

## Playing on the Plane of Immanence

### Notes on the Resonance between Body and Image in Music Video Games

In recent years computer games have been discussed by a variety of disciplines from various perspectives. A fundamental difference with other media, which is a point of continuous consideration, is the specific relationship between the viewer and the image, the player and the game apparatus, which is a characteristic of video games as a dispositive. Terms such as immersion, participation, interactivity, or ergodic are an indication of the deep interest in this constellation. This paper explores the resonance between body and image in video games like REZ, SOUL CALIBUR and DANCE DANCE REVOLUTION from the perspective of a *temporal ontology* of the image, taking particular account of the structuring power of the interface and its subject positioning aspects.

The constitutive relationship between human players and non-human elements of the gaming situation has been described in the past in different ways, as a logical relation, for example, or as a spatial structure or configurational practice. But too little attention has been given to the *temporal* nature of this relationship. We are all familiar with the concept of real-time, which points heavily to the relevance of this topic. It is an important but, in my view, still insufficient temporal category for describing the broad range and fundamental function of temporal structures that define the player-image relations in video games.

This question of the temporality of video games is a key aspect that I will address with reference to the temporal constitution of the video image itself. French Philosopher Henri Bergson developed a philo-

in: *Logic and Structure of the Computer Game*, ed. by Stephan Günzel, Michael Liebe, and Dieter Mersch, Potsdam: University Press 2010, 166-195.

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sophical approach to thinking of the 'image' in the realm of a temporal ontology in his famous essay *Matière et Mémoire* (1896), and in the 20<sup>th</sup> century his concepts were adopted for a theory of cinema by Gilles Deleuze (1992, 2005) and of video by Maurizio Lazzarato (2002).

The second aspect concerns the interface of games, the logic and structure of different interfaces and their relevance to the production of meaning in games. I am convinced that interfaces may be interpreted as specific cultural forms, which not only serve as a framework for the presence of meaning and content that occurs within the progress of the game, but that they also play a crucial role in the production of meaning itself. According to media scholar Lev Manovich (2001:64), the interface "acts as a code that carries cultural messages", while German media scholar Petra Missomelius (2006:89) described the interface as a "complex of meaningful contexts".

These theoretical approaches point forward to an understanding of user interfaces as a type of *cultural grammar*. User interfaces are able to constitute a semiotic space in which perception, action, and technology are linked together in an inter-connection of man and machine. Furthermore, it is the interface that defines the pragmatic dimensions of the exploratory, interpretive and configurative 'work' of a player (Eskelinen 2001), as well as the interlacing of the particular point-of-view and point-of-action of a given game, an interlacing that characterizes computer games as digital media products (Neitzel 2008).

## Interfaces and Subject Positions

In computer games, we can observe the emergence of certain interface-styles and interface-conventions that are shaping specific gaming experiences.

1) Different input devices very directly affect the degree of physical involvement. This is currently a big issue in the context of popular life-style fitness games. The *Wii-Remote* is a good example, since it

is designed to register different real movements as game inputs, and to translate them into video game sensations. The interface-style is decisively shaping the experience of sports games, tennis, bowling, etc. (Gregerson/Grodal 2009:71-77). But even older sports games like Decathlon (1983) were able to bridge the gap between video games and real physical exercise. On one side of the spectrum we see physical action up to the point of intense physical strain – there is no absolute division between video games and ‘real physical sports’ – and on the other side of the spectrum there are input devices such as the legendary *Atari Mindlink*.

The *Mindlink* was never released, but it gave expression to a fundamental idea. Just by slightly moving the muscles in your head you would be able to control a game. Your movements would be read by infrared sensors and translated into movement within the game. The striking idea behind its fame was the promise that one could control a game just by the power of their thoughts – interfacing people with computers and videogames and leaving the physical boundaries of the living body behind (Crawford 2003:172).

It is likely that similar controller types are currently in development, since the basic idea seems to belong to the permanent repertoire of the desiring-function of video games: the wishful fantasy to create real images by the mere power of thoughts. It is precisely between these positions of ‘real sport’ and ‘control by thought’ that we can locate the micro-movements of the standard controllers, gamepads, keyboard and mouse. The dance mat as controller-device prefigures a different repertoire of movements and gestures than a guitar controller or a fishing rod.

2) Undoubtedly, the function and shape of the input is of great importance to the degree of physical involvement in games. Nevertheless, the specific nature of an interface is never determined only by the input device, but also by the detailed interplay of controller, game concept and the design and presentation of virtual spaces and reactive surfaces.

Interfaces predefine the forms that are filled by the players. They indicate a relationship with specific subject positions. First-person shooters can serve as an example: typically the space is presented with linear perspective in a manner that puts the focus on the player as the 'origin' of space by enhancing the power of the gaze as a key element of the spatial structure. This visual presentation is a common technique for evoking an immersive experience. At the same time it defines a typical subject position. Stephan Günzel (2009:342) described first-person shooters from a phenomenological perspective as a formal representation of an ego, 'I' or "Ich-Origo", others have argued that the first-person-view in games could be interpreted as the return of a transcendental, 'Cartesianesque' subject and the "myth of the autonomous self" (Shinkle 2003). There were also attempts to 'deconstruct' this formation as the embodiment of a colonialist-phallic gaze (Scholl 1997). There is still some room for controversial interpretations.

In strategy games, however, another point-of-view and other spatial representations are dominant. Here, the paradigm of the map and the representation of modes of spatial control are key elements of the common onscreen-interface. The map is a traditional means of spatial control – the bird's-eye view connotes distance, oversight, invisibility and control. Both aspects relate to the typical point-of-action of the players in strategy games, which is linked with the narrative figures of statesmen, managers, generals, or local warlords (Wiemer 2008).

The formal structures of the interfaces in first-person shooter games and strategy games, their way of operating, their forms of representation, of information management, etc. point to the function of desire of a powerful subject. A crucial element in the production of the formal equivalent of such a subject is the amalgamation of point-of-action and point-of-view where "to see" is "to control".

In the above examples, a connection between genre characteristics and interface aesthetics becomes evident. This is not just by accident, since the concept of 'genre' in video games remains fuzzy

and often misleading, if defined only by the narrative content, by the repetition of stereotypes or by typical game mechanics, rules or winning conditions, without looking at the typical interface conventions that are in operation.

## Music Video Games

To go into more detail regarding the logic and structure of the interface, it is worth taking a closer look at music video games and their paradoxical implementations of the common control-paradigm of video game user interfaces. Many music video games can be understood as genre-hybrids. The notion of 'hybrid music games' links music video games with existing genres like puzzle games, fighting games and shooters.

Music video games can share similarities with musical instruments, with audio software, with electronic music production and with pure audio games. A theoretical presupposition of music video games is the existence of an interface that offers the possibility of player-actions and reactions related to musical-acoustic forms. Music video games offer the opportunity to respond to music or acoustic events and structures through meaningful action or to produce musical or acoustic events and structures in a playful way. SINGSTAR (since 2004) would clearly be a music video game in this sense.

A basic definition of a music video game could thus be: *a Music video game is a video game where the gameplay and therefore the player's interaction with the interface is meaningfully shaped by musical scores or sound figures or other kinds of musical elements within the structure of a game.*

I want to discuss three games in particular, though they represent no more than a small selection of the rich diversity of music video games: (1) REZ, (2) a machinima adaptation of Namco's fighting game SOUL CALIBUR called *Dance, Voldo, Dance* and (3) the DANCE DANCE REVOLUTION series.

## REZ

REZ (2002) is a critically acclaimed rail shooter developed by Sega's United Game Artists division, conceptualized and produced by Tetsuya Mizuguchi. As a hybrid music game, it uses conventional shooter game elements and reshapes the shooter experience by allowing players to co-create sounds and music within the game as they target and destroy foes and interact with different geometrical objects found in the game. The concept of REZ aims to create a form of electronic synesthesia, enhanced by a so-called 'trance vibrator', a special type of controller which pulses in time with the music, similar to but stronger than the force-feedback effect of the *DualShock* controller. It is intended to make the players literally 'feel the beat' and to expand the sensation of the audiovisual experience into somatic and tactile resonances. Aki Järvinen, Satu Heliö and Frans Mäyrä (2002) mention REZ as a notable example of the sensual-flow gaming experience that can be provided by digital gaming products.



Fig. 1: REZ ([www.xblarcade.com](http://www.xblarcade.com))

## Voldo's Dance (SOUL CALIBUR)

The second example is SOUL CALIBUR (since 1995). It may be counterintuitive to look at SOUL CALIBUR as an example of a music video game, nor is it meant to be one by design. At first glance it is nothing but a fighting game. But the art of machinima, especially *Dance, Voldo, Dance*, makes it obvious that it contains a strong possibility of musical *expression* and *dance*. The machinima video features two players, both of whom control the character Voldo, using existing in-game animation to have the characters perform a synchronized dance to the song *Hot in Here* by musician Nelly. It is rumored that the idea for Voldo's dance was born when the creators noticed that the game's character animations and attacks could be triggered in sync with the beat of a song, and were impressed by this possibility.

The machinima video is the result of over a week of full time preparation and training and some effective post-production video-editing. If you look at SOUL CALIBUR from the perspective of a music video game, it all depends on the *performance* of the players. It is not just a matter of game mechanics or rules, but of the players kinaesthetic *interpretation* of the video game and its interface options. Voldo's dance is about using the controller in a virtuoso manner as a tool for expression and dance.

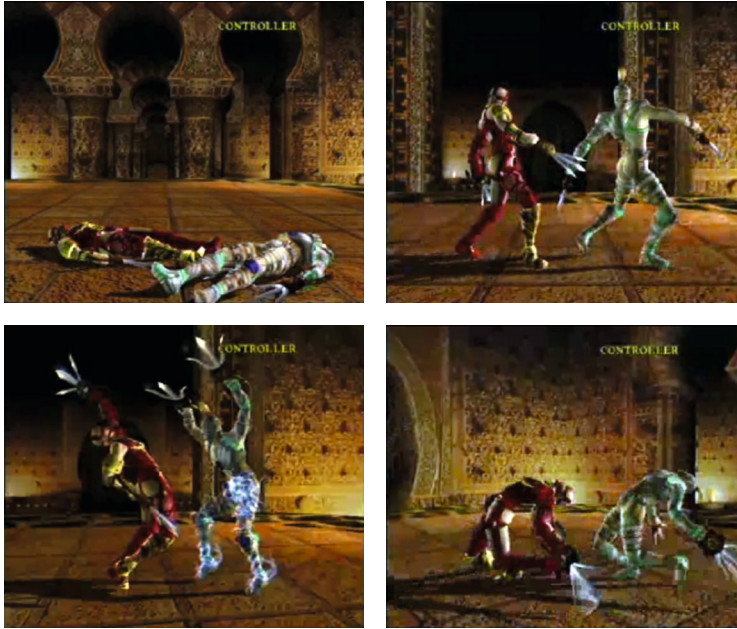


Fig. 2. Machinima video *Dance, Voldo, Dance* ([www.machinima.com](http://www.machinima.com))

## DDR – Bemani Games: Synchronization, Rhythm, CCC

A very different specimen is DANCE DANCE REVOLUTION (since 1998). It is an internationally highly successful dance game series, developed under the supervision of Konami. It has been marketed since 1998, first as an arcade game and later on all commercially important video game platforms.

DDR is a popular exponent of *Machine Dance Games*. Other well-known representatives of this type of game are PUMP IT UP (1999), CYBER GROOVE (2000), DANCE STATION 3DDX (2000), BRITNEY'S DANCE BEAT (2002), IN THE GROOVE (2004), and the open source game STEPMANIA (2006). These games are optimized for dance mats, which are equipped with sensor fields. *Machine Dance Games*



typically display on-screen icons that move toward a target area. If these are reached, the player must trigger the appropriate area on the dance mat with his foot or other limbs. The movement of the arrows reaching the target area and the movements of the players are synchronized with the music. The game measures the temporal precision of the player while he hits the appropriate areas on the mat according to the rhythm (Machine Dance 2009).

Machine dance is particularly interesting because of the remarkable logic of the interface. Many games follow a control paradigm with interfaces used as an instrument for regulating and influencing objects from a distance. In this respect, machine dance games are quite special. In DANCE DANCE REVOLUTION, the arrows on the screen show the players what step they have to perform next. It is as if the usual chain of command – to stay with the military metaphor – now follows a reversed order: the arrows are the commands and the player *obeys* by executing the required movements. It is not the player who controls the game and regulates the movements on the screen through the input device, rather, the game seems to control the player. Here it is not a matter of “being in control”, but of “being controlled”.

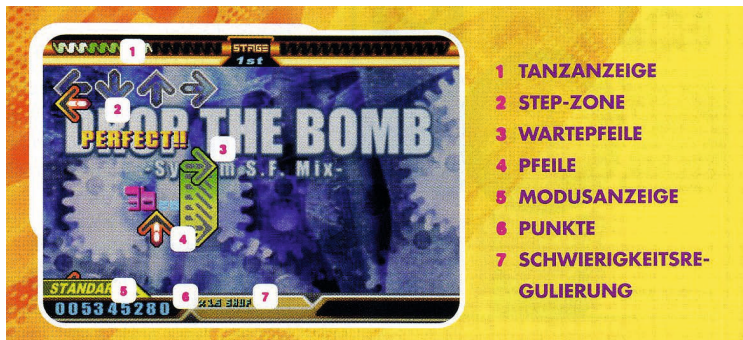


Fig. 3: Onscreen interface of Dancing Stage MegaMiX as part of the European version of the DDR series

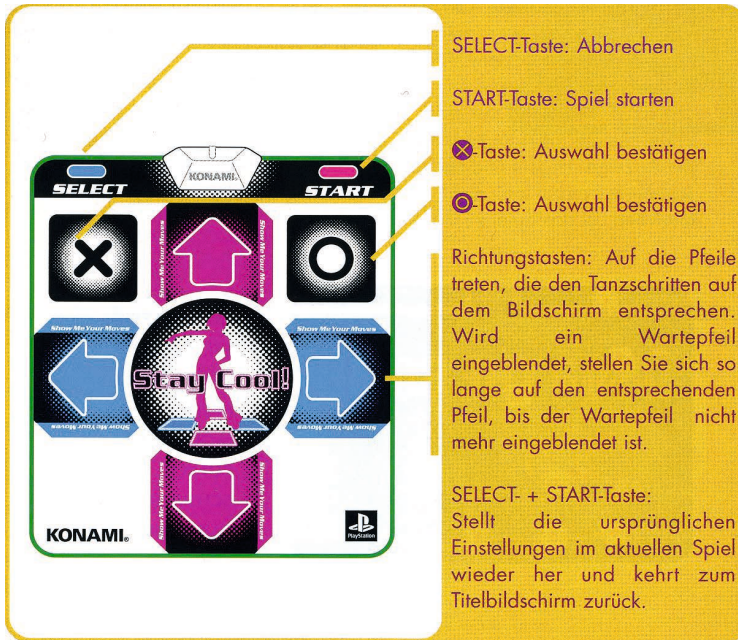


Fig. 4: Dance mat of Dancing Stage MegaMiX

## Ideology of Control

Should machine dance be characterized as the willing suspension of subjectivity, decision-making and rational behavior? To be controlled, to be danced, to become a mere puppet, a remote controlled ensemble of moving body parts – is that what it is about? Could it be that we face here the pure “ideology of interactivity” without a mask? Game researcher Matt Garite (2003) described this ideology as follows:

The world of the video game is nothing more than the on-screen rendering of programmed instructions and decrees. Players are ‘schooled’ by an aggressive bombardment of pixelated images and sounds. Every moment is a direct imperative, an attack that

demands a response. As the game unfolds, the player's body is silently inscribed with and encoded by the command lines of the program [...]. But what is perhaps the most fascinating feature of video games is their effort to simulate the illusion of player control while simultaneously reflecting on screen the player's subjection to the game.

According to Garite, the on-screen video game-actions "are determined by the player to the same extent that the player's actions are themselves determined by the program" (ibid.).

Similarly, video game researcher Eugenie Shinke (2003) wrote, with reference to Lev Manovich, that video games force the user

to adapt her/his movements to suit the demands of the interface rather than the other way around. Game controllers are a case in point, reducing the individual bodily gestures to 'forms that can easily be manipulated, mass produced, and standardized'.

Such readings of the interface strongly suggest the submission of the player to the power of the machine. Maybe then dance machine games celebrate this submission as a joyful and masochistic experience? And the players just enjoy their passive state as appendages of the game apparatus?

In contrast to such a reading, I would like to suggest a different interpretation and a reading of video games as ludo-diagrams and as variations of the movement-image. With reference to a Bergsonian concept of images, video games may be understood as a pleasurable connection between body and video image beyond a paradigm of command and control. From this point of view, both human players and non-human images and machinic objects are connected in a way that constitutes multiple relationships between perceptions and actions, where player and game *mutually receive sensations*, create perceptions, perform significant temporal cutting and reshaping, respond and *re-create* sensations into *new audio-visual actions*.

## Ludo-Diagrams, Multimodal Images and Expressive Force

The term 'ludo-diagram' is used by Colin Cremin (2008) to describe video games as a kind of process-visualization. It can be understood as a sensual representation and expression of ludic functions in the process of playing. Ludo-diagrams are not merely visual, but are suitable for describing the *multimodality* of electronic images in video games. With digital computers, the visual aspect of the image is just one out of a range of modalities of the expression of dynamic data structures. And the visual expressions can easily be transformed into acoustic events and vice versa. Movement can become image, music can become movement and so on.

In coining the term 'ludo-diagram', Cremlin refers to the theory of the diagram developed by Gilles Deleuze in his analysis of the paintings of Francis Bacon. According to Deleuze (2003), Bacon succeeds in subverting the categories of identification and narrative in painting. Instead of a hierarchical view, which holds objects at a distance, the narrative space is dissolved by haptic and tactile qualities. Instead of a spatial arrangement of clearly demarcated objects, Bacon's paintings depict the movement of forces. Deleuze uses the term diagram to indicate the character of Bacon's paintings as the result of a specific balance of forces and sensations, and more precisely as the expression of motor and sensory qualities in the realm of the image.

The ludo-diagram would be the game viewed as a series of sensations: the expression and representation of movements and qualities of perceptions as a result or as a potentiality of the exchange between players and interface. Cremin (2008:4) writes:

The diagram of the video game is a latent force brought to life by the ludo-apprentice. Deleuze describes the diagram in the work of Bacon as 'chaos, a catastrophe, but it is also a germ of order or rhythm'. On the painting, the 'diagram are the zones, line-strokes

and color patches' upon which recognizable forms are created. [...] The *ludo*-diagram is all of these things. The force, that distorts the figure in the video game is an invisible presence in the zones, line-strokes and patches: the possibility of the fact of sensation for the ludo-apprentice brought to life in the brush strokes of play.

The ludo-diagram can be described as a sensual expression and representation of ludic functions in the game. It is the video image seen from a pragmatic and performative point of view. If we look at SOUL CALIBUR, informed by its machinima-adaption about the performative potential of this game for expression and dance, then it is precisely in the ludo-diagrammatic dimension of the game that this expressive potentiality is revealed: it is where the latent force of the player-machine-connection is brought to life in a recognizable form and movement is transformed into audiovisual sensations, orchestrated in a shared rhythm.

## Machines for Crystallizing Time – New Ontologies for New Media?

From an ontological point of view, video games can be seen as a variation of the video image. The video image can be defined as a fundamentally time-based type of image, a temporalized and dynamic image. Electronic video images are modulated to match the capacity of the human perceptual apparatus, and they are processual images. This also means that they are open to interventions and additional modulations in the process of their creation. (Real-time images in particular are not essential visual entities, but temporally structured configurations of data.) Each event within the frame of electronic images is the *expression* of an underlying temporal process.

In his book *Videophilosophie* (2002), Italian-French media theorist Maurizio Lazzarato describes video as a machine for crystallizing time (for a short English abstract of his approach cf. Lazzarato 2007). Borrowing concepts from the French philosophers Henri Bergson and

Gilles Deleuze, he conceives of video technologies and information-processing machines in general as based on the synthesis and modulation of 'contraction syntheses' of time. From this perspective of a temporal ontology, the electronic images are actually not interpreted as imitating the ability of the eye – in the sense of an optical capacity – but as imitating the very conditions of perception, memory and thought itself. Bergson's notion of the image is quite different from the usual understanding of the term and of crucial importance for Lazzarato's theoretical argument. For Bergson, images are defined not by their visibility, but by their *connection* with other images.

An approach similar to Lazzarato's theory can be found in Marc Hansen's work *New Philosophy for New Media* (2004): Like Lazzarato, Hansen builds upon a Bergsonian conception of the image in order to characterize the changed preconditions of the constitution of perception in relation to information processing machines. According to Hansen (2004:10), we must accept that the image,

rather than finding instantiation in a privileged technical form (including the computer interface), now demarcates the very process through which the body, in conjunction with the various apparatuses for rendering information perceptible, gives form to or informs information. In sum, the image can no longer be restricted to the level of surface appearance, but must be extended to encompass the entire process by which information is made perceivable through embodied experience.

While Hansen focuses on the image as a concept of “embodied perception” (ibid.:3), Lazzarato emphasizes the temporal constitution and the ontological framework of the Bergsonian image. For Bergson (1911:4-5), even the human body is thought of as an “image” –

an image which acts like other images, receiving and giving back movement, with, perhaps, this difference only, that my body appears to choose, within certain limits, the manner in which it shall

restore what it receives. [...] So the body is but a privileged image, providing for the exercise of choice among possible reactions.

If the body is “privileged” within a universe of images, it is because it has the capacity to be a ‘centre of action’ and of ‘indetermination’, which means it is not only capable of ‘pure perception’, but also of establishing an *interval* between perception and action. Images then are thought of as *nodes of activity*, which perceive and transmit movements. In this sense Bergson’s ‘pure perception’ is a mechanism of unfiltered and instant transmission of movements. In contrast to this, however, the ‘actual perception’ is always based on the performative capacities of a body. The interval is the necessary minimal distance that a body requires to perform any action or ‘actual perception’, an interval between the incoming movement and its transmission, the minimal response-time.

Concerning Bergson’s ontology, ‘action’ is not understood as the intentional act of a subject on an object, but as a mode of the chain-linking of images and perceptions. Action, thus, is as a process that unfolds mutually between the player and the game. Actions and perceptions, from this point of view, are not exclusive to the human side. The concept of video as a machine for crystallizing time points to the idea of machinic perceptions and actions. This point of view implies a shift in attention from the subject to the process, from human action to human-machine situations and assemblages between formerly separated entities. This goes along with an interest in the conditions of non-human agency and efficacy, separated from anthropocentrism, which has gained critical attention in recent years among a growing group of theories. For example, it is intensely discussed in the field of ‘speculative realism’ or object oriented philosophy (Harman 2005) and within the actor-network theory (Latour 1993), where Graham Harman (2009:14) and others discover a conception of a ‘democratic’ ontology, where

[a]toms and molecules are actants, as are children, raindrops, bullets, trains, politicians, and numerals. All entities are on exactly the same ontological footing.

In the field of game studies, Ian Bogost (2008:22) articulated some of these concepts, following the lines of Harman's ontology, asking whether it is possible to develop a phenomenology of the gaming situation "from the perspective of the computer rather than the game or the player". It still seems rather vague, however, which conclusions may be drawn from this ontological shift in perspective with respect to game analysis or even game philosophy.

## Actions and Situations

French philosopher Gilles Deleuze applied the ontological concepts of Bergson's theory of the image to cinema, and took it as a base for developing his own concept of the movement-image. In *Cinema 1: The Movement-Image*, Deleuze (1992) gives a radical interpretation of the first chapter of Bergson's *Matter and Memory*, which he adopts and extends to include the 'new' cinematic images of machinic production. The *movement-image* itself is described by Deleuze with reference to his philosophy of immanence. According to this philosophical point of view body, image, and matter share the same plane of immanence. He suggests a perspective where there is no transcendental gap between mind and body, no ontological difference between thought and material action. The nodes of activity, the chain-linking of humans and non-human entities is then described as a 'machine assemblage'. This idea is extended to a concept of ontological unity, one-ness or univocity:

An atom is an image which extends to the point to which its actions and reactions extend. My body is an image, hence a set of actions and reactions. [...] External images act on me, transmit movement to me, and I return movement [...] this infinite set of



all images constitutes a kind of plane [plan] of immanence. The image exists in itself, on this plane. This in-itself of the image is matter: not something hidden, but on the contrary the absolute identity of the image and movement. The identity of the image and movement leads us to conclude immediately that the movement-image and matter are identical. The material universe, the plane of immanence, is the *machine assemblage of movement-images*. (Deleuze 1992:58-59) (For a critique of the tension between univocity and multiplicity or 'manifold see Badiou 2003.)

Recently, video game researchers like Alexander Galloway (2006) and Souvik Mukherjee (2008) referred to Deleuze's theory of the image to bring new concepts to the theoretical analysis of video games. To be precise, they use the concept of the 'action-image' to describe video games as action-based media. The action-image, according to Deleuze, is a subtype of the movement-image, which describes the general flow of actions and perception in cinema. There are many different variations of the movement-image, and the perception-image and the affection-image are two other important subtypes that share a strong link with the action-image. Within Deleuze's film theory, the action-image emphasizes the role of the sensorimotor scheme as a temporal structure of cause and effect.

Concerning Bergson's ontology, 'action' is not understood as the intentional act of a subject on an object, but as a mode of the concatenation (chain-linking) of images and perceptions. In video games, it is important to think of action as a process that unfolds mutually between the player and the game. Action should not be identified with a single event, but can be understood as a "multiplicity that is both different as well as repetitive" (Mukherjee 2008: 228). The elements of the action-image include virtual and actual events and are temporally extended. The repetition, the rhythm, the sequence, the possible and actual operations are some of its main components. Furthermore, it

is important to see that action is a two-way relation. As Mukherjee suggests, we should take into account the machinic agency, thus “the action occurs from the machine perspective: the code responds to, and creates, situations of action” (ibid.:229).

## Shared Rhythm, Hybrid Subjectivities and Libidinous Play

With this theoretical framework, music video games and their interface structures can now be read differently: if we play music video games, it is crucial, as in almost every action-based video game, to adopt, internalize and modulate our movements and gestures to the standards of the interface. By forms of tactile, aural and visual feedback, the player and game-apparatus are brought into some kind of mutual perception. User interfaces are able to constitute a semiotic space in which perception, action, and technology are linked together in an interconnection of man and machine, constituting temporal manifestations of a “cybernetic continuum” (Millington 2009:622).

The characteristic feature of music-games as a variation of the movement-image can be seen in the resonating mode and the intensity of the linkage or interconnection between bodily movement and the moving images, that is, in *the sensation of movement as image*.

The logic of the interface demands that the body be opened toward the framing of the ludo-diagram. With this, there is a tendency toward the active production of a ‘new body’, a temporally constituted, dynamic and hybrid subjectivity beyond the paradigm of command and control. The ludo-diagram reveals the co-creation of expression as a result of the interfacing of human and non-human forces. The specific pleasures of the interface are to be found in the resonating interval between body and image, where there is a “becoming-music of the image” (Pisters 2003:218) and a becoming-image of the body and its sensations.

In music video games we can see the multimodality of the action-image (i.e. the constant mutual translation of actions and perceptions, of sound, movement and image into complex audiovisual situations), its sensorimotor relations and its strong link to somatic experiences more clearly than in many other variations of video game aesthetics. In this respect, games like REZ can be seen as examples of a general feature of video games, namely their transformation of interface experience into sensual perception and aesthetic pleasure. As Järvinen (et al. 2002:23) put it, games

often provide their feedback in audio-visual and bodily sensations that become part of the enjoyment of gameplay experience. [...] In other words, audio visual sensations function both as a feedback mechanism and as a form of aesthetic enjoyment.

Eugenie Shinkle (2003) compares playing REZ with “being at a rave”; for her the game is centered on “visual and auditory overstimulation, bodily and autonomic responses”. She then describes REZ as affirming a kind of “dynamic subjectivity” opposed to the “Cartesianesque subject” of first-person shooter games – “[n]either vision nor rational response is privileged here” (ibid.). The perception of REZ is shaped by intensity, and affectivity, a kind of synesthesia and affection that is linked to the body without drawing on it merely as a ‘natural’ resource. On the contrary, the linkage of technology with bodily, affective sensations points to the historical specificity of affect and technological, embodied subjectivity. (Further studies would have to clarify the relation between the ‘flat’ ontologies of speculative realism, actor-network-theory and similar philosophical projects and the historical constitution of hybrid subjectivity; in the end the experience of a “cybernetic continuum” can be seen, as Millington (2009) argues, as the result of a specific socio-technical constellation, where power structures, biopolitical strategies and mechanisms of the control society are leading the way. But this is another line of argument beyond the scope of this paper.)

A crucial aspect of the interface which has to be taken into account here with regard to the temporality of the gaming experience is rhythm and musical form. A reading of music video games like DANCE DANCE REVOLUTION as exercises of a pure paradigm of control, as suggested by Garites critique of the 'ideology of interactivity', is going to miss the ambivalence and ambiguity of the aesthetic function and logic of the interface.

If we play DDR, it is not sufficient just to wait for the arrow as a visible command that indicates the next correct move. Instead, we need to listen to the music, open up to feel the rhythm and look out for possible resonances with it. To the degree that we have to 'obey' the arrows on the screen, we should also follow the music and its rhythm. There is something like a rhythmic conjunction of the separate elements of the game apparatus or dispositive, including the body of the player.

In this respect REZ and machine dance games exceed the action-image (as a regulated sensorimotor scheme of action and reaction) and approach a rhythm of "pure perception" (Bergson). They constitute a simultaneous play of action and reaction, a joint motion of image, sound and body: the temporality of the image follows movement on a fundamental level, that is, movement and image assert themselves in the feedback-situation and tend to merge in a liminal space of perception. The body is perceived as a movement, which – in real-time – is directly constituted as an image, as a perception of the movement-image. The body is at this level 'image', insofar as it is actualized as a quality of movement. Based on Bergson's temporal ontology, one could speculate about the equivalence of this situation with the concept of 'pure perception'. At the same time, the resulting pleasure of the music video game feedback situation could be described as an almost childish pleasure or 'jouissance': "It moves. I move it. It moves me. I/It move(s)!"

What can be observed about machine dance games, from this point of view, is a pleasurable synchronization with the machine, a simultaneity, a common oscillation in the connection of the player's own body movements with the game. It is not a simple succession of command and obedience, but rather a sensorimotor coupling of machinic perceptions and actions with the player's perceptions and actions – brought together at the temporal level in the form of a somehow 'shared' rhythm.

Dance machine games like DDR, where controller-action, screen-movements within the frame and player-movement are synchronized in such a 'shared rhythm', offer a subject position that is clearly distinct from those offered by first-person-shooters or strategy-games. There is a position of power, control and mastery constituted by the synthesis of views, space and movements that is part of the basic definition of what shooter games and strategy games as genres are about. In comparison with this, music video games include different subject positions and other options of pleasure. Shooter and strategy games tend to offer an interface that is based on governing and mastery. They offer a strong position of active control, an imaginary ego or "I", similar to the traditional concept of a powerful Cartesian subject. In contrast to this, music and dancing games tend to offer a subject position that is defined by the responsiveness and openness of the body. At the same time they also emphasize what can be seen as a general quality of video games, since they began to evolve as a cultural phenomenon: to be a testing ground for new and unexpected interconnections of human and machine in sensual and libidinous play.

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## Response

The paper makes an indispensable contribution to our understanding of the relationship between man and machine during game-play. An interesting consideration provided by the paper is a nuancing of the notion of the cybernetic feedback loop (Hayles 1999) or cybernetic circuit (Dovey/Kennedy 2006) from a cyclical, single-channel process to a characterization of the game – player connection as a bi-directional and simultaneous process.

It would be interesting to see a more thorough application of this foundational concept to further examples of games. The paper claims a distinction between dance games and first person shooters (FPS) and strategy games that needs more fleshing out to be convincing. First of all, if we consider modes of control and subject position it is crucial to not lump FPSs and strategy games together. The difference between strategy games and dance games is largely evident. Strategy games, especially if we are talking about turn-based strategy games, do not couple the player with a single in-game entity. The player in strategy games tends to occupy an abstracted position not rooted within a single location in the game-world; issuing orders to multiple entities which respond with a latitude of interpretation that FPSs and music games cannot afford. The image on the screen in this case is not absorbed into the body as a site of immediate expression of movement, but an abstracted nudging of entities to and fro.

The sharp distinction between FPSs and dance games that the paper makes with regards to action and interface might not be as straightforward as presented. If music games like *DANCE DANCE REVOLUTION* (since 1998) instruct the player to move in a particular way through direct commands, FPSs instruct the player indirectly through the ludic structures (socially agreed upon rules, environmen-

tal affordances, systemically implemented rules and goals, etc.) of the game. There is a difference in the communication of these instructions, but the difference may more be attributable to the kind of ludic structures typical of these two genres and the manner in which these ludic structures are communicated. In *DANCE DANCE REVOLUTION* (DDR), there is a far tighter coupling of rule and action than in an FPS game. Placing a foot on the right arrow at the right time yields points while missing it does not. In an FPS game, even the more tightly constrained and rule-bound kind such as *COUNTER-STRIKE: SOURCE* (2004), input by the player does not have such immediate guidance and quantification, particularly to the un-initiated. But these seemingly trivial actions have far more meaning to the experienced player who is adapt at maximizing an opponent's mistakes. A simple pressing of the R button starts a reload action that takes a few seconds to complete. If this is performed when an enemy is nearby (even if they are not visible), it gives a clear signal both of the reloader's location and vulnerability. To the inexperienced, the sound might mean nothing.

There are two points I am trying to convey with this in relation to the present paper. First, we need to acknowledge that a consideration of the action-image within games is always informed by the ludic structures that are written into the environment or upheld by the social group that inhabits it. A player's interpretation of visual representation integrates the knowledge and affordances of the ludic structures of the game that might not be obviously visible or accessible to the casual onlooker. These ludic structures shape our actions in ways which the visible image on the screen by itself does not always impart. The edge representing a corner into an area where I expect enemies in *COUNTER STRIKE: SOURCE* prompts me to jump just before I reach it since this drastically reduces the chance of getting shot in the head, which in this particular game could be fatal. In other games where head-shots are not registered, or not as fatal, a ledge

leading to a corner has different meanings which shape the (experienced) player's actions. For the knowledgeable player, the ledge is as clear a sign for action as the arrow of DDR.

Just to clarify, I am not here agreeing with Garite's (2003) perspective of game control. Wiemer is absolutely right in being critical of such a restricted view of game interaction. Garite ignores the vast potential for expression and interaction that games allow. In fact, I would even go so far as to say that Wiemer could well bolster his critique of Garite by considering how the different ludic structures of games restrict or liberate movement. Garite clearly misses the diversity of games out there and the idea that a good portion of such games afford expression far beyond what their designers intended.

The second point follows from the first in appealing for a stricter application of the action image to actual game examples. There is a conceptual problem with the equivalent treatment of a *machinima* like Voldo's Dance and REZ or DDR. The last two are instances of game-play. The first is an instance of a recorded *performance* using a game. The disposition of the players in the last two takes into account the ludic structures of the game and interacts with it as such. In the case of the *machinima*, players are not playing the game at all but acting within the environment to the beat of an external track which is overlaid upon the performance in editing the *machinima*. We need to distinguish between game-playing and using game technologies for other ends. The analysis of Voldo's Dance is either an analysis of an audio-visual, non-ergodic text or the analysis of a performance intended for an audience. This is particularly problematic in a paper which focuses on the experiential nature of game-playing and, once again, stems from a lack of acknowledgement of the stance that players are adopting towards the ludic structures.

Whilst close analysis of the image are essential to such a distinctly visual medium, we need to remember that the game-image conveys a further layer, or set of layers, of information that traditional, non-

ergodic images did not include. These ludic layers form an important part of the game-playing experience and shape the interpretation and internalization of both image and action.

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