

## RHYTHM-HOUSE: A VIRTUAL DESIGN FOR THE DIGITAL

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*Instead of mathematical form, [a] design has – or rather, is – ‘living’ form, though it need not represent anything living ... not really movement in the scientific sense, change of place; [but] the semblance of rhythm.*  
(Langer, 1967: 63)

### **Enter. The Trembling House of Rhythm**

You are standing in a dark room, the first of three interconnected spaces comprising the building of Rhythm-House. You are wearing a luminous belt. As you move through the room, you are unaware of hidden cameras fitted on the ceiling directly above you, which detect any movement in the room.<sup>1</sup> Your only guide in wandering through this dim space are very low frequency sounds, constantly changing their location, intensity and audibility. These are recorded from changes in the infrastructure of the building – such as temperature, climatic and tectonic variations – and then mixed with non-audible high frequency components, thus giving the impression of random rhythms that are barely audible. Rather than visibly or sonically, the house unravels rhythmically via faint murmurs, tremors and tacit pulsations. From time to time you may feel rhythms that appear smooth, alluring and ‘playful’, while other rhythms may scare and repel your body, compelling it to flee to the next room. Inside the second dark space your movements continue to be traced by hidden cameras. In addition, electromagnetic interfaces on the walls create a powerful force-field, pulling or repelling your body by inducing minor shocks.<sup>2</sup> At its peak, the electromagnetic field causes the belt – and thus your body – to vibrate, appearing to control your movements. Due to the structure of the installation you will always enter the third room last. It is still very dark there. Four speakers are transmitting 3D audio in the form of irregular and jagged bass-vibrations. The soundscapes create an immersive effect, whose

varying frequencies are felt as a continuous change in the ambience of the room. Flashing images projected onto the walls reveal your navigations of the building with a delay. Suddenly you realize that your activity has been closely monitored and used to compose the atmosphere of this third space.

Rhythm-House is a virtual container for the potential relations between human body, physical space and digital technology. In its murky zones an alternative mode of interactivity begins to emerge, which is real yet too small and fleeting to be immediately perceived by the senses. Incipient energies compose the dark spaces of the first two rooms, evoking the strange sensation that there is something there but you cannot distinguish it clearly. The idea is that, at times, a body feels the interiors of the House by entering an almost 'nonconscious' mode of perception. During this mode, it experiences the tentative forces of vibration before it has the time to think and decide its actions on a conscious level. At other times, the cognitive layers of the body return and become actively involved in the explorations of the building. Oscillating between these partial states, a body emerges as a turbulent structure, constantly falling in and out of consciousness. This unstable perceptual condition is exposed in the third room of the installation. Here, the building experiences a body through the transformation of its movements into an artificial dis-continuum of vibrations. In Rhythm-House, then, the process of interactivity does not seem to entirely depend on the perceptual capacities of the user. Rather, this paper will suggest that interactivity may develop as an intensive resonance between all the elements of the assemblage (i.e. building infrastructure, human body, digital code, ambient space), without residing in any single one.

### **1. A Virtual Dynamics for the Digital**

Rhythm – House is both a theoretical and practical experiment conceived to explore the impact of non-actualized processes on actual digital events. It attempts to address a virtual condition of experience probed by digital events, too microscopic and molecular to be directly lived by a body. In other words, the project is engineered to allow for the development of a tension between the concepts of the digital and the virtual. However, here their linkages will not reflect a commonplace hype of digital progression from the analogue past, or imply a simulation, amplification and escapism from the real. At the same time, Rhythm-House is seeking to

conceptualize the digital by sidestepping the mere equivalence of its binary form to the domain of the possible (i.e. the problem of code). For example, in an essay entitled 'On the Superiority of the Analog' (2002a), Brian Massumi argues against the false equation of the digital with the concept of the virtual. Drawing on the abstract materialism of Deleuze (1968) and Deleuze and Guattari (1980; 1991), Massumi suggests that the virtual realm may be more adequately accessed by the analogue. These philosophers define the virtual as an abstract-yet-real, molecular force-field, which envelops the actual event but which does not always present itself to perception.

In Massumi's account, this reservoir of potential – not always actualized or available to lived experience – is more fittingly approached by the analogue; a process of self-varying, continuous and qualitative impulses which are not representative of anything outside of themselves. In a similar tone, Aden Evens (2005) suggests that digital logic bears an affinity with order, precision, refinement and perfection, intrinsic to the code's static binary form. For him, these features constitute the digital which is unable to approach 'something more, something fuzzy, something to-be-determined' outside codification (2005: 66, 69). Digitalization, as the argument goes, merely systematizes, represents and simulates probable options, failing to capture the 'immediacy' (Evens, 2005: 71) and 'emergence' of the virtual into actuality (Massumi, 2002b: xxxvi).<sup>3</sup>

However, considered as a purely technical machine (of codification), the digital seems unable to offer any important insights into theories of the virtual or into its own relationship with the concept. In other words, thinking about the digital event in new creative ways might perhaps involve sidestepping both the reductionism of technological determinism and the 'inferiority' of digital code. Rhythm-House constitutes an attempt to construct a virtual ontology for the digital, emerging from conceptual encounters between new media art, science, technology and philosophy. The project considers the impact of a field of invisible, rhythmic and abstract forces understood as enveloping the materiality of a digital assemblage; pointing to a nexus of indeterminate relations between its natural, artificial, actual and virtual zones. At the core of the fictional installation are questions such as: What if the digital event was able to somehow integrate machinic (i.e. self-modulating, symbiotic and indeterminate) processes, rather than purely converge, homogenize and represent information?<sup>4</sup> Could we, then, conceptualize a directly virtual digital

that does not merely resemble and simulate or allude to an unreal, immaterial world governed by the human mind? Is it possible to consider the digital as an autonomous quality, which does not involve the superiority of a particular element (purely technological or living), or a conventional interpretation of human perception as the ultimate receptive hub, in order to emerge as virtual?

As an abstract-but-real creation, the House suggests the presence of a deeper level of (rhythmic) movement accompanying actual interactions between human and machinic elements. Rhythm, here, is understood as an irregular, amodal and non-temporal resonance, detached from a habitual association with the metric theories of time and music. More specifically, this notion of rhythm can help to propose an account of temporal agency which is active at a micro-perceptual level. Bachelard, for example, elaborates a philosophy of rhythm that bypasses the temporal successions of lived experience and duration. For him, at the imperceptible scale, all movement proceeds from rhythm to rhythm as a vibration in matter, 'without there being any macroscopic reason for it' (2000: 137). Contra Bergson's metaphysical privileging of continuity (duration) over discontinuity (as the spatialization of time), Bachelard proposes a discontinuous-becoming of duration made of rhythmic instances.

According to Foucault, Bachelard was the first to teach us that we live in a non-homogeneous, non-empty space 'laden with qualities' that are never intrinsic.<sup>5</sup> And yet, these rhythmic qualities are not oppositional or hierarchical but rather 'ruptured', 'discontinuous', 'unstable' and always 'relational' (Foucault, 1998: 178). Bachelard's technique is an attempt to enact the contagion of rational knowledge with rhythm-analytic ontology. The latter exposes a readiness in philosophical thought and scientific inquiry to shift and change their course, rather than follow a linear and continuous progress. All in all, rhythm expresses an amodal or nonsensuous quality underlying the appearance of surfaces and pointing to unexpected divergences at the small scale of all (organic and artificial) life. Crucially, it constitutes a method for thinking events formulated at the microscopic and invisible layers of matter; thus revealing experience as a multiplicity of 'unforeseen phenomena in the interval between cause and effect' (Bachelard, 2000: 97).

## 2. Micro-Perceptions of Rhythmic Digitality

Rhythm-House is a digital event based on complex interaction feedback loops, incorporating principles of electromagnetism, vibration and the hypersonic effect.<sup>6</sup> At times, the feedback forces utilized by the installation cause a body to vibrate, providing the intriguing experience of losing control of one's own movements. Drifting unintentionally inside the House, a vibrating body becomes disorientated and confused, while its sense of time and space are scrambled. Although its design is based on a continuous exploration of the structure – giving the impression of an uninterrupted experience from the first room to the last – the project entails a discrete device. It is conceived as a digital grid (in Max/MSP), tracking irregular movement and turning it into jagged and discontinuous frequencies. In addition, each of the rooms is designed as a block of separate energies, a vibrational hub which is itself cut out of the spatiotemporal stream of the installation as a whole. The discontinuity of its architecture is enforced further by the darkness, electromagnetic interfaces and immersive audio in each space, designed to push the body into a claustrophobic daze. These conditions of isolation and obstructed perception encourage the body to feel displaced - not only from the rest of the installation but also from its own spatiotemporal duration, thus indicating a gap or anomaly in its perception of the 'here and now'.

Broadly speaking, in new media theory the materialization of digital spaces has frequently been assumed to depend on the subjective temporality of a body. In some of these accounts interaction is generated by a body's capacity to receive information and, thus, produce or complete the space of the installation, which is presumed to be empty without this human activity. For example, according to Hansen (2004), digital art users are always in control of interactivity, actively intervening to convert discontinuous and quantifiable numerical data (digital code) into continuous corporeal lived duration. Rhythm-House, however, conceptualizes a space in which a body's continuous stream of experience is interrupted by the unstable leaps of rhythm. The digital house is composed from a cluster of hypersonic and vibrational energies that affect a body nonconsciously, that is, without passing through the conventional auditory system or depending on it. These invisible and inaudible forces impinge on the way the body perceives before becoming available to cognition; suggesting perhaps that the phenomenal continuity of experience surfaces out of a discrete 'micro-phenomenological' zone.<sup>7</sup> From a rhythmanalytic perspective,

duration is traversed by a dis-continuum of instants that do not merely melt into one another but that rather occupy the molecular ground in-between actual perceptions.

As a micro-energetic apparatus, Rhythm-House alludes to a level of digitality that is not directly available to the continuity of lived experience. Its experimental spaces are composed to enable the coexistence of embodied temporality with an implicit quality of interactivity – a rhythmic resonance developing between the different elements without belonging to them. This autonomous incalculable dimension seems immanent to the computational processes of the installation, hinting at a capacity in the digital to elude the precision of its binary form.<sup>8</sup> In the House, a fuzzy aggregate of rhythms seems to exceed both the contours of continuous bodily experience and the discreteness of code. These hypersonic energies are used to create a feeling of confusion and uncertainty that suggests a slippery dimension of experience, leading to the following questions: Is your body triggering and perceiving the ambience of this space extrinsically? Or is the digital event generated in-between the mutual micro-rhythmic resonations of living and artificial entities? Looked at in this way, the building produces a surplus of rhythms that cannot be fully absorbed by sensory memory or entirely controlled by programmable code. Here, virtuality is not contained in any particular element (sensory-motor or digital code), but rather resides in the ‘maximally unknowable’ linkages between them.<sup>9</sup> The installation thus reworks the notion of interactivity according to a rhythmic digital ontology that pushes the boundaries of what a body *is* (human, technological or other) and what it can do. Its organic and artificial layers intertwine to generate machinic bodies, rather than mere interfaces between individual humans and machines. In other words, Rhythm-House emerges as a digital assemblage of divergent entities, whose virtual relations may not be predetermined or exhausted by their actual interactions.

### 3. Transdisciplinary Creative Encounters

At the level of the very small, it has been argued, concrete digital form is immersed in the rhythmic activity of abstract forces. The pulsating spaces of the building are composed by intensities, that is, climatic, tectonic and vibrational changes in its infrastructure.<sup>10</sup> Rhythm-House invents a virtual architecture for the digital by intersecting media art, science and technology – or, more

appropriately, technoscience. For Latour, technoscience describes 'all the elements tied to the scientific contents no matter how dirty, unexpected or foreign they seem' (1987: 174–75). Traditionally, science has been understood as the experiment-based generation of knowledge about the laws of nature. At the same time, artistic and technological interventions are commonly regarded as cultural processes following an already established scientific reality. Philosophers of science such as Latour and Stengers (2000), however, call for a non-reductive and collective method that rethinks relations between science, aesthetics, technology, politics and nature by 'mixing humans and non-humans together' (Latour, 1988). Additionally, current research in the fields of nanotechnology, biotechnology, media architecture and bioart reinforce the idea that it is becoming increasingly difficult to distinguish between science, technology and art – and between nature and culture – in absolute ways.

Rhythm-House emerges out of this transdisciplinary mode of thought and, as such, it is not merely concerned with the virtual digital as a progression, simulation and supplementation of reality, or with creating practical applications of critical theory. Rather, the project proposes a co-evolution of a philosophy of the virtual with technoscientific experimentation and artistic production. Accordingly, it is not a house for the interaction of physical substances but an abstract machine for the conceptual staging of virtual events. Simultaneously aesthetic and technoscientific, artificial and biological, digital and virtual, experimental and experiential, these events traverse different fields but are irreducible to any one of them. At this abstract level, then, a digital event may no longer be defined by its mechanism, the precision of code, its micro-physics or semiotics. Rather, it can be approached as an exercise in the expansion of perception, allowing for the emergence of its more unusual states. By speculating on the potential relations between its aesthetic, technological and scientific layers, Rhythm-House endeavours to depart from methods of interpretation, signification or representation between the different fields that it brings together. Hence, it may be regarded as a creative media experiment, which does not so much aim to make the imperceptible perceptible but which rather invites us to engage with it.

For Bohm (1996), in order to understand the deep relationality between the sciences and the humanities we must depart from acts of mere imitation, or the direct application of results from one field to the other. As he explains, the key link between them is 'creativity',

enabling us to depart from 'habitual modes of thinking, perceiving, and action' (Bohm, [1996] 2004: 44). Following Bohm, creativity seems crucial in understanding dynamic systems such as Rhythm-House, which are detached from the specificities of any one discipline. The notion, here, does not aim to reinforce the idealism of a subjective capacity to express emotional values, originality, beauty, or the reflection of nature through imitative symbols. For Bohm, as well as for Bachelard, creativity involves a necessary intersection between philosophico-scientific thought and the autonomous movements of matter.<sup>11</sup> For the purposes of the rhythmic house, creativity is 'an ethico-aesthetic paradigm' that breaks with the institutionalization of art, technoscience and philosophy (Guattari, 1995). The term implies an 'artistry' or 'power of emergence' (Guattari, 1995: 102) that does not seem to naturally emanate in a unidirectional manner – for example, from science to the other disciplines. On the contrary, the divergent realities, fields and concepts that engineer this virtual design might develop further 'outside' their own limits and conditions – on an altogether new creative plane.<sup>12</sup>

As an interactive installation from the future, Rhythm-House sets out to identify a diagram of potential relations between digital installation art, technoscience and abstract materialist thought. This endeavour to think the digital as a nexus of creative tensions between different layers synthesises a distinctly transdisciplinary affair. More than a digital installation, the project unfolds a complex transversal assemblage of 'mobility, creativity, and self-engendering' (Genosko, 2002: 55). For Guattari, transversality is a conceptual weapon that unlocks closed systems of hierarchies to allow for the experimental production of new alliances; whereas interdisciplinary research is utterly 'unidimensional', uncritically promoting a 'methodological migration' from one discipline to the next (Genosko, 2003: 129). For this project, transdisciplinarity addresses the speculative and experimental nature of a virtual digital by accounting for an 'ontological heterogeneity' beyond pre-coded possibility (Guattari, 1995: 61). Additionally, facilitating the cross-pollination of the micro-sciences with digital art and contemporary philosophy might intensify a tendency in these disciplines to approximate the unknown, with interesting results. Crucially, their transversal encounters encourage a reflection on the significance of situating media theory between the conventional boundaries of critical theory and creative practice.



### **Exit. The Multi-Dimensional Digital Event**

Rhythm-House is also a speculative project about the collective interweaving of media theory and media practice and its impact on our understanding of the digital. The project aims to open a way of thinking about the digital as virtual, without conflating, opposing or reducing the concepts to each other. In particular, it proposes that the participation of abstract implicit processes is immanent to the emergence of actual digital structures. Its virtual design is invented to explore an invisible and indeterminate dimension in digital assemblages of art and technoscience. Arguably, such a rhythmic force resonates between the interacting elements and is vaguely felt in the formation of vibrations, resonance and minute shocks, before it becomes a conscious perception. The hyper-energies of the trembling house allude to a field of un-actualised processes which accompany the digital event. In this context, Rhythm-House can be viewed as an abstract architecture generated in the middle ground between the actual and virtual spheres of digitality.

Rhythm-House unfolds as an interactive fiction across three different but interrelated systems. In the first place, it is a conceptual digital installation, yet to be devised, conceived to survey the peripheries of human perception. This level belongs to a noticeable turn in digital installation art, with works that foreground a shift from the production of purely visual and sonic spaces to a micro-energetic process of interactivity with no audiovisual output. Secondly, the project is an online interactive fiction game, slowly unveiling the virtual ecology of the digital house amidst the dark and silent spaces of your screen. In this framework, Rhythm-House is the actual manifestation of a theory of virtual dynamics; an instance of the virtual forces of digitality crossing over to the perceivable phenomenal world, which, nonetheless, does not fully exhaust their potential. On yet another level, this experimental work expresses the concerns of a broader effort in contemporary media theory to account for the impact of technology on sub-perceptual processes, as well as speculate on the autonomy of machine agency. This last component, developed in the form of an academic paper, encompasses the overall purpose of the project. By interweaving the practice and analysis of the digital artwork with the philosophical genesis of a virtual ontology, the paper has sought to capture some of the underlying conditions in which experience might be differently produced in current media environments. As Langer eloquently observes in the epigraph to this piece and as Rhythm-House is hoped to demonstrate across its three designs, there is no

purely artificial (mathematical, scientific or technological) structure which is merely communicating a message. Following this idea, a digital event may be viewed as latent, with the potential to become void of its creator's intentions, and take on a life of its own instead.

### Endnotes

<sup>1</sup> This conceptual experiment draws on motion tracking possibilities made available by the Max/MSP software – designed for music and multimedia environments by Cycling '74, with the added program SoftVNS (Very Nervous System) – a video processing extension package developed by David Rokeby. The idea is that DV cameras are tracing a luminous belt around your waist, in order to determine a designated 'tracking zone' created on the Max/MSP spatiotemporal grid.

<sup>2</sup> The belt around your waist contains markers that enable a digital system with a wireless force feedback interface (on the surface of the walls), to detect your position at any moment and thus change the electromagnetic field accordingly.

<sup>3</sup> Note that Evens' parallel point is constructed in a different manner and language to that of Massumi's essay. For example, Evens refers to the 'actual' as a complex process that cannot be reduced to the absolute measurements and precisions of digital code, whereas Massumi uses the concept of the 'virtual' to theorize the 'superiority of the analog'. However, Deleuze's philosophy of the virtual as coexistent with the actual and more accessible by continuous and analogue processes than 'digital resemblance' (Deleuze, 2003: 113-5), is implicit in Evens' theorization of the digital. In addition, note that in later writings – such as 'The Thinking-Feeling of What Happens' published in the online journal *Inflexions* (2008) – Massumi develops the idea of rethinking interactive media from the standpoint of 'relationality' and potentiality, bypassing the limitations of pre-coded possibility. This later essay, in a way, acknowledges the potentiality of a virtual digital in a noticeably more powerful manner.

<sup>4</sup> For Deleuze and Guattari the machinic phylum refers to 'materiality, natural or artificial, and both simultaneously' (2002: 409). As Deleuze explains, '... the assemblage's only unity is that of co-functioning: it is a symbiosis, a "sympathy" ... alliances, alloys ... contagions....' (Deleuze & Parnet, 2006: 52). Symbiosis indicates a

network of micro-relations between heterogeneous bodies whose interactions and connections, at the molecular level, may be considered to exceed their mere union. As Luciana Parisi and Steve Goodman explain in 'The Affect of Nanoterror', symbiosis 'is not simply the joining together of two distinct entities ... it defines the micro-relations connecting bodies through contagion' (2005: non-pag.).

<sup>5</sup> 'In other words, (for Bachelard) we do not live in a kind of void, within which individuals and things might be located. We do not live in a void that would be tinged with shimmering colours, we live inside an ensemble of relations that define emplacements that are irreducible to each other' (Foucault, [1954 – 1984] 1998: 178).

<sup>6</sup> The term 'hypersonic effect' was coined by a team of Japanese researchers to refer to the combined impact of audible and inaudible forces (i.e. sounds above the frequency range of 20 kHz) on human hearing. Their study demonstrated that the participation of complex inaudible vibrations – such as high-frequency components (HFC) in Gamelan soundscapes – not only affect human response but, in a way, complete perception (see Oohashi, 2000). Vibration can be defined as an elementary rhythmic movement of matter, whose powers exceed 'every domain and traverse them all' (Deleuze, 2003: 42). Drawing on Francis Bacon's triptych method of painting, Deleuze explains that vibration is 'more profound' than the senses and may appear as sound or organized music when it 'invests the auditory level', or as painting and visual imagery, when it 'invests the visual level'.

<sup>7</sup> Bachelard conceived the term 'micro-phenomenology' to refer to a 'miniature' world that accompanies 'ordinary' perception. According to him, these microscopic processes address regions that exceed the ordinary levels of perception (semantic, descriptive, sensuous etc.), pointing to an 'imperceptible' zone crucial to the imagination. On this point, see *The Poetics of Space*, especially 'Miniature' (1994: 159-165).

<sup>8</sup> The idea alludes to mathematician Gregory Chaitin's theorem of binary algorithmic randomness and, in particular, his discovery of the infinitely random number Omega ( $\Omega$ ). This complex computation suggests that there is 'a string of unrelated digits' located somewhere between 0 and 1 (i.e. something that can never be computed). According to Chaitin, Omega is a simultaneously real continuous number and the protagonist of a discrete theory,

‘maximally unknowable’, ‘undefinable’ and ‘algorithmically incompressible’. On all these points, see Chaitin (2005: 117, 125, 130-34).

<sup>9</sup> For instance, Hansen asserts that the digital event triggers virtual perceptions hidden in the ‘sensorimotor’ (2004: 267). On the other hand, a number of cybercultural accounts have suggested that digital media enable a virtual sphere that ‘duplicates’ or amplifies the reality of the body (for example, Poster, 1995). However, drawing on Chaitin’s algorithmic theory, it may be possible to suggest a ‘maximally unknowable’ (potential) aggregate of instances, or relations, in between precise numbers, elements or bodies.

<sup>10</sup> Intensity (or intensive difference) is a concept in physics designating nonmetric variations (such as in temperature, pressure, speed or chemical concentration), i.e. quantities that may vary continuously but that cannot be divided without changing in nature. In philosophical terms, intensities are virtual ontologies, inaccessible by empirical sensibility but *indirectly* felt by the qualities that arise from them (i.e. actual perceived entities or extensive structures). On this point, see DeLanda (2002: 58-73). As it was explained at the beginning of the article, the hypersonic energies of Rhythm-House are composed from a mixture of recorded vibrations from the infrastructure of the building – such as temperature, climatic and tectonic changes – and from non-audible high frequency components.

<sup>11</sup> This idea, shared by Bohm and Bachelard, is particularly evident in these two passages: For Bachelard, ‘you are obliged to imagine experiments, to provoke relations, to dynamise the multiple worlds of atoms. Matter crumbles away as you act precisely on it and so ends up giving only ambiguous answers to your enquiries ... You will no longer find subtle, precise matter always there at the disposal of experiment. You have to wait for it to produce its own events’ (2000: 46). For Bohm, ‘paradigms’ (as ‘simple and typical’ examples of modern scientific and philosophical thought) are ‘creations’, not representations, and form on two levels: as a dynamic internal activity prior to conscious experience – ‘a very deep and sensitive probe reaching into the unknown’ – and as the collection and interpretation of accurate data (2004: 43).

<sup>12</sup> The ‘outside’ here refers to Elizabeth Grosz’s method in *Architecture from the Outside*, where she discusses how different disciplines come together, outside their own internal needs and

constraints, to 'a third space in which to interact without hierarchy, a space or position outside both, a space that doesn't yet exist' (2001: xv).

## References

Bachelard, G. (2000) *The Dialectic of Duration*. Trans. M. M. Jones. Manchester: Clinamen Press.

Bachelard, G. (1994) *The Poetics of Space*. Trans. M. Jolas. Boston: Beacon Press.

Bohm, D. (2004) 'On the Relationship of Science and Art' in L. Nichol (ed.), *On Creativity*. London and New York: Routledge.

Chaitin, G. (2005) *Metamaths, The Quest for Omega*. London: Atlantic Books.

DeLanda, M. (2002) *Intensive Science and Virtual Philosophy*, London: Continuum.

Deleuze, G. (2003) *Francis Bacon the Logic of Sensation*. Trans. D. W. Smith. London and New York: Continuum.

Deleuze, G. ([1968] 1994) *Difference and Repetition*. Trans. P. Patton. London and New York: Continuum.

Deleuze, G. & Guattari, F. ([1980] 2002) *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. B. Massumi. London and New York: Continuum.

Deleuze, G. & Guattari, F. (1991) *What is Philosophy?* Trans. G. Burchell & H. Tomlinson. London and New York: Verso.

Deleuze, G. & Parnet, C. (2006) *Dialogues II*. Trans. H. Tomlinson & B. Habberjam. London and New York: Continuum.

Evens, A. (2005) *Sound Ideas: Music, Machines, and Experience*. Minneapolis: University of Minnesota Press.

Foucault, M. (1998) *Aesthetics, Method, and Epistemology: Essential Works of Foucault, 1954 – 1984*. J. D. Faubion (ed.), Trans. R. Hurley et al. New York: The New Press.

Grosz, E. (2001) *Architecture from the Outside*. Cambridge, MA: MIT Press.

Guattari, F. (1995) *Chaosmosis: An ethico-aesthetic paradigm*. Trans. P. Bains & J. Pefanis. Bloomington: Indiana University Press.

Genosko, G. (2002) *Felix Guattari: An Aberrant Introduction*. London and New York: Continuum.

Genosko, G. (2003) 'Felix Guattari: Towards a Transdisciplinary Metamethodology', *Angelaki* 8(1): 129.

Hansen, M. (2004) *New Philosophy for New Media*. Cambridge, MA: MIT Press.

Johnson, J. (aka Bruno Latour) (1988) 'Mixing humans and nonhumans together: The sociology of a door-closer', *Social Problems* 35: 3, 298-310.

Langer, S. K. (1967) *Feeling and Form*. New York: Routledge & Kegan Paul.

Latour, B. (1987) *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, MA: Harvard University Press.

Massumi, B. (2002a) *Parables for the Virtual*. Durham and London: Duke University Press.

Massumi, B. (2002b) *A Shock to Thought: Expressions after Deleuze and Guattari*. London and New York: Routledge.

Massumi, B. (2008) 'The Thinking-Feeling of What Happens'. *Inflexions* (Vol.1), [www.inflexions.org](http://www.inflexions.org)

Oohashi, T. *et al.* (2000) 'Inaudible High-Frequency Sounds Affect Brain Activity: Hypersonic Effect', *Journal of Neurophysiology*, Vol. 83, No. 6 (June): 3548-3558.

Parisi, L. & Goodman, S. (2005) 'The Affect of Nanoterror'. *Culture Machine* (Vol.7),

<http://www.culturemachine.net/index.php/cm/article/view/29/3>  
6

Poster, M. (1995) 'Postmodern Virtualities' in M. Featherstone & R. Burrows, (eds), *Cyberspace/Cyberbodies/Cyberpunk: Cultures of Technological Embodiment*. London: Sage.

Stengers, I. (2000) *The Invention of Modern Science*. Trans. D. W. Smith, Minneapolis: University of Minnesota Press.