bombings and simultaneously time travels back through you; by crouching down, you yourself become a living memorial of the event. The night of the bombing is re-activated or re-enacted through the physical posture demanded by the installation, influencing the atmosphere of the place.

*Touched Echo* offers signaletic conditions of emergence for significations to arise without pre-determining how they will play out. What relations emerge depend on the system that arises through the interaction where the signals emitted from the balustrade mix with the signals of the body, creating an environment where lived relations between the human and the non-human, the past and the present, the physical place and the socio-cultural setting continuously and collectively individuate. The signaletic pertains to this transindividual potential for becoming-significant, and persists in the individuations that unfold relationally through the interaction, and

continue to function after the initial affective encounter.

## DISCUSSION AND CONCLUDING REMARKS

As I have argued throughout this article, there can be no doubt that the shift to real-time interactive and electronic media can benefit from a focus on the signal as a new paradigm for analysis. Such an analysis would focus on *how* we experience; how real-time interfaces create new kinds of affective encounters between people and technology, rather than *what* is experienced. Focusing on what makes us experience, what pulls us into and out of experience, is necessary for conceptualizing the impact of new technological assemblages and interactive environments on our affective experience of the world. However, as I have also argued we must be careful not to simply fall into the idea of one paradigm to replace the other. Instead, we should investigate what the signaletic allows us to say about already existing analytic approaches, to produce a fusion of approaches that unfold the dynamics of interactive technologies and environments.

To meet this challenge, I have turned to the work of Gilbert Simondon, which might function as a conceptual and philosophical starting point for moving back from the signal into a realm of signification. Simondon contributes to a thinking-together of the signal and signification, affect and emotion, as necessary to account for the experiential dynamics on a larger experiential continuum. As I have shown, incorporating these analytic dimensions in the understanding of interactive environments and technological assemblages helps unfold the experiential complexity at stake. It is necessary to account for how the affective is part of the emotional, how the signaletic becomes signification, not least to be able to qualify an interactive experience. As Simondon argues, it is not enough to have signals, if there is no signification. Following this, I have attempted to move more specifically into the realm of digital and interactive technologies via an analysis of Markus Kison's *Touched Echo*. In this analysis, I have shown how significations occur as lived relations that become more than interactive; relations that make felt the affective-emotive dynamics through the transindividual workings of

the interactive setup. This analysis also echoes Brian Massumi's claim that interactivity in itself is not enough to create a truly interactive experience:

It is not enough to champion interactivity. You have to have ways of evaluating what modes of experience it produces, what forms of life those modes of experience might develop, and what regimes of power might arise from those developments.<sup>25</sup>

To be truly interactive, a technological assemblage needs to be relational, creating conditions for lived relations.<sup>26</sup> And to be relational, the interactive setup must produce significations and collective individuations.

The article attempts to present a theoretical commentary to the relation between the sign and the signal through a Simondonian notion of signification. As such, it does not pretend to offer a fully-fledged analytic framework. Rather, the conceptual tour de force put forth seeks to creatively problematize the discourse on the relation between signal and signification as well as affect and emotion in order to unfold a more nuanced account of the analytic possibilities for making sense of the experiential impact of digital technologies and interactive environments.

## Notes

1. See among others Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham/London: Duke University Press, 2002); Patricia T. Clough, ed., *The Affective Turn: Theorizing the Social* (Durham/London: Duke University Press, 2007); Mark B.N. Hansen, *New Philosophy for New Media* (Cambridge, MA: MIT Press, 2004); Anna Munster, *Materializing New Media—Embodiment in Information Aesthetics* (Hanover: Dartmouth College Press, 2006); Nigel Thrift, *Non-Representational Theory: Space, Politics, Affect* (London and New York: Taylor & Francis Group, Routledge, 2007); Melissa Gregg and Gregory J. Seigworth, eds., *The Affect Theory Reader* (Durham/London: Duke University Press, 2010).
2. See note above for references in cultural and critical theory, in interaction design this is explicated in among others Anthony Dunne, *Hertzian Tales* (London: Royal College of Art, 1999); John McCarthy and Peter Wright, *Technology as Experience* (Cambridge, MA: MIT Press, 2004).
3. Brian Massumi, "The Thinking-Feeling of What Happens [interview]", *Inflexions* 1 (2008), 18.
4. See for example Massumi, *Parables for the Virtual* and Thrift, *Non-Representational Theory*.
5. This article relates and further develops the explorations undertaken in an earlier article, Christoph Brunner and Jonas Fritsch, "Interactive Environments as Fields of Transduction," *Fibreculture*, 18 (2011), 118–145.
6. Gilbert Simondon, "The Genesis of the Individual", in *Incorporations*, eds. Jonathan Crary and Sanford Kwinter (New York: Zone Books, 1992), 296–319; Isabelle Stengers, "Résister à Simondon", *Multitudes* 18 (2004): 55–62; Erin Manning, *Relationescapes: Movement, Art, Philosophy* (Cambridge, MA: MIT Press, 2009); Brian Massumi, "'Technical Mentality' Revisited: Brian Massumi on Gilbert Simondon", *Parrhesia Journal*, no. 7–8 (2009): 36–45. Adrian Mackenzie, *Transductions; Bodies and Machines of Speed* (London/New York: Continuum, 2002).
7. See Muriel Combes, *Simondon. Individu et collectivité* (Paris: Presses Universitaires de France, 1999) for a comprehensive introduction and Brunner and Fritsch, "Interactive Environments" for an attempt to use Simondon's vocabulary to address challenges in the design and analysis of interactive environments. See Massumi, "'Technical Mentality' Revisited" for an elaborated discussion of Simondon's relevance today.
8. This introduction partly builds on previous work presented in Brunner and Fritsch, "Interactive Environments".
9. Gilbert Simondon, *L'individuation à la lumière des notions de formes et d'information* (Paris: Millon, 2005), 23.
10. *Ibid.*, 252.
11. *Ibid.*
12. *Ibid.*, 23.
13. *Ibid.*, 263. Here, the notion of an ensemble covers the preindividual state of a system from which individuations emerge.
14. *Ibid.*, 263.
15. *Ibid.* Translation appears and has been taken from: <http://fractalontology.wordpress.com/2007/11/28/a-short-list-of-gilbert-simondonsvocabulary/>
16. *Ibid.*, 307. In *Cinéma 2* where Deleuze develops his notion of the signal, he also stresses that what he terms signaletic material is neither a language system nor a language:  

It is a plastic mass, an a-signifying and a-syntactic material, a material not formed linguistically even though it is not amorphous and is formed semiotically, aesthetically and pragmatically. Gilles Deleuze, *Cinéma 2: The Time Image*, trans. Hugh Tomlinson and Robert Galeta (London, New York: Continuum, 2005), 28.
17. Simondon, *L'individuation à la lumière des notions de formes et d'information*, 307.
18. *Ibid.*, 223.

19. Ibid.
20. Ibid., 247.
21. Ibid.
22. Ibid., 252. Simondon also names this relation “spirituality”, *ibid.*, 252.
23. Ibid., 260.
24. [http://www.markuskison.de/#touched\\_echo](http://www.markuskison.de/#touched_echo)
25. Massumi, “The Thinking-Feeling of What Happens [interview],” 9.
26. Ibid., 13.