

Spring 2009

Programmer

sous la direction de
SUZANNE LEBLANC



Sommaire/Contents

Programmer/Programming

- Introduction** 9
SUZANNE LEBLANC (Université Laval)
- PROGRAMME: L'ARCHITECTURE, L'ESTHÉTIQUE, L'INTERMÉDIALITÉ, L'ART, L'ÉCRITURE** 17
FRANCINE DAGENAIS (McGill University-Université Laval)
- Divinations** 39
MICHELLE KUO (Harvard University)
- Une époque circuitée** 57
JÉRÔME JOY (École nationale supérieure d'art Villa Arson Nice)
- Programmation architecturale et architecture virtuelle** 77
PIERRE CÔTÉ, JEAN-PIERRE GOULETTE et SANDRA MARQUES (École d'architecture de l'Université Laval et École nationale supérieure d'architecture de Toulouse)
- Programming and Reprogramming Artworks: A Case of Painting and Practicing Conceptual and Media Art by Other Means** 89
DAVID TOMAS (Université du Québec à Montréal)
- Programmer un pays**
Cybernétique et matérialisme dialectique en RDA 115
JÉRÔME SEGAL (ICCR Vienna)
- Artiste invité/Guest Artist**
- « Programmer l'imprévisible » :
la programmation comme pragmatique radicale** 143
SUZANNE LEBLANC (Université Laval)
- Ruedi Baur** 153
- Hors dossier/Miscellaneous**
- Interactivity and Affect in Intermedial Art:
Theorizing Introverted and Extraverted Intermediality** 177
JASPER SLUIJS et ANNEKE SMELIK (Radboud University of Nijmegen)

**Hors dossier
Miscellaneous**

Interactivity and Affect in Intermedial Art: Theorizing Introverted and Extraverted Intermediality

JASPER SLUIJS
ANNEKE SMELIK

17

In our study of intermedial art we were struck by the interactive musical-architectural artwork *Son-O-House* (Edwin van der Heide and Lars Spuybroek, 2004) and the animated movie *Elephants Dream* (multiple authors through open-source technology, 2006). These two digital artworks made us realize that the concept of intermediality was too broad to understand the specific effects and affects of contemporary intermedia. How could we account for human movement shaping both a curvature of arabesques and spatial sound projections? How could we analyze a collaborative, “open”, movie that we fail to understand, yet that highly engages us? We therefore took up the challenge to specify and designate a process that in its very complexity evades specification and designation. This article thus reflects on the flexibility of intermedial theory.

To better specify intermediality while at the same time doing justice to its dynamics and complexity, we introduce a focus on the *direction* of an art work rather than its meaning. In our view, the direction of an intermedial object can be “introverted” or “extraverted.” Introverted intermediality is directed inwards, drawing a reflexive attention to the intermedial relations of the work. Extraverted intermediality is directed outwards, engaging the subject through an affective register. Introverted and extraverted intermediality are not mutually exclusive or each other’s counterpart, but indicate two out of many dynamics of intermediality at play in a work of art. We hope that the identification of introverted and extraverted directions in intermedial objects enables a more specific analysis of intermediality.

In the first section we present our working definition of intermediality. The second part addresses introverted intermediality in the monumental piece of interactively sounding architecture *Son-O-House*, and the third section, extra-verted intermediality in the animated "open" movie *Elephants Dream*.

THE IN-BETWEEN OF INTERMEDIALITY

Various theorists have stressed the notion of the "in-between" as a crucial characteristic of intermediality. In one of the earliest definitions of intermediality, Dick Higgins points to the relations between various art forms and disciplines within the Humanities.¹ His writings have been quite influential in German thought on intermediality in the 1990s.² For the purpose of our research, we highlight Jürgen Müller's focus on the dynamic processes between media that push the object beyond mere multimodality. Intermediality constructs a conceptual fusion of media, resulting in a distinctly new dimension and experience that are not present in the separate media.³ This implies that the actual meaning of intermediality is determined by its context. But context is not sufficient to understand complex medial interactions. Musicologist Nicholas Cook points out that most studies of multimedia have focused on similarities between media, rather than on differences.⁴ He argues that the connected media relate dynamically to the

other media in a signifying practice through internal difference. Intermediality can then be understood as a contest or struggle between media, reframing one another through their interaction.⁵ Cook's notion of medial signification through conflict, flux and difference refers to the French philosophers of difference.

In the first issue of *Intermedialités*, Éric Méchoulan focuses on the ontological status of the "inter" itself, indicating that the term "intermediality" in fact doubles up its principle because "inter" and "medium;" both mean an in-between: "[...] pourquoi ajouter encore 'inter', comme 'l'entre de ce qui est au milieu'?"⁶ He argues that media are brought together through different relations to time: an intermediality that comes *after* the media as its effect; an intermediality that *precedes* the media; and an intermediality that is *present*, im-mediate, to the medium. In the same issue, Henk Oosterling argues that the in-between does not have a *locus* somewhere between the media, since it cannot be localized. The meaning of intermedia is thus always already mediated. This implies, in the first place, that a medium has no conceptual meaning in itself, and secondly, that intermedial meaning is instantly conveyed through mediation. In Oosterling's inimitable phrasing: "immediately mediated mediating immediacy."⁷

The key philosophers of the in-between are, of course, Deleuze and Guattari. For them, the in-between is the place of constant instability where things "pick up speed."⁸ By privileging difference over similarity, dynamic multiplicity over single linearity, and the rhizome over hierarchy, Deleuze and Guattari offer a toolbox for understanding intermediality as the in-between that makes a difference.

The dynamics of intermediality can thus be situated in its in-betweenness, in the very combination of media that produces an altogether new experience. Crucially, this experience is the result of the "inter," which can never be reduced to any of the individual media that prefigures it. As Sylvano Santini remarks, intermediality is found in "[...] le mystère du mouvement substantiel [...];"⁹ the mystery being that movement is perceived and experienced between the media

1. Dick Higgins, *Horizons: The Poetics and Theory of Intermedia*, Carbondale-Edwardsville, Southern Illinois University Press, 1984, p. 15-29.

2. Jürgen E. Müller, *Intermedialität: Formen moderner kultureller Kommunikation*, Münster, Nodus Publikationen, 1996; Jürgen Müller, "Intermediality: a Plea and some Theses for a New Approach in Media Studies," in Ulla-Britta Lagerroth, Hans Lund and Erik Hedling (eds.), *Interart Poetics: Essays on the Interrelations of the Arts and Media*, Amsterdam and Atlanta, Rodopi, 1997; Eric Vos, "The Eternal Network: Mail Art, Inter-media Semiotics, Interarts Studies," in Lagerroth, Lund and Hedling (eds.), 1997; Werner Wolf, *The Musicalization of Fiction: a Study in the Theory and History of Intermediality*, Amsterdam and Atlanta, Rodopi, 1997; Yvonne Spielmann, *Intermedialität: das System Peter Greenaway*, München, Wilhelm Fink Verlag, 1998; Yvonne Spielmann, "Intermedia in Electronic Images," *Leonardo*, vol. 34, n° 1, February 2001, p. 55-61; Peter Wagner (ed.), *Icons, Texts, Iconotexts: Essays on Ekphrasis and Intermediality*, Berlin and New York, Walter de Gruyter Verlag, 1996; Werner Wolf, *The Musicalization of Fiction: a Study in the Theory and History of Intermediality*, Amsterdam and Atlanta, Rodopi, 1999; Peter Zima, *Literatur Intermedial: Musik-Malerei-Photographie-Film*, Darmstadt, Wissenschaftliche Buchgesellschaft, 1995.

3. Müller, 1996, p. 83-89.

4. Nicholas Cook, *Analyzing Musical Multimedia*, Oxford, Oxford University Press, 1998. His work has been sadly neglected in studies on intermediality.

5. *Ibid.*, p. 103.

6. Éric Méchoulan, "Intermedialités: le temps des illusions perdues," *Intermedialités*, n° 1, "Naître," Spring 2003, p. 22.

7. Henk Oosterling, "Sens(a)ble Intermediality and Interesse: Towards an Ontology of the In-between," *Intermedialités*, n° 1, "Naître," Spring 2003, p. 42.

8. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi, London and New York, Continuum, 2004, p. 28.

9. Sylvano Santini, "La perception du mouvement entre disparition et apparition: réminiscence mallarméenne de l'intermedialité," *Intermedialités*, n° 10, "Disparaître," Autumn 2008, p. 45.

rather than being something within the isolated medium itself. Thus, the experience of movement creates intermediality: "le résultat de la synthèse de deux médias."¹⁰ The relation between the media is a fundamentally unstable process, the outcome of which is never certain. This raises the question how meaning is constructed in an intermedial experience. Or whether it is still appropriate to speak in terms of "meaning." Perhaps intermediality is better understood, with Deleuze, in terms of "what it does" rather than "what it means."¹¹ To enhance our understanding of the experience that is produced by intermedial connections, we need to delve deeper into the in-between of intermediality. Introducing the terms of "introverted" and "extraverted" intermediality might help us to do so.

As we have seen, the in-between involves instability and movement. We therefore want to refocus on the direction of intermediality by questioning how the media relate to one another, and how the intermedial object relates to the audience. Direction points to a general development on a certain track without paying attention to a final stage. In defining a possible direction of intermediality, the continuous development between the media is left intact, while at the same time a non-representational and non-teleological specification is enabled. We suggest two possible directions: introverted and extraverted.

"Introverted" intermediality is directed inward, in that it draws attention to its own principle of intermediality as an in-between of different media. As such, it is meta-reflexive. Introverted intermedial relations can be formal, abstract and stylized, but they still require the participation of the spectator or user. "Extraverted" intermediality is directed outwards, in that it draws attention to its expressive features. Its intermedial relations are diffuse and moving, triggering affect and sensation for its audience. It thus results in a certain *je ne sais quoi* that is highly engaging.

The distinction between introverted and extraverted intermedia is fluid and flexible. Our aim is not to postulate sub-categories of intermediality, but, more modestly, to offer some suggestions for possible further classification of intermediality. In the following two sections we want to experiment with this classification of intermedia by further theorizing introverted and extraverted intermediality in relation to digital art works.

THE HOUSE WHERE SOUNDS LIVE

Son-O-House is a public art work situated in a small park of an industrial complex reserved for IT and new media companies near Eindhoven in the Netherlands, the headquarters of multinational Philips. This piece of interactive "sounding" architecture is made by architect Lars Spuybroek and electronic musician Edwin van der Heide. *Son-O-House* features an interplay between architecture and music through digital technology, testifying to a complex intermedial process that involves interactivity.

The building is approximately twenty meters long by six meters wide by four meters tall, placed on a concrete surface that roughly follows the formation of the object. *Son-O-House* does not contain a single straight line, including the slightly sloped surface on which it stands. The curves of the building are covered with stainless steel plates and wire netting, leaving parts of the structure semi-transparent while the steel plates cast shadows inside. The object has an entryway on each side, although it is not possible to enter *Son-O-House* from any way standing straight. Once inside the building, the visitor is dazzled by the multitude of curved lines and the various vanishing points guiding the eyes to all sorts of directions. Forming an amorphous and rhizomatic whole, *Son-O-House* does not have a fixed center. Speakers in the building are attached to curves, covered in balls of wire netting to meet the overall design of the object.

Its architectural construction was rather complex and followed four stages.¹² In the first stage, the movements of a person walking through a house were recorded. In the second stage, a recorded sequence of these movements was translated methodically into incisions in paper strips. When these strips were stapled together and placed on a surface, they automatically formed a complex structure of bent arches that was generated by the cut material itself. In the third stage, the form erected by the paper strips was met by perpendicular bands. This stage, too, generated a curvature, which was then digitalized into a computer model. By computer animation the ends of the curves were knotted together. The form generated in the computer was then transferred to stainless steel rib curves.

The work is situated explicitly in-between architecture and music. The aural aspects of *Son-O-House* consist of a "complex feedback system in which visitors are both listeners and interpreters."¹³ Composer Van der Heide's aim

10. *Ibid.*, p. 51.

11. Claire Colebrook, *Understanding Deleuze*, Crows Nest, Allen & Unwin, 2002, p. xiv; Simon O'Sullivan, *Art Encounters Deleuze and Guattari: Thought Beyond Representation*, Basingstoke and New York, Palgrave Macmillan, 2006, p. 43.

12. Lars Spuybroek, "Son-O-House, a House where Sounds Live," in Lars Spuybroek (ed.), *NOX: Machining Architecture*, London, Thames & Hudson, 2004, p. 174-178.

13. *Ibid.*, p. 196.



Fig. 1: *Son-O-House* does not contain a single straight line. Paper model 2004. Courtesy NOX/Lars Spuybroek.

in collaborating with Spuybroek was “to get rid of the distinction between architecture and sound.”¹⁴ This called for a spatial interpretation of sound, by which it could act on the same plane as architecture. In order to make the sounds in *Son-O-House* into a spatial composition, they are not based on identical repetition but rather on internal difference, that is, on constant variation and development. This process is constituted through interactivity. The *Son-O-House* is divided into five sound fields which each have four loudspeakers. Throughout the building twenty-four sensors are placed at different heights and in different positions.

The sensors track movements of the visitors and alter the sounds of the speakers closest to the particular sensors accordingly. The movement around the sensors is statistically analyzed, to find out which places in the building attract more movement and which ones do not. The sounds that are played at “popular” places are then slowly transferred to less popular spots. Spuybroek and Van der Heide argue that if in these less popular spots the sensors gradually track

14. Edwin Van der Heide, “*Son-O-House: Interactive Sounding Architecture*,” in Joke Brouwer, Arjen Mulder and Anne Nigten (eds.), *aRt&D: Research and Development in Art*, Rotterdam, V2_publishing/NAi Publishers, 2005, p. 76.

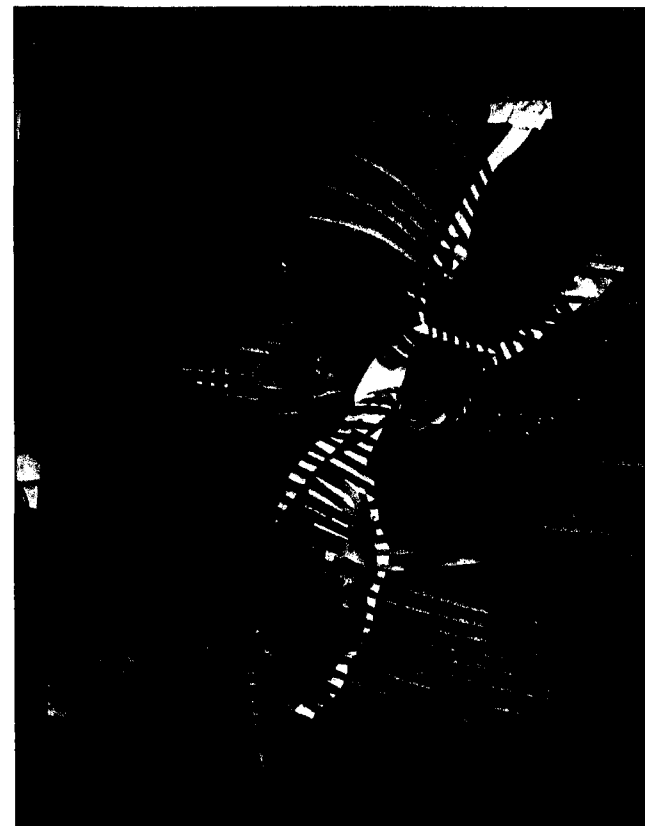


Fig. 2: Paper strips form a complex structure of bent arches, generated by the material itself. Picture of model *Son-O-House* 2004. Courtesy NOX/Lars Spuybroek.

more movement, this can be understood as the result of sound transition. In such a case, the system stores the sounds for possible future re-use. A double-sided interactive process is thus at work: by their movements visitors leave traces in the continuously changing composition of *Son-O-House*, while at the same time the system learns which sounds are most effective in triggering and influencing human movement. It is important to note that the musical interaction is indirect: a visitor does not drastically alter the featured sounds, nor will she easily perceive the influence she has. Instead, the overall sound composition gradually changes due to human movements. *Son-O-House* builds on the generative difference between sound and architecture, allowing both media to meet through spatial connections. Mark Hansen’s analysis of *Son-O-House* astutely points out that the musical and architectural interaction both define space through movement, in

different interactive processes that are nevertheless interconnected.¹⁵ Here we may recall Santini's insight that it is the movement between the media that results in intermediality, where neither medium is a "[point] de départ ou d'arrivée; [l'intermédialité] veut somme toute saisir ensemble événement et inachèvement."¹⁶ In *Son-O-House* the recorded bodily movement is coupled to the material self-organization of the paper strips, resulting in a form—the building—that in itself enables movement within the construction. Moreover, the movement in the architectural form of the building facilitates the subject's interaction with the composition of *Son-O-House*. Finally, through the subject's movement the internal composing system changes, which in turn has the potential to influence the movement of people in the building. Movement in the artwork *Son-O-House* brings about an introverted form of intermediality that approaches, in Santini's words, "la fluidité de l'être;" the fluid process of life itself.¹⁷

THE REFLEXIVITY AND INTERACTIVITY OF INTROVERTED INTERMEDIALITY

Son-O-House is obviously an intermedial object, where two media, sound and architecture, meet without any relation of hierarchy. As composer Edwin van der Heide remarked, the sounds act either in analogy or counterpoint to the architectural space, with neither medium defining the significance of the actual artwork. The question is how *Son-O-House* can be understood as a form of introverted intermediality.

As we recall, difference is important in understanding intermediality as the in-between. In *Difference and Repetition*, Deleuze develops an alternative to the traditions of transcendence and representation, by carefully delineating the process in which difference and repetition coalesce.¹⁸ In a dynamic interplay, an incorporated difference is repeated, generating a series of independent and positive repetitions, each with a productive and creative potential. Any repetition of a given in a series is only seemingly an identical repetition. Repetition

therefore operates on two planes: internally, repetition is constituted through difference, while externally, the resemblance is only a simulacrum of identity.¹⁹

The ideas presented in *Difference and Repetition* once again emphasize the need to approach intermediality through the potential that arises out of the difference between media. Deleuze offers a perspective on the internal mechanisms of intermediality. This allows us to understand *Son-O-House* as an artwork in which the different parameters of sound and architecture function as a creative nucleus. Architect Spuybroek and composer Van der Heide have constructed a work in which sound and shape are creatively juxtaposed, resulting in an experience that builds on internal difference. While Spuybroek's architectural design is fundamentally material—generated by the curvature of the paper strips—it is both non-linear and non-representational. *Son-O-House* does not represent an external intention or model, because its form is constructed by coincidence. No single shape is identical to another, as all shapes originate in recorded human movement. Similarly, the composition of *Son-O-House*'s sound fields is not determined by repetition or variation on a basic musical theme. Instead, the composition is dynamic and its constant variations are due to a mechanism of indirect interaction: repetition through difference, difference through repetition. The non-representational and interactive nature of both sound and architecture in this work enables an "open," non-hierarchical relation between the media involved.

In our attempt to analyze a complex work like *Son-O-House* more closely we turn to the theoretical work by electronic composer Dick Raaijmakers. Raaijmakers experimented with popular electronic music for the Philips physics laboratories and developed analog sampling, looping and sequencing devices as early as the late 1950s. His current work moves between three artistic disciplines—music, theater and visual art—in a highly unconventional sense reminiscent of Fluxus.²⁰ Raaijmakers has extensively documented and theorized his work and artistic principles. His views on the visual aspects of electronic music are particularly suitable in further classifying introverted intermediality, allowing us to go beyond the boundaries of intermedial theory. According

15. Mark Hansen, "Embodiment: the Machinic and the Human," in Brouwer, Mulder and Nigten (eds.), 2005, p. 155-160.

16. Santini, 2008, p. 52.

17. *Ibid.*, p. 53.

18. Gilles Deleuze, *Difference and Repetition* [1968], trans. Paul Patton, London and New York, Continuum, 2004, p. 82.

19. *Ibid.*, p. 155.

20. See the documented CD releases Popular Electronics: Early Dutch Electronic Music from Philips Research Laboratories 1956-1963 (2005, Basta Music) and The Complete Tape Music of Dick Raaijmakers (2006, NEAR/Domenus) for further information on Raaijmakers oeuvre. See also the English language edition of Dick Raaijmakers' monograph: Joke Brouwer and Arjen Mulder (eds.), *Dick Raaijmakers, a Monograph*, Rotterdam, V2_Publishing, 2008.

to Raaijmakers, the outcome of a combination of media should meet three criteria: it should be self-referential; consist of an elementary and simplified form; and induce active participation by the audience. In our view, these requirements constitute the kind of introverted intermediality that can be found in *Son-O-House*.

Raaijmakers used modernist painter Piet Mondriaan's views on music, which propose a non-hierarchical structure of music based on the primary colors, called "neo-plasticism." There should be three primary sounds, to be alternated with three sounds representing the non-colors white, grey and black. The alteration between colored and non-colored sonic sequences should not be the result of any hierarchy or linearity, but the distinction should function as an organizational principle between "tone" and "—tone". Moreover, this principle abandons traditional notions of harmony and melody. Mondriaan formulated it as follows: "One sound will be immediately followed by another—which is truly 'other' and which is by no means the 'rest' found in old music."²¹ The resemblance to Deleuze's views is remarkable, as he formulated a distinction between being and —being, where non-being is by no means a negation of being.²²

Raaijmakers rightly remarks that as music will always contain a temporal element, it will therefore produce some sort of linearity: the horizontal movement through time. When combining sounds with images some problems arise: while sound may be temporal *a priori*, images do not have temporal parameters.²³ How then to combine these two, without one of the media becoming more important than the other? Raaijmakers works out an elaborate theory that features a *spatial* understanding of sound. He argues that the melody of music follows a horizontal direction, whereas in harmony melodic elements are vertically stacked on top of each other. He introduces a third dimension to sound: depth. The horizontal (melodic) and vertical (harmonic) movement of sound forms a two-dimensional plane following the x and y axis. This plane, however, is two-dimensional only when viewed full frontal. Behind each plane is an acoustic aggregate that constitutes the tone with a spatial depth on a z axis. Depth here should not be understood in the more conventional sense of reverb, but rather as timbre. The spatial aggregate of sound allows for a dimension that is not necessarily affected by time. According to Raaijmakers, here lies a great

potential for music that is still largely virgin territory. Through the z axis, real interaction with other—non-temporal—media can be acknowledged to surpass the temporal linearity that is a given in sound. Rather than strictly following the linearity of time in melody and harmony, the listener of three-dimensional music is able to participate more actively and tilt her perspective in order to perceive the three-dimensional quality of a sound. Hierarchical structures between composer, score, performer and listening subject are thus contested, because the subject can experience an object more independently.²⁴

The active role that Raaijmakers designates to the listening subject is similar to the interactivity of *Son-O-House*. The work of Spuybroek and Van der Heide needs the visitor's active participation in order to establish a creative difference between media. Without the interactive sound production, *Son-O-House's* architecture could not enable any interaction with its visitors. Conversely, without the building's structure that people can traverse in all directions, no interactive composition would be possible. The media in *Son-O-House* thus meet one another through the participatory subject. Raaijmakers further specifies the active role for the subject in stressing the need for a simplified form. When distilled to its most elementary form, he argues, audiovisual composition consists of repetitive pulses. The most fundamental artistic form possible is the single pulse, which, in order to be perceived, requires a temporal duration by being followed by a non-pulse. By itself the single pulse means nothing; it needs a second pulse to gain any meaning. Consequently, it is only in the act of initiating a second pulse that something can become a composition or a structure.²⁵ The most basic repetition of a single pulse is necessarily a different entity relative to that single pulse—again we find repetition of difference, difference through repetition.²⁶

24. *Ibid.*, p. 51-56.

25. In an insightful article Briankle Chang has taken this argument one step further in a slightly different context. Chang, too, acknowledges that the beginning of a series can never exist in isolation: if a beginning is not followed by anything else, it cannot possibly be the beginning of anything at all. Only when the initiative is repeated, can it be perceived as an original in the first place. Chang deftly points out the implications of this situation: ontologically, "firstness" actually moves to the third place in line. One can only recognize the original as original, after its first repetition. The first term of a series marks identity, the second characterizes difference, while the third marks the beginning of the series and thus the perception of series as such (Briankle G. Chang, "Deleuze, Monet and Being Repetitive," *Cultural Critique*, vol. 41, Winter 1999, p. 188-190).

26. Raaijmakers, 2005, p. 89-110.

21. Dick Raaijmakers, *Cahier "M": a Brief Morphology of Electric Sound*, Leuven, Leuven University Press, 2005, p. 31.

22. Deleuze, 2004, p. 253.

23. Raaijmakers, 2005, p. 35-38.

Since Raaijmakers' concern is audiovisual art, he subsequently pays attention to the visual arts. He criticizes the top-down credo of representation through the subject's role in mediating the outside world. Raaijmakers exemplifies his views by distinguishing between the movement and stasis of object and subject during the playback of a recorded sequence. When the object is in motion while the subject is not, the subject is passively watching a spectacle that is imposed on him, as is the case in traditional theater and cinema. This situation changes when subject and object act the other way round. When the subject has the ability to move around and through a static object, he can take on an active role and perceive the object (inter)actively.

For the subject to be able to participate and relate to an artwork, it should be as elemental, simple and straightforward as possible. Raaijmakers refers back to the minimalism of 20th century modernism here, yet he goes beyond mere formalism by highlighting the active role of the subject. He claims that the elemental form of an artwork allows for active perception, leading the subject to the inner mechanisms of the artwork. It may come as no surprise that Raaijmakers rejects any representational value of the artwork, but rather situates its value in its intermediality. We can find the same value in *Son-O-House*, where a new experience emerges beyond strictly musical or architectural terms. In drawing attention to its own double mechanism of interaction that is interconnected between the planes of sound and architecture, the object becomes both self-referential and meta-reflexive. It is because of these qualities that we want to define *Son-O-House* as an artwork of *introverted* intermediality.

Deleuze's notion of complex repetition through internal difference finds its aesthetic equal in Raaijmakers' spatial depth in music. Raaijmakers has investigated the most elemental form of intermedial composition—a non-identical series of pulses—to conclude that only through the simplicity of an object can an active role of the subject be made possible. Deleuze and Raaijmakers also meet in their critique of representational logic. For Deleuze, difference forms an alternative to the hierarchy of representational perception. Raaijmakers approaches representation from the viewpoint of the audience: opposing passive (representational) perception he offers an alternative of (inter) active artistic experience. The strength of combining the two theoretical frameworks lies in the possibility of actualizing the implementations of Deleuze's philosophy with Raaijmakers' ideas on multimedial art.

The interplay of Raaijmakers and Deleuze enables us to understand introverted intermediality with reference to Spuybroek and Van der Heide's *Son-O-House*. The three parameters—elemental form, self-referentiality, active

participation—help to specify the notion of introverted intermediality. The requirement of elemental form may need some further explanation, because at first sight the complex structure of tilted arabesques *Son-O-House* seems anything but a plain and simple form. However, the actual building with its diffuse curvature is only a materialization of a highly abstract and simple form of cuts in paper strips. In our view, this digitalized abstraction defines the basic and elemental formation of *Son-O-House*. Its complex system of interactive intermediality is elemental in form, which allows visitors to partake in the composition: whoever experiences *Son-O-House* inevitably becomes part of the construction of the artwork itself. Raaijmakers' theory (as well as his own art) favors introversion: the subject is supposed to delve deep into the interior of an artwork. In the case of an intermedial artwork, that interior is experienced in the unspecified locus in-between media. *Son-O-House* does not generate representational meaning, but produces an intermedial experience that is situated in the in-between. The self-referentiality and the active participation are thus part and parcel of introverted intermediality.

AN OPEN MOVIE

Our second case study is the short movie *Elephants Dream*, which allows us to expand on the concept of *extraverted* intermediality. An animated movie of approximately ten minutes, *Elephants Dream* is the result of seven months of work by an international core team of seven people ("Project Orange") aided by a community of open-source volunteers. It is a co-production between Blender Foundation—an open source software collective—and Montevideo—a media art institute, both located in Amsterdam. The idea of *Elephants Dream* was to produce an animated movie that is totally "open": while entirely produced by open-source software, the source code of the movie itself is also freely available for anyone to alter the movie's form or content.²⁷

The basic premise behind the project of *Elephants Dream* was that only open source software should be used. Necessary programs in open source format had to be coded by the filmmakers themselves. The emphasis on technical issues in the early stages dominated some of the creative developments, which resulted in a highly unconventional and non-linear process of production. For instance, the

27. Our source for the section on *Elephants Dream* is the website www.orange.blender.org (last access March 14, 2010), where *Elephants Dream* can also be downloaded. We have also used the "making of" documentary by Thomas Kinast and Christian Huter (2006) and Project Orange's presentation at the Blender Conference of October 2006.



Fig. 3: The two characters Proog and Emo inhabit a giant machine in *Elephants Dream*. Copyright 2006, Blender Foundation/Netherlands Media Art Institute / www.elephantsdream.org.

Orange team developed a script along the way—there was never a “final” script that functioned as point of departure. The creators of *Elephants Dreams* thus worked on the production of the movie without ever having a clear idea how its story would end. The character design also continued to be a “work in progress” throughout the project. The short movie is a clear example of “mutual remediation” between cinema, music and digital media that Jay David Bolter regards as an important form of intermediality.²⁸ Moreover, as the project progressed and other people joined the ongoing process through open source communities on the Internet, the movie kept changing and transforming itself. When sounds, music and voice recordings were added in the final production stages, the movie was again drastically altered. The musical interpretation of the script, for example, led to significant changes in the creative production of the movie: because of the unexpected quality of voice recordings, the creative team had to re-model the characters to make their physical movement and expression match the voice actors’ intense performance.

The movie’s title, *Elephants Dream*, refers to the tradition of making up bedtime stories for children. The movie’s narrative structure is as fragmented as a typical bedtime story with open endings and dead ends. *Elephants Dream* consists of eight scenes that are neither connected logically nor linked within a

unifying narrative. The movie features two male characters, the surly old Proog and naive young Emo, who inhabit a giant machine together with flocks of mechanical ducks. The look of the short film is a mix of sci-fi and gothic horror. The movie never explains where the machine comes from, whether it represents anything, or what Proog and Emo are doing there. The passages between spaces and scenes appear out of nowhere. *Elephants Dream* opens when Proog and Emo are attacked by harpoon-like objects. Although the viewer expects an explanation for these attacks, it remains unclear why they take place or who is behind them. The film ends after another attack by large tentacles and a giant hand. As Emo falls unconscious, the hand and tentacles gradually shrivel. Proog kneels next to the (lifeless?) body of Emo: “It is there!” he cries in the howling wind, “I’m telling you Emo, it is! It is.” This is how *Elephants Dream* ends. This short description indicates that a basic premise for a character-driven plot is absent from *Elephants Dream*. There is no classical story with a beginning, middle and end, nor is there a rational center designating its meaning and closure.

Online Blender forums are filled with interpretations of Proog and Emo’s story, while the developers have communicated their views on its meaning as well. However, its signification is not the point, because the “open” in “open movie” does not only refer to the open-source form of *Elephants Dream*, but also to its content. The open source technology and the collaborative nature of the project created a disorganized production process that resulted in a continuous changing of the script, the sound track and the images. Perhaps unintended initially, the outcome was a fragmentation of the story shattering any linearity or representational logic. Denying the viewer any underlying signification, the movie also blocks identification with the characters. *Elephants Dream* has multiple entryways into the rhizomatic narrative, offering its own tautological sense. The movie ends after a dramatic build-up in the final scenes, but still leaves the viewer clueless as to what has happened or what will happen next. Is Emo dead? Is the machine Proog’s imagination? Does Emo’s skepticism prevent him from actually seeing the machine? These questions will not be answered. This undecidability, its very openness, makes up much of the appeal of the movie. *Elephants Dream* thus illustrates what Bolter sees as the desired hybridity resulting from the remediation of cinema through digital technology.²⁹

The lack of a linear narrative, the impossibility of identification, the absence of a single meaning, and the denial of closure allow, perhaps surprisingly, for the emergence of a new experience. This experience can be understood in terms of

28. Jay David Bolter, “Transference and Transparency: Digital Technology and the Remediation of Cinema,” *Intermedialités* n° 6. “Remédier.” Autumn 2005, p. 14.

29. *Ibid.*, p. 16.



Fig 4: Proog kneels down to Emo's body—a dramatic ending without closure in *Elephants Dream*. Copyright 2006, Blender Foundation/Netherlands Media Art Institute / www.elephantsdream.org.

affect. We use affect in its Deleuzian sense as a moment of intensive quality,³⁰ or as a bloc of sensations waiting to be activated by a viewer.³¹ Affect is an experience for the spectator that comes prior to meaning. It is according to Colebrook “a sensible or sensibility not organized into meaning.”³²

Elephants Dream is a highly engaging animated film that produces affects of surprise, disgust, delight and empathy in the spectator. The harpoons that suddenly fly by, the creepy inside of the telephone receiver, Proog's dance on the typewriter buttons, Proog kneeling next to the body of Emo, are all examples of an affective experience for the viewer. We contend that affect is not only related to the non-linearity of the fragmented narrative in *Elephants Dream*, but also to its intermediality. As demonstrated, small changes in either image, sound (music, speech) or text (script) dramatically influenced any of the other media, as well as the overall structure of the animated film. The dynamic processes between the media in *Elephants Dream* construct a conceptual fusion, resulting in a distinctly new experience that could not evolve from its separate media.³³ Affect arises from

this non-localized in-between. Contrary to the introverted intermediality of *Son-O-House* that produces a reflexive experience for the visitor, the intermediality of *Elephants Dream* is directed outwards, producing a new, affective, experience for the spectator. Therefore, it is for us an example of extraverted intermediality.

THE INTENSITY AND AFFECT OF EXTRAVERTED INTERMEDIALITY

In this section we want to further flesh out the concept of extraverted intermediality, which, we argue, is first and foremost affective, leading to a sensory engagement in the viewer. We showed that meaning is not the point of *Elephants Dream*. As Colebrook puts it: “Art may well have meanings or messages but what makes it *art* is not its content but its *affect*...”³⁴ In his books on cinema, Deleuze calls for a productive analysis of film in terms of affect rather than in terms of representation.³⁵ Cinema, like any art, is never just representation but instigates always a process of affect and transformation. The affect of the rhizomatic *Elephants Dream* communicates an artistic sensation, that, in our view, lies in its aesthetic intermediality. Hence, let us turn to the notion of affect.

In Deleuze and Guattari's aesthetics a “bloc of sensations” constructs the artifact. They emphatically state that it is sensation, and only sensation, that can produce an artifact. Sensations are forces that are immediately and directly experienced through the body itself, and not by any representational model. The sensations are the result of a compound of affects and percepts. Percepts are interpreted as non-representational perceptions, out of which an affect can arise. An affect is also non-representational—it lies in-between affections, and dynamically connects subjective states.³⁶ Affects “are no longer feelings or affections, they go beyond the strength of those who undergo them.”³⁷ Sensations, as bundles of affects and percepts, therefore contest the linear relation between subject and object. We can now understand the disjunction in *Elephants Dream* between the representational percepts and the non-representational affects that they trigger. On a representational level, the viewer may wonder about the nature of the machine Proog and Emo inhabit, why the mise en scène resembles larger than life switchboards or camera lenses, or how this relates to the overall

30. Gilles Deleuze, *Cinema 1: the Movement-Image*, trans. H. Tomlinson and B. Habberjam, London, The Athlone Press, 1986.

31. Gilles Deleuze and Félix Guattari, *What is Philosophy?*, trans. G. Burchell and H. Tomlinson, London, Verso, 1994.

32. Claire Colebrook, *Gilles Deleuze*, London, Routledge, 2002, p. 34.

33. Müller, 1996, p. 83-89.

34. Colebrook, 2002, emphasis in original, p. 24.

35. Deleuze, 1986; Gilles Deleuze *Cinema 2: the Time-Image*, trans. H. Tomlinson and R. Galeta, Minneapolis, University of Minnesota Press, 1989.

36. Gilles Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley, San Francisco, City Lights Books, 1988, p. 49.

37. Deleuze and Guattari, 1994, p. 164.

narrative. These representational musings are, however, irrelevant as they do not make sense into a coherent narrative. Instead, the fragmented nature foregrounds the audience's experience of irrational and non-representational percepts and affects. *Elephants Dream* appeals to us because of its loose ends and the shiver down our spine. Hence, the point here is not meaning, but affect.

Brian Massumi reworks Deleuzean affect through a distinction between the *quality*—content, indexing to conventional meaning—and *intensity*—the effective strength—of a stimulus.³⁸ Intensity is embodied in purely automatic and unconscious reactions, through the skin and nerves, while quality requires a conscious action of the subject to relate to the narrative or aesthetic structure of an object. Affect is deeply localized in the body, as it goes through the brain before being measurable in heartbeat, breathing, goose pimples or other physical reactions. Quoting empirical studies in neurology, Massumi argues that a bodily event has its origin in the unconscious before resulting in an active and conscious completion. It is in this unconscious state that he locates the affective sphere of intensity. An actual expression is the result of a virtual affective reservoir of intensities emerging into actuality. The reservoir of intensity is filled with habits, that is, with past actions and perceptions in body and brain. These are communicated as potential stimuli, leading to action. Massumi claims that an affective virtual plane is the intermediate between potentiality and actuality: potential stimuli are pressed into the actual sphere. This process takes place through affect. Affect does not have a linear *locus* in between the potential and the actual, but resides as an amorphous passage that is inseparable from the two planes it connects. The effect of intensity is therefore always rhizomatic, that is, non-linear and non-structural. As for Deleuze, Massumi's affect lies in-between stages, in this case between the potential and the actual.

By focusing on intensity, Massumi further specifies the role of affect within sensation, which is so important for Deleuze's and Guattari's views on art. Art is for them "the language of sensations" that disengages "the triple organization of perceptions, affections and opinions." An art work is made up of affects, percepts and blocs of sensation that "take the place of language." It is only through sensation that a work of art can "stand up on its own," meaning that it can exist independently of representation.³⁹ With the emergence of a bloc of sensations, an artwork reaches its goal of offering an alternative to the logic of

representation and the linear system of meaning. One of the means of achieving a bloc of sensations is through intermediality. As we have seen in *Elephants Dream*, intermediality implies the rhizomatic emergence of an original experience from the in-between of different media, effectuated through the absence of a linear narrative, subjective identification, single meaning, and final closure. Within the rhizomatic in-between of an intermedial percept, affect plays a pivotal role. Affect is the potential that unfolds in the actual experience of the viewer, because she is not so much interested in where Proog and Emo's supersonic elevator ride will take them, but rather fascinated by the elevator slowly falling apart when it reaches the outside of the machine before slamming down on the ground. An open-ended affect of surprise and confusion mixed with horror arises when Emo pushes walls away from him and eventually makes an entire room break down by massive tentacles that appear out of nowhere. As a moment of intensive quality, affect provokes a non-linear, dynamic and rhizomatic experience of the story. As we have seen, the asynchronous production of *Elephants Dream*, in which image, sound and text constantly rework each other, results in an animated movie stripped of linearity and rationality. In such circumstances, affect is foreground, while the more laborious process of signification is relegated to the background. In our view, then, affect in *Elephants Dream* depends on its radical intermediality.

We want to argue that the complexity and richness of intermediality produce affect in the audience. In such cases, we propose to specify intermediality as extraverted, because its direction is geared towards the outside world. The vital characteristic of what we have termed extraverted intermediality points to the notion of affect as an impersonal intensity that establishes a relation to the outside world, beyond the merely subjective or personal. The affective level of extraverted intermediality thus requires the spectator to ascertain an experiential relation to the film or artwork. The regime of extraverted intermediality creates a different mode of creative spectatorship, pointing to the transformative power of affect.

TOWARDS A THEORY OF INTROVERTED AND EXTRAVERTED INTERMEDIALITY

The architectural-musical artwork *Son-O-House* and the open animated movie *Elephants Dream* pose a challenge for research on intermediality, because they border on the fringes of the media that constitute them, resulting in a medial interplay that conventional theory can barely grasp. As such, they are examples of the precarious in-between of intermedial connections. While the in-between opens these works up to various interpretations, it also enables and perhaps

38. Brian Massumi, "The Autonomy of Affect," *Cultural Critique*, n° 31, "The Politics of Systems and Environments", Part II, Autumn 1995, p. 83-109.

39. All quotes in this passage are from Deleuze and Guattari, 1994, p. 164-167.

demands new steps in theoretical frameworks. In this article we have undertaken such steps by specifying a subdivision of intermediality that signals a direction rather than a meaning: introversion and extraversion.

On the basis of an analysis of *Son-O-House* we have argued that introverted intermediality is directed inwards in its self-reflexivity. The artwork invites the visitor to reflect upon the in-between of the media involved, architecture and music. Self-reflexivity is not necessarily a passive enterprise; on the contrary, it is induced by the interactivity of the artwork. In fact, the building and music together activate the visitor whose movements and actions are the *sine qua non* for the intermedial artwork to take effect. On the basis of an analysis of *Elephants Dream* we have proposed that extraverted intermediality is directed outwards in its affectivity. Affect offers an alternative to narrative perception and linear closure and thus challenges more traditional subject positions for the spectator or user. Affect as an effect of extraverted intermediality may help to rethink the spectator or user position in terms of affinity and intensity, rather than distance and detachment.

The aim of our article has on the one hand been methodological: by approaching the introverted and extraverted directions of intermedial artworks we have hoped to analyze their dynamic and rhizomic registers. On the other hand, our aim was to further develop the concept of intermediality and make it more precise, productive and effective for analyzing contemporary artworks. In our view, introversion and extraversion are helpful tools in understanding intermediality as a theorem. The case studies illustrate how introversion and extraversion in intermediality can potentially work. Introversion and extraversion are, however, merely two possible directions of intermediality. There may indeed be other directions of intermediality that could be distinguished and theorized: circular, upward, downward, intensive, extensive, rhizomic. Future works of art will certainly point to a myriad of intermedial directions, inviting visitors or spectators to new forms of reflexivity and affect, and challenging academics to create new concepts that acknowledge the dynamics of intermediality.