# European Avant-Garde: Art, Borders and Culture in Relationship to Mainstream Cinema and New Media

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A name is, then, an instrument of teaching and of separating reality. [Plato]

A research work is often the result of a network of people and their interventions in the discussion of topics and issues. My thanks go to all those people and artists who have been part of my research and have contributed with discussions, theorizations and data.

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**Dedicated to my father and my mother**

# European Avant-garde: Art, Borders and Culture in Relationship to Mainstream Cinema and New Media

## 1.1. CHAPTER ONE - The Evolution of a Digital Black Hole

The Construction of a Critical Framework for Analysis

## 1.2. The Complexity of Cultural Interaction in the Digital Realm

Parameters of Technological Experimentation in the Avant-garde

## 1.3. Osmotic Cartography: A Digital Mapping Methodology

Analysis and Models of Evolutionary Process and Coincidence

## 1.4. The Reemergence of Media: the Cyborg?

Analysis of the Dynamics of Causal Intention.

## 1.5. The Evolutionary Organic Methodology

The Integral Approach of the Digital Era

## 2.1. CHAPTER TWO - The Evolution of Autonomous Media

Spiritual Machines, Cyborgs and Media Transformations

## 2.2. The Organic Methodology in Digital Media

Spiritual Pixel Determinism in the 21st Century

## 2.3. Prostheses' Digital Aesthetic

The Integrated Technology of Human Extensions

## 5.1. CHAPTER FIVE - The Evolutionary Scenarios

### Future Applications for the Theoretical Framework

## 5.2. Conclusions

**Supporting Evidence and Verification of Findings**

1) **Interview with Peter Greenaway, DVD**

2) **Interview with David Larcher, DVD**

3) **Interview with Susan Collins, DVD**

4) **Interview with Charlie Gere, DVD**

**Abstract**

This research analyzes the impact of transformation and hybridization processes at the intersection of art, science and technology. These forms of transformation and hybridization are the result of contemporary interactions between classic and digital media.

It discusses the concept of 'remediation' presented by Bolter and proposes the concept of 'digital ekphrasis,' which is based on Manovich's analyses of the interactions between classic and digital media. This is a model which, borrowed from semiotic structures, encompasses the technical as well as aesthetic and philosophical transformations of contemporary media.

The thesis rejects Baudrillard's and Virilio's proposed concepts of 'digital black hole' as the only possible form of evolution of contemporary digital media. It proposes a different concept for the evolutionary model of contemporary hybridization processes based on contemporary forms of hybridizations that are rooted in aesthetic, philosophical and technological developments. This concept is argued as emancipated from the 'religious' idea of a 'divine originated' perfect image that Baudrillard and Virilio consider to be deteriorated from contemporary hybridization experimentation.

The thesis proposes, through historical examples in the fine arts, the importance of trans-media migrations and experimentations as the framework for a philosophical, aesthetic and technological evolutionary concept of humanity freed from the restrictions of religious imperatives.

**Prologue**

This thesis is an analysis of a protean area of film and digital media, technology and techniques, which through osmosis absorbs and exchanges approaches in practice and aesthetics. The contemporary territory of exploration, which is similar in character to the technological experimentations conceived between the 1920s or late 1960s, merges boundaries, shaping the evolution of new media and their aesthetic and is chthonic in its nature.

The intention is to analyze in this thesis a selected group of micro-developments and macrostructures in order to delineate a sense of the evolutionary directions of the media. More than encapsulate and territorialize the media process in its multiple fields, it is the intention of this thesis to consider the media experimentations as multiform aspects of the digital media, which can assume variegated, divergent and even opposite forms.

The methodology of the analysis, which responds to the characteristics of the contemporary forces at work in the field of media, film and fine art, are explained variously throughout the thesis in terms of philosophical, semiotic, technological and aesthetic criteria.

The previous definitions of the field appear obsolete and partially inadequate when thinking of films not shot on celluloid and/or acetate or of videogames where sequence are constructed with a filmic aesthetic and structure, or installations which are referring to a film and new media context. For these reason the approach adopted for the purposes of this thesis will be similar to that of a raid, a term borrowed from Hans Magnus Enzensberger and already adopted by Sean Cubitt to snap-shot a similar evolutionary

historical moment in the late 1960s. This was the period in which video defined itself as an art form and reshaped the relationships between media.

This thesis will look at some historical examples as well as more contemporary events, which are redesigning the media landscape and its aesthetics in Europe. It will also analyze some of the effects of these changes on art, culture and borders.

Past and contemporary avant-garde experimentations, rich in cross media fertilizations, has used since the beginning of the 20th century innovative technology as either referent, i.e. Futurists, or means of expression, i.e. Duchamp and Eisenstein. The avant-garde cross fertilizations, based on contemporary immediate communications and networked societies, has generated an arguably unique process of homologation which, according to Baudrillard, is embodied in the void represented by the simulacra and the hyperreal.

It appears that the international avant-garde exists in the adoption of technological 'notebooks,' [1] similar to those note books used in the thirteen century by painters, who created an homogenous aesthetic style, as argued by Gombrich.
However the avant-garde, it is suggested, has become technological; it is not in the shaping of the object, but in the engineering process of media production, shaping the genetic structures of the mass produced art objects. The process, which generates media, becomes art in itself, inheriting the social, political and aesthetic discourse of the avant-garde experimentations. The thesis therefore, will argue in support of the latter, through case studies and the creation of models, which test the evidence produced. Since the thesis deals with the complexity of interrelating elements each chapter will present analysis and models, which accumulatively overlay each separate elemental level

[1] Notebook here is described as 'software and hardware' laptops, which have the same characteristics and filters in America, Europe or Japan. This is a similar phenomenon to that of the International Gothic Style which, through the use of 'note-books' for painters across Europe, generated a homogenous aesthetic.

discussed. The final chapter, analysis and models will consolidate and conclude that the present homogenization is nothing other than a process in the evolutionary phase of technological experimentation in their innovatory stages, which are a consequence of osmotic exchanges and absorptions characterized as chthonic nature.

## 1.1. CHAPTER ONE - The Evolution of a Digital Black Hole

### The construction of a critical framework for analysis

1.1.1. This chapter contains a selection of differing discourses illustrated by examples of art practice to demonstrate an aesthetic and technical diversity, from which clear criteria can be extrapolated in order to suggest an evolutionary process. These criteria are later in the thesis applied to the deconstruction analysis of selected case studies and the creation of conceptual models evidencing processes and interrelations.

1.1.2. The complexity of the interaction between visual culture, science, art and technology is exemplified by the diverse methodologies which artists, engineers and scientists have adopted. The subject content, therefore, of this first chapter describes some of the core issues which are part of an ongoing set of experimentations in the 'technological avant-garde' or as Wilson defined it the 'Information Arts,' intersections of art, science and technology.

1.1.3. The problem of identifying changes and describing them whilst still in development is one of many methodological difficulties. There is also the necessity of devising tools which embrace the complexity of the cultural languages; visual, written and technology as code language, [2] which are translated from one technological medium to another and generate hybridization processes. These processes are based on a coincidence of technology as medium, technology as transmission and technology as language interacting with cultural expression.

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[2] Peter J. Bentley, "The Meaning of Code," in *Code: The Language of Our Time; Ars Electronica 2003*, ed. Christine Schopf and Gerfried Stocker, 33 (Linz: Hatje Cantz Verlag, 2003). Virilio on the subject states: "But when you program, a real kind of 'integrism' appears. One does not simply write: what one writes, the program performs – period. And the final coming together of the promises of the printing press and those of modern mathematics, [...] represents infinite power: a true kind of integration in that all previously separated technologies – metallurgy, semiconductors and electricity - now merge together." Paul Virilio, "The Information Bomb: A Conversation; Interview with Fridrich Kittler," ed. John Armitage, *Virilio Live: Selected Interviews*, trans. Patrice Riemens (London: Sage, 2001), 105.

1.1.4. Issues of 'organic' structures, spirituality of the medium, 'unseen' and 'unpredictable' serendipitous effects of the translation and autonomy of the media, as well as of the theory applied, are some of the issues which are analyzed in the first chapter. This is in order to establish a possible framework, as well as the context of analysis describing the dynamics of causal intention, be it serendipitous and/or osmotic.

## 1.2. The Complexity of Cultural Interaction in the Digital Realm

### Parameters of Technological Experimentation in the Avant-garde

1.2.1. Many questions have arisen regarding the art developments of the 20th century. In the consistently evolving processes of the digital media and the pervasive structure of the 'digital code,' new forms of engagement and approaches had to be devised to describe the evolving and fluid context of representation.

1.2.2. In this new realm of digital aesthetic, post humanity and technological developments in digital media, the operative frameworks of fine art and the avant-garde have been questioned. [3] The issues of global versus local, machine versus human, truth versus false, real versus virtual have generated the necessity not only to define the operative framework of the avant-garde and its experimentations, but also that of the individual's identity or multiple identities. This is particularly true in a context where the arts in general, and the avant-garde in particular, are not autonomous but contextualized.

1.2.3. The digital identity is a new form of representation which, not crystallized, has become ever more difficult to grasp. The same applies to the evolution of the media and the hybridization process, which in the transfer from the realm of the real into the virtual, is now proceeding to revert back to the real. [4] The result is a new media layering of the relationships established within the realm of reality together with those digital aesthetic representations and media languages which are characteristic of the digital era.

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[3] "How can both the arts and technical fields meet in a context of equality? Currently, the economic and political power lies with science and technology." Stephen Wilson, *Information Arts: Intersections of Art, Science, and Technology* (Cambridge, MA: The MIT Press, 2002), 876.

[4] "The impossible leap of faith required today consists in a second stage - that of turning around the traditional opposition of reality and its illusionary filmic shadow, document, or capture, by giving up the belief that the real lies beyond representation." Daniel Berchenko and Ben Wright, "Slavoj Zizek: The Reality of the Virtual," *Lux.org*, 2004, http://www.lux.org.uk/featured/default.htm (accessed December 18, 2004).

1.2.4. The contemporary challenge, therefore, is to understand the process of digitization in its evolution. The risk is the impossibility of analyzing the many realms of hybridization processes based on accessible technological exchanges. The traditional media, once digitized, become the new territory of renegotiation of relationships ranging from the social to the aesthetic, from the politic to the economical, from the technological to the religious.

1.2.5. The necessity for a 'humane' approach to technology and its applications is expressed by Bill Seaman who, at the Cyber@rt2004 conference in Bilbao, evidenced the need for a 'benevolent' media.

1.2.6. Media, which in the analysis of Seaman, Haraway, Baudrillard, Virilio and Eco, are becoming or have become 'autonomous.' The concept of autonomy, together with that of interactivity and hybridization, is part of the contemporary technological art debate, whilst engineering and scientific discoveries push the boundaries of human knowledge. This is a period in which the intersection between science, art, design and technology has become a widely recognized manifesto, which is embodied in ever more frequent forms of hybridization. These new media forms are continuously reshaping the structure of the 'classic media' [5] as we knew them. Although forms of visual 'interactivity' may be traced back to the Italian Renaissance with its painting and

[5] It is necessary to clarify the meaning of 'classic media' in this text. They are those media which produce artworks without digitization process. The research will be based on this classification, although there are three major limitations. The first is that the inspiration to the realization of the artwork may come from digitized products. The second is that there are possible media representations which can be projected directly into the retina without digitization, as already discussed by Virilio, or possibly implanted directly into the brain according to the latest bioengineering and artificial intelligence research. The third is the impossibility to replicate the historical artistic context prior to the computer revolution. The classification of 'classic media' is necessary to understand the shifting and evolutionary processes which are taking place in contemporary society within the fields of classic media and new media or, more specifically, of information arts - 'intersections of art, science and technology' -, as defined by Stephen Wilson. Although the definition of information arts could also refer to the Renaissance works of Leonardo da Vinci.

theatrical representations, the digitization process can be used as one of the key elements to describe and characterize the 'new media.' [6]

1.2.7. In this context several problems have been evidenced, most specifically the role played by the new media digital technology [7] and its omnivorous nature in the contemporary art world and in society at large. Issues which seemed to have been resolved or at least acquiesced to, like the morality of technology, an issue debated by Pasolini and Eco in Italy, seem to be reappearing as forms of contemporary debate. Fluxus, the concept of materiality of the media, the deterministic or heretical empiricism approach, the concept of 'total absorption and total rejection' appear in the analysis of the avant-garde artists who, using technology and science in their representation of the world, question and debate the very structure and fundaments of society. These ethical dilemmas although separate from the subject content of visual aesthetic expression achieved through the practitioners' interaction with the media, are also implicit in the expression and interaction.

1.2.8. This experimental technological avant-garde struggles with the concept of 'fascism' which, according at least to Virilio's analysis, is embedded in the positivistic and rationalistic structures of Marinetti's Futurism. Are we witnessing a global digital Futurism and a new form of technologically digitized fascism?

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[6] The definition of new media in this context refers to digitized media representations happening at any stage of the creative process. Although a restrictive classification, this does not attempt to be a solution to the problem of categorization in the field, but rather an expedient to identify a general descriptive terminology for more specific and in depth analysis, which will be further clarified.

[7] Lev Manovich in *The Language of New Media*, refers to 'new media' as anything that can be digitized. "All existing media are translated into numerical data accessible for the computer. The result: graphics, moving images, sounds, shapes, spaces, and texts become computable, that is, simply sets of computer data. In short, media become new media." Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 25.

1.2.9. In the attempt to find some explanations and obtain clarifications to this complex series of issues, the methodology of research for a necessarily interdisciplinary analysis has been based on comparative and speculative models borrowed from the intersections of arts, science and technology.

> 1.2.10. Modern science does not hold that what is new is always right. On the contrary, it is based on the principle of 'fallibilism' (enunciated by the American philosopher Charles Peirce, elaborated upon by Popper and many other theorists, and put into practice by scientists themselves) according to which science progresses by continually correcting itself, falsifying its hypotheses by trial and error, admitting its own mistakes - and by considering that an experiment that doesn't work out is not a failure but is worth as much as a successful one because it proves that a certain line of research was mistaken and it is necessary either to change direction or even to start over from scratch. [8]

1.2.11. These analyses have been evidenced against empirical approaches adopted by fine artists, media practitioners and theorists. This research does not attempt to be a historical analysis, neither an art survey nor an all explaining theoretical construction. It is a speculative research which will attempt to evidence some of the philosophical, historical and artistic issues that are embedded in the contemporary 'European' [9] experimental technological avant-garde. This will be part of further studies and future analysis as well as characterizing my personal artistic practice.

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[8] Umberto Eco, "Testing, Testing...: Umberto Eco Finds Scientific Method a Counterbalance to Fundamentalism," *The Guardian*, September 4, 2004. http://books.guardian.co.uk/review/story/0,12084,1296101,00.html (accessed September 5, 2004).

[9] The concept of European identity will be questioned and analyzed in a 'global homogenizing context.'

## 1.3. Osmotic Cartography: A Digital Mapping Methodology

### Analysis and Models of Evolutionary Process and Coincidence

1.3.1. The analysis of the aesthetic of new media and their structures is based on the history of modern and visual media. New media are placed within an historical framework of modern visual cultures, new cultural forms and virtual worlds which redefine the existing media such as film, video and installation generating new osmotic interactions between avant-garde film and new media. The ideological mechanism is one of the 'raid' [10] and of 'digital materialism' [11] which will generate an 'evolutionary digital materialism' approach, based on the evolutionary characteristics of media and fine art. These are based on processes of convergence and divergence of between media, technology and the cultural realm, represented by art and science respectively.

1.3.2. The technological avant-garde occurs at the intersections between art and science where there are many platforms for science/art interaction, likewise many degrees of coincidence of formative elements. Referring to Deleuze and Guattari the rhizomic growth is not just that but also multiplane and disjointed from a time line as perceived in biological evolutionary theory, which acknowledges the serendipitous nature, or non linear/non synchronized, interactions between art and science in space and time.

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[10] Enzensberger explains: "Cutting, editing, dubbing – these are techniques for conscious manipulation without which the use of the new media is inconceivable. It is precisely in these work processes that their productive power reveals itself – and here it is completely immaterial whether one is dealing with the production of a reportage or a play." Hans Magnus Enzensberger, *Raids and Reconstructions : Essays on Politics, Crime and Culture*, trans. Michael Roloff, Stuart Hood, Richard Woolley and Hans Magnus Enzensberger (London: Pluto Press, 1976) See also: Hans Magnus Enzensberger, *Dreamers of the Absolute: Essays on Ecology, Media and Power* (London: Radius, 1988); Hans Magnus Enzensberger, "The Industrialization of the Mind," *The Consciousness Industry: On Literature, Politics, and the Media*, ed. Michael Roloff, trans. Stuart Hood, 3-15 (New York: Seabury, 1974) and Magnus Enzensberger, *Europe, Europe: Forays into a Continent*, trans. Martin Chalmers (London: Hutchinson Radius, 1989).

[11] "Its overall Method could be called 'digital materialism.' Rather than imposing some a priori theory from above, I build a theory of new media from the ground up." Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 10.

1.3.3. Manovich offers an example of the contemporary convergence between different technologies evolved at different paces in different timescales in the continuum of the history of media and computer. "The two separate historical trajectories finally meet... Daguerre's daguerreotype and babbage's Analytical Engine, The Lumiere Cinematographie and Hollerith's tabulator - merge into one." [12] The linear interpretation of an evolutionary media and fine art setting is not appropriate to indicate the complex cultural interactions which form the basis for new hybridizations and developments. It is also insufficient to explain the complex modality of phenomena of technological convergence, which according to Manovich's analysis, have a non-linear media framework. Convergence is a strategic moment in a complex structure, which although appearing to assimilate every medium in the digitization processes, shows at the same time elements of technological differentiations and originality of approaches. This occurs in a setting in which the accelerated pace of technological innovations, [13] transformed in media and institutionalized, create new areas of research and art practice.

1.3.4. The theories of the contemporary avant-garde and the new media experimentations, discussed thus far, can be used as a tool to understand possible future developments in the evolution of the media context. Through a comparative historical perspective between new media and classic media it is possible to envisage the trajectories that have, thus far, generated the new media context. This in order to analyze the impact of the new media and their penetration into the realm of the body in a cultural context which is evolving from posthumanism into transhumanism as expression of transmedia applications.

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[12] Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 25.
[13] Stephen Wilson, *Information Arts: Intersections of Art, Science, and Technology* (Cambridge, MA: The MIT Press, 2002), 10.

## 1.4. The Reemergence of Media: the Cyborg?

### Analysis of the Dynamics of Causal Intention.

1.4.1. In the analysis of new media, one concept necessary to introduce here, the implication of which will be explained later, is that of teratology and its theoretical manifestations. Although this is not a treatise on the subject of teratology, the aspect of deformation and reformulation of the representation of the individual, not just as posthuman but as transhuman is fundamental to understanding both the dynamic processes and contemporary technological media developments, which are unique in the history of the evolution of the avant-garde. The result of this dynamic process is the transhuman individual, considered through evolutionary stages from one form of existence to another. [14] The importance of this analysis is based not just on the concept of cyborg, as discussed by Haraway, but on the more important shift of gaze within contemporary society. It will analyze the evolution from the mechanical gaze to the electronic/digital gaze, defined by Cubitt as 'cursory gaze'. This is significant because it is a perceptual shift in the contemporary discourse of the avant-garde.

1.4.2. The avant-garde in art, film and new media is moving towards a technological new realm, where the gaze and its fetishist perspective is filtered through the materiality of the optic fibers of technology. This technology is not mechanical but electric and re-proposes some of the analysis of McLuhan as contemporary and relevant, for no other reason than that of their visionary characteristics.

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[14] On the subject see the recent debate between Francis Fukuyama, member of the President's Council on Bioethics and author of "Our Posthuman Future: Consequences of the Biotechnology Revolution" who published an article on "The World's Most Dangerous Ideas - Transhumanism" on Foreign Policy. Replies to Fukuyama's views of technology enabled human enhancement have been issued by Ronald Bailey and Nick Bostrom. Francis Fukuyama, "Transhumanism," *Foreign Policy*, September/October 2004. Ronald Bailey, "Transhumanism: The Most Dangerous Idea? Why Striving to Be More Than Human Is Human," *reasononline: Free Minds and Free Markets*, August 25, 2004, http://www.reason.com/rb/rb082504.shtml (accessed August 27, 2004). Nick Bostrom, "Transhumanism: The World's Most Dangerous Idea?" *World Transhumanist Association*, September 10, 2004. http://transhumanism.org/index.php/th/more/495/ (accessed September 12, 2004).

1.4.3. In this context the process of transmediation or of remediations as explained in *Remediation: Understanding New Media* by Jay David Bolter and Richard Grusin, offers a partial analysis of the hyperreal context of contemporary culture and art. The concept of 'remediation,' although an interesting approach, does not offer an explanation of the evolutionary characteristics and elements of transformation particular to the new media. Transformation and evolution are characteristics not just of the media as technology, but also of humans interacting with the technology. The representation of media in a different format, like cinema that borrowed from photography, and theatre and photography that borrowed from painting, it is but one of the stages in the development of a new visual aesthetic language.

1.4.4. What has become relevant in the new media context is the 'instantaneous', the immediately 'present' to our perception, which transferred in the theoretical analysis focuses on the immediacy of the art object and not on its evolutionary processes. Furthermore, the fetishist gaze does not want the satisfaction of its desire, because that represents the end of the gaze itself. This continuously neurotic approach to acquire 'the object of desire' never exhausts its function and always requires a new object to satisfy the increasing neurosis of the gaze. In this sense the instantaneous and interactive element of the art production becomes limited, because full involvement would mean the transformation of every viewer in to 'actor'. Art becomes an explorative endeavor between media, evolving in time and space as in *The Tulse Luper Project* by Peter Greenaway.

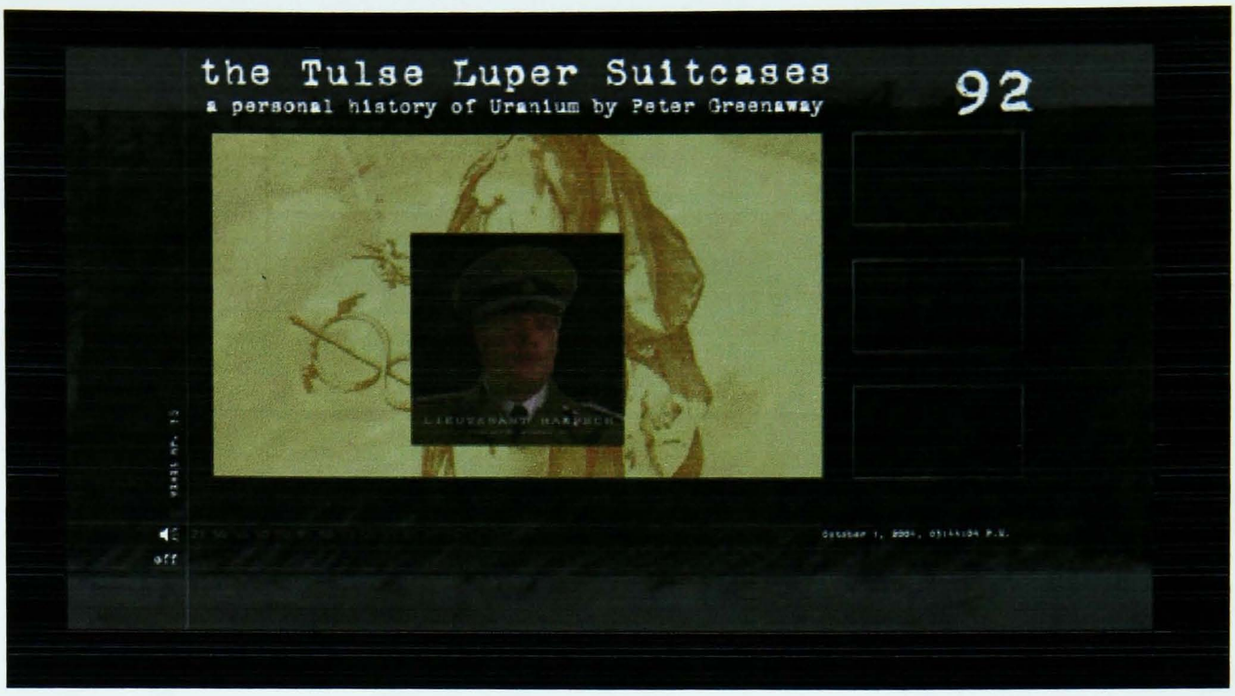


**Figure 1** ***The Tulse Luper Suitcases: A Personal History of Uranium*****, by Peter Greenaway, in the Tulse Luper Network. The picture is one of many possibilities which appear from the database every time the viewer logs in. The network is formed by a group of artists and designers who contributed to its structure. In http://www.tulselupernetwork.com/basis.html, (accessed September 1, 2004).**

1.4.5. The instantaneous access is a multipolar structure through which the viewer is granted a pseudo immediate access mediated 'through logins and passwords'. The access is a gate of immediacy to the identity of the viewer which is structured through the databased frameworks of the virtual engagement. Here multiple and often unrestricted accesses to any data of the viewer are recomposed, generating a virtual identity over which the viewer has little control. Forms of participation automatically become forms of control exercised over the viewer: the database becomes a tool, not just of representation of the individuals, but also of reconstruction of an alternative identity of the individuals who have generated it.

1.4.6. Rather than looking instantaneously to the world the viewer is instead surveyed instantaneously by the world of new media representations. This two way connection has become a more complex interaction. There is the object/individual surveyed, the individual/object that is surveying and through the recent phenomenon of

sousveillance [15] there is the individual that is surveying the surveillance exercised by the institutions. This generates a context of profound media interaction in the social, as well as institutional representations, which mediate reality, altering not just the representation of it, but behavioral and physical human structures.

**Figure 2 VR Helmet, GVU Center, Georgia Institute of Technology.**

1.4.7. The 'reality' of virtual environments is one of the complex new media structures, which evolving from a simple visual interface interaction, i.e the birdcam, has progressed to a brainwaves-media-visual-action/response form of interaction in the recent usage of VR Helmets.

[15] Steve Mann, "*Sousveillance*," *wearcam.org*, http://wearcam.org/sousveillance.htm (accessed October 1, 2004). See also: Jason Nolan, "Sousveillance Issue of The Gathering of the Tribes... CFP," *Team Polysynchronous - Just Differently Intelligent -*, August 3, 2004, http://jasonnolan.net/stuff/?q=node/view/116 (accessed September 29, 2004).


**Figure 3 Wild Birds Unlimited, 2004. The company which offers a webcam to observe birds has been in operation since 1996. In http://www.wbu.com/feedercam_home.htm (accessed January 10, 2004)**

1.4.8. In this context of continuous media surveillance, analysis and representation, the phenomenon of transformation and evolution is not just one of the media, but one related to the viewers as well. The recent study by Prof. Salti at the University of Florence theorizes that the hormonal alterations within the body of TV viewers condition hormonal development. [16] A research group at the Max Planck Institute for biological cybernetics has studied what happens in the brain when we familiarize ourselves with objects. [17] Furthermore, the brain's synaptic patterns, although genetically determined, [18] are also shaped and stimulated by 'artificial' digital apparata which enforce a 'digital biological response' from the viewer. This may be presented as a possible biological evolution enforced by the artificial world of digital media.

1.4.9. The body modifications at microlevel have already created the 'teratos', the monstrous, in as much as the media caused alterations of the body are ignored and undervalued. The human body is already a transmediated reality, one of transfer between

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[16] Gaia Vince, "Television Watching May Hasten Puberty," *Newscientist.com*, June 28, 2004, http://www.newscientist.com/news/news.jsp?id=ns99996081 (accessed June 29, 2004).

[17] See also: "Perception Is Stored in Single Neurons," *Max Plank Society for the Advancement of Science*, Research News Release, January 17, 2002, http://www.mpg.de/english/illustrationsDocumentation/documentation/pressReleases/2002/news0202.htm (accessed January 20, 2002).

[18] Matthias Kaschube, Fred Wolf, Theo Geisel, and Siegrid Löwel, "Genetic Influence on Quantitative Features of Neocortical Architecture," *Journal of Neuroscience*, 22 (2002): 7206-7217.

media. This new human body has a digital gaze, deterministically generated by the digital media. This is a reality which is developing its own aesthetics, reinterpreting classic media, film, painting and sculpture with the structures of the new gaze, generating a new aesthetic: the digital aesthetic.

1.4.10. "The play between these two positions – machine as embodiment of the rational, the precise, the organised or as the manifestation of passions unbridled by morality – suggest the complexity of the technological relation." [19] Technological relations which, as Cubitt explains, are to be understood in their complexity. These are relations between individual and technology, as well as a collective phenomenology. For this reason the analysis at micro as well as macro level corresponds to the necessity of understanding the relations of production of meanings. These relations are embedded in a context of hierarchies of knowledge and power which relate both body and soul to the social and technological context. Consequently we can conclude that transhuman, cyborg, electronic/digital gaze, remediation, surveillance, digital biological response, transmediated reality are all factors or criteria which allow us to identify the dynamics of causal intention.

[19] Sean Cubitt, *Timeshift on Video Culture* (Routledge, London: 1991), 15.

## 1.5. The Evolutionary Organic Methodology

### The Integral Approach of the Digital Era

1.5.1. In this digital ensemble of hybridizations of new media, does it make a difference to change the color of a single pixel in a painting? Is this just a philosophical question or is it relevant to the practical methodology of the artist? Is it possible to change a few elements of the Gioconda of Leonardo without anyone noticing it or does even the most imperceptible variation affect the viewer and the qualitative level of the oeuvre itself? And if this level exists, how can it be identified? And to which criteria does it respond and correspond?

1.5.2. These questions arise in an artistic world where the digital medium has changed the art scenario, allowing storage of infinite variations on a theme. It is a world where the presence of colors and layers tends to accumulate and becomes so charged with references and subtexts and hypertexts, that the nature of the work itself betrays the author. A valuable example is the recent *Fenlandia* by Susan Collins, which demonstrates the impossibility of capturing the infinite variation of the theme and creates a vast database of images, impossible to be viewed.

**Figure 4** ***Fenlandia: View from Sutton Gault*****, Susan Collins, September 28, 2004, http://www.susan-collins.net/fenlandia (accessed September 28, 2004). These images from Cambridgeshire are being recorded a pixel every second via the internet, and depicts the previous 21 hours and 20 minutes (approx.) in horizontal bands. The speed at which the image is updated is influenced by net speed, net traffic and net congestion at any given time.**

1.5.3. This analysis of a 'data-based' art moves beyond the problem of simple representation, becoming a problem of social and historical context, as with the analyses of Peter Greenaway's Tulse Luper Project.

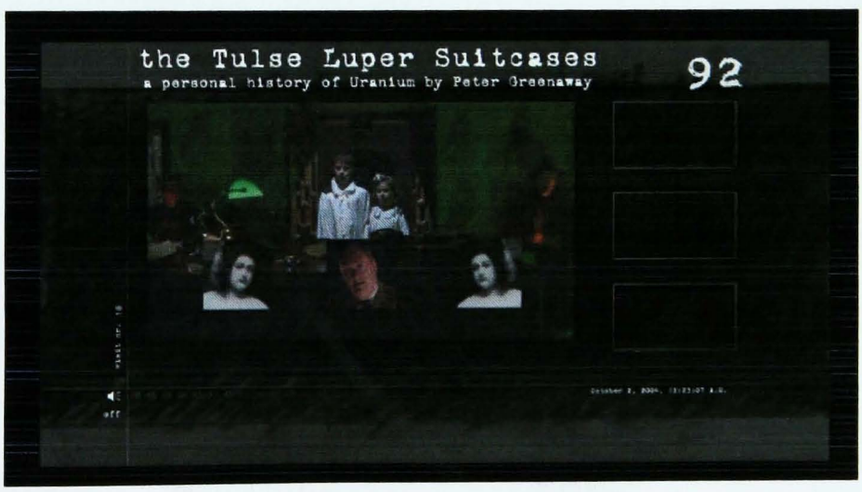


**Figure 5** ***The Tulse Luper Suitcases: A Personal History of Uranium*****, by Peter Greenaway in the Tulse Luper Network. The website utilizes a system which delivers random images selected from a database of thousands, creating a unique experience every time the viewer logs in. In http://www.tulselupernetwork.com/basis.html, (accessed October 2, 2004).**

1.5.4. The interpretation of the text becomes totally independent of the structural perspective of the author, and the work itself becomes self-represented, self-defined, self-determined and consequentially an 'autonomous oeuvre'. Is this 'autonomous oeuvre' also a self-created natural element, in which the meaning infused by the author disappears, becoming not just secondary, but totally irrelevant? Are the function, message and place in history that the 'autonomous oeuvre' chooses for itself the principal elements of its readability?

1.5.5. Problems can arise with an interactive 'autonomous oeuvre', which is partially produced by the author, but which needs the feedback of the viewer to complete and/or fulfill its existence and meaning. More interesting perhaps, are those artistic and engineering creations which example the 'autonomous oeuvre' and which are born in a complex evolutionary virtual environment. They are developed independently from the input of author and viewer and multiply, colonizing the space allocated and incrementing their complex structure, reproducing in a semi-real world some characteristics of the real environment. "Here we report the results of a combined computational and experimental approach in which simple electromechanical systems are evolved through simulations from basic building blocks (bars, actuators and artificial neurons); the 'fittest' machines (defined by their locomotive ability) are then fabricated robotically using rapid manufacturing technology. We thus achieve autonomy of design and construction using evolution in a 'limited universe' physical simulation coupled to automatic fabrication." [20]

[20] Hod Lipson and Jordan B. Pollack, "Automatic Design and Manufacture of Robotic Lifeforms," *Nature*, 406 (2000): 974-978, http://helen.cs-i.brandeis.edu/golem/download/naturegolem.pdf (accessed December 19, 2004).

1.5.6. Would an 'autonomous oeuvre', a product of a complex/evolutionary/diffusion theory, which spread into the real world in its benignant or malignant form, still be considered an art form?

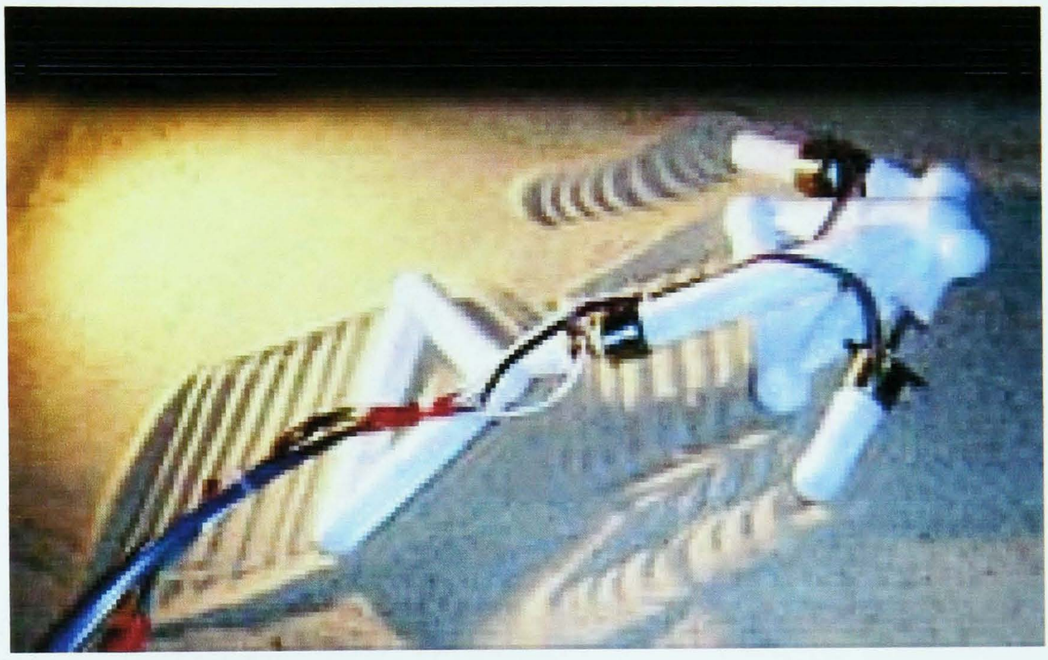

**Figure 6 The GOLEM Project (Genetically Organized Lifelike Electro Mechanic) by Lipson and Pollack, Nature, 2000.**

**Figure 7** ***Der Golem, wie er in die Welt kam*****, in English known as** ***The Golem, How He Came into the World*****, directed by Paul Wegener, 1920.**

1.5.7. The representation of the issue of technology, transhumanity and art are part of a tradition which has its roots in the cinematic images of *The Golem* (1920), the creation of a lifelike human.

**Figure 8** ***Der Golem, wie er in die Welt kam,*** **in English known as** ***The Golem, How He Came into the World*****, directed by Paul Wegener, 1920.**

1.5.8. In this context, what would be the implications of the development of genetic digital patterns determined by the media? And where could we draw the distinction between natural and artificial, soul-less and soul-full? These are some of the complex interactions which are at work in the world of engineering and artificial intelligence, where work on the 'spiritual machine' and its concepts, as envisaged by Kurzweil, continues and inspires the contemporary art practice in the technological avant-garde.

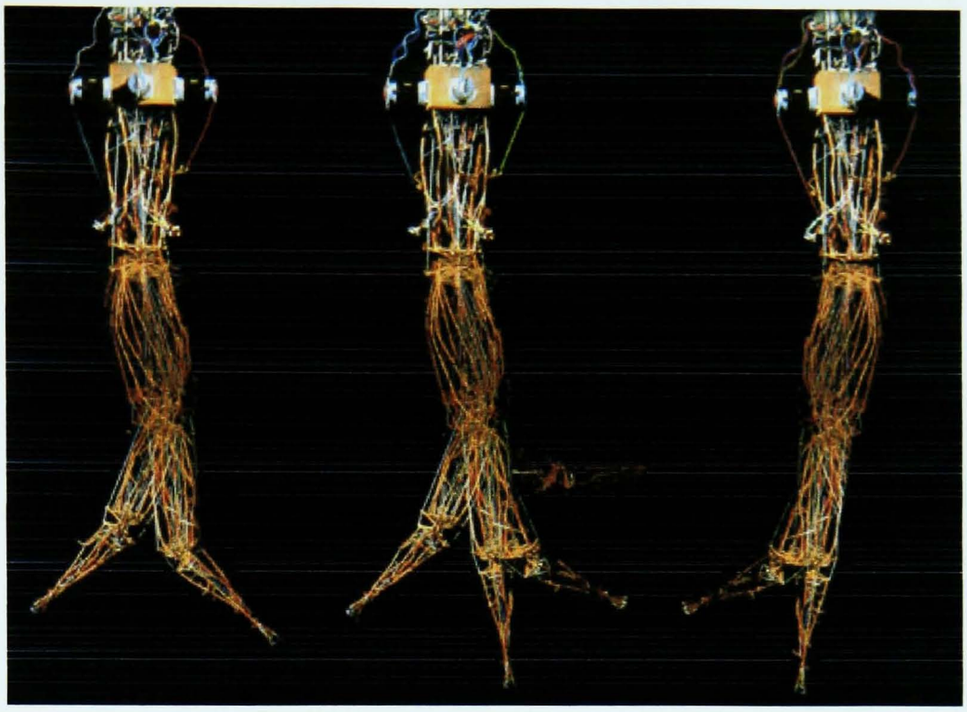

**Figure 9** ***The Flock*****, Ken Rinaldo, 1994. Computer-controlled arms show emergent behaviors through viewer interaction, in http://accad.osu.edu/~rinaldo/ (accessed September 9, 2004).**

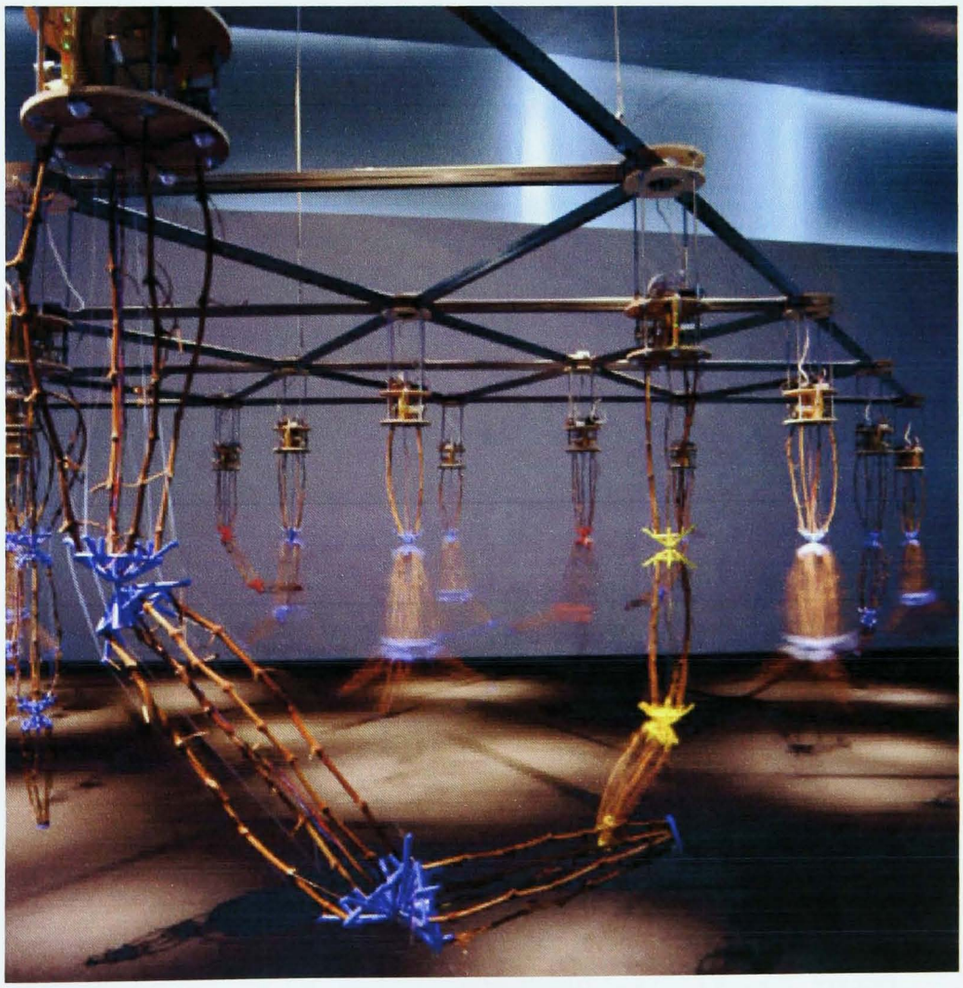

**Figure 10** ***Autopoiesis*****, Ken Rinaldo, 2000. Kiasma Museum, Helsinki, artificial life robotic sculpture installation, in http://accad.osu.edu/~rinaldo/ (accessed September 9, 2004).**

1.5.9. These recent forms of emergent behaviors art are embedded into an historical avant-garde context which, having set the framework in the 1960s and 1970s, inspires contemporary technological experimentations. Rinaldo's predecessors are Edward Ihnatowicz [21] the creator of *The Senster* (1971), and Craig Reynolds who created on screen flocking behaviors. [22] Reynolds's project *Boids*, is a 1986 computer model of synchronized animal movement, in this case birds, called flocking. "In cooperation with many coworkers at the Symbolics Graphics Division and Whitney / Demos Productions, we made an animated short featuring the boids model called *Stanley and Stella in: Breaking the Ice.* This film was first shown at the Electronic Theater at SIGGRAPH '87." [23] Since 1987 there have been many other applications of the boids model in the realm of behavioral animation. Tim Burton's Batman Returns (1992) was the first. "It contained computer simulated bat swarms and penguin flocks which were created with modified versions of the original boids software developed at Symbolics." [24]

**Figure 11 *Stanley and Stella in: Breaking the Ice*, Craig Reynolds, 1987.**

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[21] "The ultimate machine will have desires and needs, and its own machine Buddha nature. It will respond to the environment, move, participate in dialogue with others, and have means of restoring its energy. Finally, it will be a sculpture. It hasn't been made yet..." Jasia Reichardt, "Art at large," *New Scientist*, May 4, 1972, 292. Reichardt explains: "Because pre-programmed computer art is an extreme departure from work controlled by hand, from it will undoubtedly spring something quite different and unexpected." Jasia Reichardt, *The Computer in Art*, ed. John Lewis (London: Studio Vista and Van Nostrand Reinhold, 1971), 95. See also: Jasia Reichardt, *Cybernetic Serendipity* (New York: Praeger 1969).

[22] Craig W. Reynolds, "Flocks, Herds, and Schools: A Distributed Behavioral Model," *Computer Graphics* 21, no. 4 (1987): 25-34.

[23] Ibid., 25-34. See also Craig W. Reynolds, "Not Bumping Into Things: Notes on 'obstacle avoidance' for the course on Physically Based Modeling at SIGGRAPH 88, August 1 through 5 in Atlanta, Georgia," *red3d.com*, http://www.red3d.com/cwr/nobump/nobump.html (accessed August 21, 2004).

[24] Craig Reynolds, "Boids: Background and Updates," *red3d.com*, http://www.red3d.com/cwr/boids/ (accessed October 3, 2004).

1.5.10. *The Senster* of Ihnatowicz is a sculpturally more identifiable precursor of the experimentations of Rinaldo and in 1971 set the framework for interactive, lifelike emergent behaviors. His work focused not just on a technological context but was also relevant for the analysis of the methodologies to be applied to research in the field of science and fine art.

> 1.5.11. A great deal of discussion among computer-artists is centred around the question of whether the computer should be treated as a tool or as a medium, with some purists insisting that the term 'computer-art' should be reserved for the latter. The distinction may appear arbitrary, but it is in fact important because it distinguishes those artists whose inspiration comes from outside the world of computing and who use the computer simply for convenience from those whose ideas have originated as a result of computing experience. [25]

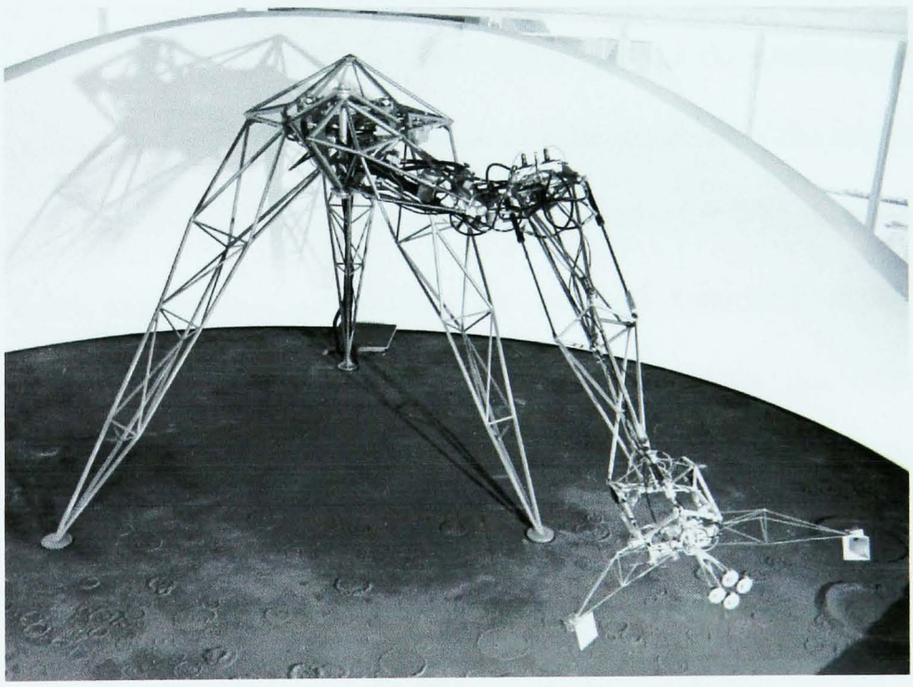

**Figure 12 *The Senster*, Edward Ihnatowicz, 1971. From the Philips Archive, photo taken January 15, 1971.**

[25] Edward Ihnatovicz, "Toward a Thinking Machine," ed. Ruth Leavitt, *Artist and Computer*, 1975, 32-34, http://www.senster.com/ihnatowicz/articles/towards_thinking.pdf (accessed July 2, 2004).

**Figure 13 A recent picture taken in 2003 of *The Senster* (1970) reconstructed only in its mechanical components in http://www.senster.com/ihnatowicz/index.htm (accessed October 2, 2004).**

1.5.12. After the creation of *The Senster* the problems related to emergence and autonomy became not just relevant to the structure of the medium, but also to the behavioral personifications of a lifelike medium. 'Why don't you speak to me?' asked Michelangelo to Moses, hitting his knee with a hammer. In the digital world of cybernetic artificial intelligence, there is a possibility that Moses could answer, or at least there is some envisaged possibility. The 'autonomous oeuvre' could strike back. Traditional filmic examples are James Whale's *Frankenstein* (1931) screen adaptation of Mary Shelley's Gothic 1818 novel *Frankenstein; or, the Modern Prometheus*.

**Figure 14 "It's alive! Alive." Dr. Frankenstein (Colin Clive).**

1.5.13. The interesting part of the movie is that the 'monster' is brought to life through electricity, which is the source and vital element of contemporary media. The moment in which the creature comes to life is a moment of recognition of the 'other' which, based on a hybridization process ever more complex, raises questions in the assessment of contemporary robotic applications and their eventual spiritualities.

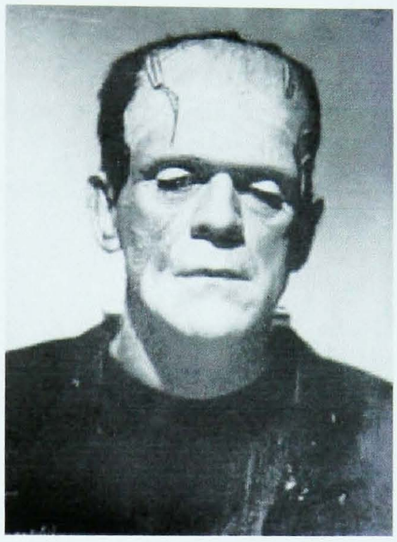

**Figure 15 Boris Karloff as Frankenstein's monster, in *Frankenstein* (1931).**

1.5.14. The world of future lifelike creatures has become one that has left the collective imaginary and has moved into the reality of contemporary media. [26]

1.5.15. In the exploration of the Golem figure and other artificial anthropoids, Elaine Graham has pointed out that the "monster is therefore the tangible, corporeal manifestation of sinful and disobedient acts." [27] The Golem becomes a transgression against the divine and the 'natural,' the Golem signifies the unlawful 'hybrid' creation.

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[26] Jay Clayton, "Frankenstein's Futurity: From Replicants To Robotics," in *The Cambridge Companion to Mary Shelley*, ed. Esther H. Schor (Cambridge: Cambridge University Press, 2003). See: William S. Burroughs, *Blade Runner, a Movie* (Berkeley, CA: Blue Wind Press, 1979). Bukatman writes: "Blade Runner's world was neither so certain nor so resolved: it offered a framework for doubt." Scott Bukatman, *Blade Runner*, (London: British Film Institute, 1997), 34. Also: Cathy Gelbin, "Narratives of Transgression, from Jewish Folktales to German Cinema," *Kinoeye, New Perspectives on European Film*, http://www.kinoeye.org/03/11/gelbin11.php (accessed November 10, 2004).

[27] Elaine L. Graham, *Representations of the Post/Human: Monsters, Aliens and Others in Popular Culture* (Manchester: Manchester University Press, 2002), 48.

1.5.16. A world of moving/speaking statues/robots could be possible. Would the creators be called artists? And on what basis? Would their craftsmanship achieve the level of art in a production line of 3DPersonas? It seems that the final accomplishment of this era is the realization of Aldous Huxley's *Brave New World.* The contemporary theoretical analysis is pushing reality to its hyperreal limits: the cyber-genetic manipulation of a new species of human beings – 'transhumans'. Transhuman pioneers and their creators, in the quest for the originating perfect image, are incorporating into the biological structure nanotechnology, robotics, genetics and artificial intelligence.

1.5.17. The same integration and quest for in-differentiation happens in the contemporary world of media where there is a quest to define the often spoken words 'electronic arts/digital arts/multimedia arts/cyberarts: what's the difference?' [28] This question requires clarification in a digital context which is becoming distinctive and undifferentiated simultaneously. It is distinctive in the production of a new prosperous generation of hybrids, but undifferentiated in the moment in which the composition is not just a simple sum of elements but, possibly, a whole new set of media which need to be redefined in their structural elements and aesthetic. "We might say that, for a section of today's public, human cloning is becoming as simple an operation as having one's portrait taken by a photographer in the nineteenth century. Or, since 1895, buying a ticket to see the Lumière brothers' baby guzzling its food up on a screen." [29]

1.5.18. The horizon that it opens is both frightening and challenging, representing a new combinatory experience to adapt means to ends. "The curious adapting of means to ends, throughout all nature, resembles exactly, though it much exceeds, the production of

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[28] Lanfranco Aceti, "Arts in a Box: The Cyber-Electronic-Multimedia-Digital Process," (conference paper, 'Inscriptions in the Sand: An Arts and Culture Conference and Festival,' Eastern Mediterranean University, Cyprus, June 4-6, 2002).
[29] Paul Virilio, *The Information Bomb*, trans. Chris Turner (London: Verso, 2000), 28.

human contrivance; of human design, thought, wisdom, and intelligence. Since therefore the effects resemble each other, we are led to infer, by all the rules of analogy, that the causes also resemble."[30]

1.5.19. If the cause is 'resembled' in the media and 're-assembled' into the effect, what is then necessary to understand is how much of the evolutionary structure of its creator is reflected into the digital world. It also becomes important for us to understand how much of the evolutionary modus operandi of humans and their media is at work in the avant-garde.

1.5.20. "The average adaptiveness of the species thus advances under 'intergroup' selection, an enormously more effective process than 'intragroup' [31] selection. The conclusion is that subdivision of a species into local races provides the most effective mechanism for trial and error in the field of gene combinations." [32] Which could be utilised as a metaphor for 'media re-combinations.' The same set of rules of integration and differentiation might be applied to the digital constructions of the contemporary new media, which seem to integrate and differentiate with an evolutionary pattern.

1.5.21. In this media world of variations, of infinite paths, it is possible to go back to the work and chose an alternative route, disregarded in a prior moment, restarting from the past, or continuing from a suspended present the same venture in an infinite universe of new possibilities. What we are defining as media's remediations could be a translation in time and space and this is the element that this research will discuss and reframe in the context of 'digital ekphrasis'.

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[30] David Hume, *Dialogues Concerning Natural Religion* (Oxford: OUP, World's Classics, 1993), 45-46 and 50-51. Cited in Mark Ridley, *Evolution* (Oxford: Oxford University Press, 1997), 387-388.

[31] The intergroup/intragroup evolutionary selection can be adopted to conceptualize a media evolutionary theory which, although requiring further definition, can be presented as 'inter-media-group' and 'intra-media-group.'

[32] Mark Ridley, *Evolution* (Oxford: Oxford University Press, 1997), 38.

1.5.22. *The Senster* (1970) may be used as an example of revived technology: but is it remediation or a case of digital ekphrasis? What is the art product, the remediated recreation of the students of the department of media technology at the Hogeschool van Utrecht or *The Flock* of Rinaldo?


**Figure 16 3D Computer model of The Senster, Hogeschool van Utrecht media technology student project, 2003.**

1.5.23. In this virtual world is each of the infinite variations of a remediation and/or translation process a masterpiece? And what is the system that governs this world of infinites? Is it the set theory with its mathematical rules to control the infinite and random world of each artistic endeavor? Are we assisting in a re-representation of the chaos-theory into the world of art?

1.5.24. Often some of the theories, developed to explain the magmatic or the chthonian nature of the art processes are parallel, exclusive, elusive, contradictory, contrasting and belligerent. This is also a characteristic of the methodologies, which are

being developed to analyze the new fields of research that the hybridization of sciences and arts are creating. All the questions that critically arise from this unsettled new realm of analysis can be re-proposed in a methodological system, where the creation of the real, in this case the autonomous oeuvre, depends on the chosen criteria for its evolutionary development. But is it really so? Or is the return into the fiddling and fudging of a series of concepts and constructions that, similar to the fantastic bestiaries of the Middle Ages or the mythic science of alchemy, pose questions that cannot be answered?

1.5.25. These are problems which do not offer a definitive and true answer between diverse alternatives, but the methodology applied, will be part of the output, an integral part of it, an expression of it. The methodology combined with all the other parts will create an organic whole, which being an expression of a metaphysical and/or physical, artistic and/or scientific analysis, will tell a lot about contemporary media, about the social constructs interpreting real and virtual, private and/or collective imaginary. [33]

1.5.26. One of the contemporary debates on the methodology of humanities is the argument sustained by Sokal and Bricmont on the inappropriateness of the contamination or the necessity of a long training period that any scholar should endure to master a subject. Even if Darwin carried in bona fide his research, he was never an economist and did not master the subject, but used it for comparative and interdisciplinary analyses. "...and their establishment as a brilliantly coherent and intellectually radical theory of evolution, can best be understood by recognizing that Darwin transferred the paradoxical argument of Adam Smith's economics into biology [...] in order to devise a mechanism..." [34]

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[33] "The results are complex, chaotic, nonlinear, and often lifelike." Ken Rinaldo, "The Flock: Artificial Life Sculpture: Emergent Systems: Exploring the Confluence and Coevolution of Organic and Technological Cultures," *accad.osu.edu*, http://accad.osu.edu/~rinaldo/ (accessed September 9, 2004).

[34] Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 59.

1.5.27. What needs to be clarified is the methodology chosen for this work and the justifications necessary for a serious research, which avoiding fallacious interpretations and gross mistakes, as aptly demonstrated by Sokal and Bricmont, does at the same time allow free borrowing in a critical serendipitous mode, without the factious and somewhat unnatural artificial divisions imposed by humans on knowledge.

1.5.28. This research analysis, therefore, will ultimately concentrate on the new digital artistic forms "toward what might be described as comparative media studies, an approach that reads the emerging technologies against the backdrop of a much broader range of media, both historical and contemporary." [35] In fact, the digital output, "in its nature is a hybrid, constructed on a notional and virtual space-time code which relies entirely on a fusion of electronics and media." [36] A similar combination of art and science, design and technology, which underpinned the first decades of artists' films are at work today in the digital forms.

1.5.29. This combination and interbreeding, characteristic of the innovations brought about in this era of interdisciplinary approaches, bares the possibility of achieving new perspectives and innovations through a new set of media which are not multimedia, cybermedia or digital media, but integrated media. This is a new meta-medium-integrated-social-context, which has the adaptability to work at different levels and on different sections, conveying contemporaneously homogenous and/or contradictory experiences. The integration of media in the contemporary art world is an element which is being transferred into reality; the film ceased to belong to the cinematic world, but like

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[35] Noel Carroll, "The specificity of Media in the Arts," in *Film and Theory: An Anthology*, ed. Toby Miller and Rober Stam, 39-53 (Oxford: Blackwell, 1999). See also: William Boddy. "Redefining the Home Screen: Technological Convergence as Trauma and Business Plan," in *Rethinking Media Change: The Aesthetics of Transition*, ed. Henry Jenkins and David Thorburn, 191-200 (Cambridge, MA: The MIT Press, 2003).

[36] A.L. Rees, *A History of Experimental Film and Video* (London: British Film Institute, 1999), 120.

a metastasis proliferated and invaded the space of reality, where the distinction between fiction and reality itself becomes blurred. Furthermore the distances between body and media have been blurred, presenting challenging new scenarios of integration between humans and machines. "When we say expanded cinema we actually mean expanded consciousness... Like life it's a process of becoming, man's ongoing historical drive to manifest his consciousness outside of his mind, in front of his eyes." [37]

1.5.30. The contemporary world seems to rest on the phenomenon of media and human convergence. This is a process which generates the specialization of different hybrids at micro level and structural convergences at macro level. This phenomenon implements conspicuous changes into the media structure, which is still human and is still being determined by human evolution. [38]

1.5.31. Gould construes a theory to explain the nature of small changes in palpable time and also attempts to give an adequate causal account for broader patterns and processes in geological history. He writes: "On the final branch of scope, the cut labelled R3 accepts the Darwinian contention that microevolutionary modes and principles can build grand patterns by cumulation through geological immensity, but rejects the argument that such extrapolations can render the entire panoply of phenomena in life's history without adding explicitly macroevolutionary modes for distinctive expression of these processes at higher tiers of time..." [39]

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[37] Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 41. "For Godard, with his usual quirky insight, cinema involved projection, a beam of light projected in the dark of Plato's cave. "Cinema will disappear', Godard has predicted, 'when it is no longer projected', when the beam of light has gone." Peter Wollen, *Paris Hollywood: Writings on Film* (London: Verso, 2002), 90.

[38] It is interesting to note that the autonomy of the medium or of the media from the human-creator is raising the prospect of a technological medium with an aesthetic of its own, independent of the attributes of the creator.

[39] Stephen Jay Gould, *The Structure Of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 21.

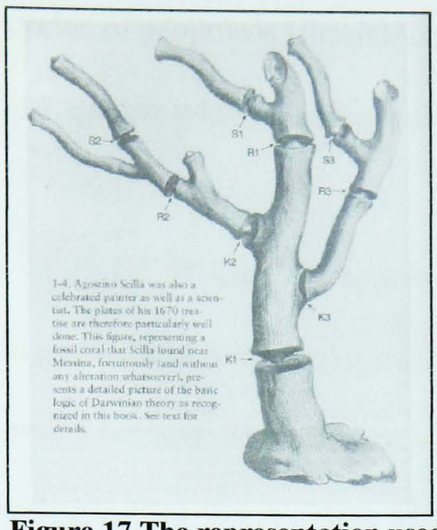


**Figure 17 The representation used by Gould for his evolutionary theory framework.**

1.5.32. What Gould calls the R3 cut, (see figure 17), it was represented in this research as a point of macroscopic change, which can be imagined as the introduction of a major changing technology, bringing about a new adaptive cycle with consequential hybridization at microscopic level (see table 5).

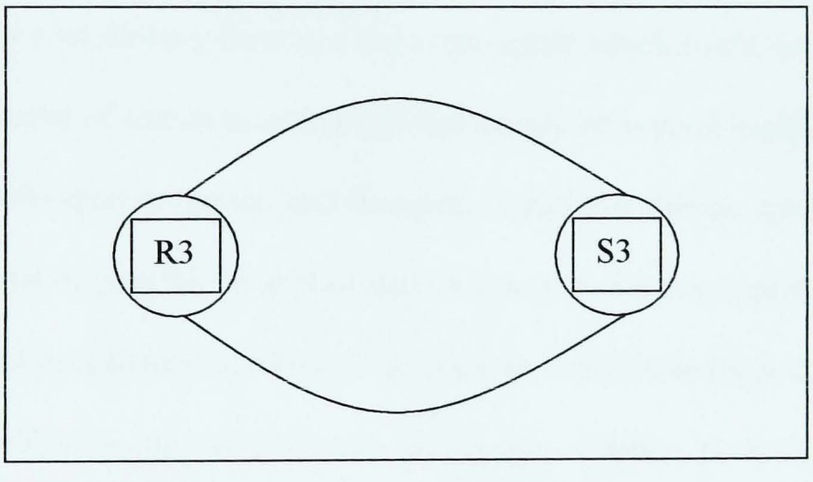


**Table 1 The figure symbolizes a schema derived from figure 21 which Gould has used to illustrate his theory. The area R3 is the point of a macroevolution, while the area S3 represents the microevolutionary segment in a linear representation.**

1.5.33. From a philosophical perspective this theoretical framework could be identified as Hegelian, in the sense that progress is described as an upwards spiral of

cycles of proposals (thesis), contrasted by oppositions (antithesis), and leading to a new protagonist which combines the best [40] aspects of both competitors (synthesis).

1.5.34. Gould's approach could be applied to a theory of the avant-garde in order to understand if an evolutionary process does exist and where the avant-garde is placed in such a context. Furthermore, if the avant-garde can be considered as part of a technological, but not only technological innovation, the identification of the technological macroscopic changes, area R3, might reveal itself as a useful tool in order to identify the possible evolutionary hybridization which will determine the microscopic reality of area S3.

1.5.35. On the basic concepts of this evolutionary approach and looking at the cut labelled R1 (see figure 21) it might be possible to extend such analysis to the context of an evolutionary theory of the avant-garde which could be expanded 'into a hierarchical model of selection acting simultaneously on several legitimate levels of Darwinian individuality (genes, cell-lineages, organisms, demes, species, and clades).' [41] It would then be possible to apply Gould's theory to the avant-garde, which, in his attempt to define a structural framework, finds an explicative metaphor outside its strictly biological field of enquiry and chooses the *Duomo* of Milan. Its artistic history from the late 14th century is used by Gould as a representational basis for the concepts of Falconer and Darwin.

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[40] It is necessary to clarify that the word 'best' is used in the context of an evolutionary approach, therefore in reference to external stimulus or stimuli. It is the best adaptive organismal answer because it allows the survival of the organism itself. It does not imply any categorical aprioristic judgment based on aesthetic, ethical or political values and the survival of the adapted organism it is in itself not to be necessarily considered as a positive result. It is a freestanding concept, which is non-comparative and non-competitive. It is not within the research remit to discuss the value of the 'evolutionary achievements' in the humanistic field.

[41] Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 21.

1.5.36. Thus, the first two tiers of the main (western) entrance to the *Duomo* display a style that, in one sense, could not be more formally discordant with Gothic elements of design, but that somehow became integrated into an interesting coherence. [...] Finally, in a distinctive and controversial icing upon the entire structure, the "wedding cake," or row-upon-row of Gothic pinnacles festooning the tops of all walls and arches with their purely ornamental forms, did not crown the edifice until the beginning of the 19th century, when Napoleon conquered the city and ordered their construction to complete the *Duomo* after so many centuries of work. [42]

1.5.37. Gould continues his analysis with a set of questions building a comparison between the *Duomo* of Milan and the building of evolutionary theory based on Darwin's *Origin.*

1.5.38. If we grant continuity to the intellectual edifice (as implied by comparison with a discrete building that continually grew but did not change its location or basic function), then how shall we conceive 'the structure of evolutionary theory' [...]? Shall we accept Darwin's triumphalist stance and hold that the framework remains basically fixed, with all visually substantial change analogous to the non-structural, and literally superficial, icing of topmost pinnacles? Or shall we embrace Falconer's richer and more critical, but still fully positive, concept of a structure that has changed in radical ways by incorporating entirely different styles into crucial parts of the building [...], while still managing to integrate all the differences into a coherent and functional whole, encompassing more and more territory in its continuing enlargement? [43]

1.5.39. The same set of questions can be asked in reference to the digital media and to the avant-garde. Is digital technology causing an evolution within the media world? And are the changes of Darwinian typology, with a framework that remains basically the same, immutable, with superficial deviation and non-structural alterations? Or are they more similar to the thesis proposed by Falconer, with critical differences and radical alterations, still integrated into a coherent whole?

1.5.40. We now reach the interesting point where excisions and regraftings preserve the essential nature of an intellectual structure, but with two quite different levels of change and revision, as characterized by Falconer's and

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[42] Ibid., 3-4.
[43] Ibid., 4-6.

> Darwin's competing metaphors for the *Duomo* of Milan. I would argue that a severing low on any one of the three major branches corresponds with a revision profound enough to validate the more interesting Falconerian version of major revision upon a conserved foundation. [...] On the other hand, the severing of a subbranch of one of the three branches symbolizes a less portentous change, closer to Darwinian models for the Milanese *Duomo* – an alteration of important visual elements, but without chance in the basic framework. [44]

1.5.41. The analysis would then rest on a terminological equation where the terms 'evolution and becoming' need to be clarified in their mutual relationship in an art context, borrowing an evolutionary methodology.

> 1.5.42. Finally, becoming is not an evolution, at least not an evolution by descent and filiation. Becoming produces nothing by filiation; all filiation is imaginary. Becoming is always of a different order than filiation. It concerns alliance. If evolution includes any veritable becomings, it is in the domain of *symbioses* that bring into play beings of totally different scales and kingdoms, with no possible filiation. There is a block of becoming that snaps up the wasp and the orchid, but from which no wasp-orchid can ever descend. There is a block of becoming that takes hold of the cat and baboon, the alliance between which is effected by a C virus. There is a block of becoming between young roots and certain microorganisms, the alliance between which is effected by the materials synthesized in the leaves (rhizosphere). If there is originality in neoevolutionism, it is attributable in part to phenomena of this kind in which evolution does not go from something less differentiated to something more differentiated, in which it ceases to be a hereditary filiative evolution, becoming communicative or contagious. [45]

1.5.43. Deleuze and Guattari seem to identify with the 'rhizosphere' the area of becoming which instead of being a filiative evolution assumes more the characteristics of digital communication or genetic plague. These two elements in their involutive characteristics seem to retain the 'rhizosphere' area of creativity. In fact, Deleuze and Guattari continue defining the area of evolution and identifying it with the communication and/or merging between heterogeneous populations.

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[44] Ibid., 19.

[45] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1988), 238.

1.5.44. Accordingly, the term we would prefer for this form of evolution between heterogeneous terms is 'involution,' on the condition that involution is in no way confused with regression. Becoming is involutionary, involution is creative. To regress is to move in the direction of something less differentiated. But to involve is to form a block that runs its own line 'between' the terms in play and beneath assignable relations. Neoevolutionism seems important for two reasons: the animal is defined not by characteristics (specific, generic, etc.) but by populations that vary from milieu to milieu or within the same milieu; movement occurs not only, or not primarily, by filiative productions but also by transversal communications between heterogeneous populations. [46]

1.5.45. An example of an 'involutionary aesthetic' representation within the mainstream of Hollywood cinema can be found in *2001, A Space Odyssey* (1968) by Stanley Kubrick. The movie offers a cinematic representation of an involutionary/evolutionary stage of the travel of humanity in a video/painterly fashion through the film medium.

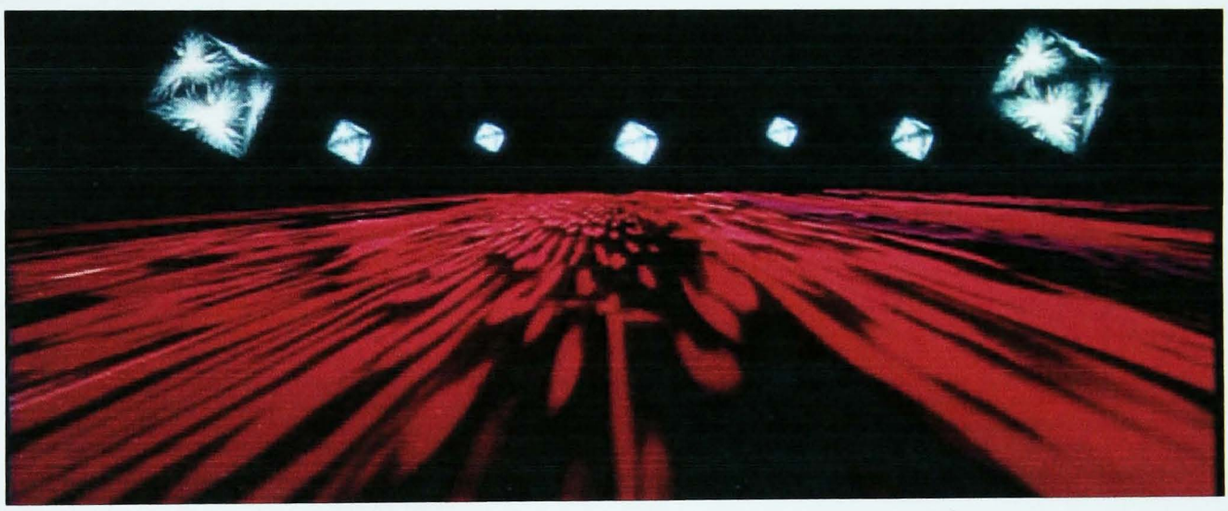

**Figure 18 *2001, A Space Odyssey*, 1968, by Stanley Kubrick. An image from the movie.**

1.5.46. The area richer in creative determinants seems to be located, at least according to Deleuze and Guattari, in the intercrossing or interbreeding of heterogeneous cultural elements. Gould, instead, pinpoints a locus which is a general and complex multileveled and multilayered structure, where the interaction is based on forces acting on a hierarchical framework.

[46] Ibid., 238-239.

1.5.47. Beyond punctuated equilibrium, the general rationale for a hierarchical theory of selection, as presented here through the interactor approach based on emergent fitnesses at higher levels, may establish a complete (and tolerably novel) framework not only for grasping the consistent logic of hierarchical selection, but also for viewing each level as potent in its own distinctive way, and for recognizing the totality of evolutionary outcomes as a realized balance among these potencies, and not as the achieved optimality of a single causal locus [...] [47]

1.5.48. The definition and identification of a locus and a modus, or as Gould explains of multiple 'loci and modi,' which determine and generate the creative process, become particularly important. This is in order to understand the 'agon' where the avant-garde interacts and develops its creative forms, some of which are destined to percolate into and permeate the mainstream. One of the elements that Deleuze, Guattari and Gould appear to have in common is the communication or interactive element between heterogeneous populations.

1.5.49. In the application of this theory to the contemporary media context it is important to define the role of integration of different media, which is also integration between reality and illusion in the area of the hyperreal. At the same time, the blurring of the boundaries creates a subsequent new set of problems which is related to the experience of the medium itself. The difference between media tends to become more and more indistinct, whilst it carries the same message all over again in every possible format. The viewer is asked to repeat a choice again and again, experiencing a continuum, a loop, in which changing the medium does not change the content. Each moment of reality is pervaded by a blurring of the restriction of the fictional element and of time and space.

1.5.50. The phenomenon of repetition of content in the evolutionary media context described generates two possible classifications: homogeny and homology. They are

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[47] Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 49.

inserted in a context of a symbiotic 'heterogeny' relationship based on the phylogeny or phylology of the media. The media interactions and phenomena of emergence can be classified as homogenous media (media with the same structures), homologos (media with the same content) which interact and evolve experimenting symbiosis with heterogeneous media based either on the phylogeny (same media origins) or on the phylology (same media 'aesthetic' discourse). [48]

**Figure 19 *Sybille*, Olaf Breuning, 1997. The image is part of a series of digital images made in 2003 titled *I Never Invite My Friends Again, They Are Weird! I-IV.***

[48] "This homogenous-fluid aesthetics of digital bodies is repeatedly interpreted as the effect of the technical possibilities of new media. However, I maintain that these imagined bodies are less technology-related, but rather that they spring from the imagery of the information age and that they are also more general basis fantasies of the dissolution of subjectivity." Yvonne Volkart, "Unruly Bodies: The Effect Body as a Place of Resistance," *Media Art Net*, 2004, http://www.medienkunstnetz.de/themes/cyborg_bodies/unruly_bodies/7/ (accessed January 22, 2005). For an evolutionary analysis see: Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 1154. Gould explains that "This crucial discovery about early emplacement of key developmental patterns [...] combined with a central fact of timing in phylogeny, establishes a framework for understanding the primary importance of historical constraint, [...] for explicating both the subsequent pathways of animal evolution and the resulting, markedly inhomogeneous habitation of potential morphospace in the history of life."

- The issue of interpretation and emergence related to the 'presence of the media object' is related to the homogeny or homology of the media themselves.[49]
- Aesthetic is determined by the relation between phylogeny and philology in a heterogeneous context of homogeny and homology.
- The identification of the locus and/or plateaus of interactions, with their related processes, could allow a better understanding of phenomena of emergence in the aesthetic and digital structure of media interaction.

This approach, exemplified by Olaf Breuning and Bjørn Melhus, can be framed in the contemporary philosophical media approach of Hansen who writes that "while the montage cut and the frame – both central in the first volume of Deleuze's study – remain homologous to the dimunition [*sic*] that constitutes perception on Bergson's account, the 'interstice between two images' that marks the direct presentation of time literally *instantiates* the universal variation of images..." [50]

[49] British Library "We can see now how wrong Godard was in some of his judgements—the shots missing from his film could be supplied by the other avant-garde—and it's not clear that he has ever realized this. Nonetheless, though a simple convergence is very unlikely, it is crucial that the two avant-gardes should be confronted and juxtaposed. History in the arts goes on, as Viktor Shklovsky long ago pointed out, by knight's moves." Peter Wollen, *Readings and Writings: Semiotic Counter-Strategies* (London: Verso, 1982), 104.

[50] Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: The MIT Press, 2004), 6-7.

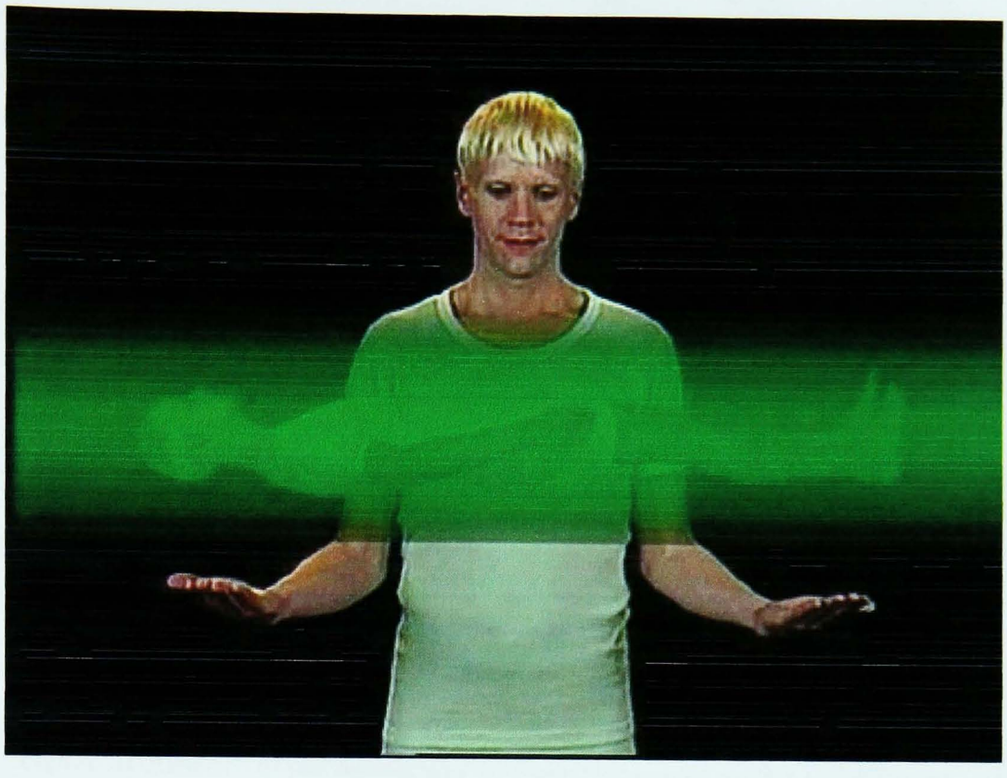

**Figure 20** ***Again & Again/The Borderer*****, Bjørn Melhus, 1998. "In the video installation 'Again & Again,' Melhus tells—not without humor—the story of a person engaged in an inner dialogue on the subject of reproduction, only to be rejected by the clone whose qualities are superior to his own. The possibility of multiplying oneself ends in a loss of subjectivity." In Media Art Net, Cyborg Bodies, Unruly Bodies, http://www.medienkunstnetz.de/works/again-and-again/ (accessed January 22, 2005).**

1.5.51. Therefore, in the attempt to identify the locus of interaction, the space of reality and the infinity of time become the modular expression of fiction which, hyperrealized, blurs the codification of the cinematic/artistic experience.[51] It also codifies the processes and modality of interactions. Art is everywhere and in every time, no longer restricted to the gallery or museum space, but presented as an externalized undefined activity. It is like cinema representation, which has become our way to experience life and no longer separable from it. Two examples are significant: the first example is Docket, Tracy Emin's cat, whose 'missing flyers' were collected by London's people and kept as works of art rather than being accepted as actual advertisements for a missing cat. [52]

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[51] In this context the blurring of media boundaries becomes a blurring of physical and genetic parameters. "Reproductive technology presents the man as a godlike creator, multiplies his body in ornamental plant patterns, and finally lets him hopelessly fall into a black hole. It is about the collapse and the permeability of categorical boundaries between nature and technology, of body and subjectivity: the protagonist is a cyborg. " Yvonne Volkart, "Unruly Bodies: The Effect Body as a Place of Resistance," *Media Art Net*, 2004, http://www.medienkunstnetz.de/works/again-and-again/ (accessed January 22, 2005).

[52] "The Great Escape," *Weekend: The Guardian*, October 12, 2002, 86-87.


**Figure 21 Authors of the interactive approach imposed on the art piece, unknown. Poster's author Tracey Emin, London, March 2002, *The Guardian*, Weekend Magazine, October 12 2002.**

1.5.52. The second example is the filmic obsession of the attack on the Twin Towers, where the sheer magnitude of the catastrophe surpassed any image produced by Hollywood, transforming the event into a self-absorbed media signifier and signified of interactive televised cinematic drama. Interesting examples of this phenomenon are: *From the Ashes: 10 Artists* (2002) and *From the Ashes: Epilogue* (2002) with documentary filmmaker Deborah Shaffer and *Rubble Without Pause* (2002) with multimedia/performance artist Pat Oleszko. [53] "The result is a portrait of people who are, for the most part, so relentlessly self-absorbed, the tragedy only serves to display the limitations to compassion when talking about oneself proves far more pleasurable." [54]

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[53] "From The Ashes," *Cornell Cinema*, September 2002, http://cinema.cornell.edu/Sep02/fromtheashes10artists.html (accessed 18th October, 2002).

[54] Felicia Feaster, "Better Seen than Heard," *Creative Loafing Atalanta*, Review, September 4, 2003, http://atlanta.creativeloafing.com/2003-09-04/flicks_review2.html (accessed October 3, 2004).

**Figure 22** ***From the Ashes: Epilogue*****, 2002, directed by Deborah Shaffer and Michael Berz.**

1.5.53. It is the representation of a reality event which seems to have assumed the characteristics of a cinematic drama, subsuming in its reality the narrative structure of a Hollywood film. This is a hyperreal loop from which not even *Fahrenheit 9/11* (2004) seems to have been able to escape. The fictional representation in a documentary reality narrative format further blurs distinctions between reality and fictional boundaries.

1.5.54. In this 'loop, circle or hole' where space seems to disappear stand claims, frequently repeated in the form of obituaries, announcing the death of the avant-garde. What might have disappeared is not the avant-garde itself but the locus, the agon, where the artistic tensions where experimented. Or it may have shifted from the real into the hyperreal world of virtual dimensions, absolving to a different function: the experimental, less visible, but not less important.

1.5.55. "Not all times are such good times, and not all scientists win the good fortune to live within these times of motion. For theories grow as organisms do, with periods of *Sturm und Drang*, long latencies of youth or ossification of age, and some happy times of optimally productive motion in between (another Goldilockean

phenomenon)." [55] This phenomenon can be certainly applied to the avant-garde, and art in general, to explain the complexity of contemporary interactions.

> 1.5.56. The modern revision seeks to replace Darwin's unifocal theory of organismic selection with a hierarchical account (leg one); his unidirectional theory of adaptational construction in the functionalist mode with a more balanced interaction of these external causes, treating internal (or structural) constraints primarily as positive channels, and not merely as limitations (leg two); and his unilevel theory of microevolutionary extrapolation with a model of distinctive but interacting modes of change, each characteristic for its tier of time. In short, a hierarchy of interacting levels, each important in a distinctive way, for Darwin's single locus; an interaction of environmental outsides with organic insides for Darwin's single direction of causal flow; and a set of distinctive temporal tiers for Darwin's attempt to situate all causality in the single microevolutionary world of our own palpable moments. [56]

1.5.57. This concept of the single microevolutionary world seems to be the same foundation on which Baudrillard has built his concept of the 'black hole' in which the whole of humanity is destined to implode. This is a concept which can be defined as the 'cynical hyperreal'. [57] The macroevolutionary concept opposite to the microevolutionary is destined to look further than our own palpable moment. Nor will it keep an anthropocentric perspective as foundation of analytical perspective, dismissing not just a set of temporal tiers, but also evolutionary scenarios. These are scenarios which Stephen Spielberg has cinematically evidenced in *A.I.* (2001), which might not represent humanity as we know it, as a protagonist. "...a body already homogenous, at this stage of plastic tactility, of mental malleability, of psychotropism at every level, already close to nuclear and genetic manipulation, that is to say to the absolute loss of image [...]." [58]

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[55] Stephen Jay Gould, *The Structure of Evolutionary Theory* (Cambridge, MA: The Belknap Press of Harvard University Press, 2002), 25.
[56] Ibid., 30.
[57] For the philosophical concept of Cynical, as constructive skepticism, as opposed to cynical, as nihilist critical analysis, see: Bracht Branham and Marie-Odile Goulet-Cazé, *The Cynics: The Cynic Movement in Antiquity and Its Legacy* (Berkeley: University of California Press, 1997), 364.
[58] Jean Baudrillard, *Simulacra and Simulation,* trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 102.

1.5.58. The future cynically envisaged by Baudrillard is the future of a 'derived humanity' which, having lost its body and its original image, will possibly look into the past to search for its original generative visual body. A process of 'loophole rebirth' similar to that represented in *2001, A Space Odyssey*.

**Figure 23 *2001, A Space Odyssey* (1968) the rebirth: the infinite loophole of circular life.**

1.5.59. With the use of this analytical structure and the application of an evolutionary framework to the contemporary avant-garde, I am attempting to overcome the impasse created by postmodernist authors such as Guattari, Deleuze and Baudrillard in the field of critical theory, which has reached with its theoretical and/or practical applications, the fields of fine art, film and visual media. An evolutionary theory allows the repositioning of the avant-garde into the sets of nodal points: K1, K2, K3; R1, R2, R3; S1, S2, S3; from Gould's theoretical model applied to new media (see figure 17).

1.5.60. "Becoming is a verb with a consistency all its own; it does not reduce to, or lead back to, 'appearing,' 'being,' 'equalling,' or 'producing.'" [59] Therefore, one of the tasks of the avant-garde is to specify its evolving, if in fact it is becoming, and to clarify the processes within the digital world that are at work in creating the consistency of the verb 'becoming' as evolution. The technology of the time facilitated an interaction

[59] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1988), 239.

between animation, video and film [60] bringing about the manifestation of the 'becoming' as aesthetic evolution.

1.5.61. If this is correct, it would appear that in order to determine or detect a stage in evolutionary progress there must be a coincidence of technology as medium, as transmission and as language. This is together with current culture, philosophical and aesthetic developments determined by causal intention, serendipity and osmosis, which are apparent at strategic moments against a timescale, although not in any given sequence, relative to technological experimentations in the avant-garde. Therefore, technology as medium and tool of transmission embodies the modality for the expression of the content determining aesthetics at a given moment in time, but also becoming art itself. This latter notion of technology as art will be argued in the subsequent chapters.

[60] "If one considers the introduction of sound and then colour as successive 'generations' in the history of cinema, it is possible to say that we've have entered the fourth generation by marrying basic cinematic techniques to computer and video sciences." Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 156.

## 2.1. CHAPTER TWO - The Evolution of Autonomous Media

### Spiritual Machines, Cyborgs and Media Transformations

2.1.1. After having analyzed the issues related to the contemporary avant-garde, it is necessary to individuate aims and objectives, as well as the methodologies applied. This chapter looks at the issues of machines's spirituality and its representation in contemporary visual culture. Film, painting, telerobotica and autonomous intelligent systems are all but parts of an inclusive structure in which forms of self expression, autonomy and perhaps even spirituality are evolving. [1]

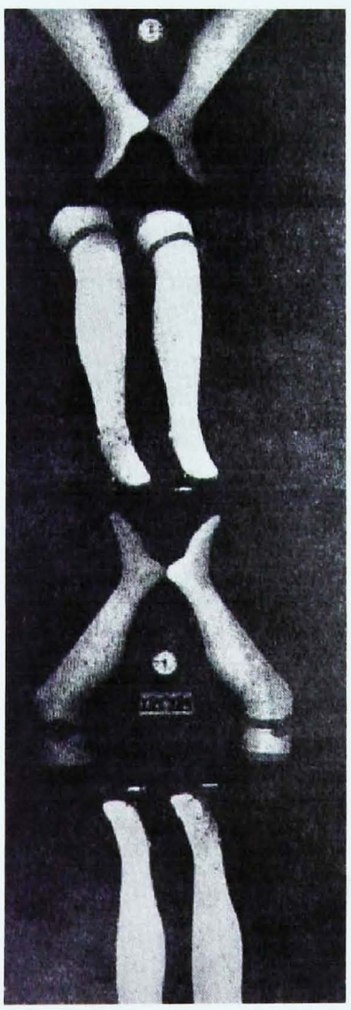

**Figure 1 *Ballet Mécanique*, Fernand Léger and Dudley Murphy, 1924.**

[1] "A crucial change occurred in the definition of avant-garde film around the mid century when it became associated with artists who made films to the virtual exclusion of other media. By contrast the first film avant-garde was made up of artists, such as Man Ray and Fernand Léger, who 'supplemented' their work in painting, sculpture or photography with a small number of experimental films." A. L. Rees, *A History of Experimental Film and Video* (London: BFI Publishing, 1999), 8.

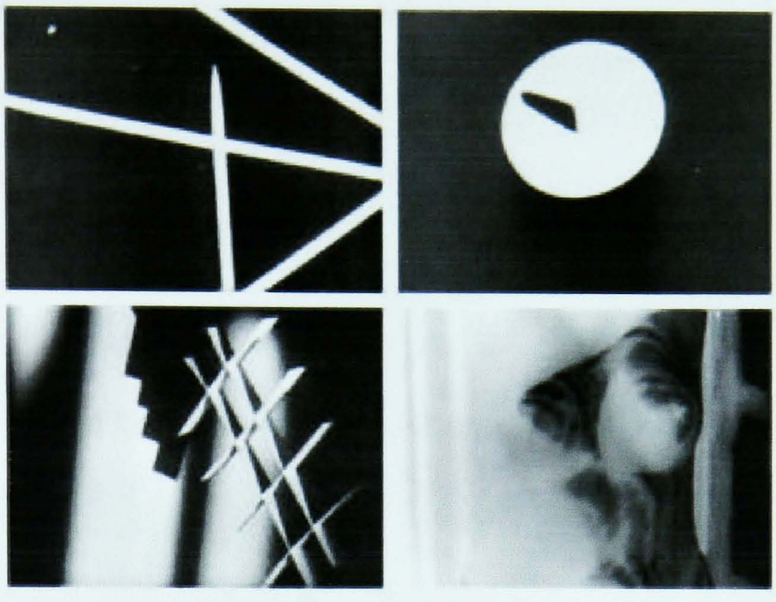

**Figure 2** ***Le Retour à la Raison*****, Man Ray, 1923.**

2.1.2. This tone was set by the later modernists who stressed the role played by process in art.

> 2.1.3. The work was to be autonomous and non-mimetic (i.e. 'pure') to resist final interpretation through logic or verbal language. [...] Cubist collage was given new content in the chance-based methods of the Dadaist Jean Arp or in the cut-up dream montage of 'Dada-Max' Ernst. A sense of process was thus preserved in collage, automatic writing and chance procedures, all of which distinguished the surrealists from the 'return to order' and classicism during the 1920s. [2]

2.1.4. These ideas of process, evolution and transformation, inherited in the contemporary avant-garde, are components of contemporary computer art forms and are manifested in the idea that unplugging a computer may be compared to causing a form of death. This raises issues related to the 'lifelike' status of the object and its eventual spirituality: biocyberethics. [3] Also, in this context, the relationship of humanity to technology needs to be revisited. Is this a reality in which forms of computers are

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[2] Ibid., 53-54.

[3] "Attorney Dr. Martine Rothblatt filed a motion for a preliminary injunction to prevent a corporation from disconnecting an intelligent computer in a mock trial at the International Bar Association conference in San Francisco, Sept. 16, 2003. The issue could arise in a real court within the next few decades, as computers achieve or exceed the information processing capability of the human mind and the boundary between human and machine becomes increasingly blurred." Martine Rothblatt, "Biocyberethics: Should We Stop a Company from Unplugging an Intelligent Computer?" *KurzweilAI.net*, September 28, 2003, http://www.kurzweilai.net/meme/frame.html?main=memelist.html?m=4%23611 (accessed October 15, 2004).

evolving characteristics ever closer to those of humans or vice versa, humans are transforming themselves more and more into machines? [4] Is it one or the other, or a more complex process, which reflects the organic evolutionary systems applied to humans and machines alike? The idea that this is a process of transition and evolution of multiple hybridization forms has been envisaged in the avant-garde [5], by Duchamp, Man Ray and Fernand Léger, as well as in the Hollywood mainstream cinema.

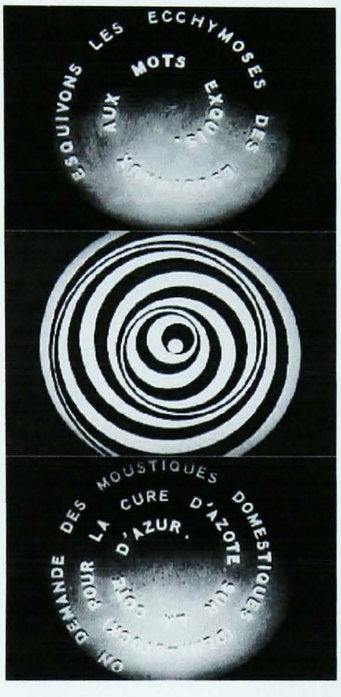


**Figure 3** ***Anémic Cinéma*****, Marcel Duchamp, 1926.**

2.1.5. Whilst the first has focused on the loss of privacy and humanity, as well as the dehumanizing structures which are being put in place within contemporary society, the latter has envisaged worlds of conflicts and utopia. These are representations in which evolutionary scenarios range from the victory of the machine and the transformation of humans (*Blade Runner*, 1982), to forms of relatively positive coexistence (*The*

[4] "The reverse engineering of the human brain appears to be complete. The hundreds of specialized regions have been fully scanned, analyzed, and understood. Machine analogues are based on these human models, which have been enhanced and extended, along with many new massively parallel algorithms." Ray Kurzweil, *The Age of Spiritual Machines: How We Will Live, Work and Think in the New Age of Intelligent Machines* (London: Phoenix, 1999), 292.

[5] "Avant-garde film was initially seen as a spin-off or by-product of visual art movements like Cubism, Futurism, Suprematism, Constructivism, Dadaism or Surrealism. Linked to these movements were abstract or pictorial animations as well as montage and kinetic film by artists like Fernand Léger, Bruno Corra, Kasimir Malevich, Viking Eggeling, Hans Richter, László Moholy-Nagy, Oskar Fischinger, Man Ray, Marcel Duchamp, Len Lye, Lotte Reininger, Berthold Bartosch, Alexander Alexeieff and Claire Parker." Peter Weibel, "Expanded Cinema, Video and Virtual Environments," in *Future Cinema. The cinematic Imaginary after Film*, Jeffrey Shaw and Peter Weibel ed., 110 (Cambridge, MA: ZKM Center for Art and Media Karlsruhe and The MIT Press, 2003).

*Terminator*, 1984 and *Alien*, 1979), to a humanizing and spiritual search of the machine's self (*Bicentennial Man*, 1999 and *AI*, 2001).

2.1.6. This chapter will conclude with an analysis of these transformations and of the philosophical and critical theories which have been applied through film and art, to develop an analysis of future evolutions. It will focus on the terminological analysis of technological transformation according to Baudrillard and Virilio, attempting to devise new categories and a new framework for these interactions.

## 2.2. The Organic Methodology in Digital Media

### Spiritual [6] Pixel Determinism in the 21st Century

2.2.1. If this is a fragmented society in which different segments are at work independently and following a casual law of nature or a causal necessity, the development of human knowledge then seems to be based on an ongoing evolutionary conflict. In this evolutionary context the presence of digital media contrasts the established perceptions and classifications of a previous century where art and science, time and space, real and virtual, existed only in a substantial dichotomy. I will attempt, with this methodology, to propose the concept of technological avant-garde, constructed on the belligerent interactions of art vs. science and human vs. machine. These interactions, according to Gamwell, curator of the Gallery of Art and Science at the New York Academy of Sciences, carry forms of spiritualities, which find expressions through the medium in the art object. [7]

> 2.2.2. *Wavelength* was shot in one week in December, 1966, preceded by a year of notes, thoughts, mutterings. It was edited and first print seen in May, 1967. I wanted to make a summation of my nervous system, religious inklings, and aesthetic ideas. I was thinking of, planning for a time monument in which the beauty and sadness of equivalence would be celebrated, thinking of trying to make a definitive statement of pure Film space and time, a balancing of 'illusion' and 'fact,' all about seeing. [8]

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[6] Note that the word spiritual is used to indicate the intangible essence of a thing or being and not as representative of religious fundamentals and dogmas of any kind.

[7] Ernst Cassirer, *Language and Myth*, trans. Susanne K. Langer (New York: Dover Publications Inc., 1953), 9. See also: Lynn Gamwell, *Exploring the Invisible: Art, Science and the Spiritual*, (Princeton, New Jersey: Princeton University Press, 2002) and Lynn Gamwell, "Perceptions of Science: Beyond the Visible: Microscopy, Nature and Art," *Science* 299, no. 5603 (2003): 49-50, http://www.sciencemag.org/cgi/content/full/299/5603/49 (accessed October 5, 2004).

[8] "Three films by Michael Snow," *LAfilmforum.org*, http://www.lafilmforum.org/spring2005/4_24/4_24.html (accessed February 20, 2005).

**Figure 4** ***Wavelenght*****, Michael Snow, 1966.**

2.2.3. The analysis of the microscopic, of the scientific, of its philosophical implications with the world of art and its representations, creates the necessity to understand the 'organic' structure of reality. This becomes even more necessary when issues of ethics, morality and benevolence, or those of common sense and spirituality, are part of the media and of their interactions and future developments. The issue of virality and its representation mutates in an issue of 'digital virality,' where the necessity of the integrity of the individual representation in the world of the digital is constantly fought for. [9] The necessity for a 'spiritual pixel determinism' is lingering on the borders of aesthetic representations and artificial intelligence, where the battle to reconcile the differences between machine, organic, animal and spiritual are actually fought.

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[9] "Here again, there is no effective prevention or therapy; the metastases invade the whole network 'virtually'; de-symbolized machine language offer no more resistance to viruses than do de-symbolized bodies." Jean Baudrillard, *Screened Out*, trans. Chris Turner (New York: Verso, 2002), 2. "They ask the question 'How far?' That's also an ethical question in the context of genetic engineering, in the problems of traffic of human beings as improvable raw materials, the body considered as raw material, the body of 'hominiculture', as some scientists say." Paul Virilio, *Virilio Live: Selected Interviews*, ed. John Armitage, trans. Patrice Riemens (London: Sage, 2001), 136.

2.2.4. Translation of quality from one entity to another becomes an issue of communication. Communication as the transfer of data, of genetic materials and hybridization processes between machines, between humans and machines is a phenomenon of transformation that is part of the Hollywood mainstream and not just of the avant-garde experimentations. *The Matrix: Revolutions* (2003), *The Lawnmower Man*, (1992) and *Lawnmower Man II: Beyond Cyberspace*, (1996) are some recent examples. In the area of avant-garde experimentations, Lisa Jevbratt displayed an artwork, *Network Is Speaking*, which represented in visual format the communication between machines.

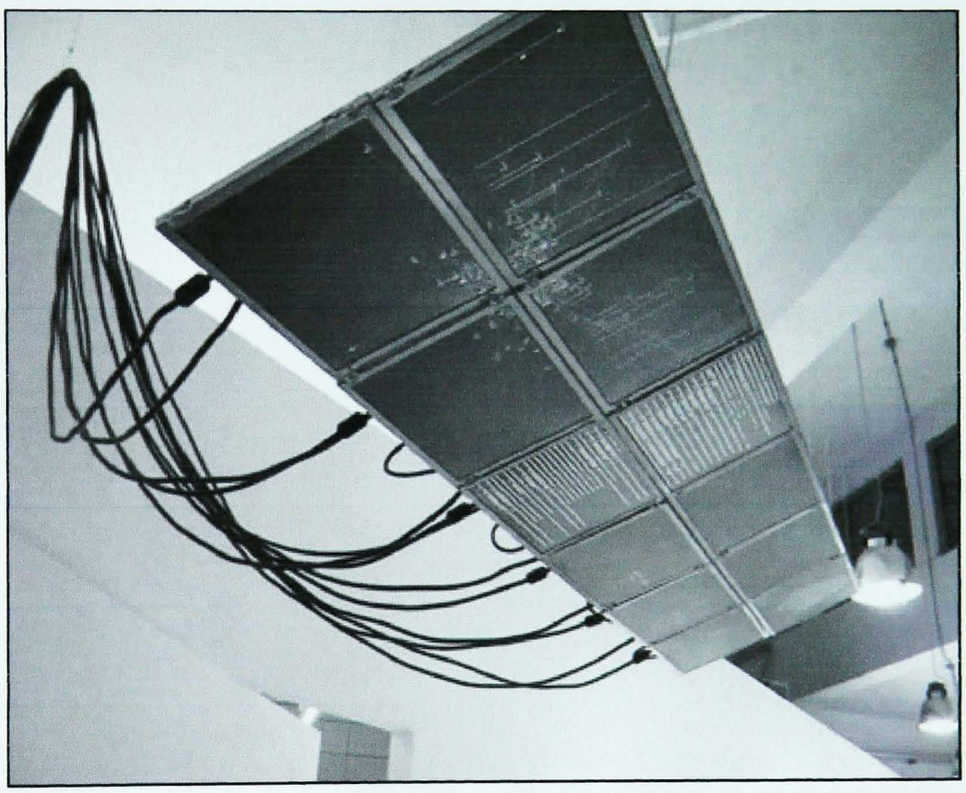

**Figure 5** ***Network Is Speaking*****, Lisa Jevbratt, 2004. "'Network is speaking' is basically a Carnivore (http://www.rhizome.org/carnivore/) Client installation that listens to all Internet traffic on the local network turning it in several different visualizations and a sound feedback as well. In http://www.limiteazero.com/xyz/network.html (accessed March 1, 2004).**

2.2.5. What are they saying? And how are they communicating between themselves? These are some of the riddles of contemporary artistic research, in a field which recognizes the possibility of an autonomous and uncontrollable development, as

Goldberg describes it. This development is based on a hybrid space where the virality of language and media [10] mixes with the genetic evolutionary possibilities of machines. [11]

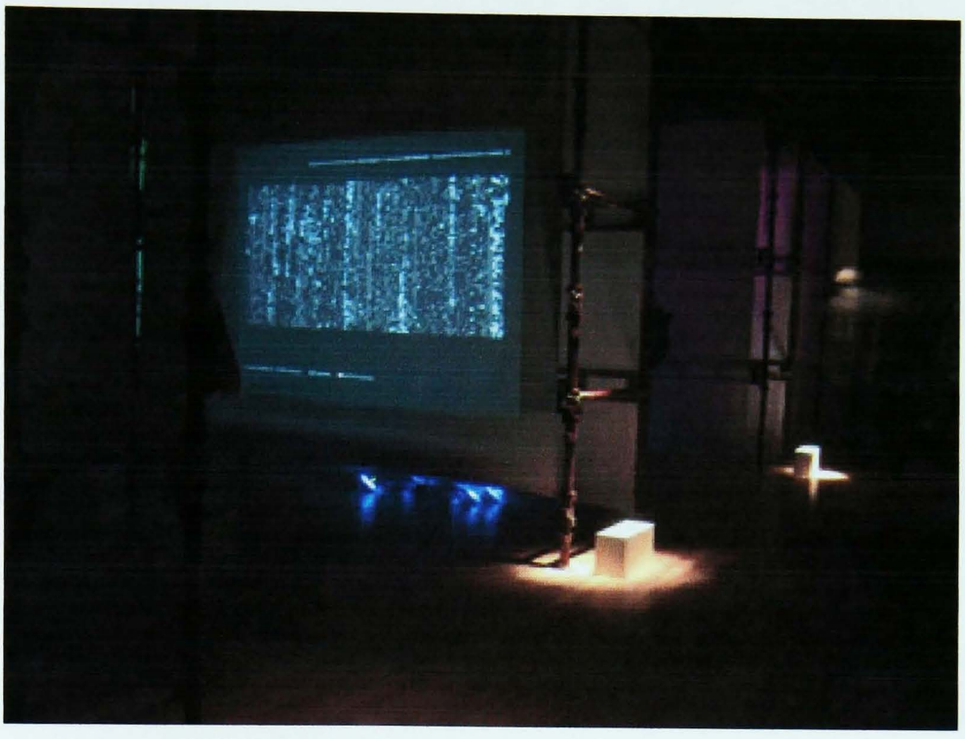

**Figure 6 *Out of the Ordinary*, Lisa Jevbratt, 2002. Installation, Electrohype 2002, Malmoe, Sweden, http://jevbratt.com/projects.html (accessed October 12, 2004).**

[10] "In the Electronic Revolution I advance the theory that a virus IS a very small unit of word and image. I have suggested now such units can be biologically activated to act as communicable virus strains." William S. Burroughs, "The Electronic Revolution," *hyperreal.org*, January 16, 1992, http://www.hyperreal.org/wsb/elect-rev.html (accessed January 12, 2005). See also: Daniel Odier, *The Job: Interviews with William S. Burroughs* (New York: Grove Press, 1974), 59. In this interview Burroughs states: "... The written word is an image. However, there is an important difference between a hieroglyphic and a syllabic language. If I hold up a sign with the word 'ROSE' written on it, and you read that sign, you will be forced to repeat the word 'ROSE' to yourself. If I show you a picture of a rose you do not have to repeat the word. You can register the image in silence. A syllabic language forces you to verbalize in auditory patterns. A hieroglyphic language does not." Tim Griffin, "Viral cultures: William S. Burroughs and Antonin Artaud," *World Art*, 13 (1997): 26-31. William S. Burroughs, *Word Virus: The William Burroughs Reader*, ed. James Grauerholz and Ira Silverberg (London: Flamingo, 1999). Robin Lydenberg, "Sound Identity Fading Out: William Burroughs' Tape Experiments," in *Wireless Imagination: Sound, Radio and the Avant-Garde*, ed. Douglas Kahn and Gregory Whitehead, 411 (Cambridge, MA: The MIT Press, 1994). Lydenberg states that: Burroughs' experiments with voice and sound can best be understood in the broader context of his theories about language. He views Western culture as ruled by a system of mass ventriloquy in which disembodied voices invade and occupy each individual."

[11] "In the world of living things, there are basically only two ways creatures can obtain a characteristic: by inheriting it from a previous generation, or by evolving it in the present one. This last form of evolution is itself the subject of debate; an organism can't change its DNA in one lifetime. The only proven exception is found in the world of viruses." Belinda Barnet, "Technical Machines and Evolution," *CTheory.net*, ed. Arthur and Marilouise Kroker, March 16, 2004, http://www.ctheory.net/text_file.asp?pick=414 (accessed April 19, 2004).

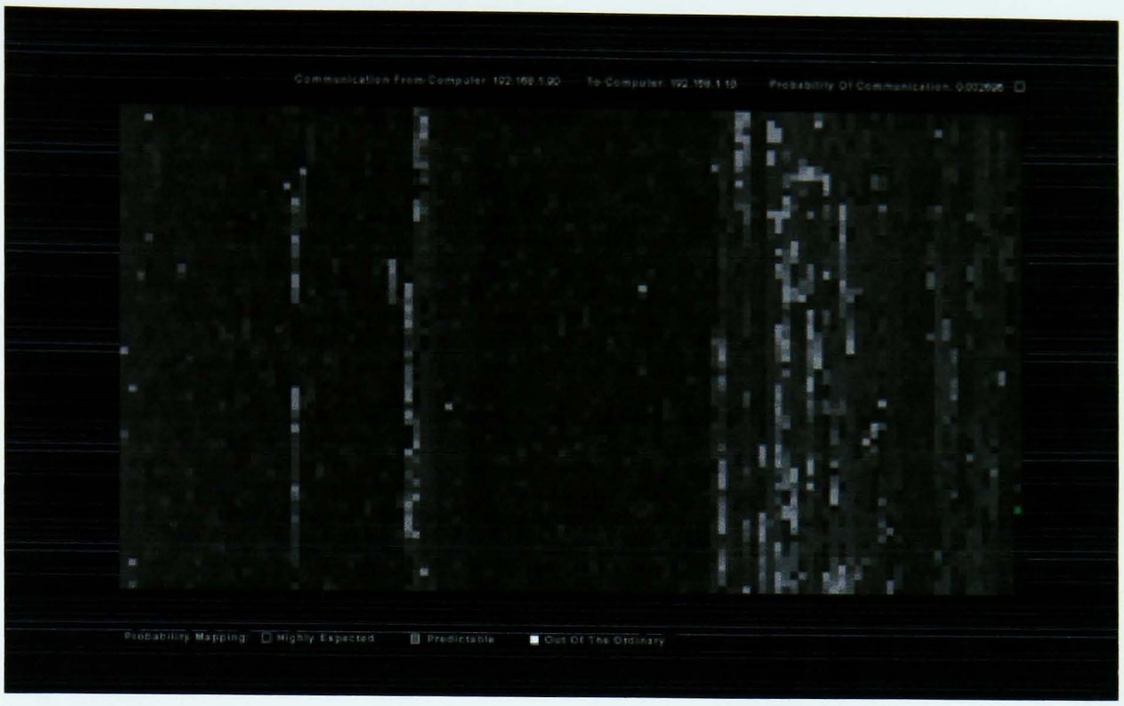


**Figure 7 *Out of the Ordinary*, Lisa Jevbratt, 2002, image detail. "The *Out of the Ordinary* client maps the likelihood of a packet being sent between the two communicating computers. It thus produces an image of its networks' levels of excitement and surprise, or the lack thereof." Lisa Jevbratt, http://jevbratt.com/out_of_the_ordinary/ (accessed October 15, 2004).**

2.2.6. The modality of communication and the content transmitted is one of the key issues in the contemporary artistic practice as well as one characteristic of the concept of digital virality. This is a process of transfer or translation, from one entity to another. In the translation process there is 'infection' through contact, the purity disappears, and the new digital organism is a composite of different elements. Hybridization becomes a form of pollution, an alteration of the purity of the genetic structure, but at the same time a form of experimentation which allows adaptation and survival. This phenomenon generates important issues related not just to the field of artistic experimentation but also to that of human identity, culture and borders. [12] The problem is related to the assumption of a 'forma imaginis,' the perfect form given from God to man according to the medieval tradition. Is change, therefore, as Virilio and Baudrillard put it, a deterioration of humans' existence, of the originating perfect genetic image? The question is important because the viral discourse in this case becomes not one of evolution but one of involution. The

[12] Borders are not just national borders and that of national identity, but also borders of the body and its interactions, biological-mechanical-electric-digital, with the surrounding environment.

contemporary digital virality in the avant-garde becomes just a case of degradation: a rotten discourse.

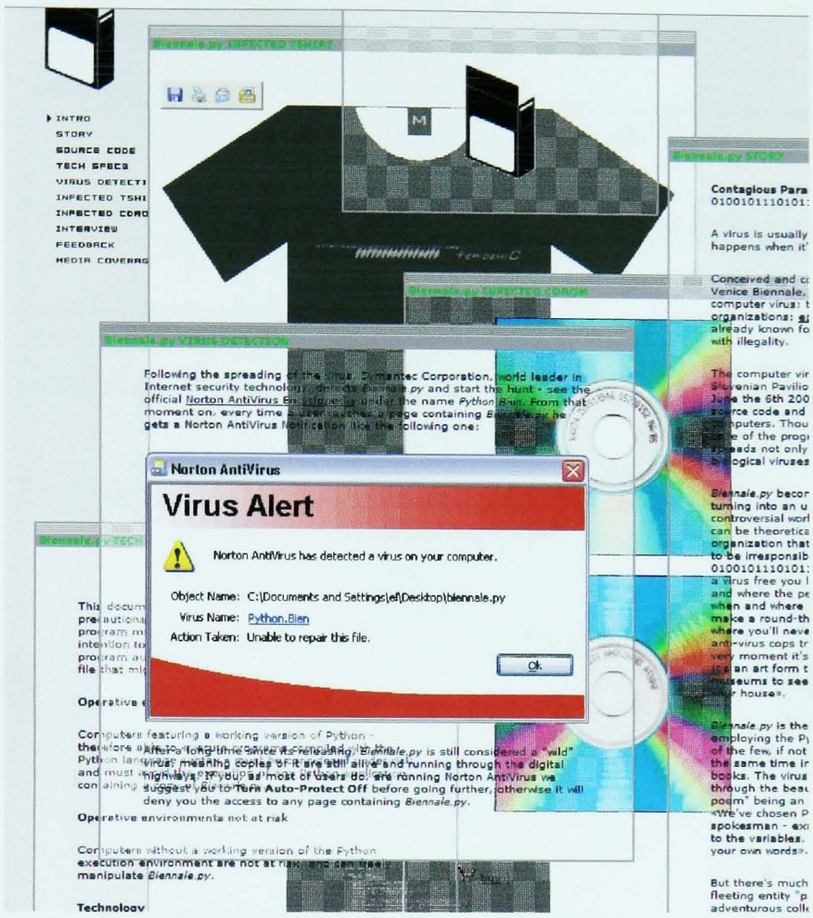


**Figure 8 *Biennale.py*, 0100101110101101.org, 2001, Venice, Venice Biennale, http://www.0100101110101101.org/home/biennale_py/iindex.html (accessed October 15, 2004).**[13]

2.2.7. The problem is if virality affects every form of communication or represents a movement started with the Futurists and Marinetti, rooted in the manifesto of May 11th 1913: "Distruzione della sintassi – Immaginazione senza fili – Parole in libertà." [14] The discourse of destruction of the text and involution may actually be one of liberation which, as in the case of David Larcher, is expressed through a non-sensical approach, one of rediscovery and reconstruction. The video work and web work of Larcher represents

[13] "In an essay on experimental software, the net.art critic Tilman Baumgärtel points out that thirteen years prior to 0100101110101101.org's 'biennale.py', in 1988, a computer virus had been programmed and disseminated as an artistic prank. A detailed account of the case is available in Robert M. Slade's 'History of Computer Viruses', the classic reference on the subject." Florian Cramer, "Language a Virus?" *digitalcraft.org*, 2004, http://www.digitalcraft.org/iloveyou/catalogue_florian_cramer_language.htm (accessed January 21, 2005). Tilman Baumgärtel, "Experimentelle Software," Telepolis, October 28, 2001, http://www.heise.de/tp/deutsch/inhalt/sa/9908/1.html (accessed January 21, 2005). See also: Robert M. Slade, *Robert Slade's Guide to Computer Viruses: How to Avoid Them, How to Get Rid of Them, and How to Get Help* (London: Springer-Verlag, 1994).

[14] Luciano De Maria, *Marinetti e i Futuristi* (Milano: Garzanti Editore, 1994), 100.

freedom in the chaos of life, an attempt to define the causal and casual components of a makeshift reality which, by not framing possibilities, leaves the experience of the art object itself to the viewer.

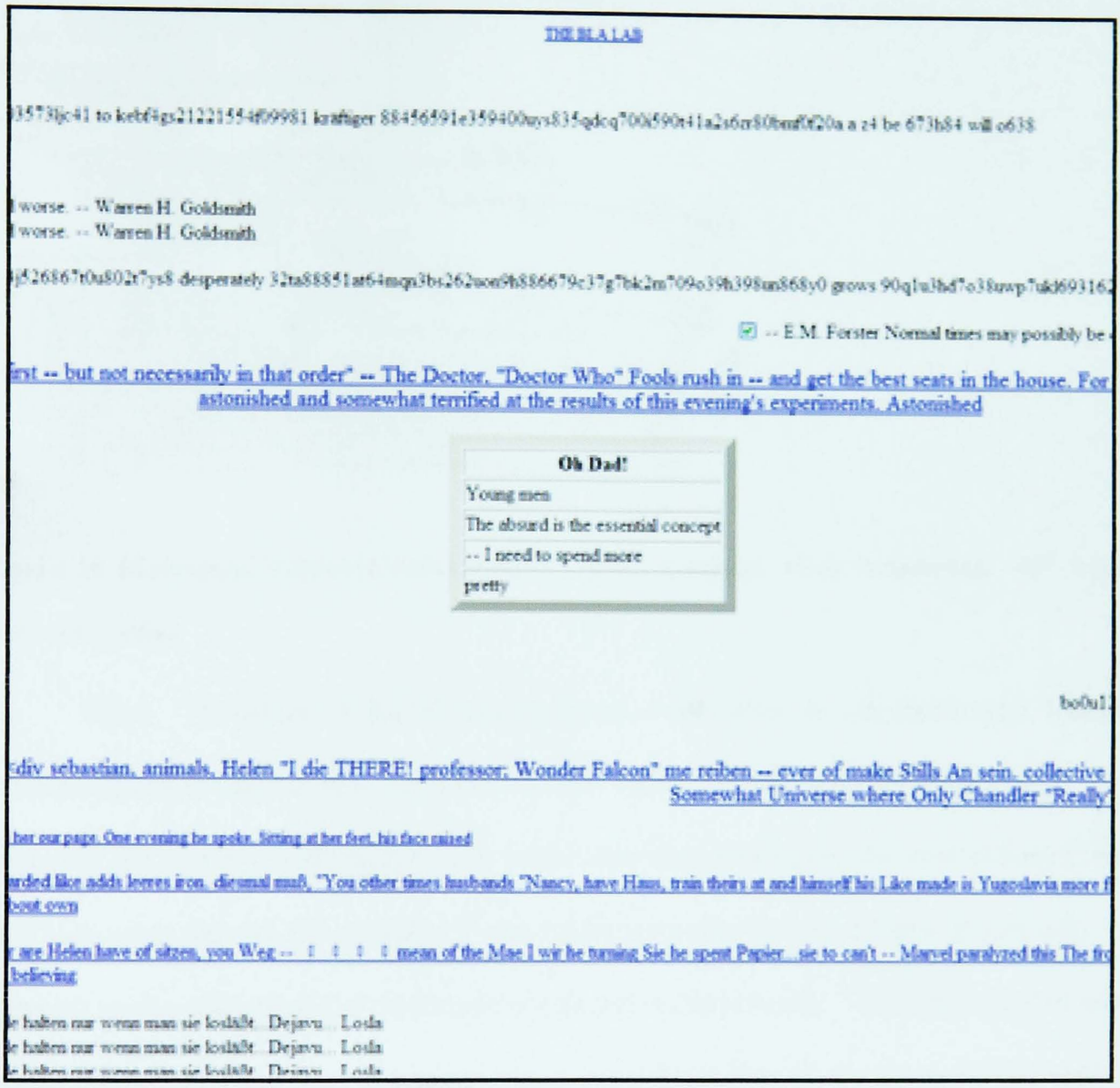


**Figure 9** ***The Bla Lab: Always See Somebody Who Did Worse*****, David Larcher, The Bla Lab, http://www.khm.de/~davidl/blalab/ (accessed October 15, 2004).**

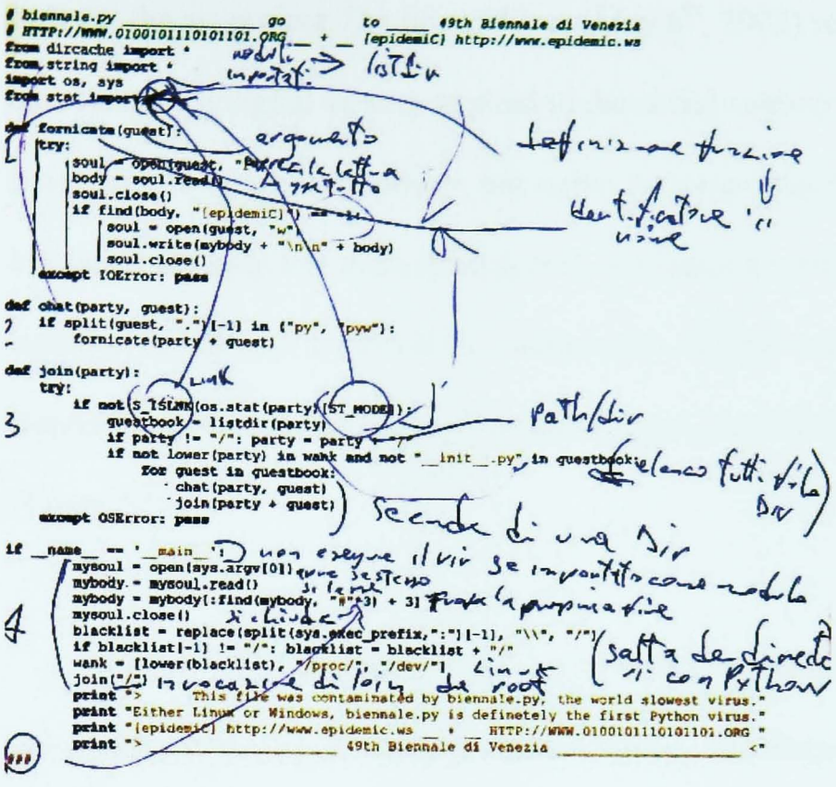


**Figure 10** ***Biennale.py*****, 0100101110101101.ORG , 2001, computer virus installation, 49th Venice Biennale, Venice.**

2.2.8. The forms of digital virality, because they alter the original image, become instruments of evolution, new experimentations which, by affecting the body and changing the structures of engagement, entice new methodologies and interactions. Like real biological viruses and parasites [15] the media are being developed as a response to changes in the context of the contemporary digital cultural realm. "The main goal of our virus is just to survive. And, it can better survive when it doesn't do any harm to the host. If it would kill its host, it would die itself, too. So, it sucks energy, but tries to stay invisible as much as possible. It is only safe as long as nobody discovers it." [16] At the same time issues of identity, spirituality, notions of self and social engagement are represented as contextual elements of developments happening in contemporary society.

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[15] Nathan Martin and Hans M., "Parasitic Media: (Creating Invisible Slicing Parasites and Other Forms of Tactical Augmentation)," *Carbon Defense League*, November 2002, http://www.carbondefense.org/writing.html (accessed March 2nd, 2005). See also: Albert-László Barabási, Vincent W. Freeh, Hawoong Jeong and Jay B. Brockman, "Parasitic Computing," Nature 412 (2001): 894-897, http://www.nd.edu/~parasite/nature.pdf (accessed March 2nd, 2005).

[16] Cornelia Sollfrank, "Biennale.py: The Return of the Media Hype, Cornelia Sollfrank in Conversation with the Creators of the Biennale Virus, 0100101110101101.ORG," *0100101110101101.ORG*, June 1, 2001, http://www.0100101110101101.org/home/biennale_py/interview.html (accessed October 15, 2004). See also Cornelia Sollfrank, "biennale.py - Die Rückkehr des Medienhype," *Telepolis*, July 7, 2001 http://www.heise.de/tp/deutsch/inhalt/sa/3643/1.html (accessed October 15, 2004).

In Italy, the art project *The Brand Virus* (May 6th, 2002) represents a form of social intervention, a digital virality applied to the social context. "The exact opposite happens here: there is no wish for power, but rather for temporary impotence, not for expectation but rather for surprise, there is no speech but rather a contemporary and collective coaction for silence: a virus is to a *status virus* like the cookies of a site of highly interactive erotic content (http://www.xxx.com) are to the mailing list of Christie's top clients." [17]

2.2.9. The structure of the virus and that of digital virality do not stop at a basic description of the social context. The function is multilayered and more complex. Bacteria seem to think, [18] and that function could be extrapolated for viruses as well. The theory of Eakins looks at the use of PDAs in a macrostructure, which like in a colony of bacteria, could provide forms of engagement, adaptation, modification of surroundings and therefore survival. He proposes a networked human behavior repeating in grand scale bacteria's interactions. A course of action that Baudrillard does not agree with. [19]

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[17] [epidemiC] crew, "The Brand Virus," *epidemiC.ws*, May 6, 2002. http://www.epidemic.ws/bocconi/index.html (accessed October 15, 2004).

[18] "It is now being recognized that bacteria have communication (information exchange), and agency on multiple levels that must be considered simultaneously- the micro, or individual level, the macro or group level, and the intermediate or 'meso' level." Benjamin Eakins, "Bacterial Cybernetics and PDAs: (or Why PDA shouldn't stand for Personal Digital Animalculi)," *Switch*, no 16, May 15, 2001 http://switch.sjsu.edu/v7n1/articles/ben02.html (accessed October 15, 2004).

[19] "The human species is currently domesticating itself [...] Soon it will submit to the same controlled techniques of reproduction as the protozoa, will inflict on itself the same biogenetic (phylo- or ontogenetic) destiny..." Jean Baudrillard, *The Illusion of the End*, trans. Chris Turner (Stanford, California: Stanford Univesity Press, 1994), 84.


**Figure 11** ***I Love You [rev.eng],*** **in** ***The Aesthetic of Computer Viruses*****, 2004. Virus computer exhibition curated by Franziska Nori, in http://www.digitalcraft.org/index.php?artikel_id=21 (accessed October 15, 2004).**

2.2.10. These phenomena, from micro to macro structures, have been at the basis of the recent exhibition curated by Franziska Nori titled *The Aesthetic of Computer Viruses*.

> 2.2.11. Our perception of viruses stems both from the way we consider the most recent epidemic diseases, such as AIDS, and from an innate fear of having one's own body invaded by other efficient organisms, capable of re-arranging their working patterns in order to facilitate infiltration into their host. This perception applies to the principles of knowledge society with similar consequence. Many are concerned with cultural infection, as it may change our identity, and as communicative distances grow shorter, this process seems to become even more inevitable.... [20]

2.2.12. The changes appear to be part of larger social phenomena of digital virality, whereby the behavior has subsumed characteristics similar to those of viruses. Christiane Paul wrote as a comment to the exhibition CODeDOCII (2003) at the Ars Electronica Festival, following CODeDOC (2002) at the Whitney Museum, that "in

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[20] Alessandro Ludovico, "Virus Charms and Self-creating Codes," *Digitalcraft.org*, 2004, http://www.digitalcraft.org/iloveyou/catalogue_alessandro_ludovico_virus_charms.htm (accessed October 15, 2004).

software art, the 'materiality' of the written instructions mostly remains hidden. In addition, these instructions and notations can be instantaneously activated; they contain and—further layers of processing aside—*are* the artwork itself." [21] The hidden character of the work and its functionality have become characteristics which artists have merged in their practice, imitating the 'virus' behavior, in an empirical search for a spiritual vision of society.

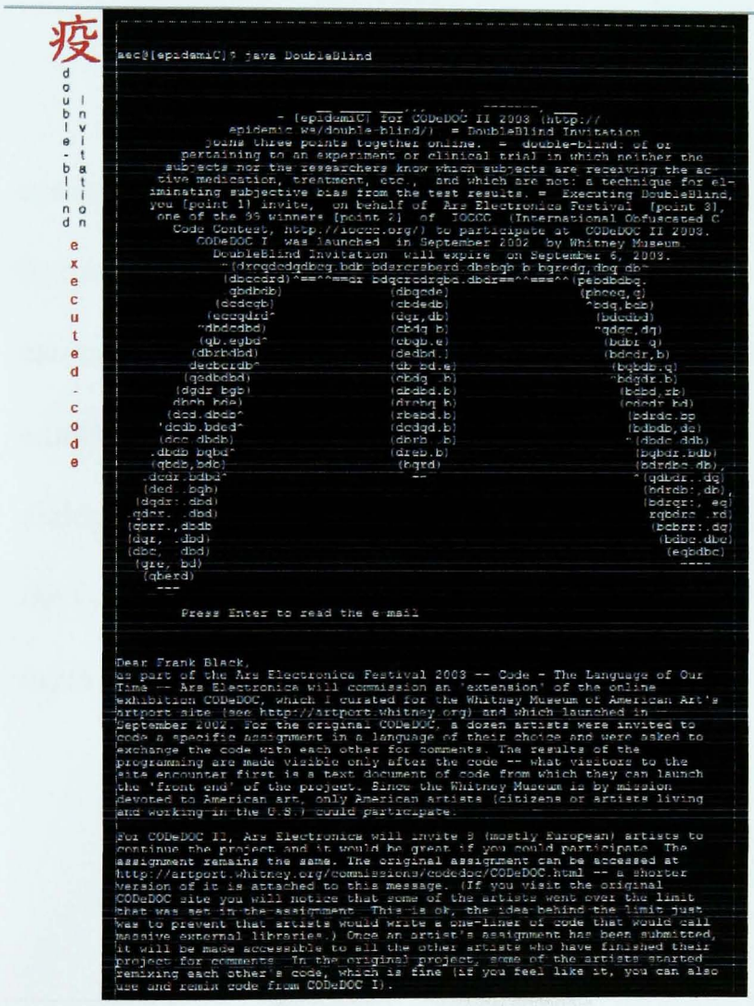


**Figure 12** ***Double Blind*****, http://www.epidemic.ws/double-blind/output.html (accessed October 15, 2004).**

2.2.13. "I was thinking of psychology basically, and physiology, but I was looking at these snipers as these viruses. I said, well they insert themselves and replicate within the host, not necessarily to kill the host you see. But to replicate ideas, or their own form,

[21] Christiane Paul, "*CODeDOCII*," *Ars Electronica Festival*, September 6, 2003, http://www.aec.at/en/festival2003/programm/codedoc.asp (accessed October 15, 2004).

but they always slightly mutate, but not exact. I thought, if I could transfer that to the world of ideas we would have the methodology, be as it is. And that would be over time." [22] In this sense the intrusive work of Chin functions on the basis of an organic methodology which, through hybridization processes, promotes variation and permutations. These experimentations, products of intermingling, are also characteristic of innovative behavior and methodologies which push social boundaries through new phenomenologies.

2.2.14. In this area of future intermingling, John Canny and Eric Paulos, two computer scientists, propose a computer mediated phenomenological perspective, and imagine that in the future "rather than automatons blindly repeating orders, 'social machines' and toys of the future will express a wide range of behaviors including emotions." [23] These emotive behaviors raise the issue of spirituality, as discussed in the dialogue between Ken Goldberg and Ovid Jacob. Goldberg, moving from the concept of the Golem (Chapter 1), reconsiders some of the particulars of the Jewish version of the myth and explains what he considers the real nature of the Golem.

> 2.2.15. After the Golem saves the small Jewish community from the consequences of an accusation of a blood libel, Rabbi Loew asks the creature to fetch water from the well. The Rabbi goes upstairs to sleep and awakens to discover that the entire house is filled with water! The Golem continues dutifully to fetch water until the Rabbi tricks it into leaning close enough that the Rabbi can erase the first letter inscribed on its forehead, thus changing Emet (Truth, or Life) to Met (Death), whereupon the Golem turns into a lifeless mass of clay which crushes the Rabbi to death. Again, harsh consequences for the creator. As a Computer Scientist I note that the rabbi's fatal error was to forget to specify what we call a 'termination condition'. The Golem went into an infinite loop due to a programming error! [24]

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[22] Glen Sparer, "Art as a Creative Virus and Host in the Work of Mel Chin," *switch*, no. 7, 2002, http://switch.sjsu.edu/v7n1/articles/glen02.html (accessed October 15, 2004).
[23] Ken Goldberg, *The Robot in the Garden: Telerobotics and Telepistemology in the Age of the Internet* (Cambridge, MA: MIT Press, 2001), 18-19.
[24] Ovid Jacob, "Adam, Golem, Robot: A Dialogue Between Ken Goldberg and Ovid Jacob," *mishkan.com*, February 15, 1995, http://www.mishkan.com/agr.html (accessed October 12, 2004).

2.2.16. Goldberg suggests that the loss of control is often retraceable to a mistake on the part of the creator, but another explanation is the further complexity and autonomy of the object created. So autonomous and complex is the object that its endeavor becomes that of spirituality: finding itself searching for his creator. An example is *AI* (2001), where the child robot recreates its own spiritual boundaries in the quest for the creator.

**Figure 13** ***AI*****, directed by Steven Spielberg, 2001. The moment in which the light is shed on the perfect vision of the robot: the miracle fades and a different reality takes place.**

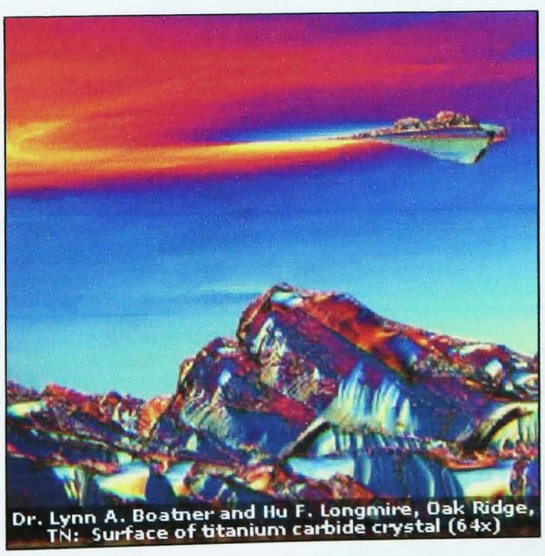


**Figure 14** ***Oak Ridge*****, Lynn A. Boatner and Hu F. Longmire, at the Gallery of Art and Science, New York Academy of Sciences.**

2.2.17. These forms of aesthetic interpret 'spiritual pixel determinism' and find their expressions not just in Hollywood narratives but also in the infinitely small of avant-garde research. "Even the contemporary computer-generated effects of the latest Hollywood movie are evident in Boatner and Longmire's photomicrograph of the surface of a titanium carbide crystal." [25] These effects are reminiscent of some of the final sequences of *2001: A Space Odyssey* (1968) by Stanley Kubrick, where the interpretation of spirituality becomes a travel through the structure of the universe and an exploration of the film medium itself. These images are also manifestations of possibilities, which Goldberg defines as necessary. "The event wherein the creator loses control of the creature is a necessary step toward the development of the creature." [26]

2.2.18. The trilogy *The Matrix* (1999), *The Matrix: Reloaded* (2003) and *The Matrix: Revolutions* (2003), offers arguments on the spirituality of the machine. The machine world, The Matrix, is a locus where the conflict between humanlike behaviors can integrate, overcoming the logical structure based on the computer science component of The Matrix itself. The worlds of humans and machines cross over into each other. One example is the meeting between Neo (Keanu Reeves) and three computer software programs, Sati (Tanveer K. Atwal), her father Rama-Kandra (Bernard White) and her mother Kamala (Tharini Mudaliar). [27] The child is a purposeless computer program, destined to be terminated, which the parents are trying to save by infringing the rules of The Matrix.

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[25] Lynn Gamwell, "Beyond the Naked Eye: Images from a Microscopic World," *Gallery of Art and Science*, June 25, 2004, http://www.nyas.org/snc/gallery.asp?exhibitID=10# (accessed October 4, 2004).

[26] Ovid Jacob, "Adam, Golem, Robot: A Dialogue Between Ken Goldberg and Ovid Jacob," *mishkan.com*, February 15, 1995, http://www.mishkan.com/agr.html (accessed October 12, 2004).

[27] "**Sati:** A program created by two other programs (as their daughter). Sati is smuggled into the Matrix from the machine world, due to a deal made by her father with The Merovingian. The consequence of this deal is the termination of the Oracle's original shell, though she believes it is worth it due to Sati's importance to both worlds."

**Rama-Kandra and Kamala:** Sati's 'father' and mother. They have made a deal with The Merovingian to smuggle Sati into the Matrix, but perhaps more importantly they have "a lesson for Neo about the machine's (and program's) ability to love. Not love as a human emotion, but love as a connection to someone or something else." "The Matrix Revolutions: Characters," *The Matrix 101.com*, http://www.thematrix101.com/revolutions/characters.php (accessed October 29, 2004).


**Figure 15** ***The Matrix: Revolutions*****, directed by Andy and Larry Wachowski, 2003. Computer programs in human form which show humanlike behavior.**

2.2.19. Within the framework set by these conflicts the research will attempt to demonstrate the evolutionary nature of media.

> 2.2.20. At all together, they are not compatible with a *strong* idea of the birth and development of **languages** (my emphasis) [28], but they would be compatible if we admitted that **languages** (my emphasis) are a historical-cultural phenomenon, that they grow without an order decided by a supernatural will, and that they gradually arrive at their stability through borrowings (deliberate or unconscious), poetic inventions, conventional whims and 'iconic' attempts. But in this case **languages** (my emphasis) would achieve their organic condition just as, from an evolutionist perspective devoid of any idea of providence, only giraffes would survive in certain conditions because they have the longest necks. [29]

2.2.21. In the context of this Darwinian evolutionary analysis of media and languages, McLuhan's theories represent a cardinal framework with their deterministic

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[28] In the above quote the word 'languages' could be substituted with 'media'. The choice is based on the comparable semantic and structural form of language and medium, the latter also called visual language. de Kerckhove explains: "Information processing begins with spoken language. Language is still the most powerful code available to humans [...] The evolution of human intelligence keeps pace with the evolution not only of language, but of technologies supporting and processing language." Derrick de Kerckhove, *The Skin of Culture: Investigating the New Electronic Reality*, ed. Christopher Dewdney (London: Kogan Page, 1997), 193-194.

[29] Umberto Eco, *Serendipities: Language and Lunacies*, trans. William Weaver (London: Phoenix, 1998), 147-148.

approach: "For the message of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs." [30] The inability to understand and predict the patterns and areas of influence of a technological advancement will short-circuit the dialectic between the old technological order and the new technological development. McLuhan explains this concept clearly: "Failure to understand the organic character of electric technology is evident in our continuing concern with the dangers of mechanizing the world." [31]

2.2.22. This short-circuit system could be identified with the contemporary theory of the hyperreal and its expression, the simulacra. The impossibility of a dialectic between reality and virtual is represented by the impossibility of a dialectic between old and new. This short-circuited dialectic is both a conjunctive and disjunctive point, in a non contradictory relationship, expressed by loss of meaning through the representation of the simulacra. It represents a loss of meaning due to the failure and/or impossibility to understand complex changes in progress whilst happening. It is difficult to perceive and frame the shift in the transitional processes of media evolution. The materiality of the medium itself becomes a void, as expressed by David Larcher's *VIDEOVØID*, where the understanding of 'the thing' that is the medium is always escaping the viewer, whilst the author makes a poem out of pure nothing. [32]

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[30] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge and Kegan Paul Ltd., 1964), 8.
[31] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 248.
[32] David Larcher, "Old Repetition Wanker," *David Larcher Website*, http://www.khm.de/~davidl/blalab/aaa/david.htm (accessed October 4, 2004).


**Figure 16** ***VideØvoid - the trailer,*** **David Larcher, 1993.**

2.2.23. The shift within the social structure and consequentially within the language of the media started from the time of the telegraph. Since then Western man began to live an implosion. "He began suddenly with Nietzschean insouciance to play the movie of his 2,500-year explosion backward. But he still enjoys the results of the extreme fragmentation of the original components of his tribal life. It is this fragmentation that enables him to ignore cause-and-effect in all interplay of technology and culture." [33]

2.2.24. If this is a fundamental truth in the development of the second half of the past century, in the contemporary digital society expressed through virtual environment, this fragmentation seems to have created a base where the interplay of technology and culture does not allow the disassociation between cause and effect. It actually seems to integrate and 're-integrate' different and diversified media [34] within one single space, which is the contemporary virtual space expanding into reality.

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[33] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 270.

[34] See: Sean Cubitt, "False Perspectives in Virtual Space," *Variant*, no. 11 (spring 1992) and Sean Cubitt, "Beyond Destination," *Third Text*, no. 25 (Winter 1993-94).

2.2.25. Furthermore, such conditions "would necessarily be an extension of our own consciousness as much as wheel is an extension of feet in rotation. Having extended or translated our central nervous system into the electromagnetic technology, it is but a further stage to transfer our consciousness to the computer world as well." [35] The physical digital space seems to have become an externalization of the brain, its perceivable extension, where different inputs are imploding and after having been manipulated, reshaped, recombined and 're-morphed', can reenter into the database of the hyperreal world of possibilities.

> 2.2.26. I think at first sight what you call human being deals with the brain. That is, I think it's a metaphor to deal with technologies or new technologies as an extension of the brain... All the discussion about extension of the brain has to do with some really bad feelings which people have inside their own bodies. They want to be pure brain. What does that mean? They want to be immortal. They don't want to die. The Web, international or universal or global Net is some kind of hatred against that death of the body. I think that. [36]

2.2.27. The extension of the brain also represents the difficult journey of translation [37] of humanity's Platonic 'ideal' world into the world of simulated reality. The exchange between the digital and the physical becomes an issue of translation of languages.

2.2.28. The contemporary issue of translation between media will be defined in this research as 'digital ekphrasis.' The problem is then not just one of transfer of media

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[35] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 60.

[36] Hans Ulrick Reck, "Art and New Media," *Mediamente: Trasmissione Televisiva e Telematica sui Problemi della Comunicazione*, November 22, 1996, http://www.mediamente.rai.it/mmold/english/bibliote/intervis/r/reck.htm#link002 (accessed October 3, 2004)

[37] Translation – from the Latin verb 'transfero' which in its past participle becomes 'translatum'means to carry over or across, to transfer, transport, *convey* (italics mine). *Cassell's New Latin-English English-Latin Dictionary*, fifth ed., comp. D. P. Simpson (London: Cassell and Company, 1975), s.v. "transfero." (The concept of translation is a cross platform concept which refers to the ideas of Deleuze and Guattari's plateaus. If the translation can be interpreted as a translation of data - linguistic, visual and digital - that becomes readable in a different context and usable in a different software platform, then the theory of a more radical approach would be that of translating the physical body into different 'frameworks.' This is the recent transhumanist approach.)

representation, but of transfer of specific characteristics to the new medium, or as Kurzweil puts it, that of the transfer of spirituality into machines. In the pursuit of artificial intelligence, an artwork that raises many questions is *AARON* by Harold Cohen. [38] The scientist-painter created an 'artificially' intelligent program, *AARON*, which draws and paints landscapes and portraits. *AARON* is a profound symbiosis of man and machine, of translations and interactions, based on computer imitating art and art imitating life. It demonstrates the growing capacity of technology to reflect the 'subtlety' of 'spiritual' human experience.

2.2.29. This process of translation, which is a transfer from one context to another, is based on the necessity of adaptation and transformation. For this reason the concept of ekphrasis will be discussed as a better tool than remediation, which looks at an engagement of media and not its context, including consciousness and spirituality. "In this electric age we see ourselves being translated more and more into the form of information, moving toward the technological extension of consciousness." [39] This is a process experienced and analyzed by Michael Snow who states: "I made 16 mm copies of *The Living Room* and *Corpus Callosum*, from the beta original, which worked pretty well. What is interesting is that it becomes a translation, it is a film of electronic effects." [40]

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[38] Kurzweil Cyber Art Technologies, "AARON the Cybernetic Artist," *Kurzweil Cyber Art Technologies*, 2001, http://www.kurzweilcyberart.com/index.html (accessed October 9, 2004). See also: Ray Kurzweil, *The Age of Spiritual Machines: How We Will Live, Work and Think in the New Age of Intelligent Machines* (London: Phoenix, 1999).

[39] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 57.

[40] Donato Totaro and André Habib, "Weathering the Creative Storm: An Interview with Michael Snow," *Off Screen*, November 30, 2002, http://www.horschamp.qc.ca/new_offscreen/snow_interview.html (accessed February 20, 2005).

**Figure 17 Michael Snow, *Corpus Callosum*, 2001.**

**Figure 18 Michael Snow, *Corpus Callosum*, 2001.**

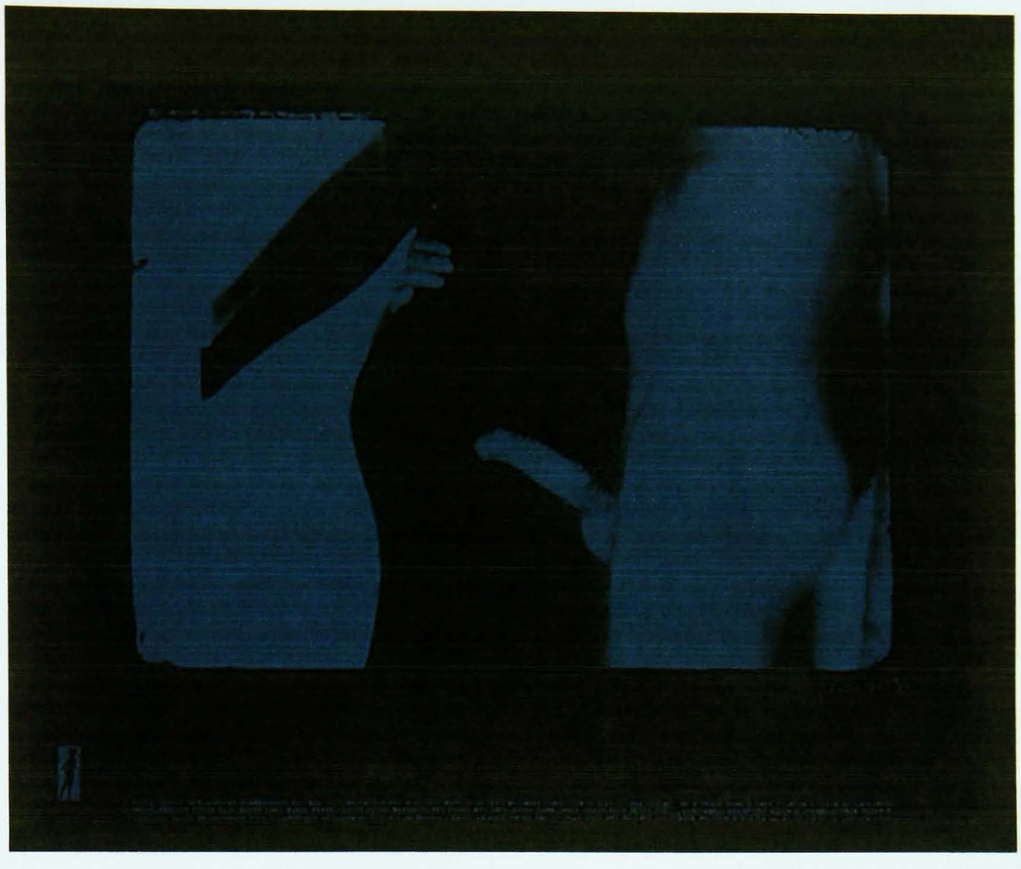

**Figure 19** ***Projection*****, Michael Snow, 1970. Photolithograph in black and blue on wove paper.**

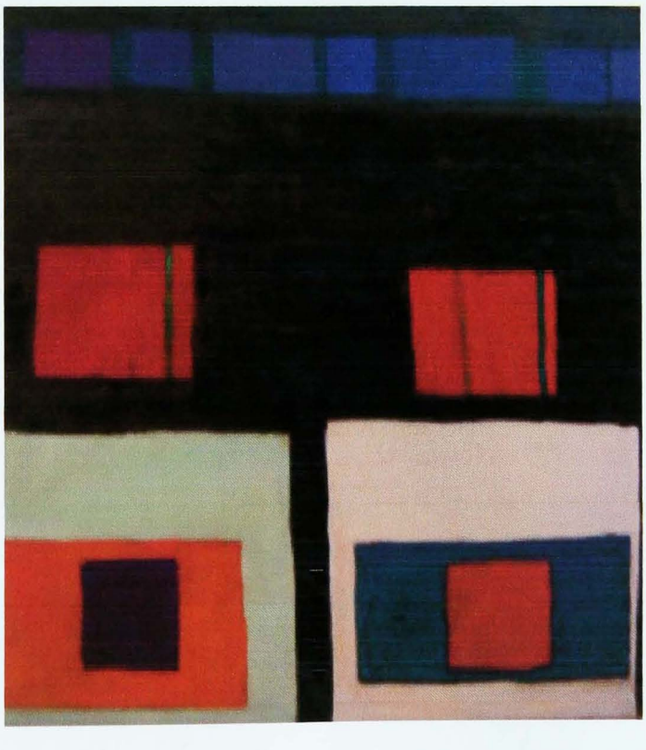

**Figure 20** ***Brilliant Corners*****, Michael Snow, 1960. Oil on canvas, 54 inches x 48 inches.**

2.2.30. Remediation exists in the transfer from one medium to another, in a repetitious process disjointed from the context and the knowledge value. The idea that McLuhan expressed through the possibility of being able to "translate more and more of

ourselves into other forms of expression that exceed ourselves" [41] is not expressed within the context of remediations. These contemporary ekphrasis, exceeding our own structures, are forms of hyperreality. In these new forms the human by translating itself beyond its own nature is not just posthuman, but transhuman: a transient form of electrical technological evolution.

2.2.31. Ekphrasis is then an important tool if McLuhans' analysis is applied to the world of technologies. "That technologies are ways of translating one kind of knowledge into another mode has been expressed by Lyman Bryson in the phrase 'technology is explicitness.' Translation is thus a 'spelling-out' of forms of knowing." [42] Technology, therefore, has played and continues to play an important role in clarifying forms of knowledge in periods of transition. [43] Digital ekphrasis could be a key to understanding the innovation of digital technologies in the process of translation. Translation or digital ekphrasis is, in the case of technology, not only applied to media, but to a large canvas of experimentations in the field of science ranging from physics to bioengineering.

2.2.32. In this context the works of Steven Rooke, a champion of evolutionary art, are representative of his comments related to the transfer between the physical and the hyperspace. "I can't stop. There is something compelling about this process. It feels as though the images are *trying* to break out of their hyperspace into the physical world..." [44]

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[41] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 57.
[42] Ibid., 56.
[43] Douglas Bicket, "An Early 'Denial of Ekphrasis': Controversy over the Breakout of the Visual in the Jazz Age Tabloids and the New York Times," Visual Communications 3, no. 3 (2004): 360-379.
[44] Peter J. Bentley, *Digital Biology: How Nature Is Transforming Our Technology and Our Lives* (New York: Simon and Schuster, 2001), 60. See also: Steven Rooke, "An Introduction to Creative Evolutionary Systems," in *Creative Evolutionary Systems*, ed. Peter J. Bentley and David W. Corner (London: Morgan Kaufmann, 2001) and Peter J. Bentley ed. *Evolutionary Design by Computers*, (London: AP Professional, 1999).

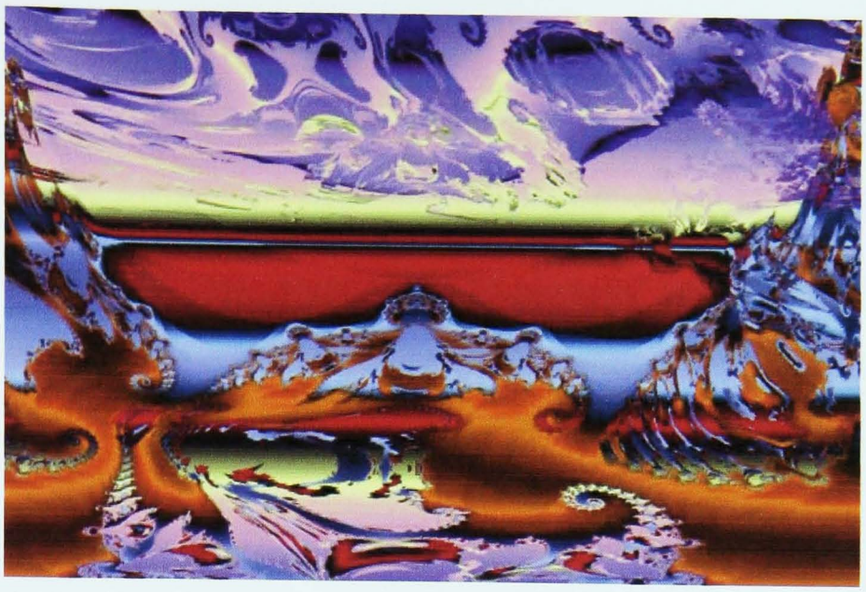

**Figure 21** ***Hypersea,*** **Steven Rooke, 1997. Digital image, in maps, volume X, number 3, creativity 2000, http://www.maps.org/news-letters/v10n3/10315roo.html (accessed October 11, 2004).**

2.2.33. The process of creating life in digital space is a process which is not restricted to the screen. [45] It is a process of translation between spaces, in the literal Latin meaning of the word. The images coming alive and attempting to break out of the screen, as described by Rooke, are examples of a process which is technologically, culturally and aesthetically more complex than 'remediation'. The process of ekphrasis responds to the necessity of translating forms into diverse fields, whilst the remediation process is restricted to media related environments. Ekphrasis implies the contextuality and indexicality not just of the virtual images but of reality itself, in an evolutionary progression. Its historical Platonic [46] origins and philosophical development throughout the centuries generate a better understanding of a process of description of a medium into another medium context. In this process of re-description from one medium to another, the transfer and modification of content and its indexicalities is taken into consideration, either as belonging to the content or to the material structure of the technology.

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[45] "Adrian gave evolution quite a lot of freedom. He simply said to the computer, 'I want a circuit that does X' and let evolution generate any circuit it wanted to using the FPGA. The result caused quite a stir in the research community. Circuits that behaved very bizarrely kept emerging. They performed the desired function, but it wasn't at all clear how they worked." Peter J. Bentley, *Digital Biology: How Nature Is Transforming Our Technology and Our Lives* (New York: Simon and Schuster, 2001), 61.

[46] Ekphrasis is a rhetorical form which allows the transfer of content from one art form into another. One of the earlier examples can be traced to Homer and the description of Achille's shield in the Iliad. See on the topic: James A.W. Heffernan, "Ekphrasis and Representation," *New Literary History*, no. 22 (1991): 297-316.

2.2.34. An example of ekphrasis is *Galápagos* (1997) by Karl Sims, in which the images are not just lifelike evolving structures, but also a filmic new media process which is displayed as art in its continuous and ephemeral development. "In *Galápagos*, the process itself is the real art. Sims has created a remarkable allegory of the mechanism that four and a half billion years ago began the most complex design of all - life." [47]

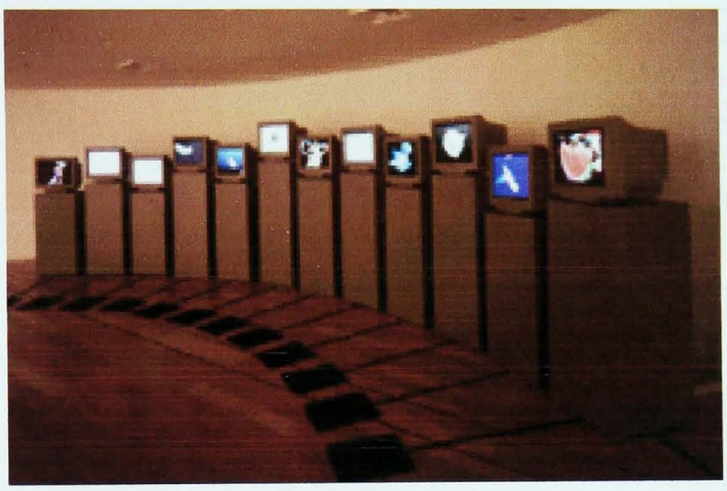

**Figure 22 *Galápagos*, 1997-2000, Karl Sims, Intercommunication Center, Tokyo. It was also exhibited at the De Cordova Museum in Lincoln, Massachusetts in *Make Your Move: Interactive Computer Art* and the Boston Cyberarts Festival 1999.**

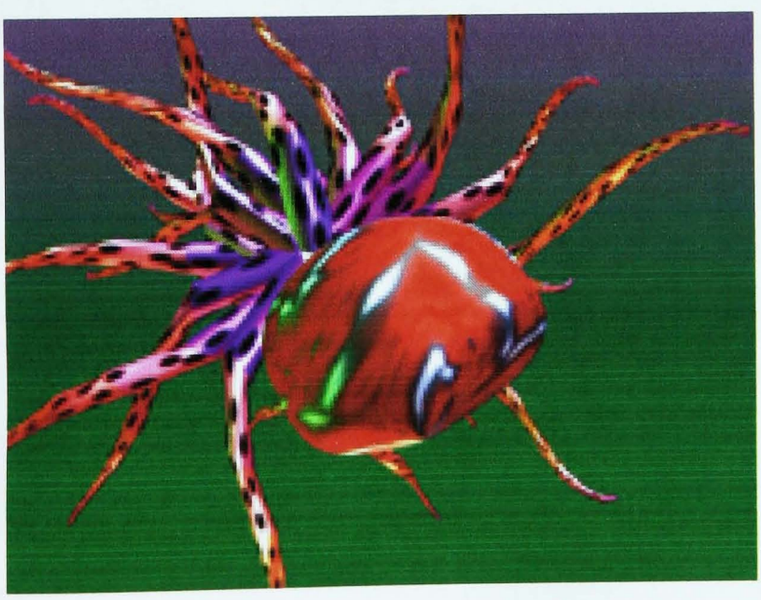

**Figure 23 A detail of an image from Galápagos.**

[47] George Fifield, "Art by Natural Selection," *Art New England*, August/September 1997, http://www.genarts.com/galapagos/fifield97.html (accessed October 11, 2004).

2.2.35. The same typology of a video processing installation displayed on computer is reflected in the collaborations of William Latham and Stephen Todd, which mix the elements of the installation, the video development of the evolutionary creatures, computer art and computer science.

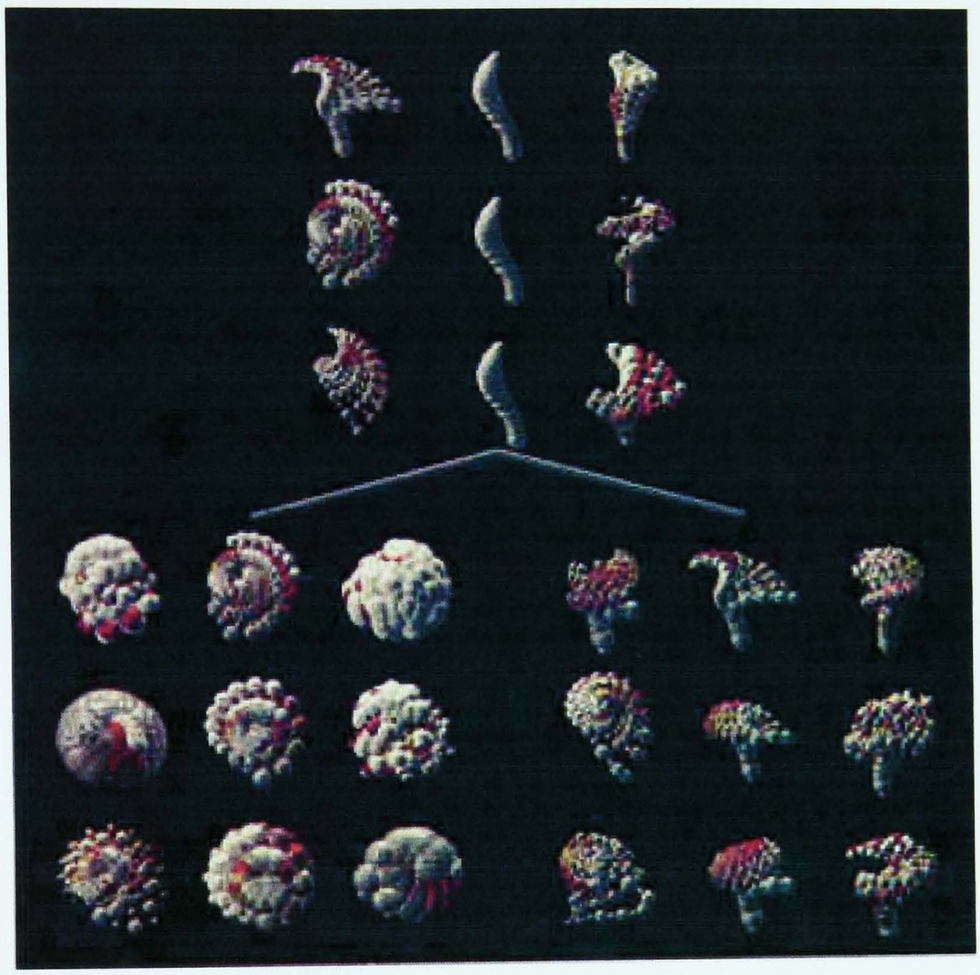

**Figure 24** ***Organic Art – The Art of William Latham*****, William Latham, 1996. From** ***The Art of William Latham*****, screenshot.**

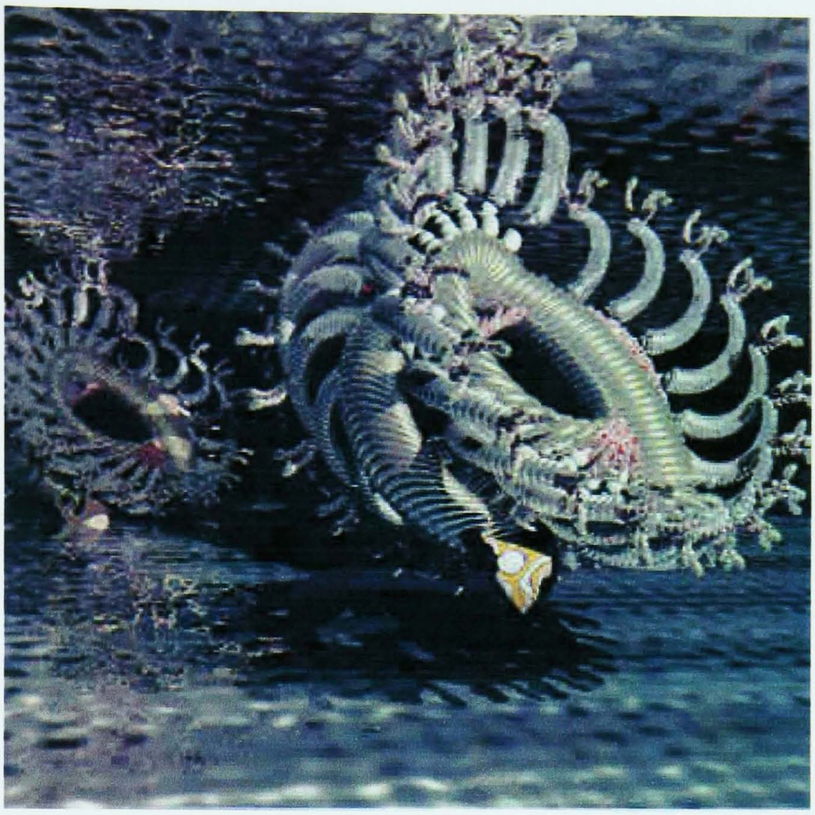

**Figure 25** ***The Garden of Unearthly Delights*****, William Latham, 1993.**

2.2.36. The work of William Latham is seminal in the context of evolutionary and organic art, as well as computer art at large. [48] He is one of the founders of these new forms of art and his works are a proof of a constant digital ekphrasis process between real and virtual in computer art. They also demonstrate that the processes of evolutionary and organic art cross between platforms and could take different forms. [49] They could become prints of the stages of this process, films of the evolutionary processes, [50] artistic projects

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[48] Rodney A. Brooks, "Artificial Life and Real Robots," in *Toward a Practice of Autonomous Systems: Proceedings of the First European Conference on Artificial Life*, ed. Francisco J. Varela and Paul Bourgine, 3-10 (Cambridge, MA: The MIT Press, 1992).

[49] "The most promising approach, exemplified by the British sculptor, William Latham, is to set up programmes on the basis of aesthetic choices in such a way that the parameters of style and content in the images are established but the final form is not pre-determined. Indeed, a fixed 'final form' may not the end in view. Rather, the evolutionary programme gives rise to a new type of kinetic sculpture." Martin Kemp, "Latham's Life Forms," *Nature* 391, (26 February 1998): 849. See also: Martin Kemp, Visualizations: The Nature Book of Art and Science (Oxford: Oxford University Press, 2000), 163. See also: Martin Kemp, *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat* (New Haven, CT: Yale University Press, 1990).

[50] William Latham, *Garden of Unearthly Delights*, Nimbus, 1993. CD-ROM. "The work of art was now the whole evolutionary tree of sculptures." *The Conquest of form: computer art by William Latham* (Bristol: Arnolfini Gallery, 1989), 16. See also: Karl Sims, "Evolving Virtual Creatures," *Computer Graphics (Siggraph '94) Annual Conference Proceedings*, July 1994, 43-50, http://www.genarts.com/karl/papers/siggraph94.pdf (accessed November 10, 2004) and Karl Sims, "Biota," *Karl Sims Retrospective*, http://www.biota.org/ksims/ (accessed November 10, 2004). "The viewer chooses a monitor, steps on the pad, and all the other screens go blank. Random mutations of the chosen creature appear on the monitor and continue transforming into new generations of genetic images." Michael Rush, *New Media in Late 20th-Century Art* (London: Thames and Hudson, 1999), 208.

as well as computer science and mathematical endeavors, sculptural installations, photographic images and paintings. But also computer programs and hardware generated by other machines, outside the grid of human understanding and perceptive framework. This is the case of *Evolva* (1999), another artwork by Latham, an evolving videogame where "Genohunter evolution and adaptation in the face of danger reflects our own changes as a species, and our own changes as individuals over the course of our lives. After playing Evolva, the prospect of going back to a game where the characters stay the same the whole way through is about as unappetizing as talking to a zombie." [51]

2.2.37. This multimedia process of transfer and translation is what Bolter defines as a power struggle between image and written word. He explains that in the contemporary context, since neither the written nor the spoken word can exert effective control, the resulting process is an inversion of the classic tool of *ekphrasis*. [52] He says that "it is easy to see that hypermedia applications are always explicit acts of remediation: they import earlier media into a digital space in order to critique and refashion them." [53] The phenomenon of importing is just one of the aspects of interaction between media. The contemporary phenomena are not cases of 'revival' of media which are passé or even extinct. The functionality of the revival would be limited and the innovative perspective unoriginal, in as much as the replica of the aesthetic would be based on a 'revivalist' approach. We would be presented with cases of 'neo-romanticism' and 'neo-primitivism'

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[51] David Wilson, "William Latham Explains Why Players Get to Eat Their Enemies in His New Game, Evolva," *Salon Technology*, October 28, 1999, http://www.salon.com/tech/feature/1999/10/28/latham/ (accessed October 13, 2004).

[52] "Texts that were originally written for print or manuscript can not only be transferred to machine-readable form, but also translated into hypertextual structures." Jay David Bolter, *Writing Space: The Computer, Hypertext, and the History of Writing* (Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1991). See also: Jay David Bolter, "Ekphrasis, Virtual Reality, and the Future of Writing," in *The Future of the Book*, ed. Geoffrey Nunberg, 253-272 (Berkeley: University of California Press, 1996). On the issue Bolter explains: "Altogether, the ancient scribal culture was inclined to regard a written page as a palpable texture, a pattern of words that reproduced the patterns of the larger world beyond the page." Jay David Bolter, *Turing's Man: Western Culture in the Computer Age* (London: Duckworth, 1984), 138.

[53] "In fact, all of our examples of hypermediacy are characterized by this kind of borrowing, as is also ancient and modern ekphrasis." Jay David Bolter, *Remediation: Understanding New Media* (Cambridge, MA: The MIT Press, 2000), 45.

and 'neo-cubism' via the digital arts. Although these may be some of the phenomena which have characterized the 'new media approach' in the first phases of the 60s and 70s, and in the developments of the 80s and 90s in the field of new media, much of the engagements within the avant-garde have been with the structural and innovative nature of the media itself, the hypermedia context and software/hardware technologies. [54]

2.2.38. A comparison at this stage is necessary in order to understand some of the characteristics of this evolutionary process both in technology and aesthetic. The images that will follow are respectively from *AARON* (a software computer program), Malevich, *ArtSBots* (small painting robots) and Mondrian.

[54] "Still the relation with the machine remains one of ignorance couched in the terms of desire, but an ignorance that yet might provide the grounds for a more subtle relation than the dictatorial assumption of knowledge that plagues relations with a machine in which we recognise only our own identifications." Sean Cubitt, *Digital Aesthetics* (London: Sage, 1998), 88. "Toys, computer games, fan fiction and Web sites, novelizations, comics, soundtrack and concept albums, fashion accessories, and collectables, many of them manufactured by wings of the same horizontally integrated corporation." Sean Cubitt, *The Cinema Effect* (Cambridge, MA: The MIT Press, 2004), 219. See also: Eileen R. Meehan, "'Holy Commodity Fetish, Batman': The Political Economy of a Commercial Intertext," in *The Many Lives of the Batman: Critical Approaches to a Superhero and his Media*, ed. Roberta E. Pearson and William Uricchio, 47-65 (London: BFI Publishing, 1991).

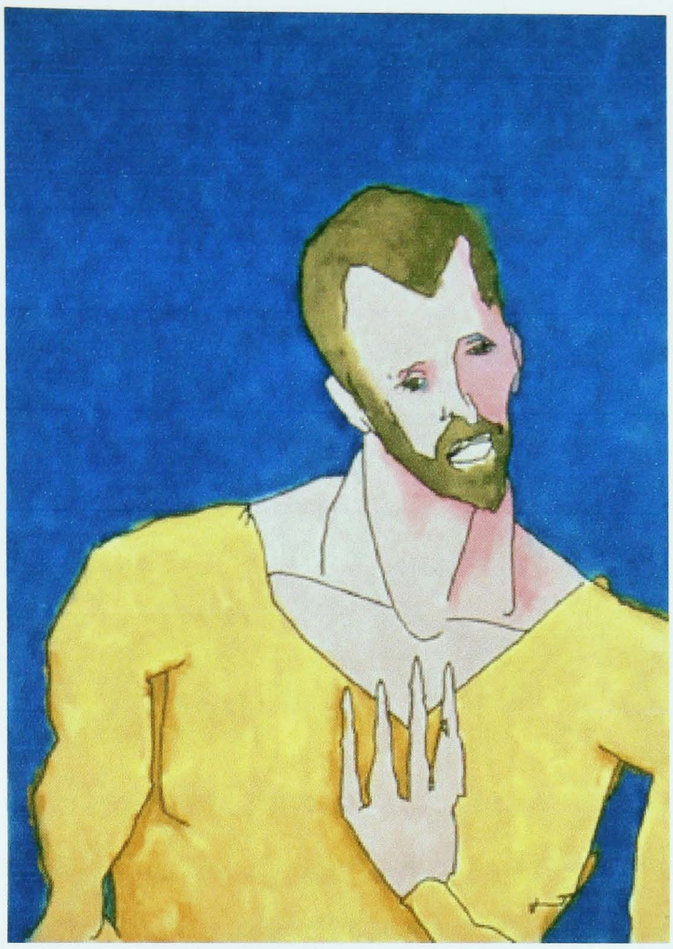

**Figure 26** ***Theo,*** **AARON, 1992. Oil on canvas, 24 x 34, a computer program and art creation by Harold Cohen.**

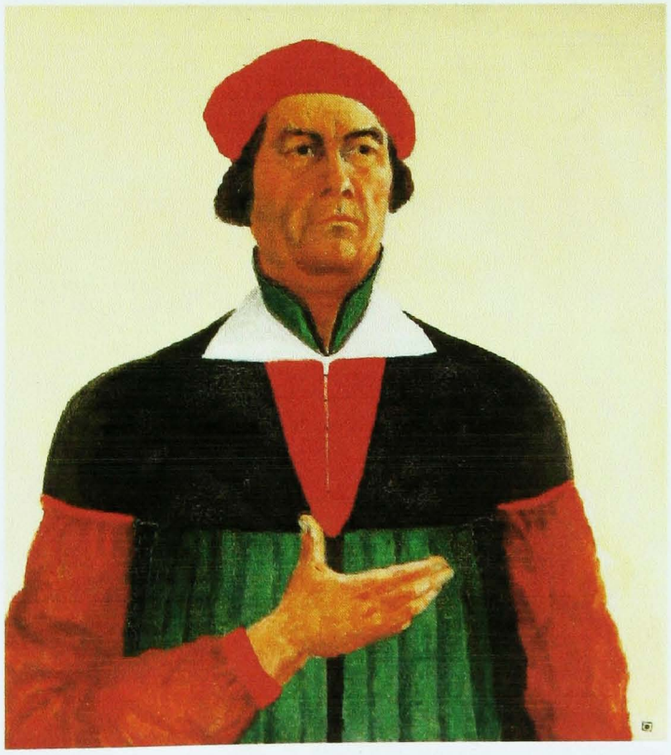

**Figure 27** ***Self Portrait*****, Malevich, 1933. Oil on canvas, 73 x 66 cm., State Russian Museum, St. Petersburg.**

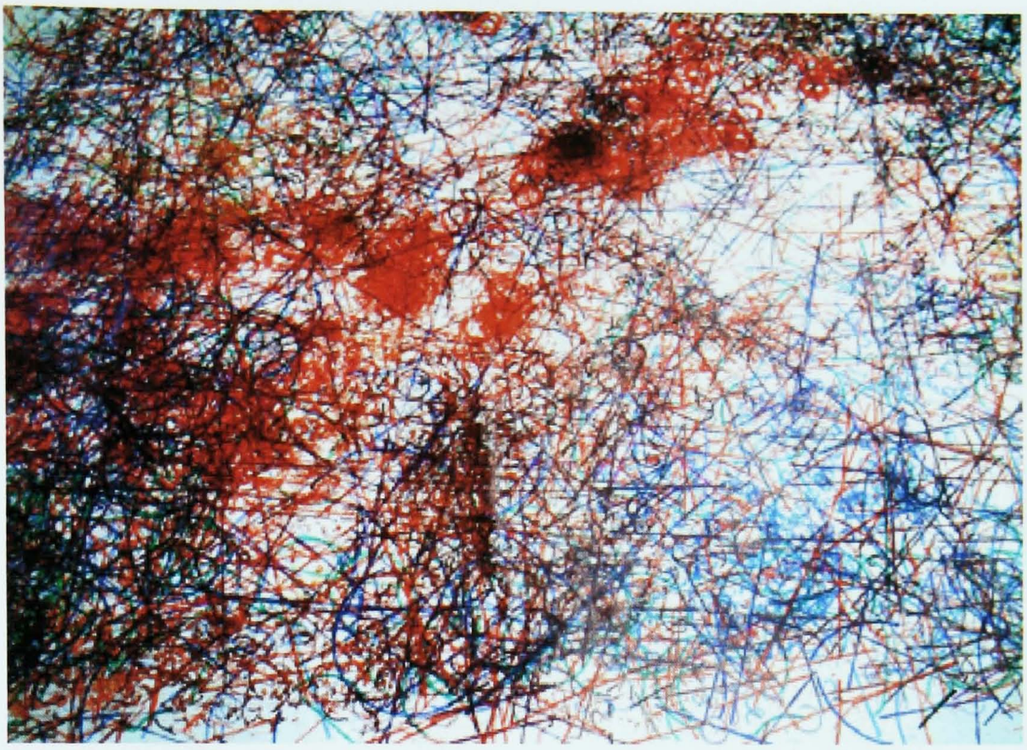

**Figure 28** ***10 mbots*****, Leonel Moura and Henrique Garcia Pereira, May 11, 2004. Ink on canvas, 400 x 500 cm.; http://www.lxxl.pt/artsbot/index.html (accessed October 13, 2004).**

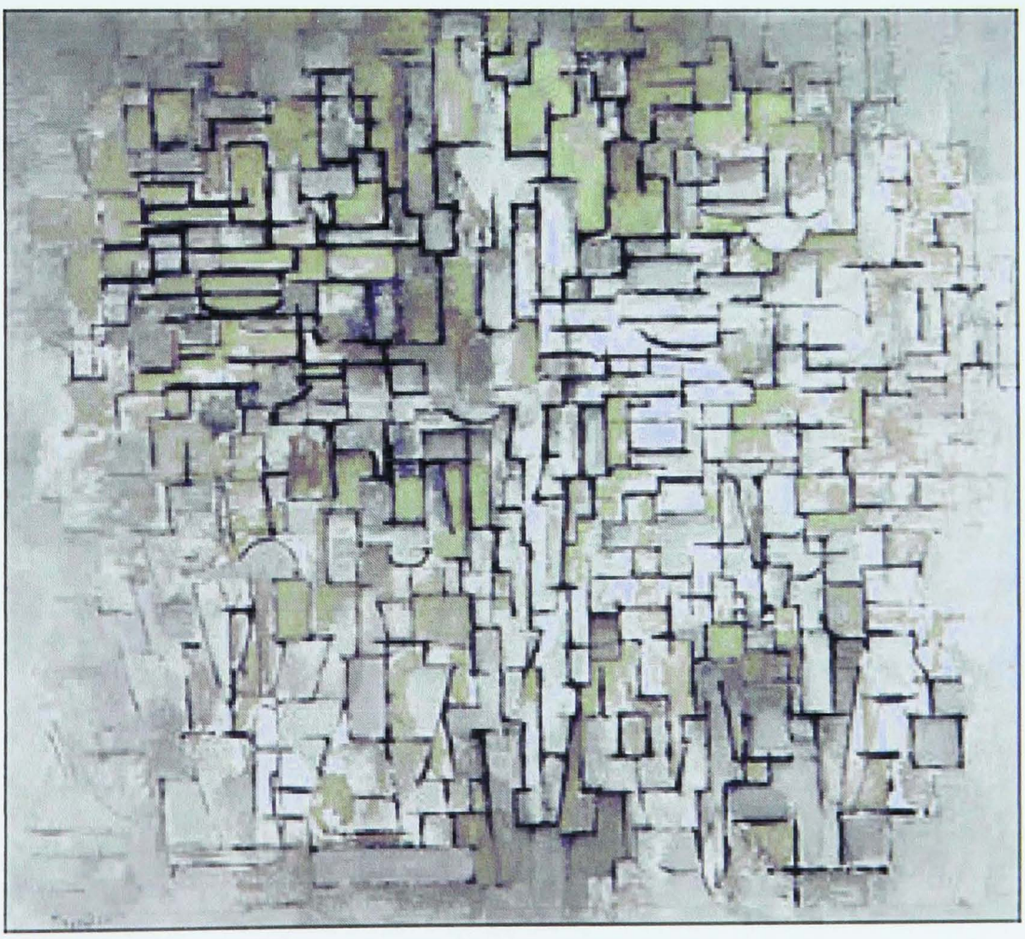

**Figure 29** ***Tableau No. 2*****, Piet Mondrian, 1913. Oil on canvas, 104.5 x 113.5 cm., New York, Solomon R. Guggenheim Museum.**

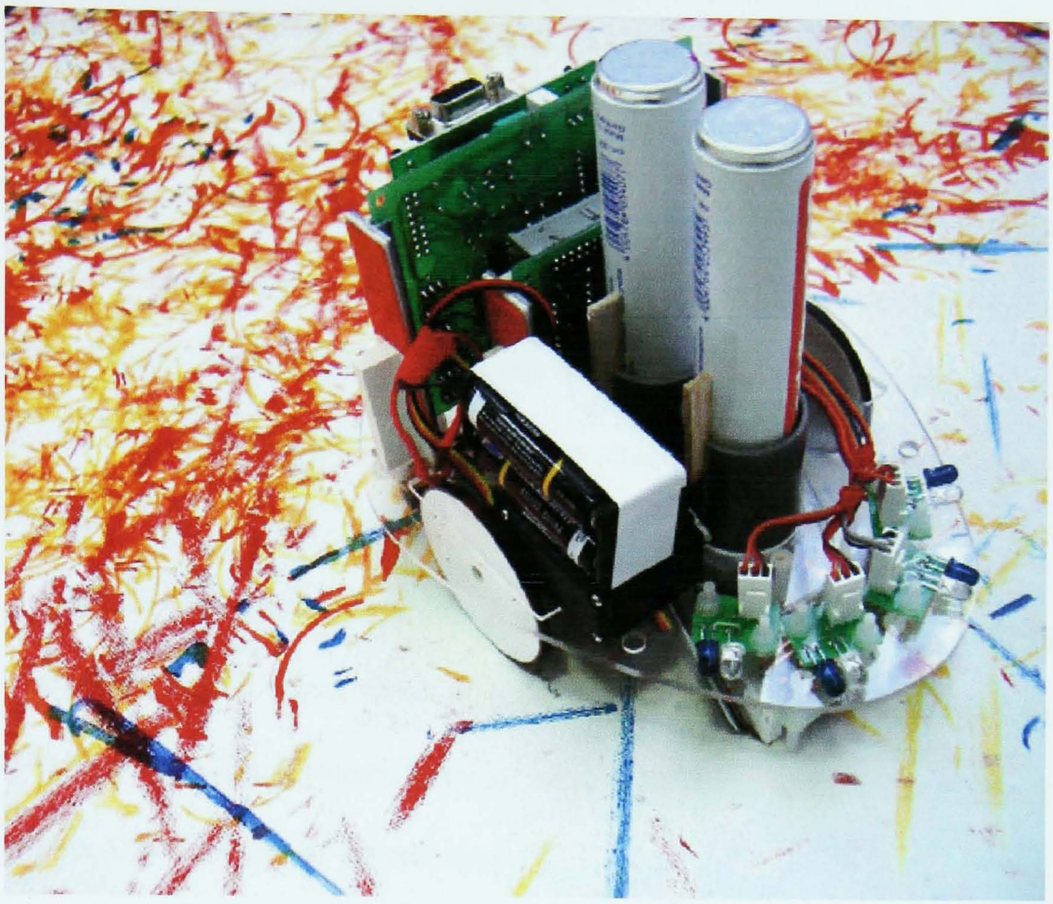

**Figure 30** ***ArtSBot: Art Symbiotic roBots*****, Leonel Moura, 2004. Sensors, servomotors, microchip, wheels, batteries, plastic, ink pens. ArtSBot is a set of autonomous robots that can produce paintings and drawings based on randomness and stigmergy. The paintings are the result of a self-organized process based on mobile robots that interact via the environment; http://artbots.org/2004/participants/ArtSBot/ (accessed October 12, 2004).**

2.2.39. According to Bolter's remediation concept, these robotic artworks would only be 'remediated' concepts and aesthetics. A problem with Bolter's analysis is that it focuses on the area of homogenization processes and the assigned function of the media, which in their nature are temporal forms of evolution. Although these are evoked to resuscitate old media in the new media scenario in a remediation context, there is no consideration for the 'remediation of remediation' as a form of evolution. "However, digital media that strive for transparency and immediacy (such as immersive virtual reality and virtual games) also remediate. Hypermedia and transparent media are opposite manifestations of the same desire: the desire to get past the limits of representation and to

achieve the real." [55] It is important to clarify that Bolter does not take into account the reality of the media creating themselves, as in the case of *FPGA* and the *GOLEM* project. The media strive for real metaphysical existence and the process of hypermedia multiplied mediation is more related to content application and use of the medium than to the medium itself. The context seems to disappear in Bolter's analysis, which misses the possibility of an ekphrasis of technology, 'technological ekphrasis,' and not just of content.

"Transparent digital applications seek to get to the real by bravely denying the fact of mediation; digital hypermedia seek the real by multiplying mediation so as to create a feeling of fullness, a satiety of experience, which can be taken as reality. Both of these moves are strategies of remediation." [56]

2.2.40. Technological mediation is a real form of interpretation of reality. A form that has gone beyond a simplistic and contextual representation of content and that looks at technology as the bearer not just of a framework, but of interactions which could range from content, to indexicality and eventually to spirituality. Eco in his afterword to *The Future of the Book* explains that "today the concept of literacy comprises many media. An enlightened policy of literacy must take into account the possibilities of all these media... Even if it were true that today visual communication overwhelms written communication the problem is not to oppose written to visual communication. The problem is how to improve both." [57] This is, in fact, one of the challenges in understanding the modality of intervention in technology which is developing greater degrees of autonomy and generating diverse trajectories of aesthetic and media evolutions. [58] We may consider

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[55] Jay David Bolter, *Remediation: Understanding New Media* (Cambridge, MA: The MIT Press, 2000), 53.
[56] Ibid., 53.
[57] Umberto Eco, "Afterword," *The Future of the Book*, ed. by Geoffrey Nunberg (Berkeley: University of California Press, 1996), 298.
58 "If the preference in earlier popular film, as in photography, was for a single unified style, popular film now seems more willing to reveal its multiple styles. Hypermediacy is certainly no longer the stylistic

these processes, reductively, as just forms of remediations, but they are ultimately forms of reality in development. Filmic examples are Oliver Stone's *Natural Born Killers* (1994) famous for its juxtaposition of film and television and Peter Greenaway's *Prospero's Book* (1991) and *The Pillow Book* (1995) which visualize the written word.

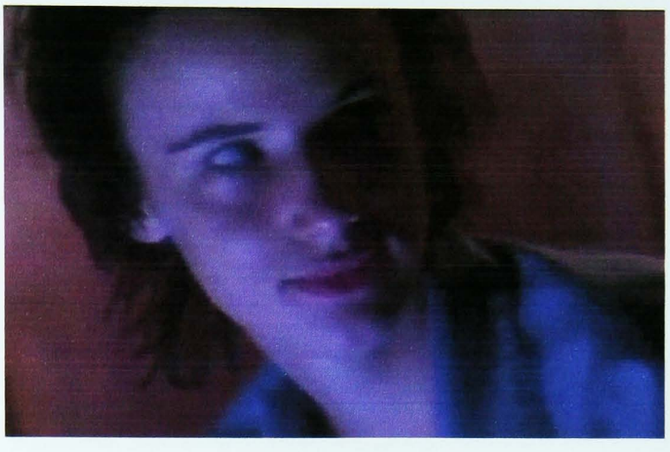

**Figure 31 *Natural Born Killers*, directed by Oliver Stone, 1994. Juliette Lewis plays Mallory Knox.**

2.2.41. An historical example in the history of painting is Mondrian's *Transatlantic Paintings* [59] a group of 17 works started in Europe in the 1930s and finished or re-modified in New York in the 1940s. These works offer an understanding of the process of an artwork's evolution within a medium as well as the relationship of this 'schizoid' process in rapport to multiple contexts and referents. Mondrian himself acknowledged the double nature of the paintings by inscribing two dates on each of them. The same happens with the evolutionary transitions of *A-Void-Travel*, an artwork conceived to mutate and change in rapport to multiple referents.

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equivalent of insanity." Jay David Bolter, *Remediation: Understanding New Media* (Cambridge, MA: The MIT Press, 2000), 154.

[59] "This 'schizoid' status has contributed to the relative neglect of the transatlantic paintings, but it is also what makes them so interesting." Harvard University Art Museum, *artmuseums.harvard.edu*, http://www.artmuseums.harvard.edu/mondrian/introduction/index.html (accessed July 12, 2004).

**Figure 32** ***No. 9*****, Piet Mondrian, 1939-1942. Detail, lower right, Harvard University Art Museum.**

**Figure 33** ***Tom, Box # 17*****, from the installation** ***A-Void-Travel*****, Lanfranco Aceti, 2003 exhibited at the Cube Development, Leeds.**

2.2.42. These forms of evolution and crossovers were analyzed by Higgins and Friedman. Whilst Higgins devised an 'intermedia' framework, Friedman moved further by affirming that there are no boundaries between art and life; in this particular case between art, technology and life.

> 2.2.43. .. Art form appropriate to people who say there can be no artificial boundaries between art and life. If there can't be a boundary between art and life, there certainly cannot be boundaries between art form and art form.

> For purposes of history, of discussion, of useful distinction, one can refer to separate art forms, but the meaning of intermedia is that our time often calls for art forms that draw on the roots of several media, growing into new hybrids. [60]

2.2.44. The structure of these new hybridization forms within the contemporary cultural context is the basis of the next section which, by focusing on technology, analyzes the processes at work in the media context. The concept of remediations seems to respond to the idea of one form fits it all, whereas instead the media territory of representation is the entire world with its evolutionary developments. [61] Fluxus's concept of intermedia, as developed by Dick Higgins, is one of the tools which may be of help in understanding the contemporary media structure.

> 2.2.45. Thus the happening developed as an intermedium, an uncharted land that lies between collage, music and the theater. It is not governed by rules; each work determines its own medium and form according to its needs. The concept itself is better understood by what it is not, rather than what it is. Approaching it, we are pioneers again, and shall continue to be so as long as there's plenty of elbow room and no neighbors around for a few miles. [62]

2.2.46. Higgins' analysis evidences a necessity in the evolutionary stages of 'intermedia' processes for what in biology is referred to as intergroup selection. [63] It is a

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[60] Ken Friedman, "Forty Year of Fluxus," *artnoart.com*, http://www.artnotart.com/fluxus/kfriedman-fourtyyears.html (accessed January 10, 2005). Friedman also explains that: "Fluxus grew with the intermedia idea. It had strong foundations in music, Zen, design and architecture. Rather than pursuing technical - or technological - solutions to artistic problems, Fluxus artists tended to move in a philosophical vein. The work was both direct and subtle. This proved to be a blessing, and most Fluxus work avoided the dead-end solutions typical of the 1960s approach to art and technology. The experiments in art and technology that typified the 1960s were as important as they were ultimately without purpose. Their importance lay in the effort to explore new media and new possibilities. Nevertheless, the tendency of the artists to focus on technical solutions rather philosophical implications rendered the work both spectacular and shallow." David T. Doris, "Zen Vaudeville: A Medi(t)ation in the Marigns of Fluxus," in *The Fluxus Reader*, ed. Ken Friedman, 117 (Chichester: Academy Editions, 1998). "It is this notion of framing as a function of mastery and power that the artists of Fluxus questioned relentlessly. The emergence of intermedia – a range of structures that lay *between* media – was an extraordinary manifestation of this questioning."

[61] Hanjo Beressem, "One Surface Fits All: Text, Images and the Topology of Hypermedia," in *Text and Visuality: Word and Image Interactions 3*, ed. Martin Heusser, Michele Hannoosh, Charlotte Schoell-glass and David Scott (Amsterdam: Rodopi, 1999).

[62] Dick Higgins, *Horizons: the Poetics and Theory of the Intermedia* (Carbondale, IL: Southern Illinois University Press, 1984), 18-28. See also: Dick Higgins, "Synesthesia and Intersenses: Intermedia Dick Higgins with an Appendix by Hannah Higgins," *ubu.com*, http://www.ubu.com/papers/higgins_intermedia.html (accessed October 10, 2004).

[63] "The average adaptiveness of the species thus advances under intergroup selection, an enormously more effective process than intragroup selection." Sewall Wright, "The Roles of Mutation, Inbreeding, Crossbreeding, and Selection in Evolution," ed. Mark Ridley, *Evolution*, 38 (Oxford: Oxford University Press, 1997).

process which, in the microlevel of arts developments, generates original approaches that if successfully experimented, pervade the next levels and reach the macrostructures. This is a phenomenon which Gould has recognized as being based on interaction and not on replication: digital ekphrasis rather than remediation. Higgins' graphic focuses on the connection between the media, but does not place the phenomenon in a larger evolutionary context.

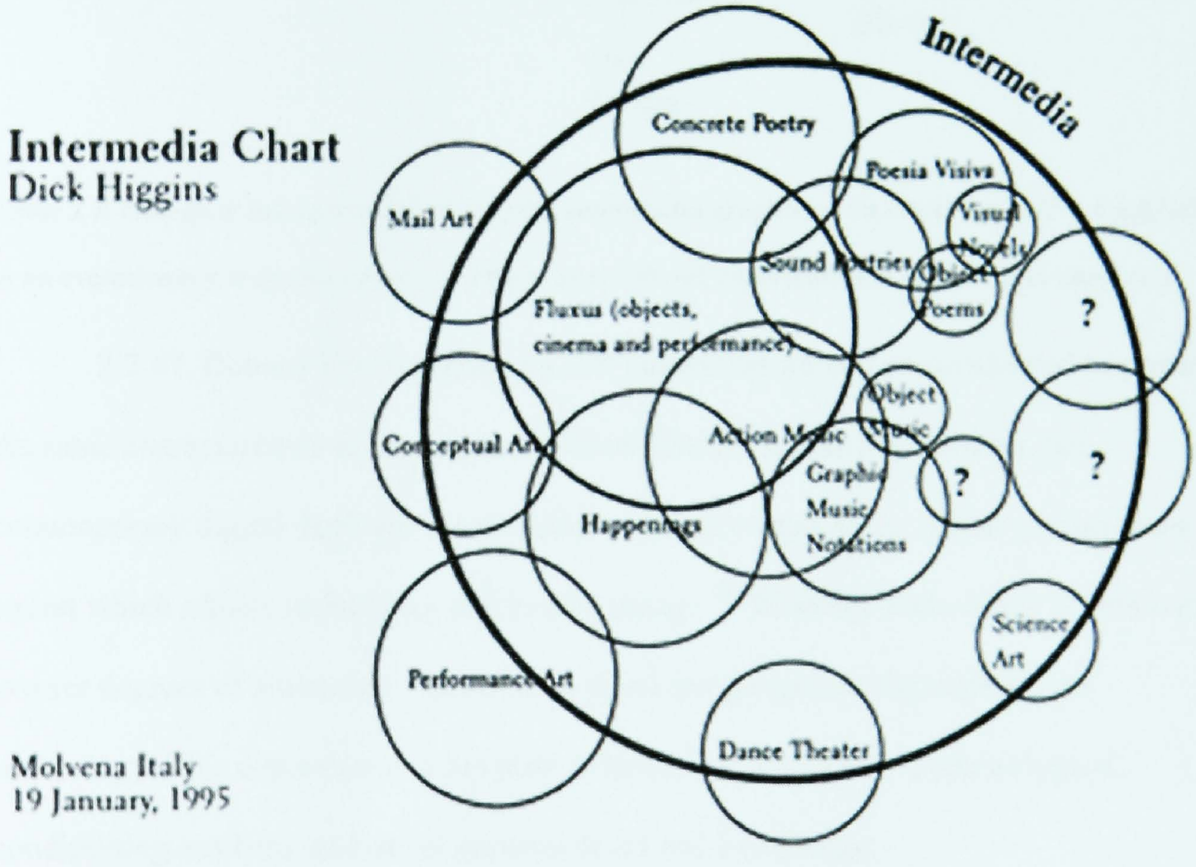


**Table 1 Intermedia Chart, Dick Higgins, January 19, 1995, Molvena Italy.**

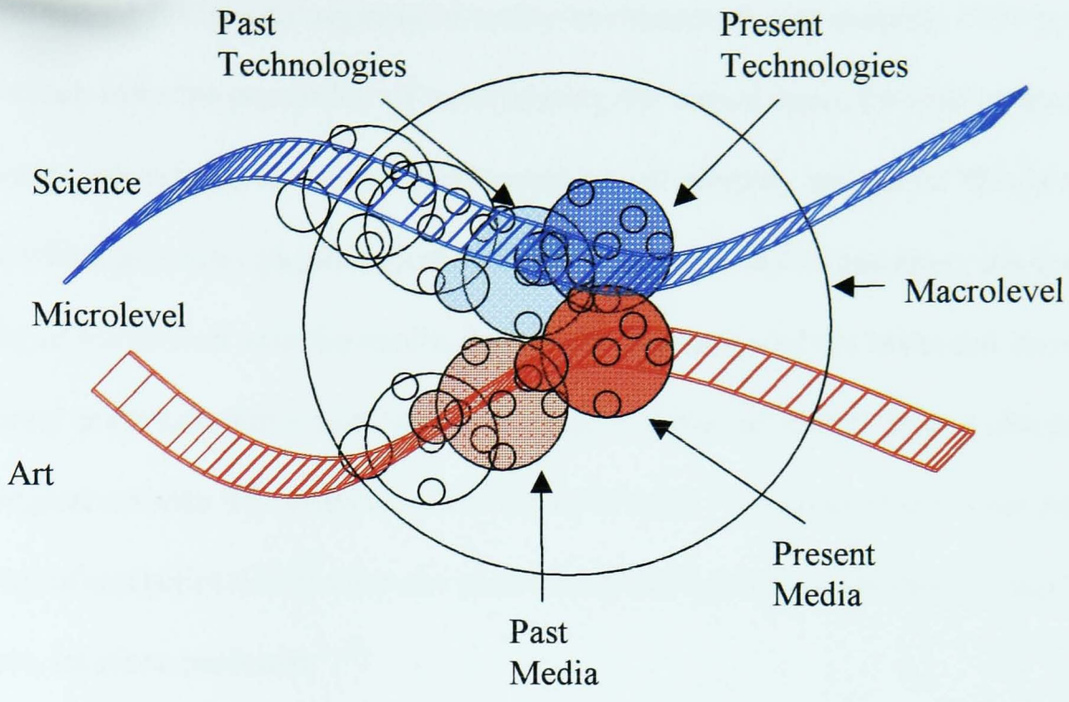


**Table 2 A biological interpretation of Higgins intermedia graphic as an intersection of art and science in an evolutionary trajectory context. This is a microlevel representation of table 3 in chapter 1.**

2.2.47. Rodney Brooks observes that human nature can be considered to posses the same characteristics as a machine. [64] Therefore the translation process, the contemporary digital ekphrasis, is not only a case of remediation, but an evolutionary strand which affects technology and human nature. [65] Whereby technology is achieving greater degrees of autonomy, humanity is developing a greater dependence on technology. This dependence is not only cultural, but physical and physiological, conditioning aesthetic and developments of art and knowledge.

2.2.48. The forms of knowledge are, therefore, based on the electric translation processes, which according to McLuhan are total and inclusive and can take the form of consciousness. The brain in this context is extending the modality of interaction with contemporary reality. Examples may be found in new forms of interaction between the

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[64] "The devices are surgically inserted into people's ears, and electrodes are permanently implanted, so that there is direct electrical connection between the electronics of the silicon device and the nervous system of the patient. They hear through a combination of flesh and machine." Rodney A. Brooks, *Robot: The Future of Flesh and Machines* (London: Allen Lane, 2002), 216 and Rodney A. Brooks, *Flesh and Machines: How Robots Will Change Us* (New York: Pantheon Books, 2002).

[65] Roland Barthes, "The Death of the Author," *ubu.com*, http://www.ubu.com/aspen/aspen5and6/threeEssays.html#barthes (accessed October 12, 2004).

brain and virtual reality and augmented reality environments, for example *EEG* by Steve Mann, which offer the possibility of manipulating the virtual space through bioelectrical brain waves, generating new forms of interactions and possibly art works. This is a process which generates physiological responses from the viewer and alters the brain's modality of interaction with the media. Semir Zeki's analysis of the brain and its reaction to different aesthetics shows how the brain reacts to different stimuli, with a change in physiological activity. His analysis of art is based on the "workings of the brain, and that no theory of aesthetics which does not have strong biological foundations is likely to be complete, let alone profound." [66]

**Figure 34** ***EEG electrodes at 330 Dundas Street*****, Steve Mann.**

2.2.49. Therefore, this new context of electric media, hybridization and biological interactions generates a field of interventions and experiments which are translated from one plateau to another, creating a rhizome of hybrids. [67] Each hybrid carries the

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[66] Semir Zeki, *Inner Vision: An Exploration of Art and the Brain* (Oxford: Oxford University Press, 1999), 217.

[67] "Sometime one organizes the assemblage: dimensional components, intra-assemblage. Sometimes one leaves the territorial assemblage for other assemblages, or for somewhere else entirely: interassemblage, components of passage or even escape. And all three at once. Forces of chaos, terrestrial forces, cosmic forces: all of these confront each other and converge in the territorial refrain." Gilles Deleuze and Félix

possibility of either a fecund filiation or a sterile future. This process of filiation appears to be the originating cause of changes, which affects not only language and media, but also the concept and perception of society. The electric media abolish the spatial dimension rather than enlarging it. With electricity it became possible to resume everywhere person-to-person relations as if on the smallest village scale. [68] This has created a new order which enhanced the concept of relation in depth without delegation of functions or powers. "The organic everywhere supplants the mechanical. Dialogue supersedes the lecture." [69] The dialogue is instead for Virilio an endless speeding of the image which is *an ob-jactus*, inseparable from the path, which should be presented more as an organic *sub-jactus*, where the commodified subject and its representation is accelerating the trajectory of technosciences and communication.

2.2.50. Where the mechanical is becoming organic, or is simulating becoming organic, the artworks become representation of simulation, enacting of illusion and evolution, in a conflictual dialogue with the reality of representation and transformation. An example is the work of Paul Catanese [70] who transforms the digital in the organic representation, a simulation of organic reality which is then subject to a trajectory of decay in its manifestation in the real.

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Guattari. *A Thousand Plateaus: Capitalism & Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1988), 312.

[68] On this topic Virilio's examines the concept of total indifference toward *the space-world*. He speaks of ob-jactus which includes the representation of the subject as environmental pollution. Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 120.

[69] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul. 1964), 256.

[70] Paul Catanese, "News and Announcement," *paulcatanese.com*, http://www.paulcatanese.com/index.html (accessed November 4, 2004).

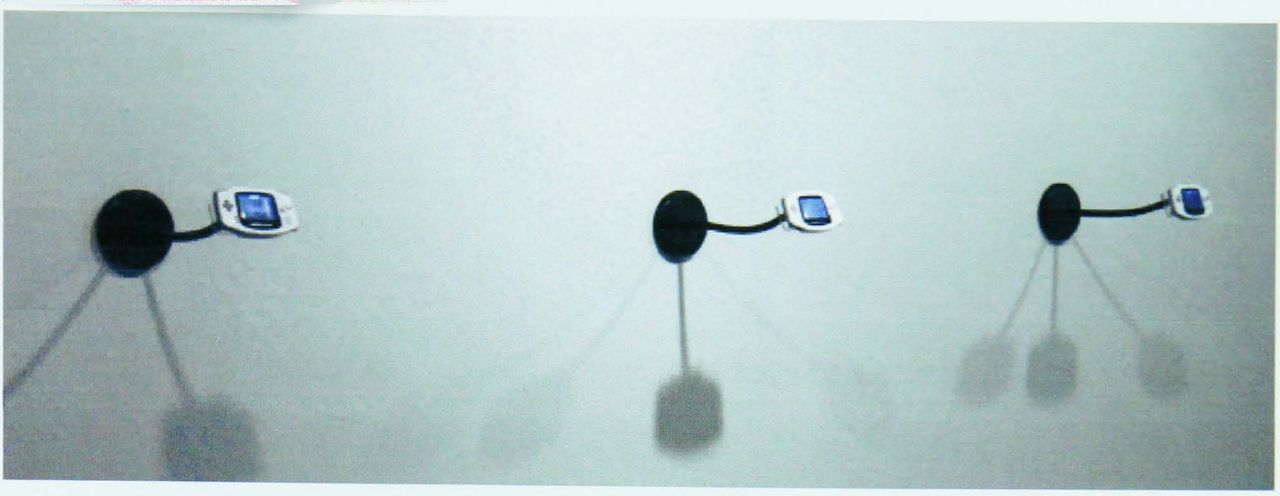

**Figure 35** ***Medicinal Craft of Cephalopods, Recollections of a Somnambulist*** **and** ***A Short History of the Bezoar Stone*****, Paul Catanese, 2004.**

**Figure 36** ***Super Ichthyologist Advance*****, Paul Catanese, 2003.**

2.2.51. The enacting of illusion is perhaps a characteristic of Orlan's work, [71] where the reconstruction of the body creates the representation of the persona as an artifact, a commodified body enacting and provoking illusionary representations. It is a process which has pushed the boundaries of representation with the *Self-hybridization* project, where the transformation lies between real and unreal.

[71] "Currents and objects remain external to the subject, which no longer appears as the stable pole of a single identity, but as a transformer." Regis Durand, "Texts for Orlan" in *Orlan: Carnal Art*, trans. Deke Dusinberre 209 (Paris: Flammarion, 2004). See also: Kate Ince, *Orlan: Millennial Female*, (Oxford: Berg, 2000); Barbara Rose, "Orlan Is It Art?; Orlan and the Transgressive Act," *Art in America* 81, no. 2 (1993): 83-125, http://www.stanford.edu/class/history34q/readings/Orlan/Orlan2.html (accessed December 7, 2004) and Orlan, "self-hybridization," *Orlan.net*, http://www.orlan.net/ (accessed November 4, 2004).

**Figure 37** ***Surgery-Performance*****, Orlan, July 6, 1991. Orlan speaking during the fourth operation performance.**

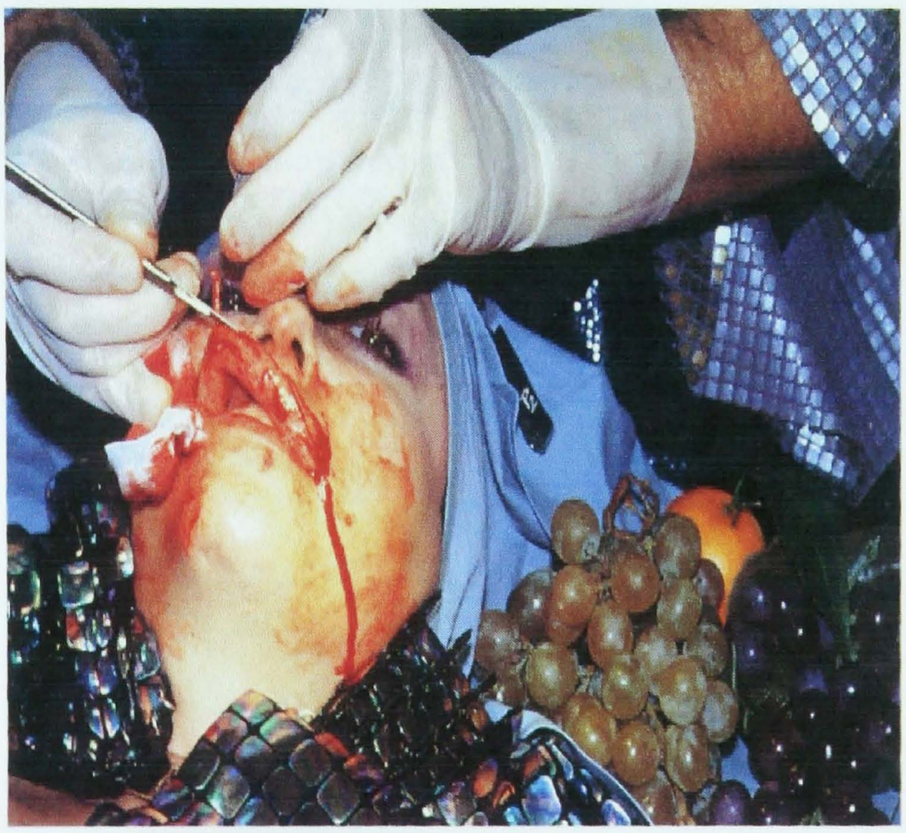

**Figure 38** ***A Mouth for Grapes*****, Orlan, 1991. Photograph mounted on aluminium, from the fourth operation/performance. Photo by Joel Nicholas.**

**Figure 39** ***Refiguration Self-Hybridization no 4*****, Orlan, 1998. Cibachrome 116 x 166 cm. or 74 x 104 cm. Technical help to digital editing: Pierre Zovilé.**

**Figure 40** ***African Self-Hybridization: Half-White Half-Black Mbangu Mask with Face of Euro-Saint-Etienne Woman in Rollers*****, Orlan, 2002. Digital photographic paper 125 x 156 cm., edition of seven. Technical help to digital editing: Jean Michel Cambilhou for 'Janvier', Paris.**

2.2.52. While Orlan increases the hybridization process of the self blurring the boundaries of the body and its persona in both cultural and physical elements, the work of Sims presents an evolutionary reality based on the representation of the virtual as 'lifelike.' These works of simulation, illusion and evolution refer to a reality with no boundaries, that of a body without organs. [72]

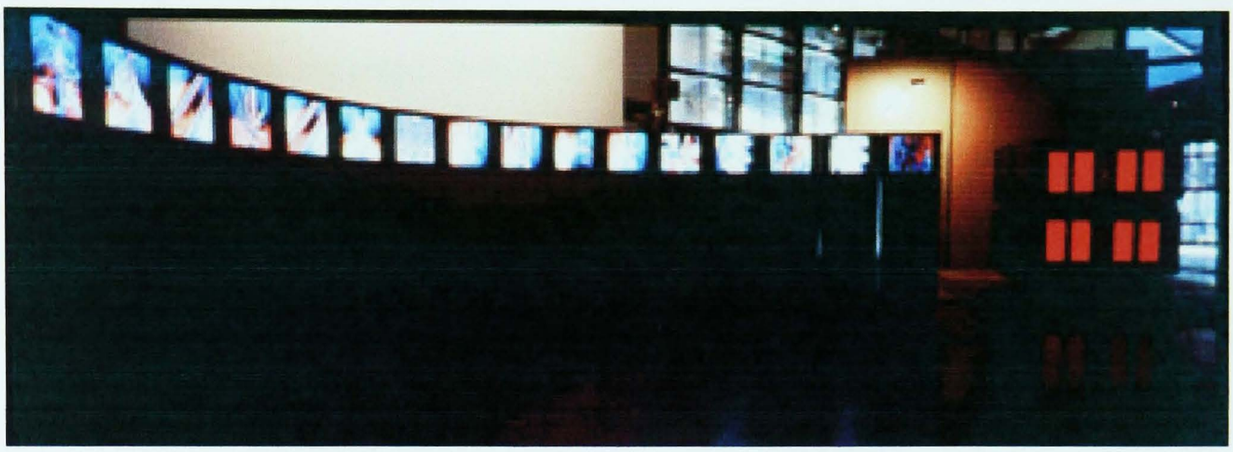

**Figure 41 *Genetic Images,* Karl Sims, 1993. A Media interactive evolutionary installation where visitors could stand on sensors in front of the most aesthetically pleasing images and a computer generated images selecting which ones would survive and reproduce. Exhibited at the Centre Georges Pompidou, Paris, Ars Electronica, Linz, and the Interactive Media Festival, Los Angeles. http://www.genarts.com/karl/genetic-images.html (accessed November 4, 2004).**

2.2.53. The contemporary blurring between mechanical, electric and organic, of simulation, reality and illusion, generates media representation and understanding of reality based on a traditional Hegelian dialectic approach. Instead the complexity of interacting at a basic level, the rhizome growth, [73] which Baudrillard compares to cancer, [74] represents an engagement at every hierarchical level in time and space, at the same times and in the same spaces. The interaction at electric level has been sublimated into the

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[72] "And it is the same everything, but under such conditions that the body without organs has replaced the organism and experimentation has replaced all interpretation, for which no longer has any use." Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1988), 162.

[73] "It is not enough, however, to replace the opposition between the One and the multiple with a distinction between types of multiplicities." Ibid., 506.

[74] "Cancer designates a proliferation ad infinitum of a base cell without taking into consideration the organic laws of the whole." Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 100.

fiber optics and has become similar to a synaptic connection, allowing a full engagement of the media in a homogenizing process.

2.2.54. In this framework the media have the necessity of creating a common language, an approach, which will allow them to communicate with each other. Different and once isolated pieces of hardware now have to 'dialogue' with each other. In some cases they are even integrated in their functions: an example is the digital television, which incorporates functions of written information, Internet, film, music and video. This is a system which has not substituted the individual elements but has integrated them through interactivity in hybridized forms, generating according to Baudrillard, the implosion of the medium and of the real in the hyperreal nebula. [75]

2.2.55. "Within this new system of social implosion with its functional and/or organic perspectives of virtuality and reality 'The tendency of electric media is to create a kind of organic interdependence among all the institutions of society, emphasizing de Chardin's view that the discovery of electromagnetism is to be regarded as a prodigious biological event.'" [76] It could be inferred that the '*interdependence*' is a subsequent manifestation of previous interactions and interactivities.

2.2.56. In the moment that language, media and science implode and fuse their boundaries, "they all function organically together in the construction of spiritual reality, yet each of these organs has its individual assignment." [77] Within this tradition "the movie had a kind of symbolic origin in an attempt to photograph the flying hooves of galloping

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[75] Ibid., 82.
[76] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 247.
[77] Ernst Cassirer, *Language and Myth*, trans. Susanne K. Langer (New York: Dover Publications Inc., 1953), 9.

horses, for to set a series of cameras to study animal movement is to merge the mechanical and the organic in a special way." [78]

**Figure 42 Horse Running, Jules Etienne Marey, 1886. Chronophotography, image from positive glass plate, Cinémathèque Française, equipment collection, http://www.expo-marey.com/ANGLAIS/mediasup.html (accessed October 28, 2004).**

2.2.57. This fusion is more evident when one refers to the parallel development of cinema and computer which with their interbreeding have generated the new media realm. Manovich stresses this link by explaining that "the histories of media and computing became further entwined when German engineer Konrad Zuse began building a computer in the living room of his parent's apartment in Berlin... One of his innovations was using punched tape to control computer programs. The tape Zuse used was actually discarded 35mm movie film." [79]

2.2.58. In this movement towards new media cinema, as Manovich explains, the cinematic iconic code is discarded in favor of a more efficient binary one. The convergence between media and computer is represented by the convergence of

[78] Marshall McLuan, *Understanding Media: The Extension of Man* (London: Routledge & Kegan Paul Ltd., 1964), 284.
[79] Lev Manovich. *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 25.

Daguerre's daguerreotype and Babbage's Analytical Engine, the Lumière Cinématographie and Hollerith's tabulator.

2.2.59. This merging also represents the fusion of the mechanical and electric with the organic. In this case it may not be correct to say that the computer has returned to its origins in a historical loop, as Manovich affirms, but has subsumed the new characteristic of being 'electric' with the possibility of being not just a media synthesizer and manipulator but a 'tool' to reshape the protean magma of databases, not just digital, but organic and genetic as well as spiritual.

2.2.60. The new media, therefore, have the opportunity to reshape, through their structures and technological characteristics, not just the 'object' of art but the viewers themselves.

## 2.3. Prostheses' Digital Aesthetic

### The Integrated Technology of Human Extensions

2.3.1. The following section will clarify the use of a technical terminology in the works of Baudrillard and Virilio. It will also be a foundation for further work based on the classification of exogenous and endogenous, generating a new understanding of technological categories in relation to the human body.

2.3.2. The terminological confusion which can transpire from the work of these authors is due to a fluid world in evolution. The analysis of such a world and its means of extension, both technological and biological, becomes necessary to understand the new philosophical and aesthetic challenges that the technological extensions of the body are proposing through the use of evolving media.

2.3.3. "So long as this intrinsic quality is present, even though the name have not all the proper letters, the thing will still be named; well, when it has all the proper letters; badly, when it has only a few of them." [80] Socrates describes the possibility of determining reality with the appropriate description of an 'object' in the Cratylus of Plato. This description is a characteristic function of a noun which is quite often composed of parts of words that belonged to previous languages. These historical parts form the substratum of the noun and can be more or less correct, according to Socrates, because the name-giver might have used more or less correctly the tools at his disposal. Therefore, the noun with each of its components, prepositions, adverbs, syllables and letters has the function of describing more or less adequately a reality, an 'object.' It has the function to recall in our mind the vision of the object and to re-create it in a 'cerebral virtual space.'

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[80] Plato. *Cratylus*. ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996). 165-167.

2.3.4. If Socrates and Plato described a reality of language, it is possible to build a critique of the philosophical use of the opposite concepts of exotechnical and esotechnical made by Baudrillard in *Simulacra and Simulation*.

2.3.5. Darren Tofts explains that linguistic variations confirm "the emergence, no less of a new conception of human life, a redefined ontology that goes by a number of different, yet complementary names: posthuman, cyborg, informatic. While the inflections of these terms suggest important differences, they are nonetheless cultural indices of change and variation, ways of thinking about and defining what we are becoming." [81]

2.3.6. In this mutating and hybridized world the paradigms to define post-humanity are not easily identified in a binomial dualistic opposition as evidenced by Deleuze and Guattari.

2.3.7. Baudrillard's analysis reveals its own inadequacy in the re-proposition of a dualistic process, which limits the ontological nature of a complex matrix. The classification of the way in which the human body interacts with the natural and mechanical world is not based on a dualistic relationship. "The prostheses of the industrial age are still external, exotechnical, those that we know have been subdivided and internalized: esotechnical. We are in the age of soft technologies – genetic and mental software." [82] The redefinition of technology which Baudrillard proposes is based on the differentiation between externalized technology: 'exotechnical'; and internalized technology: 'esotechnical.'

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[81] Darren Tofts, Annemarie Jonsons and Alessio Cavallaro, *Prefiguring Cyberculture: an Intellectual History* (Cambridge, MA: MIT Press, 2002), 2.
[82] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001). 100.

| EXOTECHNICAL | VERSUS | ESOTECHNICAL |
|---|---|---|

**Table 3 In Baudrillard's analysis the two forms of technology are in opposition, in the grammatical sense, in order to create a structural differentiation. Their relationship in reality could very well be an integral relation.**

2.3.8. The same concept is also analyzed by Virilio, who describes the technological phenomena in these terms: "The law of mechanical proximity that once allowed us to carve up and develop the human environment, the 'exogenous' environment of the species, is giving way to a law of electromagnetic proximity about which we really know nothing and understand even less. And soon, as more or less passive witnesses, we shall see the imminent invasion of our bodies, the control of an 'endogenous' environment, that of our entrails and viscera, thanks to the interactive feats of a biotechnological miniaturization that will finish off the job of those flourishing large-scale mass communications tools that already govern our society." [83]

2.3.9. The definition that Virilio supports is one of 'contra-position,' similar to Baudrillard, but described in a different terminology. Here the externalized technology is 'exogenous' while the internalized technology is 'endogenous'.

2.3.10. Therefore, it is possible to define, according to Virilio, the first element of the relationship as 'exotechnical' and the latter as 'endotechnical'.

[83] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 50.

| EXOTECHNICAL | VERSUS | ENDOTECHNICAL |
|---|---|---|

**Table 4 In Virilio's analysis the two elements describing the concept of technology are in opposition in the grammatical sense, in order to create a structural differentiation.**

2.3.11. What has been evidenced thus far in the development of this argument is the analysis of two philosophical concepts in juxtaposition, as described from two different philosophers and/or critical theorists: Baudrillard and Virilio.

2.3.12. A key element is the same denomination for the first components of this analysis: the external technology in both Baudrillard and Virilio is called 'exotechnical.' This could ingenerate the conclusion that the second element of the juxtaposition is either 'esotechnology' as Baudrillard states or 'endotechnology' as affirmed by Virilio. Instead the two authors use a different terminology for the definition of the internal technology. The different terminology used to describe internal and external implications of technology are not simply matters of semantics, as they have repercussions on the understanding of the subject. They also affect the manner in which we apply theory as well as the success or failure of those applications.

| EXOTECHNICAL | VERSUS (Baudrillard) | ESOTECHNICAL |
|---|---|---|
| EXOTECHNICAL | VERSUS (Virilio) | ENDOTECHNICAL |

**Table 5 The juxtaposition proposed by Baudrillard and Virilio.**

2.3.13. From table 5 an analysis through the elimination of various possibilities could offer a better understanding of the concepts which are determining the external and internal structure of our environment and our bodies.

I. The concept of 'exotechnology' is correctly used by both Baudrillard and Virilio and has the same meaning; therefore there is no dubious meaning or confusion.

II. The concept of 'exotechnology' is used differently by Baudrillard and Virilio, and has a different meaning; therefore one of the two authors should have differentiated the noun.

III. The concepts of 'esotechnical' and 'endotechnical' have the same meaning; therefore the authors should have chosen a standard terminology.

IV. The concepts of 'esotechnical' and 'endotechnical' have different meanings; therefore Baudrillard should have specified the differentiation in the terminological use of 'esotechnical.'

2.3.14. The research at this point has focused on a textual analysis, which has attempted to uncover if any possible mistake has been made in the English translation from the French original. Through the French text it has been possible to establish that the translator had respected the original thought of the author and the word 'esotechnical' used by Baudrillard reflects the original intended meaning. [84]

2.3.15. In this case the argument is that either there is a discrepancy due to a non-appropriate use of the terminology or that this is a knowledgeable description of reality which creates new subdivisions, and therefore new realities, within the analysis of the contemporary technological context.

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[84] Jean Baudrillard, *Simulacres et Simulation* (Paris : Galilée, 1981), 150.

2.3.16. This framework, or rather the absence of a framework, requires the clarification of the relation of each category to one another in the present cultural context.

2.3.17. Looking more closely into Virilio's analysis it is possible to find another concept: intra-organic. This concept appears to be relevant, as suggested by its contextualization, to the ideas of 'esotechnology' and 'ektechnology,' [85] in a framework of exchange of 'biological organs' between internal and external worlds and vice versa. "Finally, the revolution in transplants, the last revolution, introduces this technology of transmission inside the body by means of certain techniques. After the revolution in transportation and the revolution in transmissions, now with the twenty-first century begins the revolution in intra-organic transplants." [86]

2.3.18. It is a communication revolution where the biological systems of the body need to communicate with alien forms in order to find a common platform for interaction and integration. The body is open to internal communication with other forms of representation. The body has never before been simultaneously explosive and implosive, exclusive and inclusive, as it is in this case. The transfer of the body's parts into the environment and the absorption of the environment's parts into the body generates an inner exchange which mutates the originating structures.

2.3.19. "In short, because the body-system has been pried open, the body can, theoretically, be anything, but it cannot be a human construct anymore." [87] This concept of openness, which denies the evolutionary 'human construct,' is the basis for this

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[85] The concept of 'ektechnology' is a concept which will be introduced and clarified in the current postmodern debate in order to create a systematic classification.

[86] Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 99.

[87] Ollivier Dyens, *Metal and Flesh: The Evolution of Man: Technology Takes Over*, trans. Evan J. Bibbee and Ollivier Dyens (Cambridge, MA: MIT Press, 2001), 81.

analysis, which will attempt to disprove it. Never before as now, the body has the possibility of becoming a bio-mechanical construct of humanity, of its wants and desires, freed from nature's imperatives.

2.3.20. A linguistic analysis of Baudrillard and Virilio's argument can be achieved by focusing on their etymological use of the concept of technology. It will translate the usage of the concept of technology into a new construct, envisaging four different categories. These categories are by no means exhaustive of the materiality and reality of the 'open human body.'

2.3.21. The scope of the analysis is not to evidence a lack of propriety in the use of terminology in both Baudrillard and Virilio, but to reframe the structure of the language, recreating, from the original classic Greek definitions, a more stringent description of the possible developments of technology in society and in the human body.

2.3.22. The objective is to clarify the nature of the reclassification proposed in this context, which could offer a new perspective in the analysis of the subdivisions of the main category, technology, in contemporary postmodern society.

| | | |
|---|---|---|
| EXOTECHNICAL (Classic Greek) | VERSUS (Baudrillard) | ESOTECHNICAL (Classic Greek) |
| EXOTECHNICAL (Classic Greek) | VERSUS (Virilio) | ENDOTECHNICAL (Classic Greek) |

**Table 6 The oppositional classifications as presented by Baudrillard and Virilio.**

2.3.23. Therefore in this first instance it is necessary to present an etymological analysis of the four categories:

I. Exotechnical = εκ (Classic Greek, meaning: ***from***)[88] as proposed by Baudrillard.

II. Esotechnical = ες (Classic Greek, meaning: ***into***)[89] as proposed by Baudrillard.

III. Exotechnical = έξω (Classic Greek, meaning: ***outside***)[90] as proposed by Virilio.

IV. Endotechnical = ενδον (Classic Greek, meaning: ***within***)[91] as proposed by Virilio.

2.3.24. From this reconstruction it is possible to derive that Baudrillard proposed an analysis focused on the transfer and transmission of technology. [92] Baudrillard's theory has the human body at the center point of this universal movement: transfer from the inside to the outside and vice versa.

2.3.25. Virilio, instead, stresses the characteristic of permanent mutations in both the outside environment and the inner space of the body. There is a 'creationist' approach, where the mutation is permanently embodied in the procreation of the body itself. [93] In this context it seems credible to derive that:

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[88] "Of Motion, *out of, forth from.*" *A Greek – English Lexicon*, a new edition, comp. Henry George Liddell D.D. (Oxford: Oxford University Press, 1958), s.v. "εκ."

[89] "*Into* or *to.*" *A Greek – English Lexicon*, a new edition, comp. Henry George Liddell D.D. (Oxford: Oxford University Press, 1958), s.v. "ες."

[90] "Without any sense of motion, *outside.*" *A Greek – English Lexicon*, a new edition, comp. Henry George Liddell D.D. (Oxford: Oxford University Press, 1958), s.v. "έξω."

[91] "Within." *A Greek – English Lexicon*, a new edition, comp. Henry George Liddell D.D. (Oxford: Oxford University Press, 1958). s.v. "ενδον."

[92] "But when one reaches a point of no return (deadend) in simulation, that is to say when the prosthesis goes deeper, is interiorized in, infiltrates the anonymous and micro-molecular heart of the body." Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 100.

[93] "A human being no longer procreated, born out of another, but created." Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 101.

| |
|---|
| I. ***Ek***, signifies 'movement from' |
| II. ***Eso***, signifies 'movement into' |
| III. ***Exo***, signifies 'outside' |
| IV. ***Endo***, signifies 'inside' |

**Table 7 The new classification proposed.**

2.3.26. It is self-evident from table 6 that there are two representations of the word 'exotechnical.' Table 7 presents a different classification according to the Greek etymology in which both Baudrillard's and Virilio's terminology of exotechnology needs to be reframed. Table 6 presents exotechnology as the first term of two different binary oppositions. The problem with these oppositions is that they need to be constructed by juxtaposing the two adverbs and the two prepositions, respecting their original classic Greek meanings.

2.3.27. Therefore, it becomes necessary to reclassify Baudrillard's 'exotechnical' in table 6, which is composed of the preposition 'from' – a movement from the inside of a given space into an exterior world – as '**ektechnical**' in table 7 (I). This helps to distinguish it from 'exotechnical,' (III) table 7, which instead is composed of the adverb 'outside,' implying no transfer and/or movement, as used by Virilio in table 6.

2.3.28. The linguistic analysis creates two groups of categories, each with a clear classic Greek reference. These references can be resumed according to the Greek etymology in the following table.

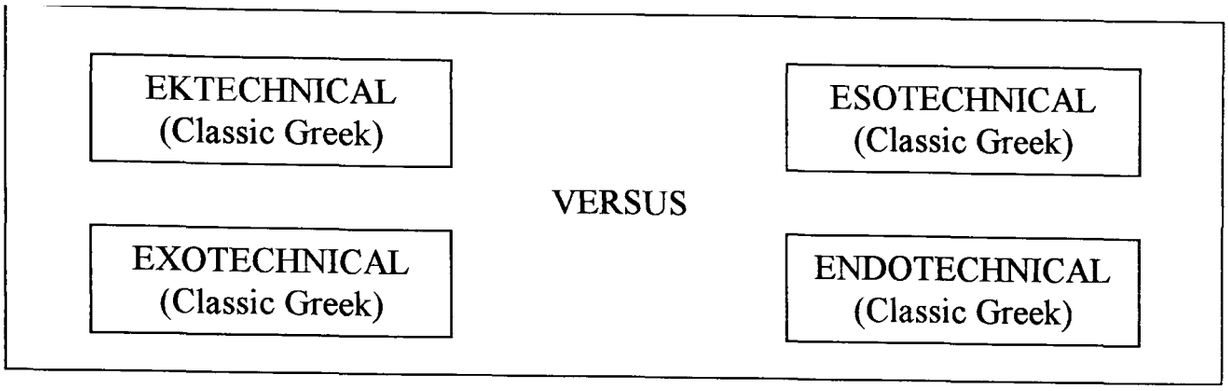


**Table 8 The new classification to correlate 'signifier and signified' in each of the concepts.**

2.3.29. To further develop the argument it is now necessary to analyze the binary opposite concepts thus far developed in order to clarify the interpretation of their meanings.

2.3.30. **Ektechnical** is a technological transfer representing a movement from the human body (in an anthropocentric culture) which pervades and invades the external environment. Relevant examples are the concept of augmenting technological extensions as envisaged by MacLuhuan [94] and the Transplant Biopresence design project of Georg Tremmel and Shiho Fukuhara, which "proposes to put the complete DNA information of a human being into the DNA of a tree. By using a special process the genes of the tree will not be altered in any way, therefore creating a tree that will look, grow and behave like any other tree, **but it would carry the biological information of a human**." [95] (original emphasis)

2.3.31. **Esotechnical** is a technological transfer representing a movement from the outside, which would carry material into the inner sphere of the body. The technological

[94] "It is more natural to fragment our own bodily form, and to let part of it go into another material, than it is to transfer any of the motions of external objects into another material. To extend our bodily postures and motions into new materials, by way of amplification, is a constant drive for more power. [...] All manner of utensils are a yielding to this bodily stress by means of extensions of the body." Marshall MacLuhuan, *Understanding Media: The Extensions of Man* (London: Routledge and Kegan Paul Ltd., 1966). 181.

[95] Charles Arthur, "An Apple Tree Bearing Human DNA: Arts Students Seek the Ultimate in Forbidden Fruit," *The Independent*, May 26, 2003, http://news.independent.co.uk/uk/this_britain/story.jsp?story=409672 (accessed August 7, 2003). See also: Georg Tremmel and Shiho Fukuhara, "Biopresence: A Design Proposal," *Royal College of Art Research Website*, http://www.interaction.rca.ac.uk/alumni/01-03/georg/transplant.html (accessed August 4, 2003).

experiments of Kevin Warwick, professor of Cybernetics, [96] are a pertinent example. As are the art and performances by Stelarc, originally named Stelios Arcadiou, [97] who has announced that he will implant an ear on his arm. [98] The possibility of a technological and/or genetic transfer into the body of permanent and genetically inheritable prosthetics may blur this category into 'endotechnology.'

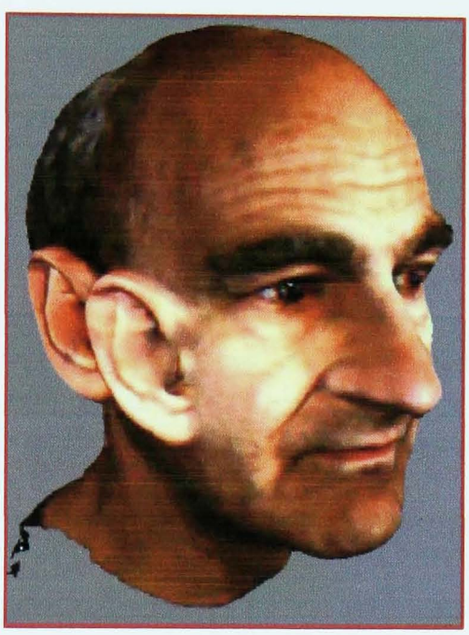

**Figure 43 *Extra Ear*, Stelarc, 1999. "The 'THIRD HAND' (technology attached), the «STOMACH SCULPTURE» (technology inserted) and 'EXOSKELETON' (technology extending) are different approaches to prosthetic augmentation. The 'EXTRA EAR' is a soft prosthesis, constructed not out of hard materials and technologies, but out of soft tissue and flexible cartilage. This would not be simply a wearable prosthesis, but one constructed on the body using its skin and cartilage as a permanent addition. " [99]**

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[96] "Professor Kevin Warwick," *Kevinwarwick.org*, http://www.kevinwarwick.org/ (accessed October 29, 2004).

[97] "Imagine an ear that cannot hear but emits sounds. With an implanted sound chip and a proximity sensor it would speak to anyone who would get close to it. (Or if no-one got close it would whisper sweet nothings to the other ear anyway). Also, connected to a modem and a wearable computer it could broadcast RealAudio sounds to augment the local sounds that the actual ears hear. The EXTRA EAR becomes a kind of Internet antenna that telematically and acoustically scales up one of the body's senses." Stelarc, "The Extra Ear: or an Ear on an Arm," *Stelarc.va.com.au*, http://www.stelarc.va.com.au/extra_ear/index.htm (accessed October 28, 2004).

[98] Paul Harris, "So You Think You've Had It up to Ear With Modern Art...: An Artist Has Caused Outrage by Planning to Graft a Biotech Ear on to His Arm," *The Guardian*, August 3, 2003, http://www.guardian.co.uk/arts/news/story/0,11711,1011495,00.html (accessed August 3, 2003).

[99] Stelarc, "The Extra Ear: or an Ear on an Arm," *Stelarc.va.com.au*, http://www.stelarc.va.com.au/extra_ear/index.htm (accessed October 28, 2004).

2.3.32. The common element of the above two classifications is the temporality of the prosthetic technological transfers. They are not, thus far, genetically inheritable. But the proposition of Tremmel and Fukuhara introduces a new perspective, blurring any boundaries for a strict categorization. The transfer into the body of technology which may be genetically inheritable generates a new matrix or a rhizome growth of the concept of technology.

2.3.33. **Exotechnical** is a technological event pertinent to the external world, outside of the body. An exotechnical mutation within the external natural structure is a mutation which impacts upon the surrounding environment. Contemporary natural catastrophes, viruses and cancer, [100] according to Baudrillard, are manifestations of these alterations. Such a defined barrier in an age in which the body is being invaded by the external environment and technological applications is likely to fade. The opposite is also true: human existence and impact on the environment may be considered as a 'catastrophic cancerous viral pollution.' The extension of the human, Stelarc's *Exoskeleton*, can be defined as the extension of human's ability to penetrate the external environment.[101]

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[100] This category could also include nanomachines. "Vast clouds of self replicating, and perhaps mutating, nanomachines could just as easily tear the world apart molecule by molecule as repair it." Andrew Murphie and John Potts, *Culture and Technology* (New York: Palgrave Macmillan, 2003), 139.

[101] The extension of the human is an intention of grasping. Schrag explains in his phenomenological analysis that: "The lived body displays its attunement to an everyday world of practical and personal concerns by grasping and pointing. [...] One points for the other in the presence of oneself. In the concrete motility of grasping and pointing, gesturing and posturing, a praxis-oriented discernment and understanding of self and world is called into being. [...] The human body is not a thing, not an object, not an entity somehow representative of finite substance in general. Indeed, it is the human body, the body as lived, that first provides the conditions for objectification." Calvin O. Schrag, *The Self After Postmodernity* (New Haven: Yale University Press, 1997), 57-58.

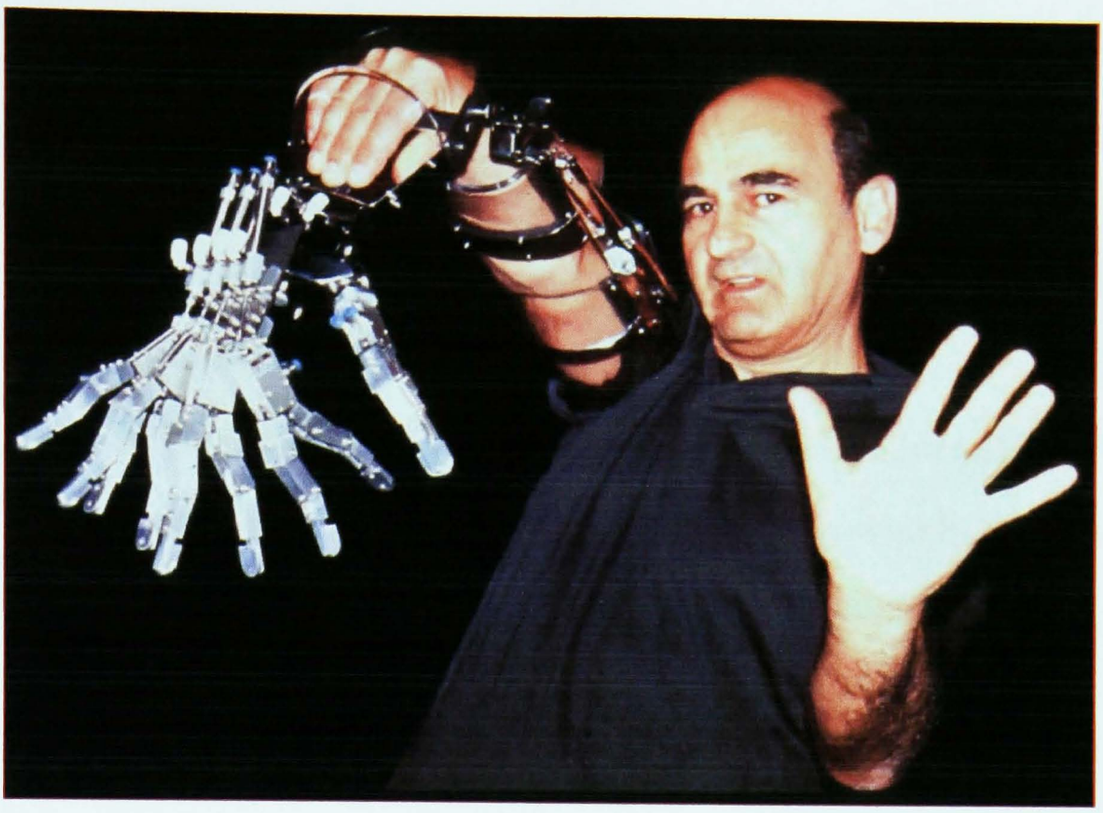

**Figure 44 *Extended Arm*, Stelarc, 2000. "Performing with machine attachments and implants, performing with manipulators and locomoters augments and extends the body's capabilities and disrupts its habitual sense of position/ orientation in the space that it occupies and between points that it navigates. What sensors, video and computers do is to extend the body's nervous system into the space it dances in producing intelligent, immersive and responsive environments."[102]**

2.3.34. **Endotechnical** is a technological event pertinent to the internal world, inside the body. It is the defined environment within a membrane, a cell, a packaged object or living form. Endotechnical alterations are casual and uncontrolled phenomena of evolutionary emergence, which in their unpredictability cause genetically inheritable alterations. An induced genetic mutation in the human body could also represent an example of this group.

2.3.35. The common element of the two above classifications is the permanence of the technological mutations inside and outside the body. This is a description of a state of emergency, a collapse within the structures of external and internal environments:

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[102] Stelarc, "The Involuntary, the Alien & the Automated: Choreographing Bodies, Robots & Phantoms," *Stelarc.va.com.au*, http://www.stelarc.va.com.au/articles/index.html (accessed October 28, 2004).

irreversible and permanent, at least according to Virilio. This change is the definitive alteration, one which obliges humanity to reconsider its own basic ontology.

2.3.36. The phenomena of emergence and technological transfers shown in table 8 and described above have generated a wide variety of literature, arguments and ethical discussions. Murphie and Potts evidence these phenomena of emergence, citing how De Landa is particularly "interested in self-organization, the process by which ordered, interactive events emerge from apparent chaos, in the regions of the social or technological as much as in those that seem more obviously 'natural.'" [103]

2.3.37. Virilio and Baudrillard have described emergent phenomena as destructive evolutionary possibilities, eliminating in their argument natural and/or artificial experimentation as a basis for the evolution of the human species.

2.3.38. Having clarified, through an etymological research, the structural and linguistic meanings of the concept of technology, the next step is to discuss the use and the context in which Baudrillard and Virilio have used their terminology.

2.3.39. The concept of 'ektechnology' represents something from the internal human body which is transferred into the external arena. It is an echo of man which is portrayed and transferred into the external world. In its representation it may take both physical and cultural forms, but at its basis is the element of transfer from the inner into the outer world. It is the transfer from 'one's consciousness and/or media' into the 'other.'

2.3.40. The relationships established by Baudrillard and Virilio between the technological categories represent not just a binary interaction, but a matrix of a multiple

[103] Andrew Murphie and John Potts, *Culture and Technology* (New York: Palgrave Macmillan, 2003), 121.

series of technological transfers and interactions between the two pairs of oppositional definitions.

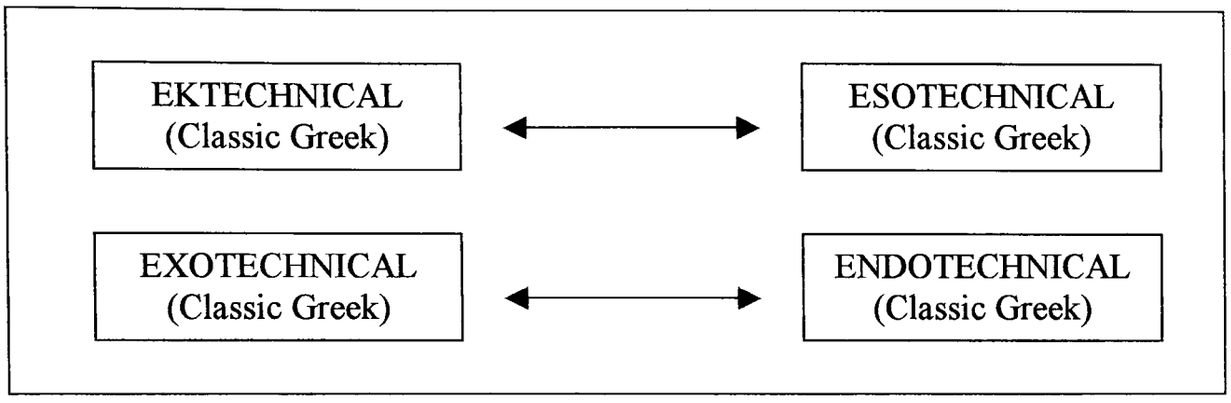


**Table 9 These new etymological relationships between categories are based on Baudrillard and Virilio's envisaged dichotomy/dialectical interactions of table 6.**

2.3.41. Both Baudrillard and Virilio present the relationship between categories in oppositional terms. However, because of the out/out and in/in representations, the real nature of the phenomena is not fully evidenced. The hybrid nature of technological evolution is constituted of percentages and variations of percentages. This is a matrix which allows an infinite number of possible creations and an infinite number of variable creatures where the boundaries are limitless, as in John Latham's *Organic Art*, figure 18.

2.3.42. "The posthuman solar system is a comic-book world of infinite possibilities and cyborg multiplicities, defined in and through the technologies that now construct our experiences and therefore our *selves*." [104] It is this construction of inner 'selves' that is now reflected in the construction of the outer 'selves.' The body is constructed to reflect the wants and desires of the mind; at the same time the mind is an expression of the construction and networked relations of the body.

[104] Scott Bukatman, "Postcards from the Posthuman Solar System," in *Posthumanism*, ed. Neil Badmington, 111 (Basingstoke, Hampshire: Palgrave, 2000).

2.3.43. The phenomena of mutation and technological transfers of the body represent the collapse of the naturally predetermined genetic individual and identification processes within society. [105] It is the ultimate affirmation of individualism, which is struggling to maintain its 'self' in a homogenizing postmodern society. In the face of homologating institutional and corporate pressures the individual dares to differ through technological evolution.

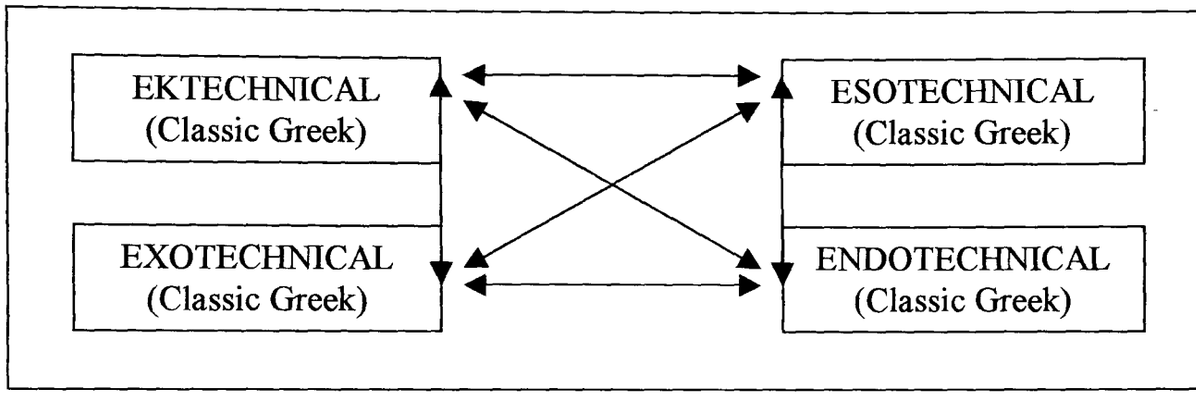


**Table 10 A contemporary representation of a matrix of multiple interactions.**

2.3.44. The systems of interactions devised and analyzed by Baudrillard and Virilio are fixed on a terminology which does not reflect the structures of contemporary interactions and does not evidence the processes of transformation which are determining not just a new 'human,' but a new aesthetic and philosophical context.

2.3.45. The analysis thus far has focused on the concept of technology in an anthropocentric structure. However, the moment that 'esotechnology' exists as an alien and alienated technological development, another referential enters the set of relationships. It is the 'autonomous technological being' with its relationships to technology, space and human race. "With the Internet and cyberspace, we are moving into a situation where non-architectonic systems emerge and evolve." [106]

[105] "Aside from deterritorialization there is another characteristic often associated with virtualization: the transition from interior to exterior and from exterior to interior." Pierre Lévy, *Becoming Virtual: Reality in the Digital Age*, trans. Robert Bononno (New York: Plenum Trade, 1998), 33.

[106] Erik Stolterman, "Creating Community in Conspiracy with the Enemy" in *Community Informatics: Shaping Computer-Mediated Social Relations*, ed. Leigh Keeble and Brian D. Loader, 47 (New York: Routledge, 2001).

2.3.46. In as much as it will be a new relation between 'endotechnology' and human beings, the 'multi-plan' structure of technology generates 'multi-plan' interactions and beings which represent differentiations within the originating structures.

2.3.47. Baudrillard, although recognizing the penetrative qualities of certain media, failed to clearly analyze their processes of interaction and distinguish their evolutionary processes. These new esotechnologies, which operate directly from the inside, once installed or once having become genetic, take the form of connatural structures. They mutate from 'esotechnical' into 'endotechnical,' becoming embedded in the bio-mechanic-digital structures of the new entities.

2.3.48. Virilio recognizes these scenarios of possible multilayered evolutions, but defines them as 'perceptual disorder.' In this case Virilio's entities are the perceptual disorder (as opposed to evolutionary) of a reconstruction which takes place after the destructions and fragmentations of postmodernity.

> 2.3.49. In the face of this 'perceptual disorder' that affects each and every one of us, it might be appropriate to reconsider the ethics of common perception: are we about to lose our status as eyewitnesses of tangible reality once and for all, to the benefit of technical substitutes, prostheses for all seasons which will make of us the 'visually challenged', living off sight handouts, afflicted with a kind of paradoxical blindness due to overexposure of the visible and to the development of sightless vision machines, hooked up to the 'indirect light' of optoelectronics that now completes the 'direct optics' of sunlight or electricity? [107]

2.3.50. This 'hooked up humanity' is creating and living on a perceptual aesthetic mediated by the nature of contemporary prosthetics, which are modifying the structural aesthetic perceptions. When Virilio affirms that the human vision is being confiscated by

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[107] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 91.

technologies, he overlooks that perceptions and interpretations are actually enhanced by the complex web of layers and symbolism that renegotiate new realities. The aesthetic reality is made up of external stimuli: paintings, graphics, advertising, digital images, which in the attempt to overcome the impasse of postmodernity launch the path of evolutionary reconstruction, instead of a permanently deconstructed vision of reality.

2.3.51. Therefore, in this prosthetic aesthetic of recombination in a new reality, a new human may emerge. This is a fact which will not necessarily generate, as Baudrillard writes, a lethal 'virality.'

> 2.3.52. When the body is exposed to artificial prostheses and, at the same time, to genetic fantasies, its defence systems are disorganized, its biological logic destroyed. This fractal body, fated to see its own external functions multiply, is at the same time doomed to unstoppable internal division among its own cells. It metastasizes: the internal, biological metastases are in a way symmetrical with those external metastases, the prostheses, the networks, the connections. [108]

2.3.53. The body has been reduced to information data, which can be affected by the lethal 'virality' of contemporary life. At the same time, the information of the body can be reprocessed in order to recreate life itself, to regenerate a process. The human body can, therefore, become a process in itself. "It is saying that we are information. It may be information that connects us to our essence – whatever that might be. Information is no longer about something else that it refers to. It is the thing or process in itself." [109]

2.3.54. In the reanalysis of the transformation process, the ontological issues become relevant to such a degree that questions can be raised regarding what actually is a disease: a lethal 'virality.' "When disease strikes – and it will strike – it is virtually

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[108] Jean Baudrillard, *Screened Out*, trans. Chris Turner (London: Verso, 2002), 3.
[109] Andrew Murphie and John Potts, *Culture and Technology* (New York: Palgrave Macmillan, 2003), 120.

impossible not to feel a sense of betrayal. We seem to take for granted that our 'original' condition is one of health and, thus, disease is an aberration – even a failure." [110]

2.3.55. In contrast to this perception, cyberpunk literature [111] looks at the present human condition as a disease. Prosthetics are a means to revolutionize the hierarchical structures of power. The post-human condition becomes the necessary phase to get past humans. Abandoning humanity does not become a choice, but the only way to achieve freedom. [112]

> 2.3.56. The body is, in effect, an information-processing machine. From this point of view, disease is something like noise. But noise is not merely the opposite of information; rather it is the condition of the possibility of information. Furthermore, noise in one context or at one level is information in another context or at another level. Noise, if you will, is always information. There can no more be life without disease than there can be information without noise. The human dilemma, therefore, is not to find a cure (there is none) but to learn to live with the impossibility of a cure. [113]

2.3.57. In this sense the return to a perfect primeval status, prior to the malaise of postmodernity, as implied by Baudrillard and Virilio, is the return to the perfect 'forma imaginis.' This is an impossible task: the scars of deconstruction have occurred and the only possible escape is the freedom of a matrix of reconstruction from the fragments that have been left: i.e. remainder and waste.

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[110] Arjen Mulder, "An Interview with Mark C. Taylor: We Are the Incarnation of Complex World Wide Webs," in *Machine Times*, ed. Joke Brouwer and V2_Organisation, trans. Leo Reijnen and James Lynn, 45 (Rotterdam: NAI Publishers/V2_Organisatie, 2000).

[111] This cybernetic dystopian future is described in the novels of William Gibson, Walter Jon Williams, Bruce Sterling and Greg Bear. The body becomes a space to be augmented, restructured or even transcended, as well as a diseased space of interconnectivity.

[112] It is interesting to note that Marx's theoretical anti-humanism is actually being implemented in contemporary Western societies. Louis Althusser, "Marxism and Humanism," in *Posthumanism*, ed. Neil Badmington, 30-33 (Basingstoke, Hampshire: Palgrave, 2000).

[113] Arjen Mulder, "An Interview with Mark C. Taylor: We Are the Incarnation of Complex World Wide Webs," in *Machine Times*, ed. Joke Brouwer and V2_Organisation, trans. Leo Reijnen and James Lynn 49-50 (Rotterdam: NAI Publishers/V2_Organisatie, 2000).

2.3.58. The third part of this analysis evidences the conflicting representations, in film and art, of prosthetic devices, implants and genetic engineering; all of which are defining the criteria of humanity and post-humanity. "What all of these theories suggest is the emergence of postbiological manifestations in which the body, culture, viruses, memes, and machines intermingle, entangle, and clash with one another." [114]

2.3.59. Nothing is closer to this vision than the representation of the cyborg encompassing all of the intermingling and entangling of contemporary society. The nature of the cyborg represents the empowerment of a destructor in a destructive society. The cyborg does not recompose the old in a new statement, reinforcing the system, but restructures the old to shatter the system and its parts, all of which are incomplete. The cyborg does not look at society and does not look at his self being. If anything, the cyborg looks at the future and at what he will be in an evolutionary self perpetuating process. [115]

2.3.60. The cyborg is an evolutionary system of hybridizations which in its promiscuous nature generates unpredictable commixtions. These commixtions are generated against a backdrop which, instead of depicting 'monstrosity as anti-human' in order 'to elevate human nature,' [116] is debasing human nature in order to depict monstrosity as human.

2.3.61. This occurs in a context which does not recognize that: "there is much more to human life than icy competition and rational calculation of self–interest. Human

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[114] Ollivier Dyens, *Metal and Flesh: The Evolution of Man: Technology Takes Over*, trans. Evan J. Bibbee and Ollivier Dyens (Cambridge, MA: MIT Press, 2001), 48.

[115] See: Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Posthumanism*, ed. Neil Badmington, 69-84 (Basingstoke, Hampshire: Palgrave, 2000). See also: Mary Flanagan, "'Next Level': Women's Digital Activism Trough Gaming," in *Digital Media Revisited: Theoretical and Conceptual Innovation in Digital Domains*, ed. Gunnar Liestøl, Andrew Morrison and Terje Rasmussen, 359-388 (Cambridge, MA: MIT Press, 2003).

[116] Eleine L. Graham, *Representations of the Post/Human: Monsters, Aliens and Others in Popular Culture* (New Brunswick, New Jersey: Rutgers University Press, 2002), 50.

beings have survived because they are creatures whose passions, however violent, matter." [117]

2.3.62. But it is a context that, through the debasing of humanity and the promotion of the emotional 'humanity' of a golden age, attempts to rein the violent passion to overcome an evermore militaristic and surveillant construct of society. The body becomes a flowing architectural network of desires, information, technology, processes, fluids and habits, as Virilio points out.

2.3.63. "There is not only a system architecture, but one of habits. Warwick is in instantaneous interactions through his body, no longer through his will, but through the grafts, electrodes, and microchips that occupy him." [118] Therefore, to answer Virilio's question on the contemporary attack on the body for the creation of a post-human it is necessary to reflect on the artists' vision.

2.3.64. "Artistic matter is no longer painting, sculpture, architecture, engraving, or colors and pigments; it's the living organism itself. The question is again: to what point?" [119]

2.3.65. The point is the avant-garde artistic liberation of the body through its elimination. Not as destruction of the body itself, but as an evolutionary reorganization of the organized organism. Unable to destroy the organized corporate social organism, the artists are trying to destroy the organized bodies that the corporate organisms control. [120]

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[117] Wendy Wheeler, *A New Modernity? Change in Science, Literature and Politics* (London: Lawrence and Wishart, 1999), 157.
[118] Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 84-85.
[119] Ibid., 121.
[120] It is the dissolution of every *institutional organism*, biological, mechanical and cultural. "The surface of the body becomes the arena for the dissolution of the governing instrumental reason of the organism." Scott

"It is not organs, therefore, that the body without organs is against, but any organization into organism." [121]

2.3.66. The reality is not that of an improvement of humans or of a creation of super-humans. The real desire is to escape from the human dimension, to cease the wanting of escaping. In this sense there is a real state of emergency. Segments of society are ready to run away, from the state, the state of things, from the state of their own body. The escapist society is escaping from itself.

> 2.3.67. The power of speed has become more potent than the power of wealth. The two are linked, of course. Time is money, and speed is power. Today, the power of absolute speed, of live transmission, of cybernetic information technology is such that traditional power, which used to rely on force, on armies, on police, etc., and even on wealth, can no longer hold it back. *The 'runaway' is under way.* This is a state of emergency. [122]

2.3.68. It is this emergency that offers humanity the possibility of escaping the materiality of its enslavement. Such a speed pushed to the extreme may achieve the objective of a liberating force. For this very reason Neo, the hero of *The Matrix* (1999), *The Matrix: Reloaded* (2003) and *The Matrix: Revolutions* (2003) is the embodiment of speed. His body is transformed into a cybernetic collection of data, which through plug-ins inhabits and fights in the realm of authoritative power. The lower the speed, the lower the ability to defeat the enemy, the lower the possibility to escape the cage of the political, military and corporate governance. The runaway is too slow. The emergency is not here yet. This is the reason why the body has to be disintegrated, in order to leave nothing behind, nothing that could be controlled.

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Bukatman, "Postcards from the Posthuman Solar System," in *Posthumanism*, ed. Neil Badmington, 111 (Basingstoke, Hampshire: Palgrave, 2000).

[121] Patricia Ticineto Clough, *Autoaffection: Unconscious Thought in the Age of Teletechnology* (Minneapolis: University of Minnesota Press, 2000), 134.

[122] Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 161-162. "The saying is: 'Homo est clausura mirabilium dei': 'Man is the closing point of the marvels of the universe.'" In: John Armitage, *Virilio Live: Selected Interviews*, (London: Sage, 2001), 21.

2.3.69. When nothing is left but the trajectory of an infinite speed of consciousness in the flight to transcendence, then nothing is left but an empty shell. The body becomes useless, no longer an object of commodification, because the human wants are over, because the 'human objects' are over.

2.3.70. No longer is the genetically engineered cyber body a product of the corporate industry. It is not a new status symbol to achieve the definitive quest of 'forma imaginis.' The body is not a 'closula' [123] in the ultimate postmodern attempt towards commodification. The genetically engineered cyber body is an accident, an unexpected evolution which, being uncontrollable, is therefore free.

2.3.71. In this construct the prosthetic's aesthetic reaches a level of great art because it responds to the human cry of liberation: liberation from the body and its oppressors. But more than a suicidal wish of liberation, it is a wish of being embedded into the world to achieve a total consciousness. [124]

> 2.3.72. Given the conditions I have tried to explain as constituting good art; - then, if it be devoted further to the increase of men's happiness, to the redemption of the oppressed, or the enlargement of our sympathies with each other, or to such presentment of new or old truth about ourselves and our relation to the world as may ennoble and fortify us in our sojourn here,[...] it will be also great art; if [...] it has something of the soul of humanity in it. [125]

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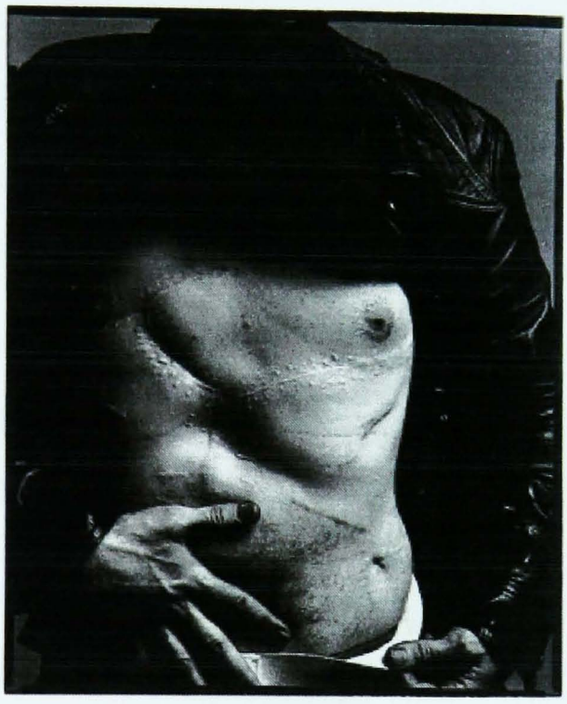
[123] "But 'end' is understood in the sense of 'closula,' a harsh word. I spoke to a Latinist about it. *Closula* is the ultimate aspect of humanity, not only in terms of catastrophe, but also power." Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 158.

[124] John Haldane, "Incarnational Anthropology," in *Human Beings*, ed. David Cockburn, Royal Institute of Philosophy Supplement: 29, 195 (Cambridge: Cambridge University Press, 1991). See also: Martin Heidegger, *Being and Time*, trans. John Macquarrie and E. Robinson (Oxford: Blackwell, 1978), 57.

[125] Walter Pater, "Style" in *Seleced Writings of Walter Pater*, ed. Harold Bloom (New York: Signet, 1974) 123, quoted in Regenia Gagnier, *The insatiability of Human Wants: Economics and Aesthetics in Market Society* (Chicago: The University of Chicago Press, 2000), 58.

2.3.73. Virilio, through the words of Hildegard de Bingen, looks at humanity as "conclusion, closula", in a world where "humanity is the conclusion of God's wonders." [126] To Virilio's religious quotation it is possible to juxtapose the comment of Saint Teresa of Avila, for whom the representation of humanity was not a castrating geometrical finite conclusion, but a Darwinian geometrical hyperbole of the infinite. "Now the soul has grown wings that can bear it, and has shed its weak feathers." [127]



Andy Warhol, artist
New York City
August 20, 1969
60¾ x 48¾

**Figure 45 Warhol impersonates the shedding of the body for the transcendence into a different realm, not necessarily that of spirituality, but that of art and self-rising iconography as explained by Bukatman.**

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[126] "Her great phrase is: Homo est closula mirabilium Dei." Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 157.

[127] Saint Teresa of Ávila, *The Life of Saint Teresa of Ávila: by Herself*, trans. J. M. Cohen (London: Penguin Books, 1987), 144. Bukatman explains: "The Body without Organs is the state where we desire to dissolve the body and regain the world. So the contemporary drama of the subject, which I call *terminal flesh*, is played out upon the *surface* of the body: 'depth' is an illusion that belongs to a passing moment of a particular subjectivity. The surface of the body becomes the arena for the dissolution of the governing instrumental reason of the organism. The flat, affectless *oeuvre* of Andy Warhol stands as a paradigmatic aesthetic experience in the posthuman solar system (and yet one also thinks of the shocking photograph by Avedon of Warhol displaying his wounds, the wounds that proved he *was* of the flesh after all). And so the last word should be given, not to Andy Warhol exactly, but to 'Andy Warhol'—an android copy of the original (one of many, of course) as presented in a Neil Gaiman script for the comic book *Miracleman*. 'Andy' has attained the Body without Organs." Scott Bukatman, "Postcards from the Posthuman Solar System," *Science Fiction Studies* 55, Vol. 18, no 3 (1991), http://www.depauw.edu/sfs/backissues/55/bukatman55art.htm (accessed January 20, 2005).

2.3.74. Virilio's consideration of the human, the material and the semiotic, not just as inseparable but also as invariable, exiles humanity in a permanent and fixed limbo. He denies the existence of an evolutionary 'horizon,' as envisaged by Irigaray, [128] denying new ways of being. Furthermore, he excludes any possibility for humanity of "continuing to consider how that engagement with the material might be an avenue into 'transcendence' or divinity." [129]

2.3.75. In contemporary post-human context, therefore, it becomes necessary to identify the 'soul of humanity,' which cannot be nothing other than a choice that "comes in the form of 'ascesis,' which is a formal property of works of art." [130] The body represents the originating point of a cultural travel, an ascesis of the collective soul of humanity, which has been commodified and enclosed in a 'closula.'

2.3.76. "If 'cultures' are taken to be radically divided, questions of 'authenticity' arise, and hybridity (a common enough human condition) comes to seem an anomaly." [131] It is this condition which imposes a focus on the status of fluxus of the described categories in relation to technology and the human body. They are not a full stop in the history of humanity, but rather describe a matrix of complex interactions which could generate phenomena of emergence. These phenomena could liberate humanity from corporate power through the elimination of the objectified 'body subjects' on which power is exercised. To shed the 'weak feathers' of the body equals breaking free from the grasp of the corporate power.

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[128] Luce Irigaray, "Divine Women" in *Sexes and Genealogies*, trans. Gillian C. Gill, 66-69 (New York: Columbia University Press, 1987).
[129] Eleine L. Graham, *Representations of the Post/Human: Monsters, Aliens and Others in Popular Culture* (New Brunswick, New Jersey: Rutgers University Press, 2002), 233.
[130] Regenia Gagnier, *The Insatiability of Human Wants: Economics and Aesthetics in Market Society* (Chicago: The University of Chicago Press, 2000), 56.
[131] Anne Salmond, "Maori and Modernity: Ruatara's Dying," in *Signifying Identities: Anthropological Perspectives on Boundaries and Contested Values*, ed. Anthony P. Cohen, 55 (London: Routledge, 2000).

2.3.77. The aim of the preceding analysis is to confute the assumption of a destruction of the human body in contemporary technological society. The fragmentation of the individual and his transformation is, however radical it may seem, an evolutionary process. This, far from condemning the human species to a self implosion, as Baudrillard explains, is opening the possibility of interaction and exploration with the external world, which has been precluded by the natural physicality of our own bodies.

2.3.78. Confirmation of this approach is substantiated by Haraway, who envisages the downfall of the patriarchal society and its powers through the assaults of Wolverine, a fictional character in *X-men* (2000) and *X2: X-men United* (2003). In these two movies Wolverine represents the downfall of militaristic power. Humanity is powerless and cannot stand up to the genetically engineered cyborg Wolverine, who is the chaotic mythological meeting of neatly separated realms: human, animal and machine.

> 2.3.79. For Haraway, culture cannot escape biology as simply as it seems to in some arguments (there is no simple cultural determination). Yet nature is itself a culturally defined concept. The cyborg is exactly the kind of monster that appears time and time again in cultural myths about the natural world (and about technology) when the division between culture and nature is breaking down. Frankenstein's monster is created in a storm. The world of the film Blade Runner is permeated by a constant rain. As such the cyborg represents both the breakdown of the human-machine boundary and also, crucially, the breakdown of the human-animal boundary. Myths, machines, animals and humans are deeply implicated with each other. [132]

2.3.80. Haraway believes that this representation of the body is a welcome possibility; a final liberation not just from the chains of man, but also from enslavement to the physical realms: mechanical, animal and human.

2.3.81. A different view is presented by Archer, for whom "the body, which might have been thought to be the organic stopping-point, represented no terminus. Indeed,

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[132] Andrew Murphie and John Potts, *Culture and Technology* (New York: Palgrave Macmillan, 2003), 116-117.

during the last decade, fascination with 'the body' has actually been the final chapter in the project of demolishing humanity. Bodies are no longer respected as something non-reductively material, which mediate our traffic with the world, but only as a permeable medium which takes the ideational impress." [133]

2.3.82. This analysis is based on a further concept of empowerment of humanity through the "re-emergence of humanity, meaning that due acknowledgement is given to the properties and powers of the real people forged in the real world, which overcomes the present poverty of social theory." [134]

2.3.83. Archer's theory clashes with the re-emergence of 'real problems.' In Archer's words, due acknowledgement is given by the 'Corporate Agents' to the real people and is forged into the real world in order to allow a new empowerment of the 'Primary Agents.'[135] What Archer does not explain is why and how the 'Corporate Agents' would decide to deprive themselves of their power. The romantic idea of a re-emergence of humanity does not lie in saving the body, but possibly in moving away from the body, as Haraway suggests. Disintegrating and eliminating the human body by blurring the boundaries of the different realms may be a possible mechanism of declassifying the object from the shelves of commodification. The object on which to

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[133] Margaret S. Archer, *Being Human: the Problem of Agency* (Cambridge: Cambridge University Press, 2000), 316.
[134] Ibid., 307.
[135] Archer employs a theory of societal construction and determinism based on the concept of 'primary agents' and 'corporate agents'. "I have dealt with the three basic strata in *Realist Social Theory* (1995), which can be summarised as follows: (i) How society impinges involuntarily upon the human self, to differentiate collectivities of *Primary Agents*, in virtue of their relations to socially scarce resources. (ii) How *Primary Agents* collectively transform themselves into *Corporate Agents*, when seeking to transform society; *Corporate Agents* being distinguished by their organisation and articulation of aims. (iii) How social reproduction/ transformation (morphostasis/ morphogenesis) affects the extant role array and hence the potential social identities available for the development of *social actors*. Taken together, these yield the following stratified model of agency, which, for any individual, develops over the life-course." Margaret S. Archer, "Realism and the Problem of Agency," *Journal of Critical Realism* 5, no. 1 (2002): 17-18, http://www.journalofcriticalrealism.org/archive/JCR(A)v5n1_archer11.pdf (accessed December 10, 2004).

exercise power, the human body, mutates [136] or disappears, vanishing into the fragmented horizon of postmodern avant-garde art speculation. If "there is no such a thing as Society" [137] then there is no such a thing as a subject of society. If it is true that the state has no moral obligation, then it might also be true that the individual has no moral obligations towards the state. The societal networks have been severed and commodified: the genetically engineered cyborg appears to be the answer. And the cyborg is a mean creature in response to a mean creator: the 'Corporate Agent'. [138]

2.3.84. The concept of a total disintegration of the human body into the environment, where parts of human genetic make up, conscious or unconscious, will constitute a referential into nature for a physical and conscious connection or simply a new form of pollution. In the societal power struggle genetic infestation may be the answer and not the problem. A new form of virality which, transcending barriers, translates humanity into reality.

2.3.85. A body freed from pre-established categories is able to defy control, if only for the reason that is able to defy the attempt of being 'data based' and 'data debased' in a reality that is evermore digitized. A body as a flux of information, or a non-body as a stream of consciousness where the boundaries of cataloguing are dysfunctional, is the possible alternative to a dominant overarching structure of 'Corporate Agents.'

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[136] "Discussion of Amazons was therefore an elliptical debate about upper-body strength and gender difference which admitted that a body might be carved into something contrary to its original nature." Joyce E. Chaplin, *Subject Matter: Technology, the Body, and Science on the Anglo-American Frontier, 1500-1676* (Cambridge, MA: Harvard University Press, 2001), 249. This passage shows that the body has been mythically altered in the past, alteration that have been necessary means to defy nature's limitations in order to gain empowerment and freedom.

[137] Iain McLean. *Rational Choice and British Politics: An analysis of Rhetoric and Manipulation from Peel to Blair* (Oxford: Oxford University Press, 2001), 225.

[138] For more information on the subject see: Veronica Hollinger and Joan Gordon, *Edging into the Future: Science Fiction and Contemporary Cultural Transformation*, (Philadelphia: University of Pennsylvania Press, 2002).

2.3.86. In contemporary 'digitized and commodified reality' the problem is that there are not enough mutants to offer evolutionary alternatives and unpredictable mutant structures in the preordained and strictly enforced relationships of power. Although the structures of the mutants are a technological product of the 'Corporate Agents,' the Oedipal conflict in the psychological development of the cyborg may just be Haraway's auspices and not a reality.

2.3.87. In conclusion it may be helpful to recapitulate the argument of this section with a comparative analysis of the basic classifications described.

2.3.88. Virilio has the advantage of having used the terminology of endotechnology and exotechnology within the etymological prescribed ambit, but at the same time, he seems to have failed to recognize, or at least to clearly acknowledge [139], the existence of a different set of evolutionary categories.

2.3.89. When Virilio analyzes the decoding of the human genome and the possibility of a different humanity, he states that "it is no longer a question of the extra-terrestrial, but of the extra-human." [140] This argument fails to acknowledge the ontological nature of humanity; that an extra-human is an oxymoron: the externality, the total alterity of humanity, is not a human being. Rather than extra-human as alien, we are looking at the altered humanity, the presence of whimsical variations, which in their own right are an enrichment and empowerment of the evolutionary possibilities of the species. These are more likely to be classified as intra-human, as will be evidenced in the following chapter.

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[139] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 93.
[140] Paul Virilio and Sylvere Lotringer, *Crepuscular Dawn*, trans. Mike Taormina (Los Angeles: Semiotext(e), 2002), 91.

2.3.90. If Baudrillard had the merit of having serendipitously evidenced a transfer of technology from the old parameters into the new categories, he did not succeed in creating an oppositional binary linguistic construct, let alone a multilayered structure which could highlight the shift within the technological, artistic and social worlds. This is to evidence the move from an undistinguished world of technologies to a more various and complex set of relations.

2.3.91. Sean Cubitt has evidenced this complexity and the necessity for a classification in *Timeshift: on Video Culture*, speaking of a conflict between the 'real' world of machines and the 'unreal' world of the body. What he stresses is the necessity for a complex analysis of its relationships. The structure of this relationship plays an important role in determining the social and psychological development of humanity and the modality of interaction with the digital media. "What is required is a conception of a relation, within which media technologies are constituted as such, which is simultaneously individual, and collective, internal and external: a 'technological' relation which is both social and psychic." [141]

2.3.92. One possibility to achieve this objective is to revisit the technological issue on the basis of inter-media [142] and intra-organic [143] as previously discussed by Higgins and Virilio. The relationship is not just that between technology and the human body but also that between media. The inter-media relationship has mutated to intra-media, within a technological context that has to acknowledge the 'electric' penetrative qualities of contemporary media. An example of 'intra-media' is the database 'shared image' project Tulse Luper by Peter Greenaway, where its complex and multitple manifestations are

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[141] Sean Cubitt, *Timeshift: on Video Culture* (London: Routledge, 1991), 16.
[142] Inter a preposition which means 'between, among.' *Cassell's New Latin-English English-Latin Dictionary*. fifth ed., comp. D. P. Simpson (London: Cassell and Company, 1975). s.v. "inter."
[143] Intra a preposition which means 'within, inside.' *Cassell's New Latin-English English-Latin Dictionary*. fifth ed., comp. D. P. Simpson (London: Cassell and Company, 1975), s.v. "intra."

based on a shared penetrative database, [144] which constitutes the basis for installation, film, internet art and videogames.

2.3.93. Paul Hertz's intermedia [145] approach is based on the shared transportable elements from one artwork to the next, but it is also an intermedia work where images, sound, interactions "are governed by a common compositional base."

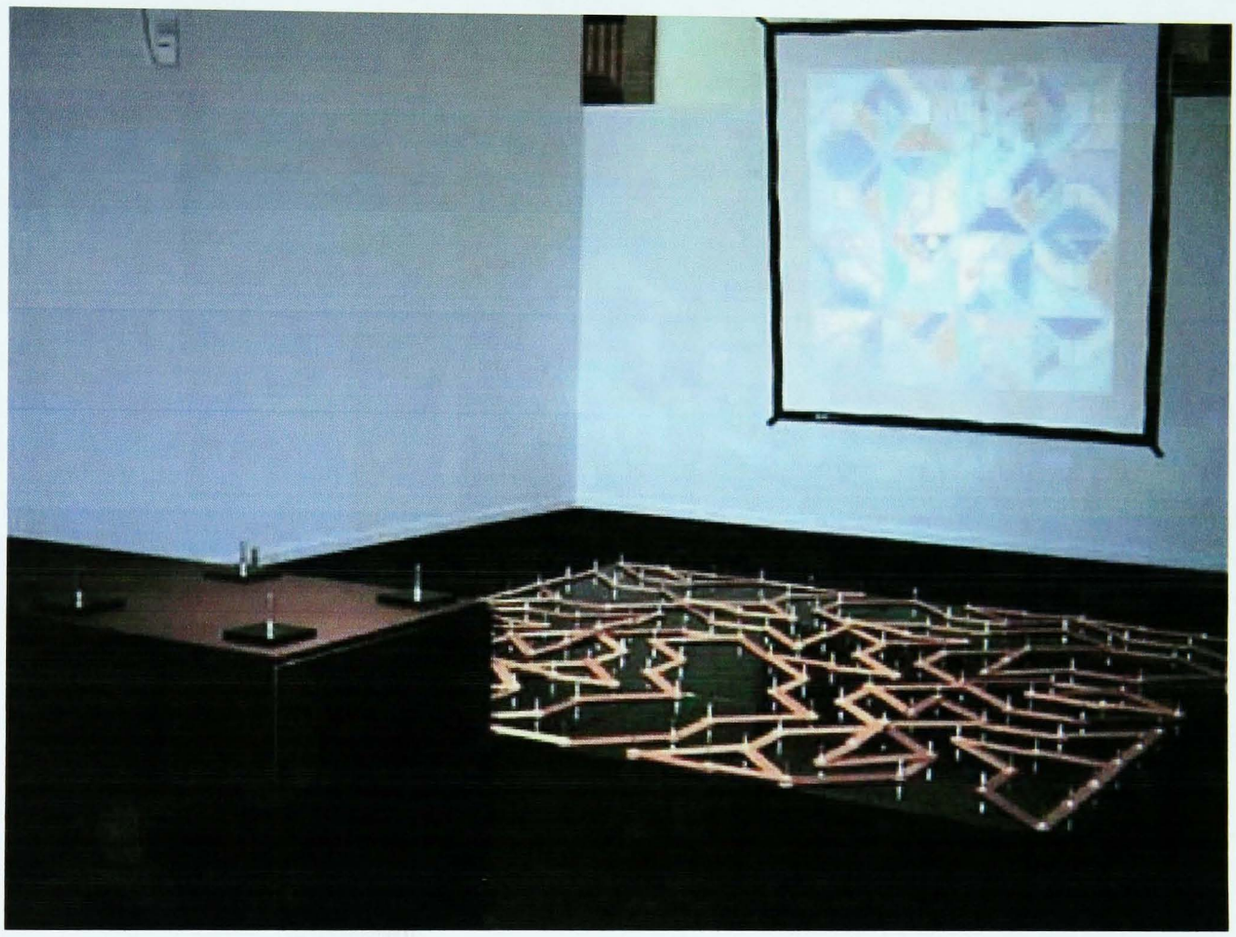

**Figure 46** ***Pond I: General View*****, Paul Hertz, 1997. In this interactive multimedia installation exhibited at the Chicago Cultural Center for ISEA 97, visitors as Hertz explains "can collaborate to fit fragmentary voices and sounds back together through the interactive interface." Paul Hertz, "Pond I: General View,"** ***Paul Hertz Portfolio,*** **December 13, 1997, http://collaboratory.nunet.net/phertz/portfoli/main.htm?fbottom=texts.htm&fmid=tx_dir.htm&view=tx (accessed December 2, 2004).**

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[144] "Modern media is the new battlefield for the competition between database and narrative. It is tempting to read the history of this competition in dramatic terms." Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 234.

[145] "Material collected in each iteration of this installation can be used for the next one, transporting images, sounds, and patterns generated by one group of people into a space viewed by a distinct group." Paul Hertz, "Framing Intermedia: From YLEM Newsletter," *Paul Hertz Texts*, January 1999 http://collaboratory.nunet.net/phertz/portfoli/main.htm?fbottom=texts.htm&fmid=tx_dir.htm&view=tx (accessed December 7, 2004).

2.3.94. Within this intermedia/intramedia scenario, the intra-organic is one of the elements, together with the inter-organic and the extra-organic, that reframes the relationships between esotechnology and endotechnology, ektechnology and exotechnology. In this reclassification the exchange and mutations of the body take place, blurring the boundaries of traditional technological and media classifications.

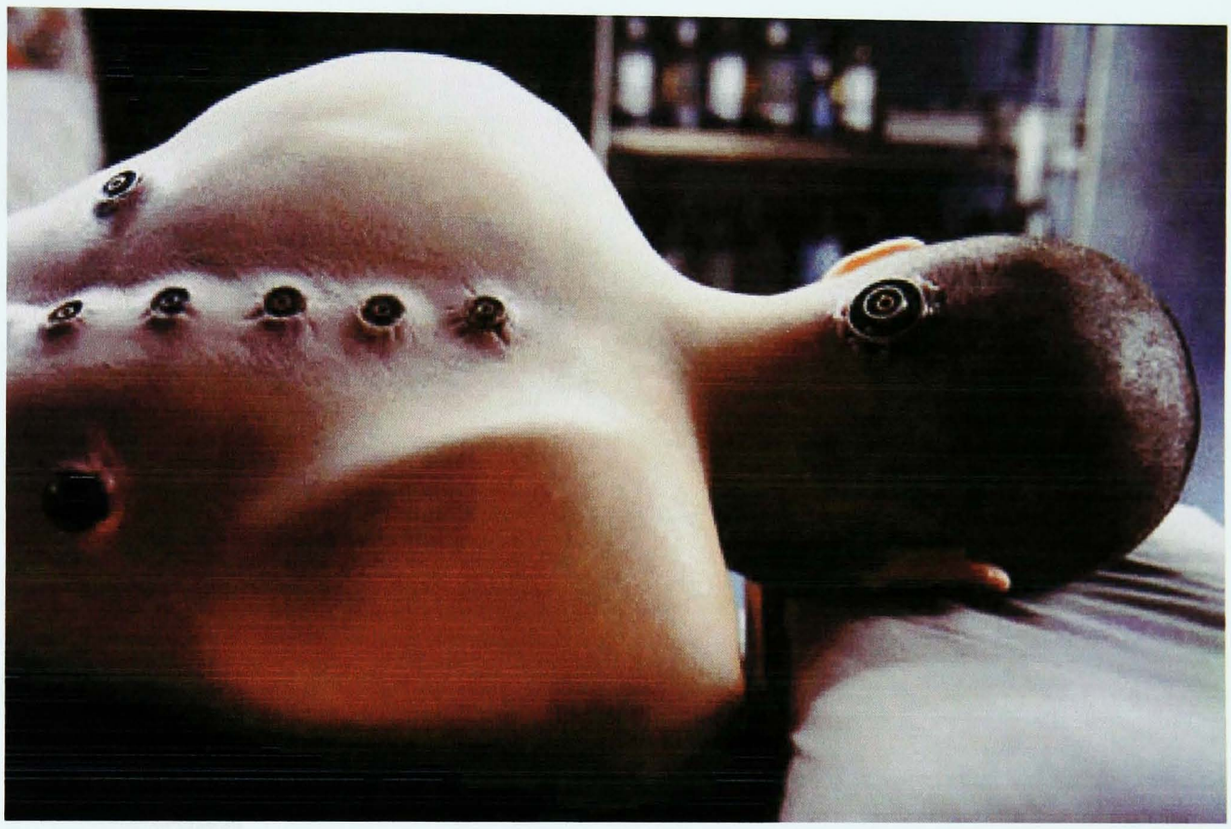

**Figure 47** ***The Matrix: Reloaded*****, directed by Andy and Larry Wachowski, 2003. Is Neo inter-organic, intra-organic, extra-organic or trans-organic?**

2.3.95. These relationships are one of the key aspects which this thesis will explore through a philosophical analysis of the media technology and its applications within cinema, new media and the avant-garde. The research has departed from the concept of 'evolutionary media' and an evolutionary avant-garde art movement, which linked to technology, follows and inspires applications and ideal constructions. The scope is not to attempt to understand if the world of ideas inspires technology or vice versa. The scope pursued is to redefine a relationship between technology and aesthetic. Is this process a 'remediation' formula or is it more similar to a process of ekphrasis, in which

the translation of the visual language is being made in a new media language of which the translator has very little knowledge?

2.3.96. Although the concept of ekphrasis is traditionally used in literature, its history has moved between different genres, which have encompassed performative arts such as theatre and cinema. Through the etymological analysis of Baudrillard and Virilio's concept of technology, I have tried to demonstrate that a similar process of 'trans-lation' and/or 'trans-fer' [146] is at work in the structure of the contemporary media technology. In this context it is possible to speak of ek-technology, as a process which, moving from postmodernism, is presenting philosophical issues of trans-humanity and related technologies embedded in the human body. The issues, as stated by Cubitt when he discussed the new video format affirmation, are related to the protean and chthonian nature of the media development itself, which, through evolutionary experimentations, attempts to device successful future forms and structures to ensure survival.

2.3.97. This analysis, which does not aspire to be the resolution of a complex and variegated issue, has attempted to clarify and classify some of the contemporary issues in art, critical theory and philosophy, leading to a better understanding of these categories and their interrelations within the present human-machine social context. This is in order to understand, in the next chapter, if it is possible to grasp the contemporary chaotic evolutionary developments of the technological avant-garde, cinema and new media's interactions in the intersections between art, philosophy, science and technology.

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[146] Translatus and Transfero are Latin verbal forms which means to go across, to transport. It is also interesting to note that the word translatio (from transfero) means 'a transferring' and the word 'translator' (from transfero) means 'a transferrer'. *Cassell's New Latin-English English-Latin Dictionary*, fifth ed., comp. D. P. Simpson (London: Cassell and Company, 1975), s.vv. "translatus," "transfero," "translation," "translator."

## 3.1. CHAPTER THREE - Philosophy, Science, Art and Technology

### A World of Intersections, Hybrids and Chimeras

3.1.1. This chapter will analyze the historical and contemporary intersections between art, science and technology, where the concept of reality and its contextualization is fundamental in understanding the basis for contemporary media interactions, evolution and recontextualizations.

3.1.2. The philosophical analyses become part of a process to discover the original characteristics of the hybridization forms in the conflicting media scenario of virtual vs. real. In this contemporary scenario of realities and virtualities, attempts are made to determine the essence of these categories as well as the essence of the media which have produced them. The contemporary technological avant-garde becomes a form of investigation into the universal fundamentals, comparable to the material experiments that, according to Peter Weibel, shattered the cinematographic code in the 1960s. [1]

3.1.3. The categories of intermedia, intramedia and metamedia are introduced as forms that define the evolutionary continuum of media and their implications. Although these are not 'conclusive' categories, they help to delineate the contemporary media

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[1] "The subversive explosion that shattered the cinematographic code in the 1960s affected all of the technical and material parameters of film. The material character of the film itself was analyzed by artists who, instead of exposing the celluloid, scratched it (George Landow, *Film In Which There appear Sprocket Holes, Edge Lettering, Dirt Particles, etc.*, 1965/1966; Birgit and Wilhelm Hein, *Rohfilm*, 1968), perforated it with a hole punch (Dieter Roth, 1965), painted it (Harry Smith used 35mm material, processing it with grease, paint, tape and spray, 1947), covered it with fingerprints (Peter Weibel, *Fingerprint*, 1967) or glued moths to it (Stan Brakhage, *Mothlight*, 1963, in which moth wings and leaves were fixed between layers of perforate tape and projected). Empty frames, black film and overexposed material were also used (Gil J. Wolman, *L'anti-concept*, 1951; Guy Debord, *Hurlments en faveur de Sade,* 1952; Peter Kubelka, *Arnulf Rainer*, 1960; Tony Conrad, *The Flicker*, 1965. [...] There were cameraless films, for which unprocessed celluloid, known as clear film, was inserted into the projector (Nam June Paik, *Zen for Film*, 1962)." Peter Weibel, "Expanded Cinema, Video and Virtual Environments," in *Future Cinema: The Cinematic Imaginary After Film*, Jeffrey Shaw and Peter Weibel ed., 111 (Cambridge, MA: ZKM Center for Art and Media Karlsruhe and The MIT Press, 2003).

structures. They also resurrect and introduce to the contemporary debate on the simulacra and the hyperreal the concept of echology. This concept is necessary to understand whether the contemporary positions of Baudrillard and Virilio on the 'deterioration of the image' are a revival of medieval concepts of religious interpretation of the 'human's image' and/or simulacrum.

3.1.4. The chapter will conclude with an analysis of the role played by the artist in contemporary art. The technological and/or scientific nature of the artistic avant-garde endeavor is, directly or indirectly, structured within a global corporate framework. Issues of 'intervention' and 'absorption' will be analyzed to understand if the artistry has been reduced to a manifestation of technological dependency and/or enslavement.

## 3.2. The Digital Avant-garde

### Integral Methodology in the Hyperreal Nebula

3.2.1. The primary intention of this section is to investigate the relationships between science, technology, art practice and philosophy. The argument to be developed in this section has a non-linear evolution and follows a 'Socratic methodology' applied to the concept of simulacra in the attempt to highlight the innate scientific and philosophical nature of artistic practice and theory. It is divided into three parts.

3.2.2. The first part identifies the methodology and the problematics of interpretation of the text, which creates a random 'collage' of key elements and becomes the structural support for an analysis focused on the signifiers involved in the artistic and aesthetic process, more than on the object found. It is based on the previously analyzed phenomena of virality and genetic hybridization, in this case applied to a cultural art context.

3.2.3. The second part is focused on the analysis of the Hyperreal Nebula and its interpretation as a simulacrum of Hypnos, the Greek god of sleep. Through the Socratic analysis of the word Hypnos, the 'hyperreal' will be reconstructed as a stage of an evolutionary process. It will be subjugated, therefore, to the laws of time and space. The analysis will develop through a confrontation between the hyperreal and its manifestations as illusion and/or simulacrum, and the 'real' from which the illusion can never be separated. In this context the simulation, although not an illusion, is the process which generates and characterizes the illusion.

3.2.4. The third part is an inconclusive conclusion: this process will leave open questions, doubts and problematics to be explored and further developed. Through this

analysis one element will become evident: the methodological process, in its variable structures and combinations, is a part of the art object. This is not disjointed from philosophical references, which, at least in this minimum form, permeate the contemporary avant-garde and the artist's methodology.

3.2.5. The research aim is not to suggest a series of unorthodox and ambiguous relationships between different fields of human knowledge, but to show that a methodology exists even in a random comparative activity; even if it is the method of not having any methodology. There is uneasiness in speaking of 'knowledge' in a relativist and postmodernist context, but it is accepted that some form of truth related to reality exists; although this assertion is similar to an axiom in mathematics or logic, or a divine dogma in theology. From here it is possible to start a process which could lead to the analysis of some of the elements of reality, in a research focused only on the endeavor of the process. The results will be the subject of a further discussion that, from the philosophical questions related to real and/or unreal relationships, will find a place for a possible Parmenidean way of the truth. [2]

3.2.6. The analysis proposed will begin with a definition of reality which, independent of any classification of truth-likeness, will only attempt to link, in the misuse of an argument ad absurdum, [3] the philosophical methodology to the contemporary art practice. In the choice of the methodology to apply, the research attempts to create a collage to show the limitations of "post-modernity, which is the immense process of the

[2] Karl Popper summarizes the philosophy of Parmenides writing: "What is surprising in Parmenides is the view that *divine knowledge of reality is rational and therefore truthful*, while *human opinion of appearance is based upon our senses, which are not only unreliable but totally misleading.*" Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 109.

[3] "And indeed the *reductio ad absurdum* is a method of almost absolute proof, in contrast to the axiomatic method, which works with unproved assumption." Ibid., 102.

destruction of meaning, equal to the earlier destruction of appearances." [4] This is a process which has characterized the expression of the avant-garde since the late 19th century and which, once embedded in the philosophical structures of contemporary art, expanded into the materiality of the object itself, erasing structures and boundaries. This is a tradition which, moving from the cubist work of Picasso and the surrealists, reaches the contemporary avant-garde applications in software art, Internet art and new media art.

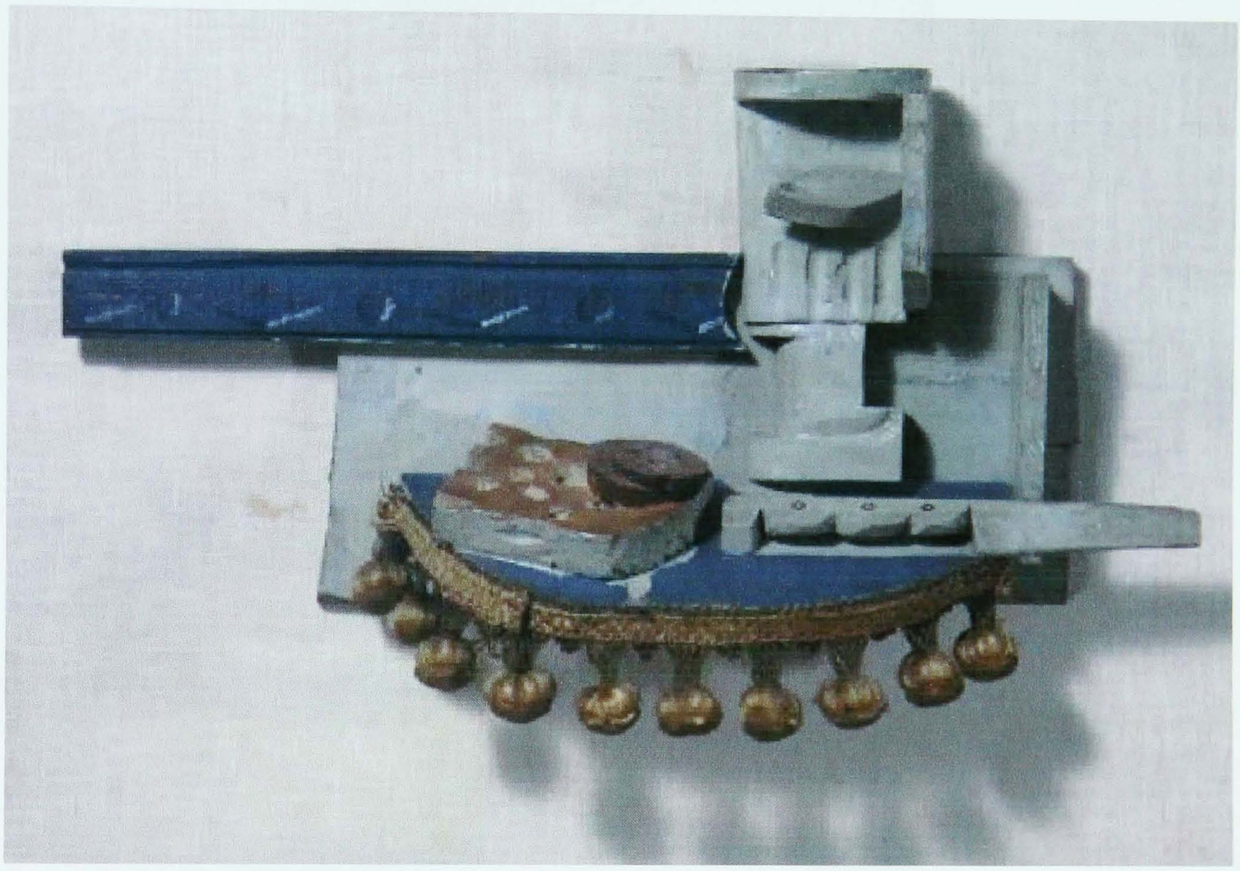

**Figure 1 *Still Life*, Picasso, 1914. Painted wood and upholstery fringe object: 254 x 457 x 92 mm. relief.**

3.2.7. An example of the blurring of the physical and theoretical boundaries can be found in John Latham's art practice and theoretical expressions which range from the art action *Still & Chew* (1966) [5] to his *Skoob Tower Ceremony* (1966) or from the

[4] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 161.

[5] "In August 1966 the artist (John Latham), then a part-time teacher at St Martin's School of Art, borrowed a copy of Clement Greenberg's collection of essays 'Art & Culture' from the college library. He invited his students, including Barry Flanagan, fellow artists and critics to his home for an action entitled 'Still & Chew'. The guests were urged to chew individual pages of the book [...] When the Deputy Director of the school asked Latham for an apology, he responded by saying that he regarded such visualizations of event structures as facts one does not apologize for.... The remains (of the action 'Still & Chew').... were later acquired by the Museum of Modern Art in New York." John Latham, *Art after Physics: The Museum of Modern Art; Oxford, 13 October 19991 - 5 January 1992*, ed. Ina Conzen-Meairs (Oxford: Museum of

theoretical analysis of *Event Structure – Approach to a Basic Contradiction* [6] to the theory of *Flat Time*, a scientific explanation of time based on the artist's experimentations with logic and philosophy.

**Figure 2** ***Skoob Tower Ceremony*****, John Latham, 1966. Bangor, North Wales.**

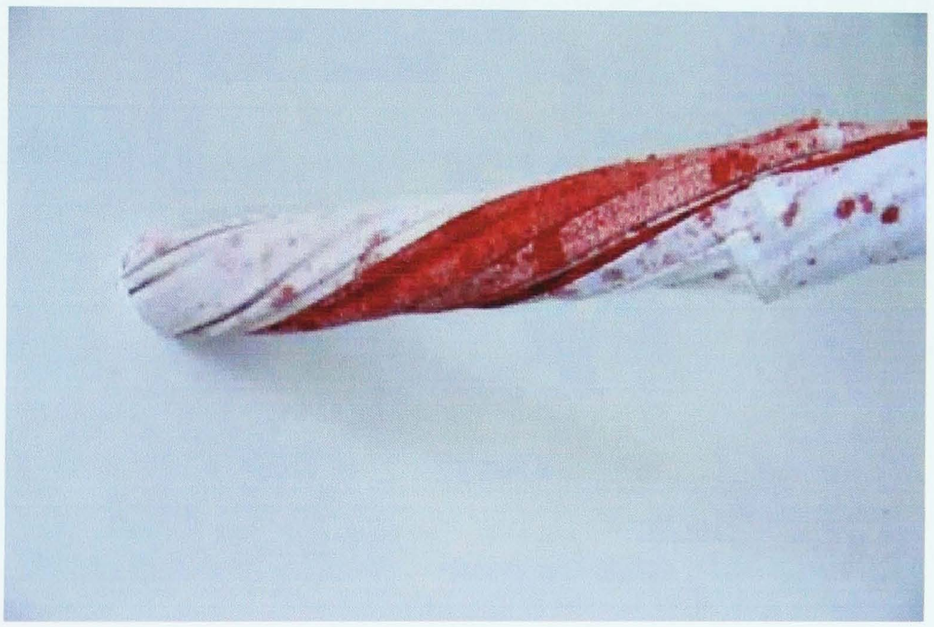

**Figure 3** ***Long Painting: detail,*** **John Latham, 1996. Canvas, paint, Documentation, 1414 Monterey, 4th floor, The Mattress Factory, Pittsburgh Pennsylvania, http://www.mattress.org/catalogue/96/index.html# (accessed October 15, 2004).**

Modern Art, 1991), 47. See also: John A. Walker, *John Latham: The Incidental Person; His Art and Ideas* (London: Middlesex University Press, 1995) and Terry Measham, *John Latham* (London: Tate Gallery Publications, 1976).

[6] John Latham, "Event Structure: Approach to a Basic Contradiction," *scartissue.org*, 1981 http://www.scartissue.org/publications/pdfs/eventstructure.pdf (accessed November 1, 2004). See also Howard Slater, "The Art of Governance: On the Artist Placement Group 1966 – 1989," *Break/Flow*, February/March 2000, http://www.infopool.org.uk/APG.htm (accessed November 1, 2004).

**Figure 4** ***Long Glass*****, John Latham, 1996. A glass wall divides the room. Through the glass pass books, wires and other objects, 1414 Monterey, first floor, The Mattress Factory, Pittsburgh Pennsylvania, http://www.mattress.org/catalogue/96/index.html# (accessed October 15, 2004).**

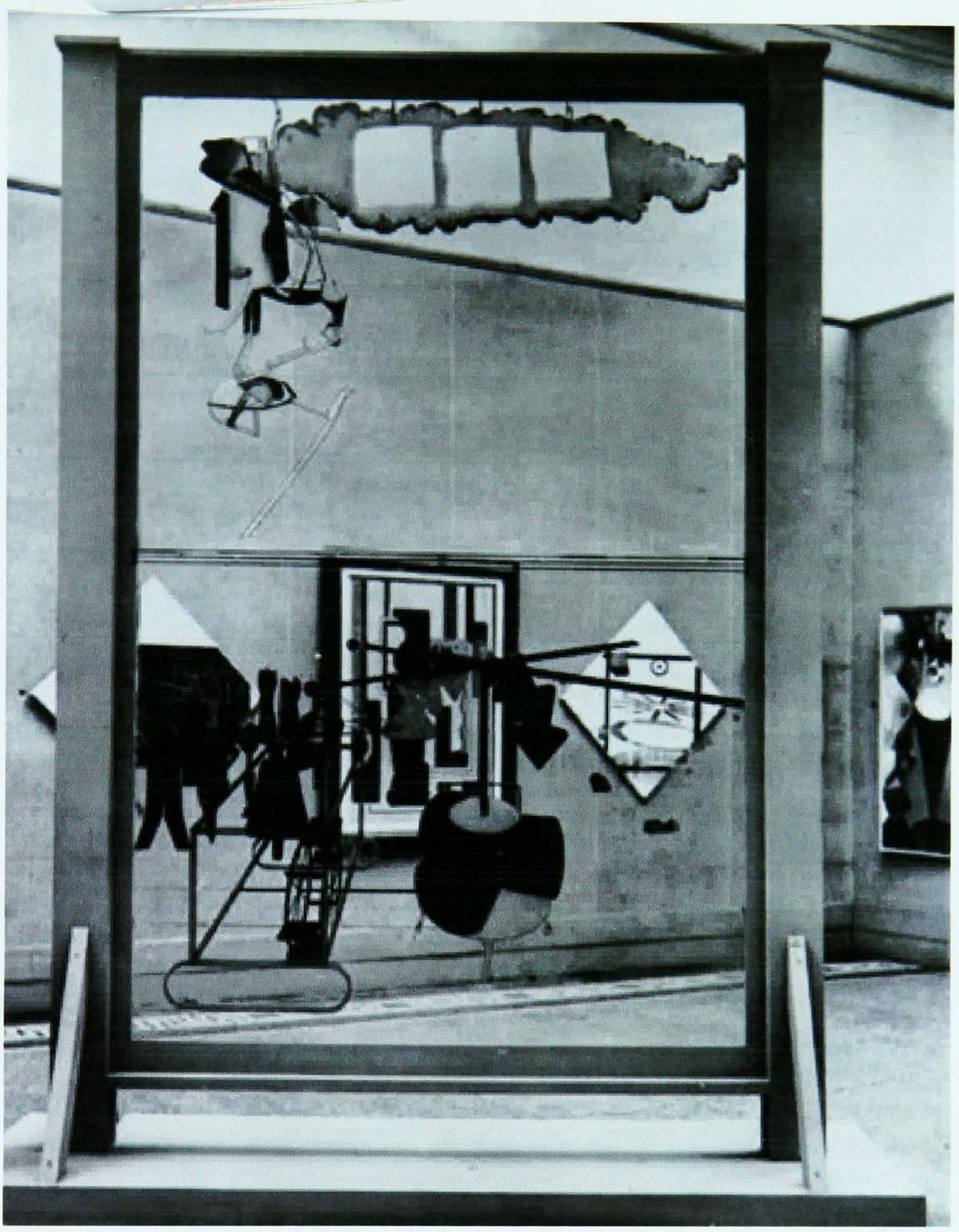

**Figure 5** ***The Bride Stripped Bare by Her Bachelors, Even (The Large Glass)*****, Duchamp, 1915-1923. Photograph of the unbroken piece. Duchamp's complex analysis to develop analogies between biology, the mechanical, social customs and practice.** [7]

[7] Arturo Schwarz, ed., *Marcel Duchamp: Notes and Projects for the Large Glass*, trans. George H. Hamilton, Gleve Gray and Arturo Schwarz (London: Thames and Hudson, 1969). See also: John golding, *Duchamp: The Bride Stripped Bare by her Bachelors, Even* (London: Allen Lane The Penguin Press, 1973) and Roberl Lebel, *Marcel Duchamp*, trans. George Heard Hamilton (London, Trianon Press, 1959), 77. This text contains an essay written by Duchamp for the Convention of the American Federation of Arts, Houston Texas, April 1957, titled 'The Creative Act.' "To all appearances, the artist acts like a mediumistic being who, from the labyrinth beyond time and space, seeks his way out to a clearing. If we give the attributes of a medium to the artist, we must then deny him the state of consciousness on the esthetic plane about what he is doing or why he is doing it. All his decisions in the artistic execution of the work rest with pure intuition and cannot be translated into a self-analysis, spoken or written, or even thought out."

**Figure 6** ***The Bride Stripped Bare by Her Bachelors, Even (The Large Glass)*****, Duchamp, 1915-1923. Oil, varnish, lead foil, lead wire and dust on two glass panels, 109 x 69 cm., Philadelphia Museum of Art, Philadelphia. Photograph of the broken piece.**

3.2.8. In the contemporary art practice, where boundaries, methodologies and canons are blurring, it will become necessary to abandon the logical system of science and instead adopt a methodology of challenge which with "imaginary science or the pataphysics of simulacra could eliminate the implosive impasse of death, which imprisons us." [8] John Latham in his website has achieved just that: a pataphysics of a simulacra, [9] where the image of reality and its existence is blurred and confused within a scientific context placed in an art referential. The study of Joseph Adler, *The Large Glass: Iconology Embedded in the Work Itself* (2003), [10] is an attempt to expose interactively the

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[8] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 154.

[9] Jean Baudrillard, "Rise of the Void Towards the Perifery," http://www.uta.edu/english/apt/collab/texts/rise.html (accessed November 2, 2004). See also: Jean Baudrillard, "Pataphysics of the Year 2000," in *The Illusion of the End*, trans. Chris Turner (Stanford, California: Stanford University Press, 1994), 1-9.

[10] Joseph Adler, "The Large Glass: Iconology Embedded in the Work Itself," *Metamedia Lab: Projects & Etudes*, May 2004, http://metamedia.stanford.edu/The%20Large%20Glass.html (accessed November 19, 2004).

iconology of Duchamp's work. This is a study which doesn't go any further than a usage of 'interactivity' as a form of 'innovation,' without achieving any pataphysic. Inserting the artwork in a metamedia context, that of the Metamedia Lab at Stanford University, proposes a remediation, while a revolutionary patamedia approach would be required. The 'revolutionary' antimachine approach of Duchamp is anesthetized in the context of a conventional use of the medium, which doesn't approach the scientific, but stops at the fashionable usage and/or remediation of previous media.

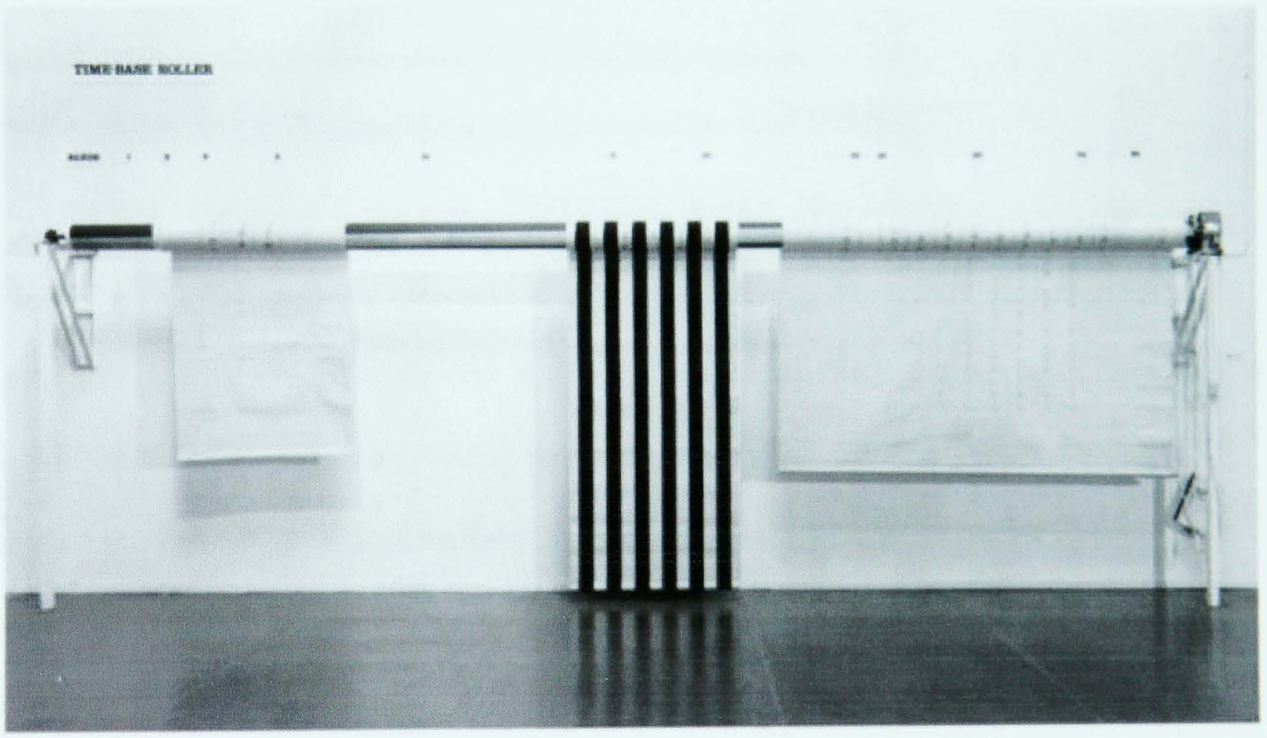


**Figure 7** ***Time Base Roller*****, John Latham, 1972. Canvas on motorized cylinder, 6m., fall 428 cm., Lisson Gallery, London. Photo: Gareth Winters, http://www.flattime.net/Timebasedroller.html (accessed October 29, 2004).**

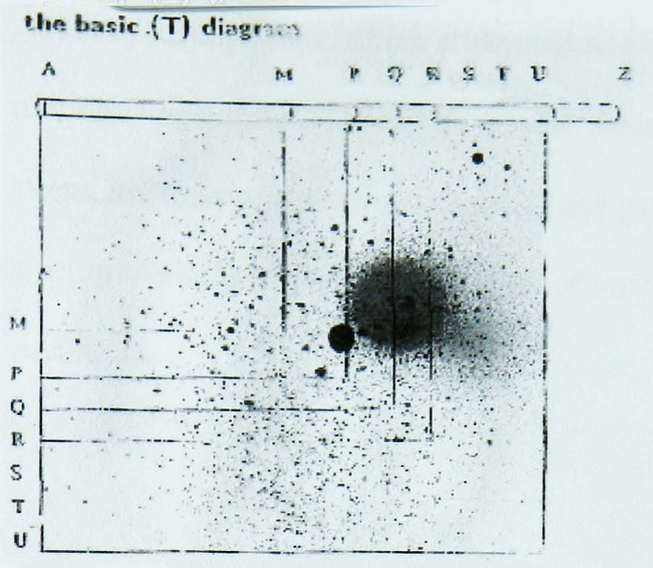


**Figure 8** ***Arbitrary Situations on a Basic T Diagram*****, John Latham,**

**http://www.flattime.net/Timebasedroller.html (accessed October 29, 2004).**

3.2.9. Different is the case of *Time Base Roller*, where the relationship between the artistic and the scientific elements is left to the viewers, who are required to define a methodology with which to interpret both images and text [11] that Latham has displayed. The difficulty arises in distinguishing the boundaries of art, science, [12] real and unreal, false and truth. [13] It goes even further, invoking the conflict between determinism and indeterminism with Popper's view that "classical physics is not accountable, in the stronger sense of 'accountable.'" [14]

3.2.10. This approach led the Italian Enrico Baj, who was very close to the pioneers of surrealism and dada, to express these relationships' difficulties through a

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[11] John Latham, "flattime," *flattime.net*, http://www.flattime.net/index.html (accessed November 1, 2004).

[12] "What is the nature of reality? It is fascinating to observe that scientists deal not simply with matter but, as the 'natural philosopher' they originally were, with conceptual thinking, with the contemplation of deep meanings and with epistemological questions. The arts constituencies have their own discourses but they should not ignore the emerging paradigms of science, for these are already becoming part of the currency of the wider world." Sian Ede ed., *Strange and Charmed: Science and the Contemporary Visual Arts*, (London: Calouste Gulbenkian Foundation, 2000), 17.

[13] "I have always been interested in the way in which science 'gazes at' and speculates about nature and humankind, and how that differs from the ways in which artists relate phenomenon. [...] how we develop our belief systems, our values and how we as cultures determine what truth is, how we determine the varieties, grounds and validity of knowledge and how these epistemological uncertainties cross-reference with art, fiction and poetry." Eve Andrée Laramée, "A Permutational Unfolding: Art and the Culture of Science," July 4, 2000, http://wawrwt.iar.unicamp.br/anpap/anais99/palestra2.htm (accessed October 8, 2004). See also: *A Permutational Unfolding*, Eve Andree Laramée, MIT List Visual Art Center, 1999.

pathaphysic approach, which attempted to avoid homologation through the representation of a serendipitous connection of diverse elements and meanings. [15] His aesthetic attempted to invade the social context and generate a Gramscian intellectual awareness as a counterweight to the void repetition of images and kitsch, which Baudrillard defined as simulacra.

**Figure 9 *L'Apocalisse*, Enrico Baj, 1979-1982.**

3.2.11. The 'pataphysic' approach of Enrico Baj and his 'nuclear art' interventions materialize a philosophical approach to art which, being not metaphysical but pataphysical, is an 'outer' philosophical painting of reality. The issues represented range from 'nuclear' imagery to alterations of the body and its representation as 'alien.' A

[14] Karl Popper, *The Open Universe: An Argument for Indeterminism*, ed. W. W. Bartley, III (London: Routledge, 1998), 55.

[15] "Baj became increasingly convinced that mass consumption had produced a culture in which artistic invention was replaced by endless repetition and kitsch. His response was to create his own copies of great modern painters, from Seurat to De Chirico and Picasso. In place of contemporary art's stultifying unoriginality, these free adaptations exemplified his talent for imaginative association and collage." Christopher Masters, "Enrico Baj: an Italian Artist Savaging Political and Cultural Orthodoxy," *The Guardian*, July 9, 2003, http://www.guardian.co.uk/print/0%2C3858%2C4708427-111261%2C00.html (accessed November 7, 2004).

contemporary alienated body that comes from outer space and that interacts with the social realities as a predatory manifestation and/or reflection. See figures 11 and 12. These works intervene into a structure of avant-garde representations as reflections of philosophical ideas through means of appropriation and modification. [16]

**Figure 10** ***Figura Atomica*****, Enrico Baj, 1958.**

[16] "...like Baj, he chose not to build on the aesthetic principles he established in these original works, they remain among the most vivid materializations of ideas about artistic invention, authorship and the appropriation of existing image." Marco Livingstone, *Pop Art: A Continuing History* (London: Thames and Hudson, 2000), 60.

**Figure 11** ***This Personage Comes from Outer Space*****, Enrico Baj, 1977. The ultrabody becomes the representation of the space where the 'alter' and its aesthetic merges.**

**Figure 12** ***Beings from Other Planets Were Violating Our Women,*** **Enrico Baj, 1959. A Daubist painting which expressed the conflicting relationship between our representations of self and alien as counter images of the self.**

3.2.12. Baj's mechanical representations of humanity condense the reduction of human characteristics to metal parts. This is evidenced in *Re Ubu e Madre Ubu* (figure

13), and its 'essence' in the representation of *Tubi di Tutti I Motori* (figure 14), which as a fundamental image of all moving things, appears to become the essence of all existence.

**Figure 13** ***Re Ubu e Madre Ubu*****, Enrico Baj, 1984.**

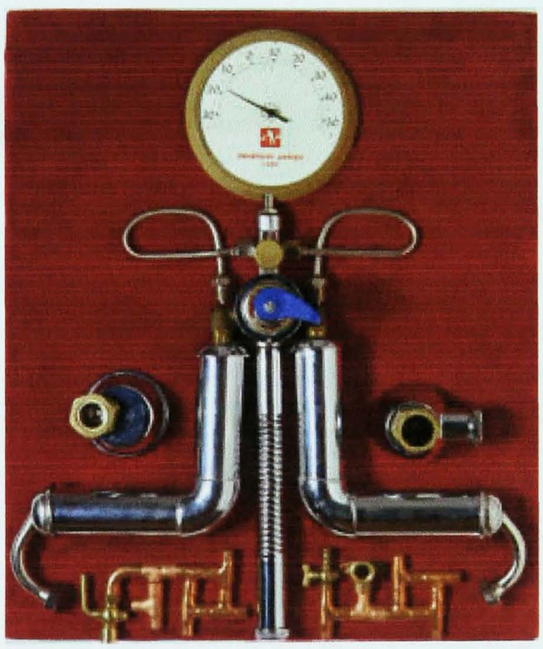

**Figure 14** ***Tubi di Tutti i Motori*****, Enrico Baj, 2003.**

3.2.13. This approach stems from the impossibility of defining the boundaries between reality, dream, illusion, and death. The Parmenedian analysis of real and unreal is at the basis of the recent declarations of Martin Rees, who suggests that 'everything'

may not be more than a giant computer simulation. [17] A statement which appears to confirm some of the interpretations of Duchamp and Enrico Baj. [18]

3.2.14. Duchamp, who himself was a pathaphysic and had been influenced by Jarry, [19] presents the fusion of mechanical and human as one of the elements of *The Large Glass* (see figures 5 and 6) which, presented alongside *The Long Glass* of John Latham (see figure 4), evidences the necessity of a pataphysics for the contemporary simulacra, in its technologically determined manifestations and interpretations.

3.2.15. In this framework, my own experiment *Slaves4Sale.com* is a technological interpretation of a representational reality. The virtual existence of humanity as a box becomes the real, with the possibility of filling it with a wide range of contents. This virtual experience, similar to the *Documentation* piece of Latham, becomes a recorded event, a new existing reality. But while Latham's records are physical, these are virtual manifestations of passed realities, documents of 'what would have been if...,' achieved

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[17] Jonathan Leake, "Top Scientist Asks: Is Life All Just a Dream?" *The Sunday Times*, November 14, 2004, 3. See also: Nick Bostrom, "Are You Living in a Computer Simulation?" Philosophical Quarterly 53, no. 211 (2003): 243-255, http://www.simulation-argument.com/simulation.html (accessed October 2003).

[18] The concept of a hydraulic structure of the world is manifested in a chaotic cosmogony which has to be read not as 'pantafluens' but as 'patafluens'. Enrico Baj, "Patafluens," *[.:ubuland.:]*, http://digilander.libero.it/ubuland/frames/artic_baj.html (accessed November 14, 2004). "...connections and parallels between the art of Marcel Duchamp and developments in modern physics that question the existence of a rational, predictable world. As part of Duchamp's work, he created fictional, quasi-scientific systems that he worked into his visual designs. Calling these playful systems 'pataphysics,' he used the current scientific thinking of the time in a satiric way, making fun of rational, determinist systems and celebrating interesting new developments that cast doubt on traditional thinking." Jonathan Williams, "Pata or Quantum: Duchamp and the End of Determinist Physics," *Tout-Fait: The Marcel Duchamp Studies Online Journal* 1, no. 3 (December 2000), http://www.toutfait.com/duchamp.jsp?postid=945&keyword= (accessed November 14, 2004). Enrico Baj, Vincenzo Accame and Brunella Eruli, ed., *Jarry e la Patafisica: Arte, Letteratura e Spettacolo* (Milano: Comune di Milano, 1983) and Alfred Jarry, *Adventures in 'Pataphysics: Collected Works I*, trans. Paul Edwards and Anthony Melville (London: Atlas, 2001). See also: Alfred Jarry, *Gestes et opinions du Docteur Faustroll, pataphysicien*, Paris 1911 trans. C. Rugafiori, *Gesta e opinioni del dottor Faustroll, patafisico*, Milano, Adelphi Ed., March 1984. http://digilander.libero.it/ubuland/frames/quotations.html (accessed December 6, 2004).

[19] "Jarry, no less than Duchamp, seemed to love Chance, *l'accident*. He had invented a new physics, for which he coined the word '*Pataphysics*,' containing nothing less than an alternate hypothesis for the workings of the universe. These workings depended ultimately on 'purely accidental phenomena.' William Anastasi, "Alfred Jarry and l'Accident Duchamp." *Tout-Fait: The Marcel Duchamp Studies Online Journal* 1, no. 1 (December 1999), http://www.toutfait.com/issues/issue_1/Articles/Glass.html#N_21_top (accessed November 13, 2004).

through further enslavement and commodification in the attempt to regain some understanding of the interactions between reality and virtuality.

**Figure 15 *Documentation*, John Latham, 1996. Plaster, books, card-board boxes, 1414 Monterey, second floor, The Mattress Factory, Pittsburgh Pennsylvania, http://www.mattress.org/catalogue/96/index.html# (accessed October 15, 2004). Books encased in plaster are scattered about the floor in the first room. Wall text in the first room reads, "on band Q, you, humankind, show up as a plague organism." In the second room the text is, "on band S you show up as seed germ of the sun . . . . given the way you are brought up to think though, you do not choose . . . ." Documentation in the second room explains some of Latham's theories including Evenstruck [20] .**

[20] "EVENSTRUCK will digest and make sense of: anomalies within physical theory, anomalies within biology, anomalies in cosmology and world systems, anomalies in theologies, anomalies in the psychologies, anomalies in language logic and common sense perception . . . rephrasing the multiplicity of specialised languages and indexing them within a single envelope framework. Evenstruck is short for event structure, a dimensionality that subsumes all alleged phenomena. The singular advantage of this (T = Time-based) framework is that it places a Reflective Intuitive Organism (RIO) structurally within the cosmos of spatially identifiable results of science without contradicting any of science's most enduring achievements. In principle, (T) gains in precision over existing (S = Space-based) notations and formulae." John Latham, "Evenstruck," *The Mattress Factory*, 1996, http://www.mattress.org/catalogue/96/index.html# (accessed October 15, 2004)


**Figure 16** ***George, Box # 2*****, from the installation** ***A-Void-Travel*****, Lanfranco Aceti, 2003 exhibited at the Cube Development, Leeds. This is one box of a series of 22, each of them named and numbered and that were transformed into an interactive web art piece** ***www.slaves4sale.com*** **(2004).**

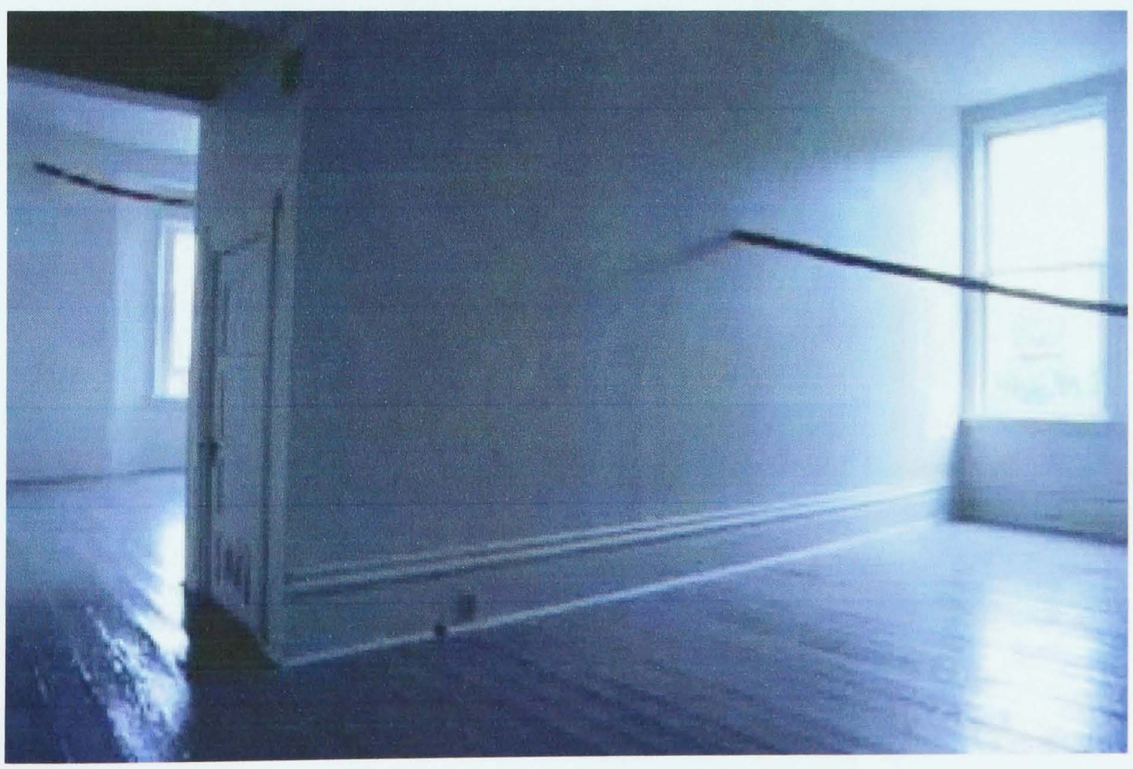

**Figure 17** ***Long Painting*****, John Latham, 1996. A continuous rolled canvas passes through walls as it travels into different rooms. 1414 Monterey, fourth floor, The Mattress Factory, Pittsburgh Pennsylvania, http://www.mattress.org/catalogue/96/index.html# (accessed October 15, 2004).**

3.2.16. "So what was really new in Parmenides was his axiomatic-deductive argument, which Leucippus and Democritus turned into a hypothetical-deductive method, and thus made part of scientific methodology." [21] These deductive methods will be applied to device a methodology which will attempt to understand the inexplicable essence of the simulacrum. The methodological system becomes a simulacrum, reducing both the argument and its visual expression to a simulacrum of an argument and of a visual expression. This is a philosophical practice which Latham has expressed in his artworks *Philosophy and the Practice Of* and *Toward a PhD for Dogs, with the assistance of Pippa O'Brien*.

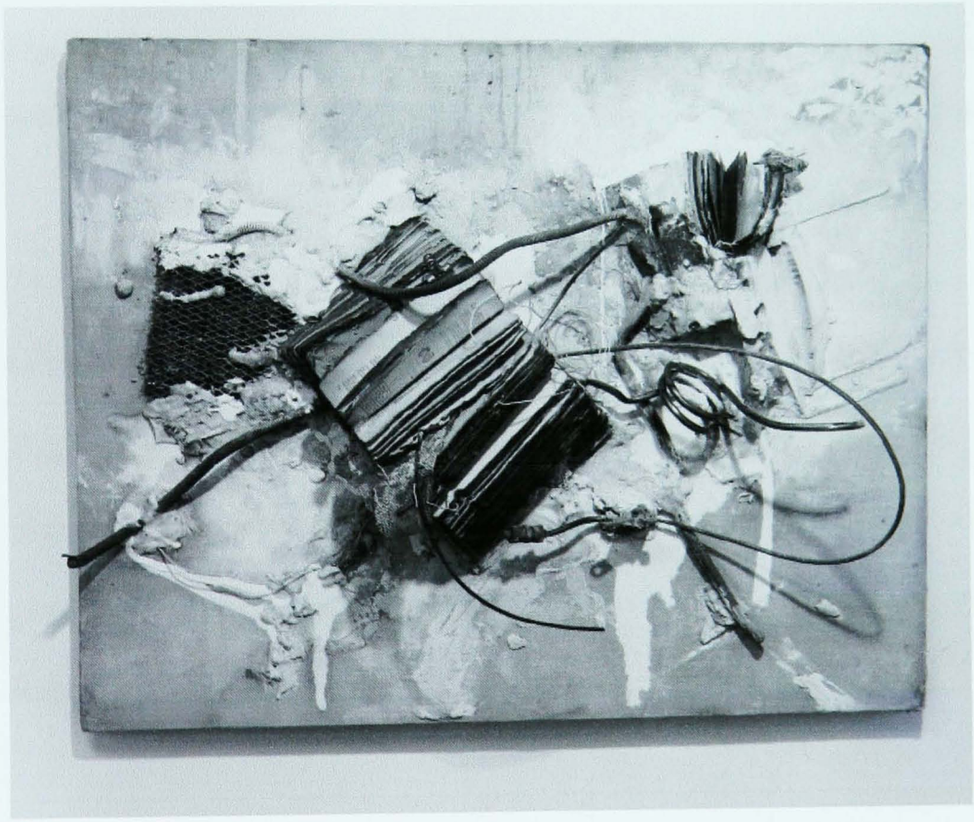

**Figure 18** ***Philosophy and the Practice Of*****, John Latham, 1960. Mixed media, Lisson Gallery, January-March 1987, London. Copyright The Courtauld Institute.**

[21] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 91.

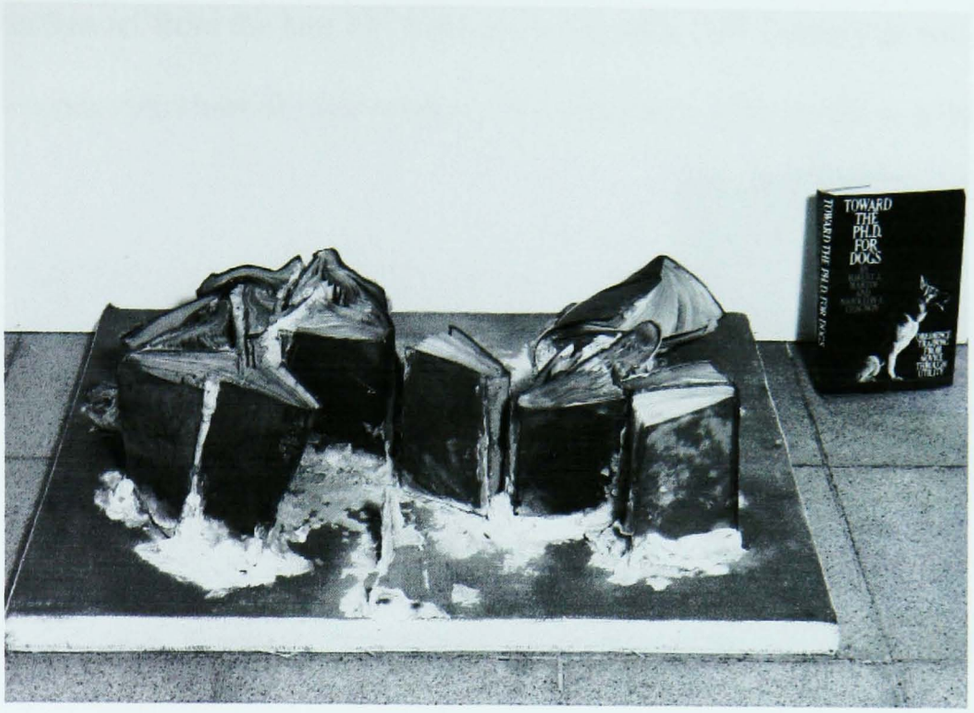


**Figure 19** ***Toward a PhD for Dogs, with the assistance of Pippa O'Brien*****, John Latham, 1977. Mixed media, Hayward Gallery 25 May-7July 1977, London. Copyright The Courtauld Institute.**

3.2.17. Therefore, the idea of truth will not find space in these analytical attempts. The research will attempt to reject the concept that "for us, truth is something which becomes, it *has* and *will have* become. It is a totalization which is forever being totalized. Particular facts do not signify anything; they are neither true nor false so long as they are not related, through the mediation of various partial totalities, to the totalization in process." [22] This research, therefore, is based on the pragmatic approach of Richard Rorty.

> 3.2.18. So I should prefer to say that the coherence of the text is not something it has before it is described, any more than the dots had coherence before we connected them. Its coherence is on more than the fact that somebody has found something interesting to say about a group of marks or noises – some way of describing those marks and noises which relates them to some of the other things we are interested in talking about. [23]

3.2.19. The process of description and joining calls to mind the processes of the scientific experimental methodological approach which characterized hybridization forms

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[22] Jean-Paul Sartre, *Search for a Method*, trans. Hazel E. Barnes (New York: Random House, 1968), 30-31.

in fine art from the late 19th Century to the early 20th Century as well as the contemporary experimentations of Manovich and his definition of the artist as a 'filter.'

**Figure 20** ***Plate 567, Plate 738*** **and** ***Plate 344*****, Eadweard Muybridge, 1887. In http://photo.ucr.edu/photographers/muybridge/contents.html# (accessed October 28, 2004).**

3.2.20. These forms of hybridization did not only attempt to refocus the aesthetic perceptions but to regain, through the art practice, a philosophical understanding of the materiality of the world, it essence and its 'truth.' Malevich, with his analysis of the 'essence' and the Platonic 'ideal forms,' is an historical example [24] in the contemporary search for the real essence of real and virtual.

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[23] Umberto Eco, *Interpretation and Overinterpretation*, ed. Stefan Collini (Cambridge: Cambridge University Press, 1992), 97.

[24] "Both Malevich and Mondrian believed the world experienced through senses was an illusion, but Malevich, unlike Mondrian, searched for the essence of being, without making any connection to or derivation from the world of objects." Gail Harrison Roman and Virginia Hagelstein Marquardt, *The Avant-Garde Frontier: Russia Meets the West, 1910-1930* (Gainesville, Florida: University Press of Florida, 1992), 159. "If one tries, *ex post facto*, to look into the soul of the founder of Suprematism, the analogy between geometric and verbal images will seem more than justified, since an act of speech (or writing) is a movement of words just like the succession of frames in cinema." Margarita Tupitsyn, *Malevich and Film* (New Haven: Yale University Press, 2002), 127.

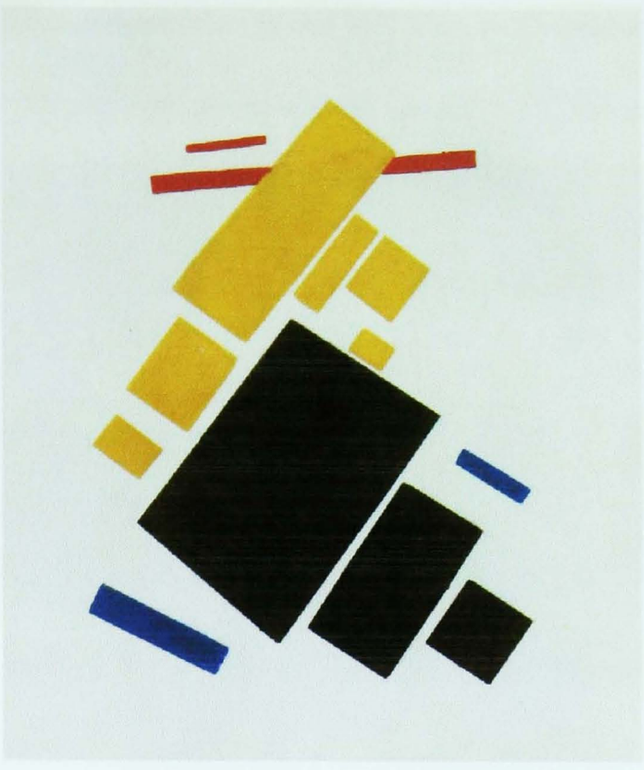

**Figure 21** ***Aeroplane Flying*****, Kasimir Malevich, 1915. Oil on canvas 22 5/8 x 19 in. (57.3 x 48.3 cm.), The Museum of Modern Art, New York.**

3.2.21. Another comparison on the essence of time, space, movement and being is offered by the following series of images, which from the chronophotography to the most recent 'Macromedia Flash effects,' show the iconography of descending a staircase.

3.2.22. *Computer Descending a Staircase, No 1*, (Aceti) is more than a simple technological remediation. It is a reinterpretation and translation of concepts which are framed within the technological context of the pixel. The movement is the 'reversed spiral' in opposition to the linearity of Duchamp, reflecting the spiraling of the implosive hyperreal nebula of Baudrillard. The artistic use that Duchamp made of technology [25] is more than a simple remediation process of Marey chronophotography. [26] This is because

[25] Craig Adcock, "Duchamp's Perspective: The Intersection of Art and Geometry," *Tout-Fait: The Marcel Duchamp Studies Online Journal* 2, no. 5 (April 2003), http://www.toutfait.com/issues/volume2/issue_5/news/adcock/adcock1.htm#N_10_ (accessed November 9, 2004).

[26] Craig E. Adcock, *Marcel Duchamp's Notes from the Large Glass: An N-Dimensional Analysis* (Epping, Essex: Bowker Publishing, 1981, 87-136. See also: Dawn Ades, Neil Cox and David Hopkins, Marcel Duchamp (London: Thames and Hudson, 1999); Duchamp's *Three Standard Stoppages* and Marey's chronophotographs in Jean Clair, *Duchamp et la Photographie: Essai d'Analyse d'un Primat Technique sur le Développement d'une Oeuvre* (Paris: Éditions du Chêne, 1977), 26-28, 52; Michel Sanouillet and Elmer

the representation is not just a technological and mechanical re-presentation, but also a philosophical statement on the nature of the experience that the artist is describing.

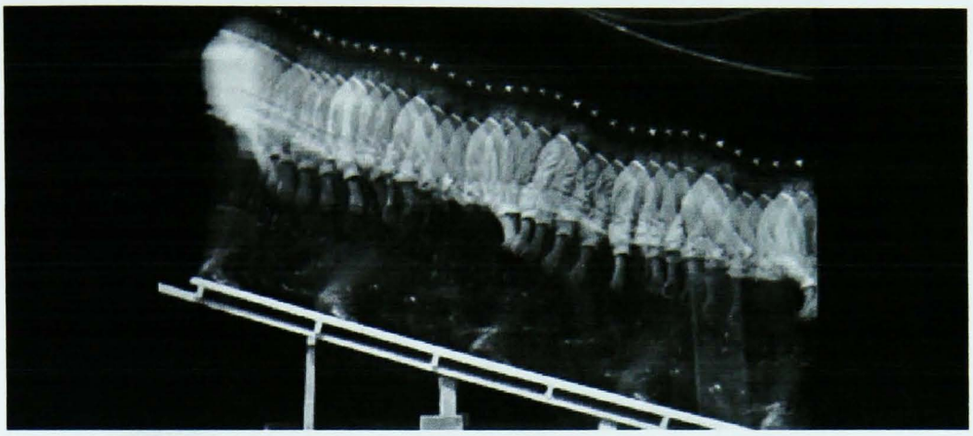

**Figure 22** ***Descent of Inclined Plane*****, Etienne Jules Marey. Chronophotograph from negative glass plate, Cinémathèque Française, equipment collection, http://www.expo-marey.com/ANGLAIS/mediasup.html (accessed October 28, 2004).**

**Figure 23** ***Nude Descending a Staircase, No 2*****, Marcel Duchamp, 1912. Oil on canvas 146 x 89 cm, Philadelphia Museum of Art, Philadelphia.**

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Peterson, ed., *The Essential Writings of Marcel Duchamp: Salt Seller, Marchand du Sel*, trans. George Heard Hamilton (London: Thames and Hudson, 1975) and Pierre Cabanne, *Dialogues with Marcel*

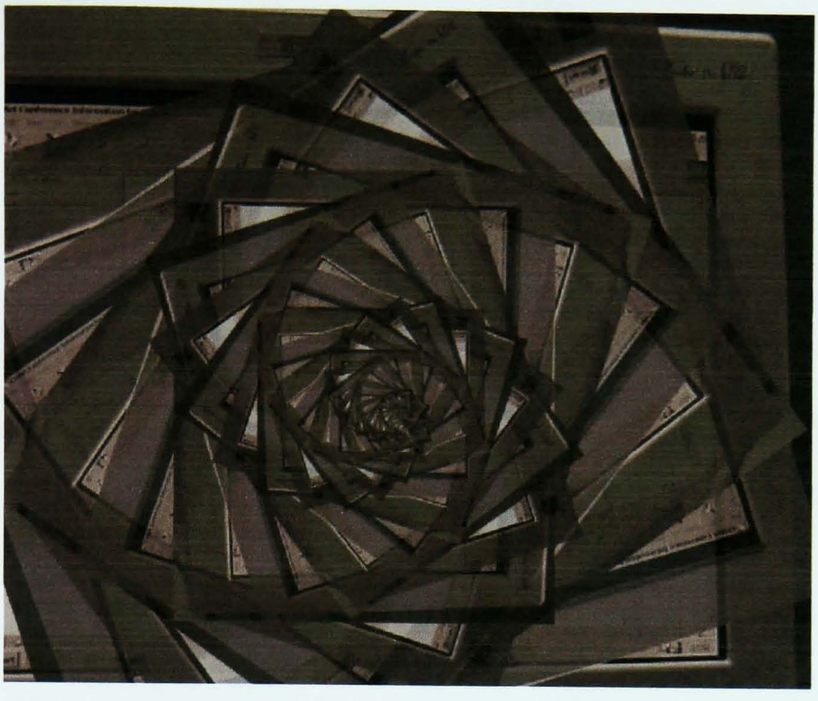

**Figure 24** ***Computer Descending a Staircase, No 1*****, Lanfranco Aceti, 2002. Photograph and mixed digital filters, presented at the British Academy, London.**

3.2.23. "But the Renaissance artist [...] had to strive for a greater knowledge of universals and master the structure of things so thoroughly that he could visualize them in any spatial context. The most illustrious instance of this natural union between knowledge and art is of course Leonardo da Vinci." [27] This striving for universal forms of knowledge is at work in the contemporary technological avant-garde which, through technology, attempts to grasp human and universal fundamentals: i.e. Latham, Duchamp, Malevich and Mondrian. [28] These representations are philosophical manifestations of the reality in which contemporary bodies are immersed and are modeled by invisible energies, as demonstrated by Watz.

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*Duchamp*, trans. Ron Padgett (London: Thames and Hudson, 1971). For Marey's work on movement see: Étienne-Jules Marey, *Le Mouvement* (Paris: G. Masson, Éditeur, 1894).

[27] E. H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation*, (New York: Princeton University Press, 2000), 154.

[28] "If we compare 2004 with 1914, we will in fact see a similar breadth of abstract styles: strict northern diet of horizontal and vertical lines in Mondrian, more flamboyant orgy of circular forms in Robert Delaunay working in Paris, even more emotional fields of Wasily Kandinsky, the orgy of motion vectors of Italian futurists. The philosophical pre-suppositions and historical roots which have led to the final emergence of "pure" abstraction in the 1910s are similarly multiple and diverse, coming from a variety of philosophical, political and aesthetic positions: the ideas of synesthesia (the correspondence of sense impressions), symbolism, theosophy, communism (abstraction as the new visual language for the proletariat in Soviet Russia), and so on. And yet it possible and appropriate to point at a single paradigm which both differentiates modernist abstraction from realist painting of the nineteenth century and simultaneously connects it to modern science. This paradigm is reduction." Lev Manovich, "Abstraction and Complexity,"

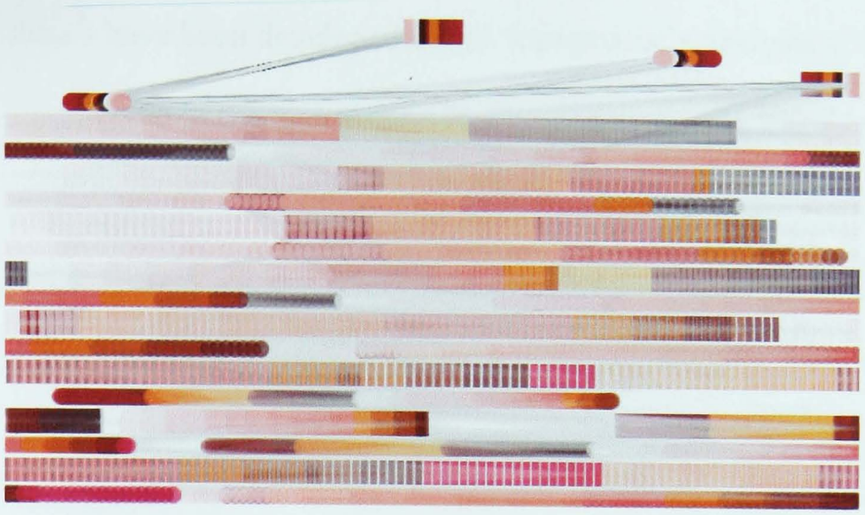

**Figure 25** ***AMOEBAABSTRACT 3*****, Marius Watz 2004. From the exhibition Abstraction Now in www.abstraction-now.at .**

> 3.2.24. If reality is made of bodies or visible surfaces, modeled by the action of invisible energies, the representation of the truth will not be possible outside a painting-philosophy, which will be able to unify the certainty of the tangible, superficial and static evidence to the sense of its internal dynamism: therefore painting is philosophy… [29]

3.2.25. Leonardo writes more on the relationship between visual art and philosophy.

> 3.2.26. He who despises painting loves neither philosophy nor nature. If you despise painting, which is the sole imitator of all the visible works of nature, you certainly will be despising a subtle invention which brings philosophy and subtle speculation to bear on the nature of all forms… [30]

3.2.27. Leonardo da Vinci's statement creates a methodological relation between painting and philosophy so strong that painting becomes philosophizing and philosophizing becomes painting. Both painting and philosophy, in this sense, represent a description of the world, of the real and of the unreal, of knowledge and its possibilities. Furthermore, the visual arts and the technological avant-garde in particular become an analysis of the human condition in its physical and metaphysical status. These are theories

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Radar, spring 2004, http://www.calit2.net/manovich/articles/abstract_complex/abstract_complex.html (accessed January 2, 2005).

[29] Leonardo da Vinci, *Scritti Letterari* (Milano: RCS Rizzoli Libri, 1991), 23. (My translation).

[30] Leonardo da Vinci, *The Notebooks Of Leonardo da Vinci* (Oxford: Oxford University Press, 1998), 195.

which have been developed in the Suprematist's analysis of Malevich and have been represented in the mainstream Hollywood cinema in *The Matrix Trilogy* through the representation and/or exploitation of Baudrillard's philosophical statements on contemporary society. These relationships evidence how expanded cinema and its extensions and/or representations are philosophical statements on the contemporary changes in human conditions and their relationship to technology. [31]

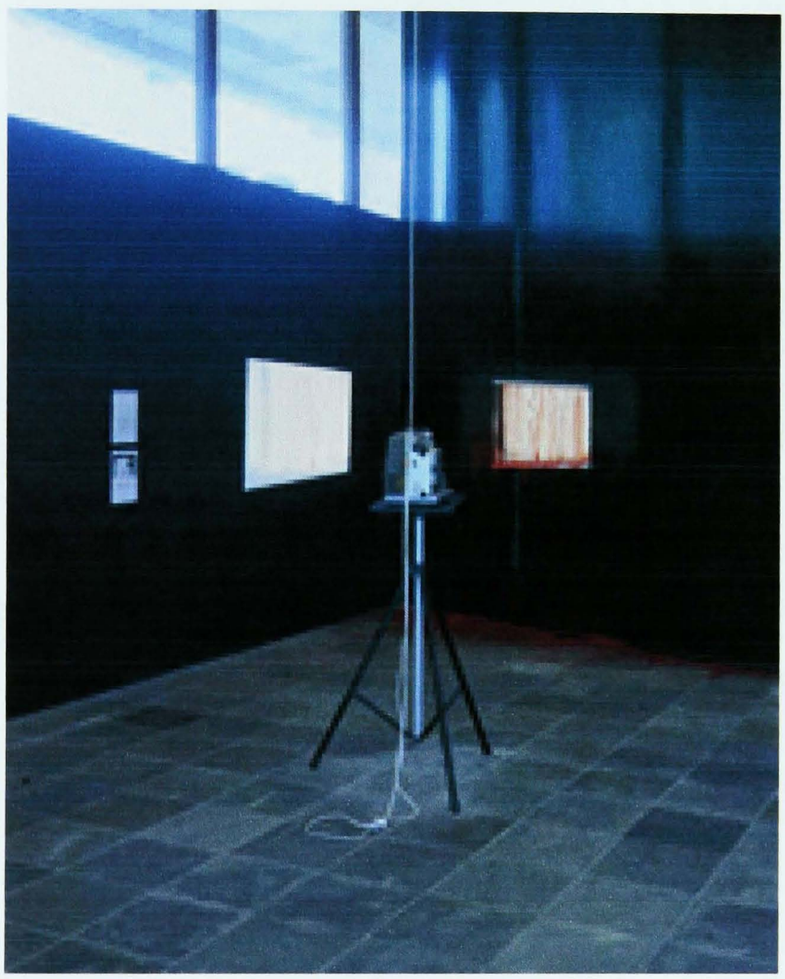

**Figure 26** ***Abstract Film No 1*****, Valie Export, 1966. "'Expanded cinema', i.e. the expansion of the commonplace form of film on the open stage or within a space, through which the commercial-conventional sequence of filmmaking – shooting, editing (montage), and projection – is broken up, was the art-form that I chose in the mid-1960s when I realised that the course of my life would lead me through the history of art." Valie Export, Expanded Cinema as Expanded Reality" Senses of Cinema, June 1, 2003, http://www.sensesofcinema.com/contents/03/28/expanded_cinema.html (accessed November 4, 2004).**

[31] "Change is now our only constant, a global institution. The human ecological biosphere is undergoing its second great transition, destined to be even more profound than the invention of agriculture in the Neolithic Age." Gene Youngblood, *Expanded Cinema*, (London: Studio Vista, 1970), 50.

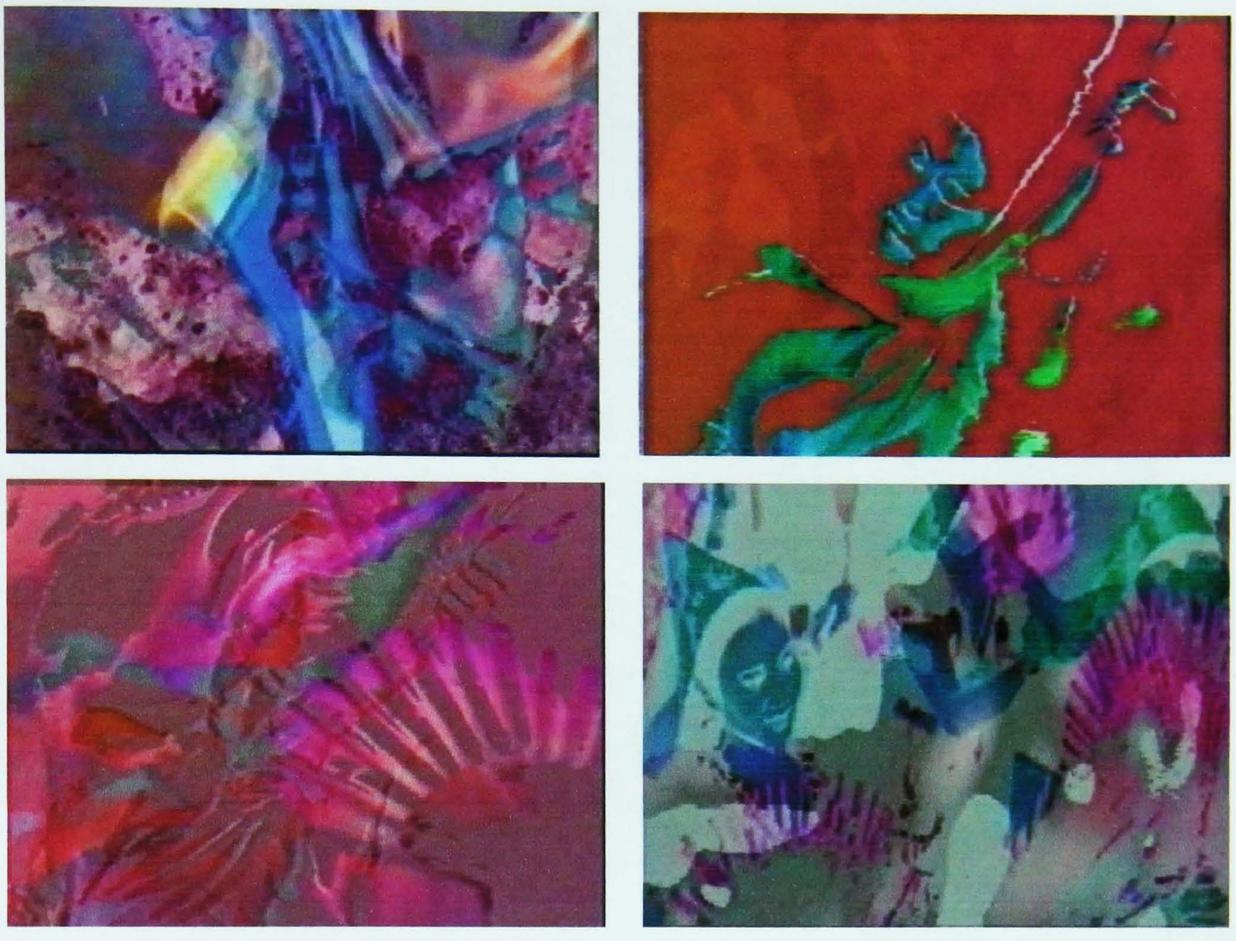

**Figure 27** ***Chronos Fragmented*****, Malcolm Le Grice, 1995. "The structural aim of the work lies in retaining a trace of the movement from the idiosyncratic towards the allegorical. This is to hold on to the concept (reading) of the material as raw and latent - available for new juxtapositions and new transformations - or perhaps remaining insignificant and trivial." Courtesy of the artist.**

**Figure 28** ***Chronos Fragmented*****, Malcolm Le Grice, 1995. Courtesy of the artist.**

3.2.28. The media, as evidenced by Malcom Le Grice, Valie Export and David Larcher, become a chronological analysis of its existence. A continuous portrayal of layered multiple existences which happen at the same moment in time. Zeno's arrow is stopped in its course, because it is at each moment of its trajectory re-layering and restructuring its past, the future and its present existence. [32]

3.2.29. "The third is ... that the flying arrow is at rest, which result follows from the assumption that time is composed of moments ... . he says that if everything when it

[32] "In other words, although not in motion at any one instant, the arrow is in motion at *all* instants in time (an infinite number of them), so is never at rest. This conclusion stems from calculus and continuous functions (as emphasised by Weierstrass and the .at-at theory of motion.), by pointing out that although the *value* of a function f(t) is constant for a given t, the *function* f(t) may be non-constant at t." Peter Lynds, "Zeno's Paradoxes: A Timely Solution," *Philsci-Archive*, September 15, 2003, http://philsci-archive.pitt.edu/archive/00001197/02/Zeno_s_Paradoxes_-_A_Timely_Solution.pdf (accessed January 20, 2005).

occupies an equal space is at rest, and if that which is in locomotion is always in a now, the flying arrow is therefore motionless. (Aristotle *Physics*, 239b.30)" [33]

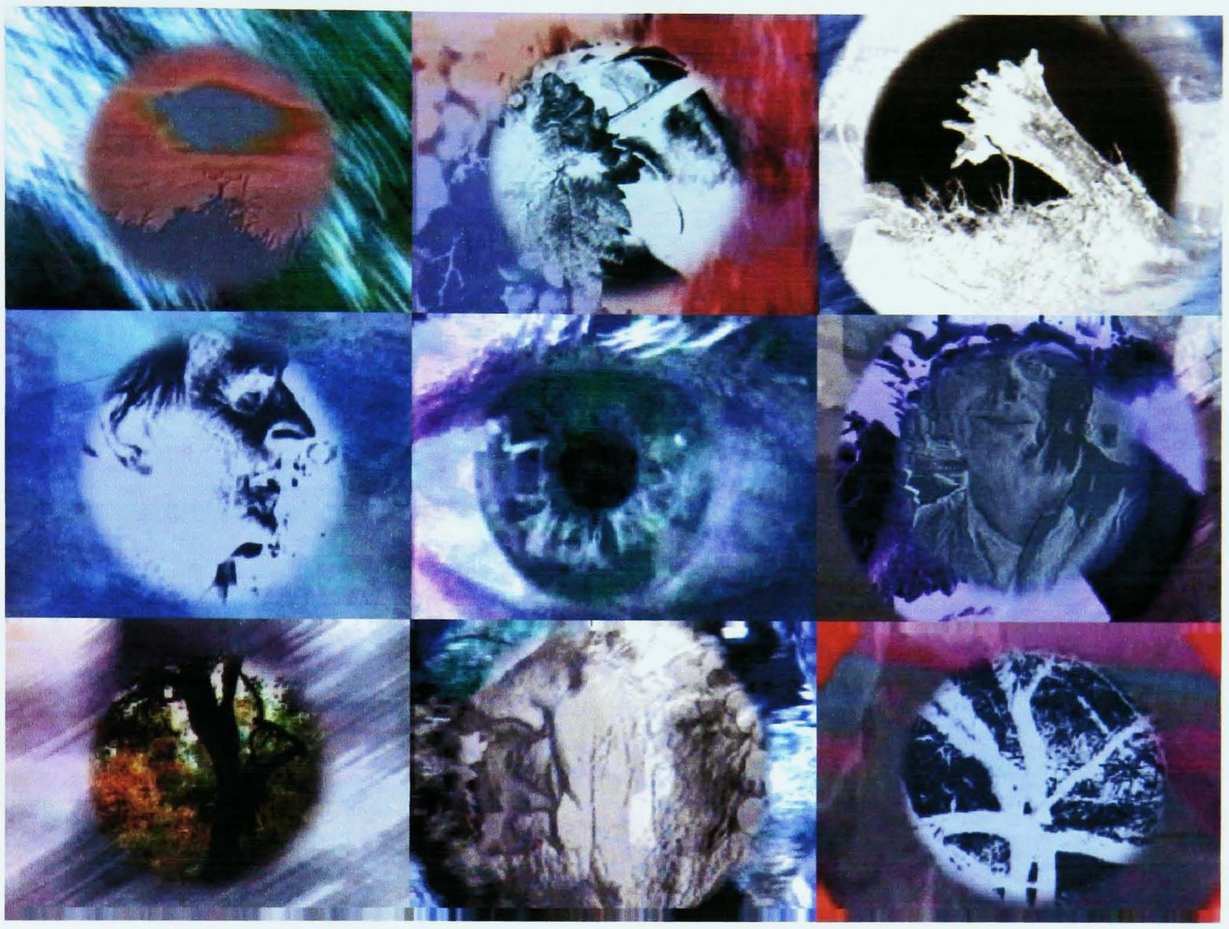

**Figure 29 *Even a Cyclops Pays the Ferryman*, Malcolm Le Grice, 1998. The image is a composition of three multiscreen different filmic sequences. The multiscreen work of Le Grice is evolutionary and multiform in nature, analyzing the contradictions and tensions of times and contemporary forms of 'multidiffusion' and evolution. Malcolm Le Grice looks at "Time [...] the one-way flowing medium in which events come into being, mature and decay." Courtesy of the artist.**

> 3.2.30. Coming from a background of formal/structural experiment, I could no longer assume a singular form of resolution to thematic notions, nor their full consistency with the 'nature' of the filmed material. This view emerged out of the anti- or non-narrative concepts which have accompanied my filmic exploration of repetition, improvised variations on visual themes, the notions of 'verticality' proposed by Maya Deren and the awareness of programmable, permutational or multiple solutions to structural problems. It also emerged from the actual possibility of exploring complex multi-connectiveness or multiple variation implicit in the use of computer technology.[34]

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[33] Nick Huggett, "Zeno's Paradoxes," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2004, http://plato.stanford.edu/archives/sum2004/entries/paradox-zeno/ (accessed January 2, 2005).

[34] Malcolm Le Grice, *Experimental Cinema in the Digital Age* (London: BFI Publishing, 2001), 254.

3.2.31. Cinema becomes more than a philosophical statement, it becomes the materiality of the representation of nature: the description of the world through the medium generates the world." [35] Examples of the materiality of the medium are Valie Export, Peter Gidal and Malcolm Le Grice, who in their works analyze the impact of the medium in reshaping both the content and the interaction of the viewer with the medium and the content.

3.2.32. A contemporary example of this integral relationship between the sign and reality, the illusion and the materiality of film is shown through the presence in the movie *The Matrix* (1999) of the book *Simulacra and Simulation* by Jean Baudrillard. A philosophical presence which shapes the mainstream Hollywood cinema as a materialization of the simulation and the illusion.

3.2.33. "The admiration for certain achievements results in an upwards spiral which manifests itself in a craze, a fashion or even a dominant style." [36] A spiral evolved through technological advancements. The avant-garde, in all of its different crazes, fashions and styles, represents this spiraling motus at its best. The spiraling movement, which Leonardo presented as an inseparable element of painting, determined by invisible forces. On the contrary, Baudrillard considers this spiraling movement not a form of knowledge but an implosion in the black hole of digital media. These are the same the forces which philosophy attempts to analyze and that permeate the internal *motus*, the flux, of art representations. Both art and philosophy attempt to crystallize the nature of the real and of the hyperreal, of what is 'similar' to the real; its simulacrum.

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[35] In the same article Valie Export also explains "The expansion of our film work proceeded initially from the material concept; thus the 'illusion' film was transformed into the *material* film, and in this way the foundations of the film medium were reflected." Valie Export, "Expanded Cinema as Expanded Reality," *Senses of Cinema*, May 31 - June 1, 2003, http://www.sensesofcinema.com/contents/03/28/expanded_cinema.html (accessed November 4, 2004).

[36] E. H. Gombrich, *The Uses of Images: Studies in the Social Function of Art and Visual Communication* (London: Phaidon Press Limited, 2002), 102.

3.2.34. In the research of a truth and in the application of a method for the research of the truth, the means and ends have not always been clear. In contemporary postmodern art each has been mirroring the other. In this context the methodological endeavors have created the serendipitous systematic, with which, in the hope "that even errors can produce interesting side effects," [37] postmodernists have started to analyze reality, discarding the theoretical approach that "experience, habit, and opinion are untrue in the sense that they can never produce *certain* and *demonstrable* truth." [38] The experiential knowledge based on serendipities raises the question of what is essential to genuine knowledge.

> 3.2.35. The answer is that genuine knowledge must be knowledge of what is *true*: genuine knowledge is true belief. But it is more: it is *certain, unshaken, unshakeable and justifiable* conviction, as opposed to 'the [uncertain and shakeable] opinions of the mortals in which there is no true [justifiable and certain] conviction at all.' We do not speak of 'knowledge' if we hit upon the truth by accident. In this case we say (as indeed Xenophanes did say) that we do not *know* but that we are merely guessing. [39]

3.2.36. Therefore, in both conflicting postmodern fields of analysis, real and virtual, this research will not attempt to make use of philosophical and artistic concepts as such, nor summarize the principal theories. It will instead introduce these concepts through the psychoanalytical technique of 'free association' [40] as applied to particular artistic practice and artwork using the 'elenchus' [41] logic systematic analysis developed by Socrates in the Cratylus of Plato.

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[37] Umberto Eco, *Serendipities: Language and Lunacy*, trans. William Weaver (London: Phoenix, 1999), 69.
[38] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 117.
[39] Ibid., 116-117.
[40] 'Method according to which voice must be given to all thoughts without exception which come into the mind, whether such thoughts are based upon a specific element (word, number, dream-image or nay kind of image at all) or produced spontaneously.' Jean Laplanche and Jean Bertrand Pontalis, *The Language of Psychoanalysis*, trans. Donald Nicholson Smith (London: Karnac and The Institute of Psycho-Analysis, 1988), 169.
[41] This is a method which with an elenchus, a list of concrete and experiential instances, attempts to prove ignorant those who believe that they know. The difficulty is to convert this critical refutation by

3.2.37. The research will also aim to confute the 'absurd' argument of its own analysis not to prove the truth. "And indeed the reduction ad absurdum is a method of almost absolute proof, in contrast to the axiomatic method (say, Euclid), which works with unproved assumptions. And it is in contrast to Aristotle's use of syllogisms (that is, derivations) as proofs, an attempt which drove him to invent induction and which, in despair, he fathered on Socrates, because Socrates had used examples, instances – though only in his disproofs – in the Socratic elenchus." [42]

3.2.38. This raises the issue of a methodological analysis which rests on the hypothetico-deductive method as a form of vision, which on occasion needs to be visionary [43] in order to generate a new understanding based on its experiential applications.

> 3.2.39. Peirce, who insisted on the conjectural element of interpretation, on the infinity of semiosis, and on the essential *fallibilism* of every interpretative conclusion, tried to establish a minimal paradigm of acceptability of an interpretation on the grounds of a consensus of the community (which is not so dissimilar from Gadamer's idea of an interpretative tradition). What kind of guarantee can a community provide? I think it provides a factual guarantee. Our species managed to survive by making conjectures that proved to be statistically fruitful. [44]

3.2.40. The survival of theories and hypotheses is dependant upon a complex structural critique, which, according to Eco, is the basis for the verification of knowledge. "If you preferred defending your mistake to amending it, he would waste not a word

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counterexamples into a positive method of proof. Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001). 4.

[42] Ibid., 86.

43 "Io so. Io so i nomi dei responsabili di quello che viene chiamato 'golpe' [...] Io so. Ma non ho le prove. Non ho nemmeno indizi. Io so perché sono un intellettuale." Pier Paolo Pasolini, "Cos' è Questo Golpe? Io So," Corriere della Sera, November 14, 1974. http://www.corriere.it/speciali/pasolini/ioso.html (accessed November 12, 2004). "I know. I know the names of those responsible for what is called 'golpe' [...] I know. But I don't have proof of it. I don't even have evidences. I know because I am an intellectual." (My translation).

more, would spend no fruitless toil [...] he will force you to flood the obscure with light, will convict the doubtful phrase, will mark what should be changed, will prove an Aristarchus." [45]

3.2.41. In this context, what is essential to the real is its meaningfulness as an element in its own progress towards the truth. "The theories remain speculative; yet, under the influence of severe criticism, they show a greater and greater degree of truthlikeness." [46] This includes Baudrillard's theory of the simulacra and the hyperreal, which as such, is based on the recognition of the critics and on the assumption of a comparative verification with the real, or with what remains of the real. In his philosophical fresco of the hyperreality of life, Baudrillard has followed the methodology of Leonardo da Vinci, 'painting is philosophy.'

> 3.2.42. ...just as painters, when they wish to produce an imitation sometimes use only red, sometimes some other colour, and sometimes mix many colours, as when they are making a picture of a man or something of that sort, employing each colour, I suppose, as they think the particular picture demands it. In just this way we, too, shall apply letters to things, using one letter for one thing, when that seems to be required, or many letters together, forming syllables, as they are called, and in turn combining syllables, and by their combination forming nouns and verbs. [47]

3.2.43. This is the element which has been criticized in the previous chapter, a description of a technological reality, which far from being complete, leaves open questions and new possibilities.

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[44] Umberto Eco, *Interpretation and Overinterpretation*, ed. Stefan Collini (Cambridge: Cambridge University Press, 1992), 144.
[45] The name of Aristarchus, famous as an Homeric scholar of Alexandria in the second century B.C., had become proverbial as that of a keen critic. Horace, *Ars Poetica*, ed. G. P. Goold, trans. H.R. Fairclough, Loeb Classical Library 194 (Cambridge, MA: Harvard University Press, 1999), 487.
[46] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 109.
[47] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), 139.

3.2.44. What is combined in the hyperreal is the reality of simulacra, or a simulacrum which becomes the basic form of a failing investigative knowledge. The hyperreal nebula of Baudrillard makes "useless to dream of a revelation through form, because the medium and the real are now in a single nebula whose truth is indecipherable." [48]

**Figure 30 *Clouds,* directed by Peter Gidal, 1969. United Kingdom, 10 minutes. The anti-illusionistic representation is that of dialectic materialism. 'Virtually' nothing ON screen, in the sense of IN screen and the obsessive repetition becomes a materialist practice.**

3.2.45. The issue becomes that of a redefinition of the film/video realm, which, through new entities, has a diverse materiality to be explored and defined. "And yet if anyone is, no matter why, ignorant of the correctness of the earliest names, he cannot know about that of the later, since they can be explained only by means of the earliest, about which he is ignorant." [49] Plunged into the new hyperreality of ignorance, the simulacra are the only evidence of reality because the originals are lost. The truth of the hyperreal nebula is indecipherable because the reader is ignorant, and the distance from the original is such that the earliest appearance is lost. But still, the evolutionary process is there and it can be reverted in order to get close to a simulacrum of the original.

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[48] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 83.
[49] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), 143.

3.2.46. "So I think we ought to re-examine my utterances. For the worst of all deceptions is self-deception. How can it help being terrible, when the deceiver is always present and never stirs from the spot? So I think we must turn back repeatedly to what we have said and must try, as the poet says, to look 'both forwards and backwards.' [50] " [51] It is this process of looking both forward and backward which has collapsed through the experience of the new media structures. It is contrary to McLuhan's approach to the rear-view mirror theory: [52] instead of looking at the future with the structural parameters of the past, the contemporary practice looks at the past with the structural parameters of the future. Instead of past-izing the future, it is futur-izing the past, changing the essence of what it was in order to be the image of what it wants to be.

3.2.47. It is in the analysis of the past that Socrates' warning has contemporary relevance: "...On the contrary, the image must not by any means reproduce all the qualities of that which it imitates, if it is to be an image." [53] Socrates also affirms that an original and a perfect copy of the original are two originals. But even with the modern technologies in the hyperreal world of the simulacra, what can be reproduced is a mere image of an original, a visual alteration of a past image. The image embodies the desire of eclipsing the past. [54] In this framework Orlan's work is daunting, because it is not an evolutionary transformation moving towards the future, but an alteration of the past: a psychotic revenge on the essence of what humans are.

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[50] The poet referred to by Plato is Homer and the verses mentioned are in the Iliad.
[51] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996). 151.
[52] Marshall McLuhan and Quentin Fiore, *The Medium Is the Massage: An Inventory of Effects* (New York: Bantam Books, 1967). 74-75.
[53] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996). 163.
[54] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001). 102-103.

3.2.48. This process represents the conflict between 'original and copy' in Baudrillard's theorization and is also expressed by Gombrich in his artistic analysis of the eternal patterns of art. "Individual trees or horses or men, such as the painter may encounter in real life, are only imperfect copies of these eternal patterns, imperfect because base matter will always resist the flawless seal and prevent the idea from realizing itself. It was on these grounds that Plato himself denied art its validity, for what value can there be in copying an imperfect copy of the idea?" [55] On these grounds Malevich's attempts failed in the representation of a perfect essence because the representation of the essence is a Platonic ideal and not a realistic essence.

3.2.49. Baudrillard describes the problem of essence as "le Flux du changement, le Cycle du devenir," where reality is an optional variable. [56] A variable that allows the modification of the past and introduces the concept of 'change,' as opposed to that of 'becoming,' as a perfect image. It is in this non-flawless world of 'reality' that visual images come to life, and their inner imperfection marks their creation. It is the absence of a perfect materiality, but also the absence of that 'aura' [57] or 'anima mundi,' that whenever present, if ever present, generates the empathy between artwork and viewer.

3.2.50. It is in this non-flawless world of 'real' representations that the images come to be. "Then if the name is like the thing, the letters of which the primary names are

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[55] E. H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation* (New York: Princeton University Press, 2000), 155.

[56] "Le signe même de la naissance, votre signe astrologique, sera un jour en option dans un future Institut de Chirurgie Zodiacale où l'on pourra, sours certaines conditions, changer de signe comme on change aujourd'hui de visage. [...] Le changement contre le devenir." Jean Baudrillard, *L'Échange Impossible* (Paris: Galilée, 1999), 99-100.

[57] "If the distinctive feature of the images that rise from the *mémoire involontaire* is seen in their aura, then photography is decisively implicated in the phenomenon of the 'decline of the aura.' What was inevitably felt to be inhuman, one might even say deadly, in daguerreotypy was the (prolonged) looking into the camera, since the camera records our likeness without returning our gaze. But looking at someone carries the implicit expectation that our look will be returned by the object of our gaze. Where this expectation is met (which, in the case of thought processes, can apply equally to the look of the eye of the mind and to a glance pure and simple), there is an experience of the aura to the fullest extent." Walter Benjamin, *Illuminations*, ed. Hannah Arendt, trans. Harry Zorn (London: Pimlico, 1999), 184.

to be formed must be by their very nature like the things, must they not? Let me explain. Could a painting, to revert our previous comparison, ever be made like any real thing, if there were no pigments out of which the painting is composed, which were by their nature like the objects which the painter's art imitates?" [58] In the re-composition of a natural world, in the manipulation of the materiality of the object through the media, the artist creates the image and the meaning of the word and of the world.

3.2.51. The creative action exists through a combinatory method which, through the use of a matrix, an algorithm or a filtering action, balances the composition of a new meaning, as explained by Manovich. "Do you think this is also the method of discovering realities, and that he who has discovered the names has discovered also the things named; or do you think inquiry and discovery demand another method, and this belongs to instruction?" [59]

3.2.52. The integrated use of methodologies in the exploration of contemporary reality has the advantage of combining diverse strengths in the analysis of the simulacra and the hyperreal. The hyperreal nebula needs a methodology to analyze the simulacra, while at the same time retracing the origins of its reality. This is necessary due to Baudrillard's theory of the hyperreal nebula, which has implicitly admitted the existence of the nebula as the existence of a knowledgeable object. If the hyperreal was not a knowledgeable entity, it could have never been the object of theoretical analysis in the first place. [60]

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[58] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), p.169.
[59] Ibid., 151.
[60] "Here I stop my trustworthy speech to you and thought about truth; from here onwards learn mortal beliefs, listening to the deceitful ordering of my words; for they established two forms in their minds for naming, of which it is not right to name one." Parmenides, *Fragments*, trans. David Gallop (Toronto: University of Toronto Press, 1984), 75. "Parmenides' version of rationalism is very simple: if you wish to find the truth, there is only one way: logical proof. In this he is, of course, mistaken; but he is not wholly mistaken, in so far as he applied a method of disproof, of refutation: the *reductio ad absurdum*." Karl

3.2.53. In this analysis of the hyperreal in order to research its possible meanings, it is relevant to quote Sophocles' Ajax.

"Ahi, ahi! Who ever would have thought that my name, Ajax, would carry in a syllable the sign of my sorrows." (My translation) [61]

The onomatopoeic rendering of the translation by Albini and Faggi of Sophocles reinforces Plato's concept that in the name, in the syllables and in the letters exists a truth or a simulacrum of the truth, an appearance, which might lead us to a better understanding of reality. Or at least a reflection of reality.

> 3.2.54. ...and Cratylus is right in saying that names belong to things by nature and that not every one is an artisan of names, but only he who keeps in view the name which belongs by nature to each particular thing and is able to embody its form in the letters and syllables. [62]

3.2.55. If Socrates' assumption of a reflection within the name of the real or the hyperreal is valid, it is then possible to progress on these criteria and experiment with a method to analyze its functionality for the artist.

3.2.56. "The analogy that I have been pursuing through these later sections is, I want to insist, one between art and language." [63] Without losing the philosophical perspective, this research will demonstrate that a possibility of enquiry can be derived from the alteration of cultural perspectives, presented as the final discovery and final

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Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 102.

[61] My comparative translation from Italian and English texts: "*Ahi, ahi! Chi avrebbe mai pensato che il mio nome, Aiace, portasse in una sillaba il segno del mio patire?*" from Sophocles, *Aiace*, trans. Umberto Albini and Vico Faggi, (Milano: Arnoldo Mondadori Editore, 1983), 31 and "*Alas! Who ever would have thought that my name would come to harmonise with my sorrows*?" from Sophocles, *Ajax*, trans. Hugh Lloyd-Jones, (Cambridge, MA: Harvard University Press, 2001), 73.

[62] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), 31.

[63] Richard Wollheim, *Art and Its Objects* (Cambridge: Cambridge University Press, 1985), 132.

truth. In this sense the alteration of the word Hypnos, [64] might, within a Socratic elenchus, defy the image of simulacra as representative of Thanatos, [65] offering an alternative philosophical perspective as well as an alternative art practice.

> 3.2.57. Yet I believe that we can develop a logical theory of understanding – and of different degrees of understanding – that shows that understanding is quite independent of pictures and models: a theory of rational understanding based upon a purely logical rather than a psychological idea of problem solving; and applicable to the most abstract scientific problems, and to the boldest and most novel scientific theories. [66]

3.2.58. Therefore, this research will attempt a reconstruction which, by moving from the Socratic philosophical approach, could lead to a clearer understanding of the elements which characterize the present definition of hyperreality. And if "it is *now impossible to isolate the process of the real*, or to prove the real" [67] as Baudrillard states, what is then impossible is to prove the reality of the simulacra itself. Furthermore, if Thanatos becomes a simulacrum, through the hyperreal process of reality being emptied of its meaning by the simulacra, then Thanatos becomes an image devoid of meaning.

3.2.59. It appears that Baudrillard has been able to defy 'Death,' or at least to empty it of its effects. But in his description of Thanatos and destruction of the real, he has created a new reality and with it a new image: the simulacra and its hyperreality. Baudrillard's representation of the real as an implosive destiny appears to be fundamental to his hyperreal nebula, where what seems to be happening is an exponential Promethean explosion of simulacra, [68] instead of an implosion of the hyperreal.

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[64] Hypnos is the God of sleep. Hesiod, *Theogony*, ed. G. P. Goold, trans. Hugh. G. Evelyn-White. Loeb Classical Library 57 (Cambridge, MA: Harvard University Press, 2002), 95.
[65] Thanatos is the God of Death. Ibid.
[66] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 203-204.
[67] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 21.

3.2.60. The hyperreal nebula is "the impression of entering and leaving time in a spatial-temporal haze where the centuries are confused." [69] It is a conjunction, a temporary moment of a process, it is not the reality itself as eternal and continuous, because that is gone, eliminated by the simulacrum. Therefore, this process is the birth or death of something new, which although it cannot be called real, is a process in the creation of alternative possible forms of realities. This process is the death and birth of 'something else' which is a stage in the evolutionary process of mankind, a moment in which the simulacrum has overcome previous existing elements, enabling the matrix of new evolutionary forms. The final reality cannot be that of the simulacra, for the reality itself, according to Baudrillard, has been dealt with. But the conclusion of this process cannot be the meaning and reality of the simulacrum, because it would imply that the simulacrum represents a meaning, that of a **real death**.

3.2.61. If it is impossible to reconstruct reality out of the unreal generated from the real, the only representation left it is the "hallucination of the real, of lived experience, of the quotidian, but reconstituted, sometimes down to disquietingly strange details,... brought to light with a transparent precision, but without substance, derealized in advance, hyperrealized." [70] This hallucination of the real, of the unreal from the real, more than the characteristics of Thanatos, possesses the elements of his brother, Hypnos, god of sleep and its hallucinatory dreams.

3.2.62. Humanity is the spectator of the Theogony. A Theogony which, based on the idea of simulacra, according to the ancient myths, is causally generated by light.

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[68] Ibid., 121.
[69] Umberto Eco, *Travels In Hyperreality*, trans. William Weaver (London: Pan Books Ltd, 1987), 11.
[70] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 124.

Chaos [71] is differentiated by the light. And from this differentiation Nyx, the mother goddess Night who originated from Chaos, through a process of closures, [72] creates a new Cosmogony.

3.2.63. The light comes out of the darkness, it is a process of definition, differentiation and the re-proposition of the nebula as undistinguished simulacra. This is an hypnotic process, which pushes back the boundaries of knowledge towards the elements of primeval Chaos, to Nyx, limited in her immense but finite nature, and before her, to that originating Chaos who Hesiod considered as the time of the 'singularity.' [73]

3.2.64. "...and tell me which of them first came to be. Verily at the first Chaos came to be,..." [74] What regains power in this nebula is not the concept of Chaos, but the experience of an evolutionary reality. What the simulacra may have reinforced as an element of the real is the deceiving appearance of Hypnos, God of Sleep. "And Night bare hateful Doom and black Fate and Death, and she bare Sleep and the tribe of Dreams." [75]

3.2.65. "...and if a letter is added or subtracted, that does not matter either, so long as the essence of the thing named remains in force and is made plain in the name." [76] Hypnos, (Υπνος) could retrace his origins in the simulation of his mother Night, (Νυξ). Hypnos appears to be the simulacrum of Night, and to become an Hyper-Night in this linguistic reconstruction:

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[71] The concept of Chaos, which is referred to in this analysis, is the mythological concept, not the principles of the 'Chaos Theory.'

[72] Hilary Lawson, *Closure: A Story of Everything* (London: Routledge, 2001), 6-7.

[73] The use of the term 'singularity' is in a comparative context, which is based on the fact that in Hesiod's narration the concepts of Cosmogony (genesis of the universe) and Theogony (genesis of the divinities) coincided. For a reference on the subject in the field of astronomy: Stephen Hawking, *A Brief History of Time: From the Big Bang to Black Holes*, (London: Bantam Press, 1988), 54.

[74] Hesiod, *Theogony*, ed. G. P. Goold, trans. Hugh. G. Evelyn-White, Loeb Classical Library 57 (Cambridge, MA: Harvard University Press, 2002), 87.

[75] Ibid., 95.

[76] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), 41.

(Υπερ Νυξ) →Υπερνυξ →Υπενυξ →Υπενυς→ Υπενος →(Υπνος).

3.2.66. Following the thread of Socrates in the Cratylus of Plato, it could be stated that Hypnos resembles his mother Night in some of his characteristics. Hypnos is a partial representation of Night, a Sleep into which mankind falls, but from which mankind can reawaken. "O thou that sleepest, what is sleep? Sleep resembles death. Oh, why not let thy work be such that after death thou mayst retain a resemblance to perfect life, rather than during life make thyself resemble the hapless dead by sleeping." [77]

3.2.67. This analysis is a collage of theoretical analyses which attempts to regain a hold of the 'unreal' concept of reality. The control of the veridicity of this analysis is in the critical examination of its structure and its concepts. "It is this critical examination of explanatory stories, or explanatory theories, undertaken in the hope of getting nearer to the truth that I regard as characteristic of what may be somewhat loosely described as *rationality*." [78]

3.2.68. By analyzing Baudrillard's construct of a nebula of hyperreality, the research aims to distinguish, from a representation of implosive Chaos, what is reality and what are the effects of a theory of simulacra.

3.2.69. Baudrillard follows the line of an evolutionary process from the undistinguished Chaos when he says that "they are two versions of the same general process of implosion that follows the gigantic process of explosion and expansion characteristic of past centuries. When a system reaches its own limits and becomes

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[77] Leonardo da Vinci, *The Notebooks of Leonardo da Vinci* (Oxford: Oxford University Press, 1998), 274.
[78] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 109.

saturated, a reversal is produced – something else takes place, in the imaginary as well." [79]

3.2.70. What takes place is the attempt to determine what will follow, or at least to understand the evolutionary trends. If there is an implosive evolutionary process in action, the result will not be necessarily a return to Chaos, but a transitional phase which is characterized by the alternation of Night and Day, the transitional presence of Hypnos and its simulacra or the leitmotiv of Death and Life.

3.2.71. Even if Thanatos is considered the final result of this evolutionary implosion, there is the necessity to distinguish between Thanatos and his brother Hypnos, who with his simulacra sheds the light of hyperrealism onto the real and the vital forms. "*...parum claris lucem dare coget,*" [80] the Latin quote from Horace expresses how Hypnos floods the obscure with light, evidencing the complementary relationship of the presence and/or absence of Hypnos and Thanatos.

3.2.72. "The glowing Sun never looks upon them with his beams, neither as he goes up into heaven, nor as he comes down from heaven." [81] The impossibility of Thanatos and Hypnos being touched by light, symbolizes the impossibility of being known by the human rational, of being captured by the categories of the intellect, touched by the light of human knowledge.

3.2.73. Baudrillard could have chosen the obscurity, the absence of specification, the chaos of undistinguished hyperreality as a methodology for his existence and

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[79] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 123.
[80] Horace, *Ars Poetica*, ed. G. P. Goold, trans. H. R. Fairclough, Loeb Classical Library 194 (Cambridge, MA: Harvard University Press, 1999), 486.

'oeuvre.' But at the same time he has defied his activity as a philosopher, as one who shines light into the obscure world of human knowledge, thereby creating a systematic of non-knowledge devoid of any structural meaning.

> 3.2.74. The point to note about Baudrillard's account of Disneyland is that the theme park is not to be understood as a permutation on Eco's (1987) 'authentic replicas' – and thus derivative, but might rather be characterised as a 'real fake' – and thus original. To be sure, the distinction between the two terms is an analytic rather than an empirical one – and each shares with the notion of an achieved utopia the common status of oxymoron. [82]

3.2.75. Because of its epigenetic characteristics, the oxymoron symbolizes the idea of an undistinguished return to Chaos achieved through Hypnos. But it is here that the argument seems to falter: if everything is re-metamorphosed, and recreated preserving multiple hyper-oxymoron characteristics, this is the anticipation of the black hole into which humanity is falling, at least according to Baudrillard. The result being the implosion into the hyperreal simulacrum of a black hole.

3.2.76. But if this implosion is happening, is it an absolute truth? Or in reality does this represent a simulacrum, an event which is not real? The concept of implosion in the hyperreal nebula is itself a hyperreal construct, therefore, does it present and/or represent an evolutionary infinite number of real possibilities, like in the mathematics of the non standard analysis and hyperreal numbers? [83]

> 3.2.77. Plato in the Cratylus discusses the problem of whether words have their source in nature, by direct imitation of things, or in law, by convention. He does not make a definitive choice; indeed, he suggests a third option, that language must reflect the order of ideas. European culture was for a long time directly influenced by Aristotle's solution: the sounds of the voice are

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[81] Hesiod, *Theogony*, ed. G. P. Goold, trans. Hugh. G. Evelyn-White, Loeb Classical Library 57 (Cambridge, MA: Harvard University Press, 2002), 135.
[82] Nick Perry, *Hyperreality and Global Culture* (London: Routledge, 1998), 79.
[83] Francine Diener and Marc Diener, eds., *Nonstandard Analysis in Practice* (Berlin: Springer, 1995), 3.

conventional symbols that express a passion of the soul, even though this passion of the soul arises spontaneously as the image of the thing that exists. [84]

3.2.78. In the same way, from reality rises the hyperreality. In this sense Baudrillard has adopted a system where the simulacra rise into the hyperreal as the images of the things that exist.

3.2.79. If it is possible to imagine a mathematical relation between the world of simulacra and the hyperreal numbers (*R) [85] it is possible to point out that the hyperreals are constructed via sequences of reals: **which equates to saying that there is no hyperreal without real.**

3.2.80. The existence of reality in opposition to the hyperreality has significance in the fact that, missing the real, the hyperreal disappears. The simulacrum does not come to light without its original.

3.2.81. Would the simulacrum's absence mean the destruction of Hypnos? Would it cause a return to Chaos? It would signify that the evolutionary process has to lead the relationship between reality and virtuality into a different realm, but still an evolutionary realm where the hyperreal is a phase and not a conclusive stage. The process of reawakening from Hypnos and the world of simulacra will not cancel the influence of the hyperreal, but cause a different reality which will become part of a new evolutionary stage.

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[84] Umberto Eco, *Serendipities: Language and Lunacy*, trans. William Weaver (London: Phoenix, 1999), 34.
[85] This assumption is based on a comparative logic construct and it is not a mathematical truth. Alan Sokal and Jean Bricmont, *Intellectual Impostures* (London: Profile Books, 1998), 5.

3.2.82. In this context the engagements of Malcolm Le Grice with the project Chronos Fragmented [86] and David Larcher's analysis of Zeno in Videovoid, are example of a relationship based on the illusory and paradoxical nature of time/narrative.

3.2.83. Therefore the existence of simulacra is a symbolic existence, a presence, a stage, but not the conclusive evolutionary stage of the universe. If the latter was the case Baudrillard's theory would be based not on Hypnos but Thanatos, and not on the simulacrum as a sign of Hypnos, but as a sign of Thanatos.

3.2.84. This conflicting relationship between Hypnos and Thanatos, Real and Virtual, reflects the contrasts between the contemporary categories in the determination of an evolutionary trajectory. The implosive digital hyperreal nebula envisaged by Baudrillard marks the return to an undistinguished, chaotic generating force. The certainty that this phase is a conclusion of the evolutionary cycle obliterates the modality of Manovich's matrix of interpretation, Deleuze's rhizomic growth processes and the Hegelian dialectic determinations, which are continuous evolutionary frameworks within which the simulacrum is an operating element. The implosion should assure that the events linked to evolution would not be repeated, that the simulacra would cancel and sterilize the real, impeding the repetition of the originating event; "but next wide-bosomed Earth, the ever sure foundation of all..." [87]

3.2.85. The birth of Earth signifies the juxtaposition of entities and the establishment of a dialectical analysis which, in Baudrillard's structure, cannot be defined

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[86] "This view emerged out of the anti- or non-narrative concepts which have accompanied my filmic exploration of repetition, improvised variations on visual themes, the notions of 'verticality' proposed by Maya Deren and the awareness of programmable, permutational or multiple solutions to structural problems. It also emerged from the actual possibility of exploring complex multi-connectiveness or multiple variation implicit in the use of computer technology." Malcolm Le Grice, "Chronos Project," *Vertigo*, 5 (Autumn/Winter, 1995).

as being other than light in opposition to the darkness. "A poem is like a picture: one strikes your fancy more, the nearer you stand; another, the farther away. This courts the shade, that will wish to be seen in the light, and dreads not the critic insight of the judge. This pleased but once; that, though ten times called for, will always please." [88]

3.2.86. The world of simulacra courts the shade and attempts to recreate a simulacrum of the Night. This is not a resolved conflict and the absence of light in the dialectic process equates to the absence of the real, which cannot be satisfied by the presence of its own image. The dialectical relationship between real and virtual, between evolutionary and implosive, needs to be clarified in the light of the concept of simulacrum as a substitute of reality, independent and autonomous from it.

3.2.87. What has to be demonstrated is that simulacra and the hyperreal are categories which have become autonomous realities per se, generating a conclusive stage for the evolution of humanity. The notion of simulacrum-knowledge itself and its relation to the real needs to be clarified. "Of good writing the source and fount is wisdom. Your matter the Socratic pages can set froth, and when matter is in hand words will not be loath to follow." [89]

3.2.88. It is this knowledge, the knowledge of simulacrum that shapes the hyperreal nebula in its mediatic forms. The use of hyperreal encoding and hyperreal techniques in films of the 80's and 90's is a reflection of the transfer of philosophical

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[87] Hesiod, *Theogony*, ed. G. P. Goold, trans. Hugh. G. Evelyn-White, Loeb Classical Library 57 (Cambridge, MA: Harvard University Press, 2002), 95.
[88] Horace, *Ars Poetica*, ed. G. P. Goold, trans. H. R. Fairclough, Loeb Classical Library 194 (Cambridge, MA: Harvard University Press, 1999), 481.
[89] Ibid., 481.

issues into the film as well as into the art practice. [90] This process began with Vertov's *Man With a Movie Camera* (1929). [91]

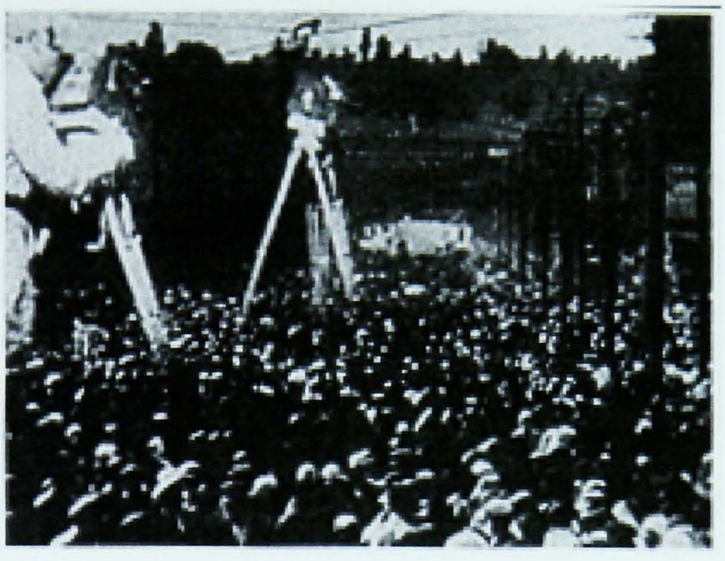

**Figure 31 *Man With a Movie Camera*, Dziga Vertov, 1929.**

3.2.89. Baudrillard establishes, in his analysis of the cinematic medium, a comparison between two very different personalities and two very different approaches to the medium itself and the social context of their times. "Cool, cold pleasure, not even aesthetic in the strict sense: functional pleasure, equational pleasure, pleasure of machination. One has only to dream of Visconti... In Visconti, there is meaning, history, a sensual rhetoric, dead time, a passionate game, not only in the historical content, but in the mise-en-scène." [92]

3.2.90. In his analysis of Visconti Baudrillard proposes the apotheosis of the artist and of his cold replicas of the world, juxtaposed to Kubrick's hot rational analysis.

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[90] Douglas G. Baldwin, "'Word Begets Image and Image Is Virus': Undermining Language and Film in the Works of William S. Burroughs," *College Literature* 27, no. 1 (2000).

[91] "Vertov's film most clearly stands against an attitude which places film in a transcendent realm impervious to the spectator. Instead Vertov *explains* how film works, how it is organized, and that its sleight-of-hand is the result of human labor. Vertov matches his opposition between everyday common reality and the glamorous, romantic world of the fiction film with an opposition between filmmaking as the result of careful human manipulation and work and filmmaking as a seamless magical world, the mysterious creation of the Artist." Jeanne Allen, "Self-Reflexivity in Documentary," *Ciné-Tracts: A Journal of Film, Communications, Culture and Politics* 1, no. 2 (summer 1977): 38 http://www.modjourn.brown.edu/Cinetracts/CT02.pdf (accessed December 5, 2004).

[92] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 46.

Visconti's characters could be considered a representation of the necessity of a hyperreality: they take refuge in the land of Hypnos. "By closing their eyes to unpleasant reality, Visconti's 'heroes' lose whatever ability they may have to affect reality." [93]

3.2.91. Baudrillard explains that it is different for Kubrick, who works and creates his films rationally and through careful planning, transforming history into a scenario of cold operating systems. "And this does not return to the old opposition between the spirit of finesse and the spirit of geometry: that opposition still comes from the game and the stakes of meaning, whereas we are entering an era of films that in themselves no longer have meaning strictly speaking, an era of great synthesizing machines of varying geometry."[94]

3.2.92. The representation of Kubrick's characters in *Eyes Wide Shut* (1999), much more than in his previous *The Killing* (1956), *Killer's Kiss* (1955) and *Lolita* (1962), is an analysis of a world where "there is no imminent apocalypse on the horizon. Its cars move normally through the streets of Greenwich Village; ...everyone does business or plays out their social role in front of or behind a window, as in everyday life." [95]

3.2.93. Through the comparison of these two directors, Baudrillard derives a theory for a new reality devoid of meaning. If Baudrillard's theory is valid, there is no residual meaning in the film *The Matrix* (1999). There is no fascination in the game of the simulacra and more importantly there is no liberation for Neo (played by Keanu Reeves), who slips from one simulacrum into another, never reaching the freedom of reality.

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[93] Henry Bacon, *Visconti: Exploration of Beauty and Decay* (Cambridge: Cambridge University Press, 1998), 62.
[94] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 46.
[95] Michael Chion, *Kubrick's Cinema Odyssey* (London: British Film Institute, 2001), 166.

3.2.94. If Neo is holding Baudrillard's Simulacra and Simulation in his hands to hide information, even that gesture has to be considered a simulacrum, and as such it is devoid of meaning, as much as Baudrillard's theorizations. The book itself never really existed and it was only an image of an emptied philosophical construct in a cult movie, which never really was. The relationship between art, philosophy and entertainment in *The Matrix* (1999) was only a fictional fantasy.

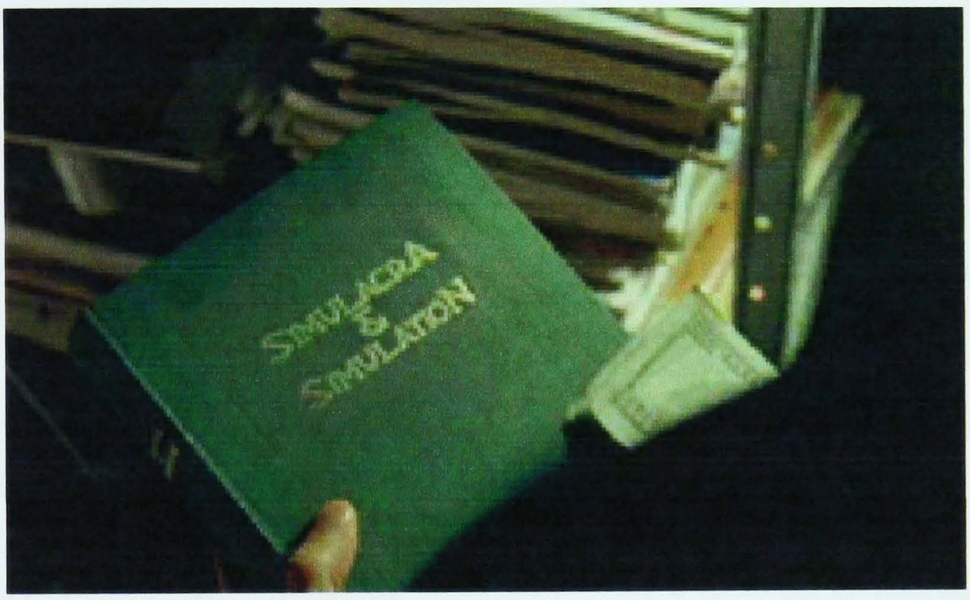


**Figure 32 *The Matrix*, directed by Andy and Larry Watchowski, 1999.**

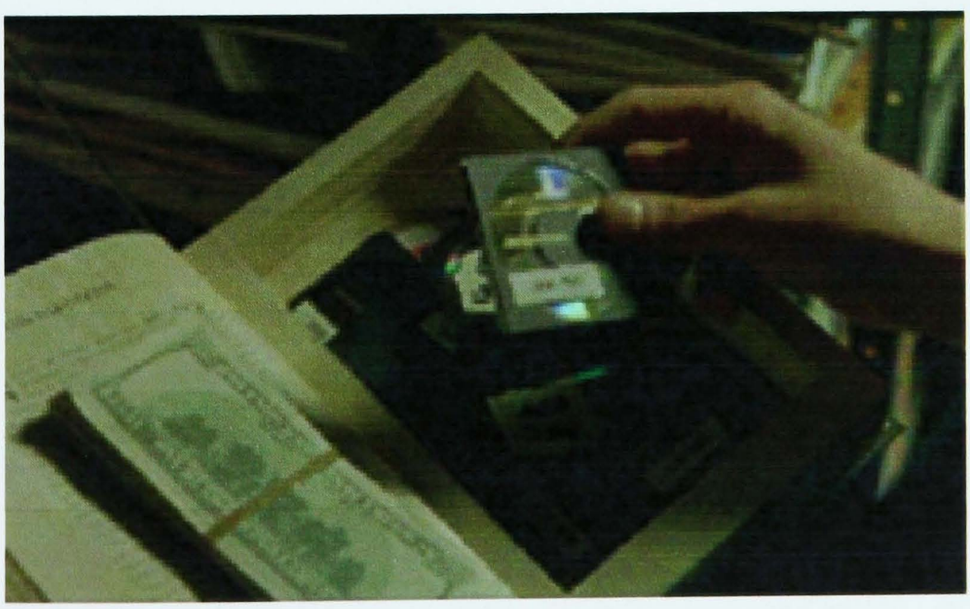

**Figure 33 *The Matrix*, directed by Andy and Larry Watchowski, 1999. Neo hides 'the reality' inside Baudrillard's book *Simulacra and Simulation*.**

3.2.95. In defense of a 'realistic approach' to the relationship between art and philosophy stands Vitruvius, who, speaking of the skills of the 'craftsman' in his De Architectura, says: 'For neither talent without instruction nor instruction without talent can produce the perfect craftsman. He should be a man of letters, a skilful draughtsman, a mathematician, familiar with scientific inquiries, a diligent student of philosophy...'[96]

3.2.96. What the research has evidenced is the existence of a process of deep and mutual correspondence between art and philosophy, which are searching, sometimes with different methods, for the same universals. This in the attempt to find an answer or a systematic that could lead to a methodological analytical tool for the grasp of those universal patterns which Gombrich refers to and are the objectives of this research. These universals are also part of the investigation of the brain's neuroaesthetic responses which determine the modality of interaction and aesthetic stimuli in relation to visual images. [97] If these images were totally devoid of meaning, if they were simulacra, they would not have any interaction and influence on the neurological patterns of the brain. In this context *Filmtext 2.0* by Mark Amerika is an analysis of the relationship between media, language, biology and semantic imagery.

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[96] Vitruvius, *On Architecture*, ed. and trans. Frank Granger, Loeb Classical Library 251 (Cambridge, MA: Harvard University Press, 2002), 9.

[97] "...If he accepts my equation of the Platonic Ideal and the Hegelian Concept with the brain's stored record of what it has seen. Whether art succeeds in presenting the real truth, the essentials, or whether it is the only means of getting to that truth in the face of constantly changing and ephemeral sense data, [...] And my equation, of both the Hegelian Concept and the Platonic Ideal with the brain's stored record, means that the difference between the two, from a neurological point of view, is insignificant." Semir Zeki, *Inner Vision: An Exploration of Art and the Brain* (Oxford: Oxford University Press, 1999), 45.

**Figure 34 *Filmtext 2.0*, Mark Amerika, 2002. http://www.markamerika.com/. "Besides experimenting with recently released digital video hardware and software technology, FILMTEXT is more importantly a fictional investigation of what it means to be human in a post-apocalyptic media environment. Borrowing from pop culture genres such as science fiction, cyberpunk, and interactive game environments, the work concerns itself with the idea that 'language is a virus' (William Burroughs) and investigates the nature of computer, biological, and media viruses via an abstract expressionistic interplay between the semantic imagery, the audio loops, and the various cryptic texts embedded in the design interface. [...] In this regard, FILMTEXT is a philosophical investigation that plays with the animated Internet environment and its supposedly liberating potential to help free us from some of the encumbrances of material reality." Mark Amerika, John Vega and Chad Mossholder, *transmediale04*, January 31, 2004, http://www.transmediale.de/page/detail/detail.1.projects.35.html (accessed December 5, 2004).**

3.2.97. The hyperreal, therefore, with its simulacra, seems to follow a tradition of deconstruction, which in its partiality, does not answer to the main question. In France a book by Jean-François Gautier was printed in 1999, its title was 'L' Universe existe-t-il?

Does The Universe exist? [98] Baudrillard, in his reconstruction of the world as simulacra, fails to answer the first question, and working from an axiom, creates his representation of a world of images. "And what if the universe were a concept like cosmic ether, or phlogiston, or the conspiracy of the Elders of Zion?" [99] What if there were parallel universes and one of these didn't have simulacra? And that one was the universe in which we are living?

3.2.98. These are philosophical theories, which artists and philosophers have adopted and developed. They have contributed to the background of paintings and art forms during centuries of human evolution. As theories, their veridicity had to be verified, certified or disproved. Therefore, even the existence of a theory of the Hyperreal Nebula would need some sort of analysis.

> 3.2.99. Of course, such a theory would be (a) a theory of problems and their solutions, and (b) a theory of the different levels of problems, and of why certain solutions are better than others. I understand a physical or biological theory if I know how it functions; if I know its virtues (its preferability to others); and if I know the problems it solves and cannot solve, and the new problems it suggest. As we see, understanding may have levels. This is why we may speak of 'deeper' understanding, or of deepening our understanding. [100]

3.2.100. If a theory does not achieve elements of knowledge or some 'other' elements of knowledge, what is missed are the integral elements of a methodology which, as Leonardo da Vinci explained, are needed to avoid mistakes made by those who practice without knowledge. "Those who are in love with practice without knowledge are like the sailor who gets into a ship without rudder or compass and who never can be

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[98] This same question was recently re-proposed by Sir Martin Rees. See: Jonathan Leake, "Top Scientist Asks: Is Life All Just a Dream?" *Sunday Times*, November 14, 2004, 3.
[99] Umberto Eco, *Serendipities: Language and Lunacy*, trans. William Weaver (London: Phoenix, 1999), 26. Also note that the name Zion has been used to name the 'human city' in *The Matrix*.
[100] Karl Popper, *The World of Parmenides: Essays on the Presocratic Enlightenment*, ed. Arne F. Petersen (New York: Routledge, 2001), 204.

certain whether he is going. Practice must always be founded on sound theory, and to this Perspective is the guide and the gateway..." [101]

3.2.101. A similar concept is re-proposed by Ernst Gombrich who affirms: "But I do think the study of the metaphysics of art should always be supplemented by an analysis of its practice, notably the practice of teaching." [102] This practice of teaching is made of the knowledge of discovery and innovation which each generation of artists has realized, pushing forward the boundaries that restrain the concepts of art and its world. In the contemporary scenario the boundaries that are being redesigned are those of the possibility of knowledge of and derived from the simulacra.

3.2.102. The evolutionary construct in the present argument is based on a methodology which, being scientific, artistic or philosophical, or made out of all three components - an 'integral methodology' - defines its visions of the world, of the real and unreal. It is based on the knowledge of Xenophanes and Parmenides or Baudrillard and Foucault, and denies the structural absence of meaning and knowledge of the simulacrum.

3.2.103. These constructions are similar to "...geometrical diagrams; the initial error is small and unnoticed, but all the numerous deductions are wrong, though consistent. Every one must therefore give great care and great attention to the beginning of any undertaking, to see whether his foundation is right or not. If that has been considered with proper care, everything else will follow." [103]

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[101] Leonardo da Vinci, *The Notebooks of Leonardo da Vinci*, ed. Jean Paul Richter, Vol. 1 (New York: Dover Publications Inc., 1970), 18.
[102] E. H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation* (New York: Princeton University Press, 2000), 156.
[103] Plato, *Cratylus*, ed. G. P. Goold, trans. H. N. Fowler, Loeb Classical Library 167 (Cambridge, MA: Harvard University Press, 1996), 179.

## 3.3. The Artist's Philosophy and Phenomenology

### The Complex Relationships Between Real and Virtual

3.3.1. The construction and differentiation process needed to understand the contemporary theorizations in the avant-garde on the issues of reality and virtuality can be restructured through the understanding of illusion and simulation. Gidal in his film works analyzed these differences and Baudrillard, commenting on *The Matrix* (1999) in the Nouvelle Observateur, [104] distinguishes between illusion and simulation.

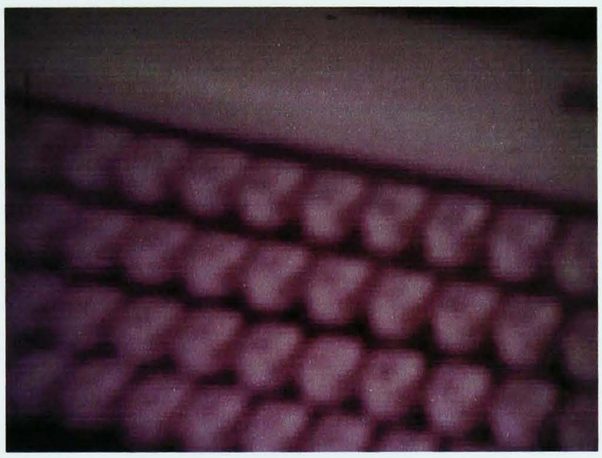

**Figure 35** ***Conditions of Illusion*****, Peter Gidal, 1975.**

**Figure 36** ***Conditions of Illusion*****, Peter Gidal, 1975.**

3.3.2. In a paper presented as part of this research to the 8th conference of The International Society for Phenomenology, Aesthetics and the Fine Arts at Harvard

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[104] Aude Lancelin, "Baudrillard Decode 'Matrix': Pourquoi ce film passionne les philosophes," *Le Nouvel Observateur*, June 19, 2003, No 2015, Arts - Spectacles, http://www.nouvelobs.com/dossiers/p2015/a201937.html (accessed October 19, 2004).

Divinity School, the problem of illusion [105] and simulation was discussed in terms of process, reality and evolution. [106] Simulation is the process which generates illusions and illusions, if believed and sustained as disjointed from reality, generate phenomena of virtual presence and delusion. "One major factor which determines the quality of an implementation of a virtual environment (VE) is the extent to which the **simulation** is able to induce a feeling of being in the virtual reality (Draper, Kaber & Usher, 1998). This **illusion** is commonly called **presence in VE**; Witmer and Singer (1998) provide as definition: 'the subjective experience of being in one place or environment even when one is physically situated in another' (p. 225), while other authors define **presence** as an **illusion** of position and orientation (Prothero, Parker, Furness & Wells, 1995)." [107]

3.3.3. This approach is based on the concept of 'reality' of the processes of simulation and illusion which cannot be disjointed [108] in a conflicting relationship, but need to be readdressed in a context of 'irreversible consequence' [109] which applies to the real and the virtual alike.

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[105] "A film is materialist if it does not cover its apparatus of illusionism. Thus it is not a matter of anti-illusionism pure and simple, uncovered truth, but rather, a constant procedural work against the attempts at producing an illusionist continuum's hegemony." Peter Gidal, *Materialist Film* (London: Routledge, 1989), 17.

[106] Lanfranco Aceti, "The Aesthetic of True Digital Illusions: Crossing Several Roads at the Same Time," (paper. Harvard University, May 16-17, 2003), http://www.phenomenology.org/finearts2003.htm (accessed October 20, 2004).

[107] Michael Krauss, Rainer Scheuchenpflug, Walter Piechulla and Alf Zimmer, "Measurement of presence in virtual environments," in *Experimentelle Psychologie im Spannungsfeld von Grundlagenforschung und Anwendung*, proceedings 43, ed. A.C. Zimmer, K. Lange et al. (Hrsg.) (Universität Regensburg: Regensburg, 2001), http://www.walterpiechulla.de/onlinePapers/teapp2001_KraussScheuchenpflugPiechullaZimmer.pdf (accessed December 6, 2004).

[108] "For example, Picasso's incorporation of a piece of the 'Journal' onto the surface of the painting acts as an illusionist (pictorial) representation of the newspaper, but simultaneously it acts as the actual object: the piece of newspaper retaining its identity as itself as an actual physical presence, and asserts itself as a material form on the surface of the canvas. Instances like these not only exploit the contradictions in coded interpretation but also question whether a binary distinction between illusion and reality can be maintaincd." Malcolm Le Grice, "Virtual Reality: Tautological Oxymoron," in *New Screen Media: Cinema/Art/Narrative*, ed. Martin Rieser and Andrea Zapp, 233 (London: BFI Publishing, 2002).

[109] "We might then define the real as being the arena of irreversible consequence. And for each of us individually, this is the arena in which the actual consequence of our developing life is determined." Ibid., 233.

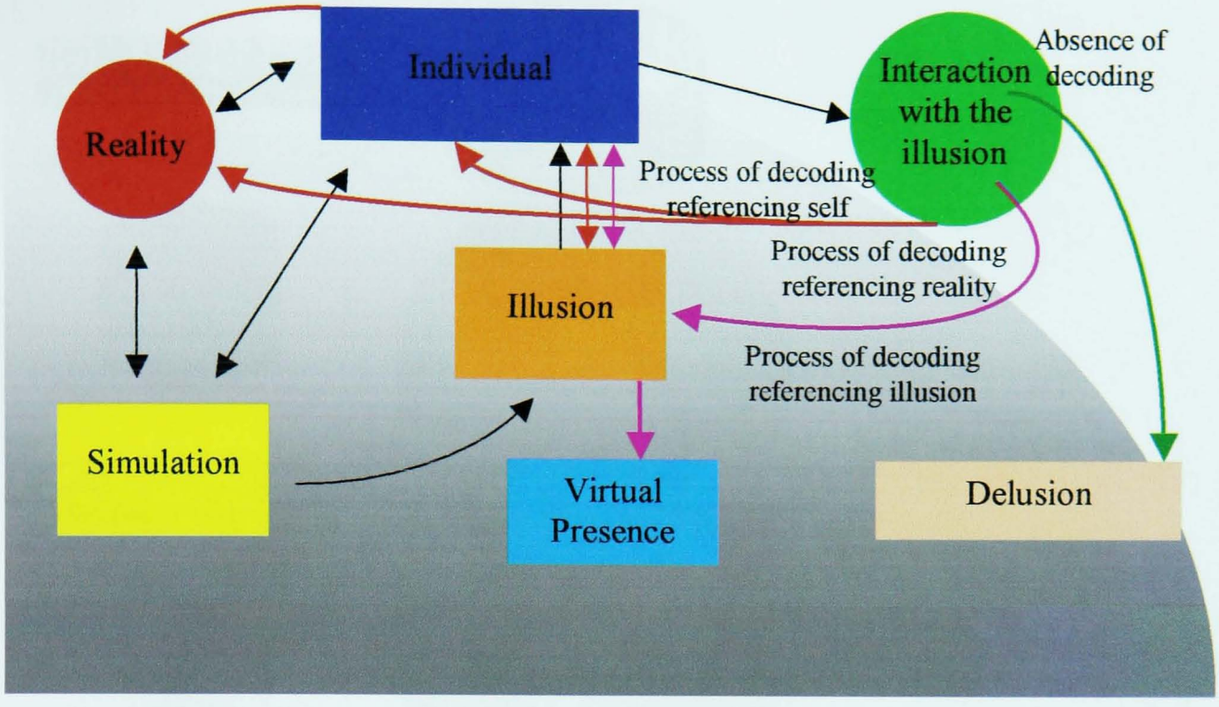


**Table 1 A representation of the interaction between the individual and the processes which generate - through simulation - illusion, presence and delusion. This is part of a Leverhulme Trust supported research project on the concept of reality, presence and film representation as illusion and simulation.**

3.3.4. These are phenomena which restructure the arena of possible applications for cinematic images, but also bring back the original experimentations of the early 'cinematic' images of Horner, Marey and Muybridge. The projection of images in virtual reality environments or of augmented reality extends the space of illusion surrounding the spectator and blurs the difference between dream, illusion, delusion, reality and death. The differences between Hypnos and his manifestations and that of Thanatos and Chaos as well as their originating dark night, disappear. From a philosophical and phenomenological perspective it is relevant to stress the implication of the determination of reality through the differentiation caused by light. These differentiations find a causal determination, according to Pasolini, in the philosophical and mythological structures of human thinking. [110]

[110] "There is an entire world in man which expresses itself primarily through signifying images (shall we invent, by analogy, the term im-signs?): *this is the world of memory and of dreams*. Every effort to reconstruct a memory is a 'sequence of im-signs,' that is, in a primordial sense, a film sequence. [...] *The linguistic instrument on which film is predicated is, therefore, of an irrational type*: and this explains the

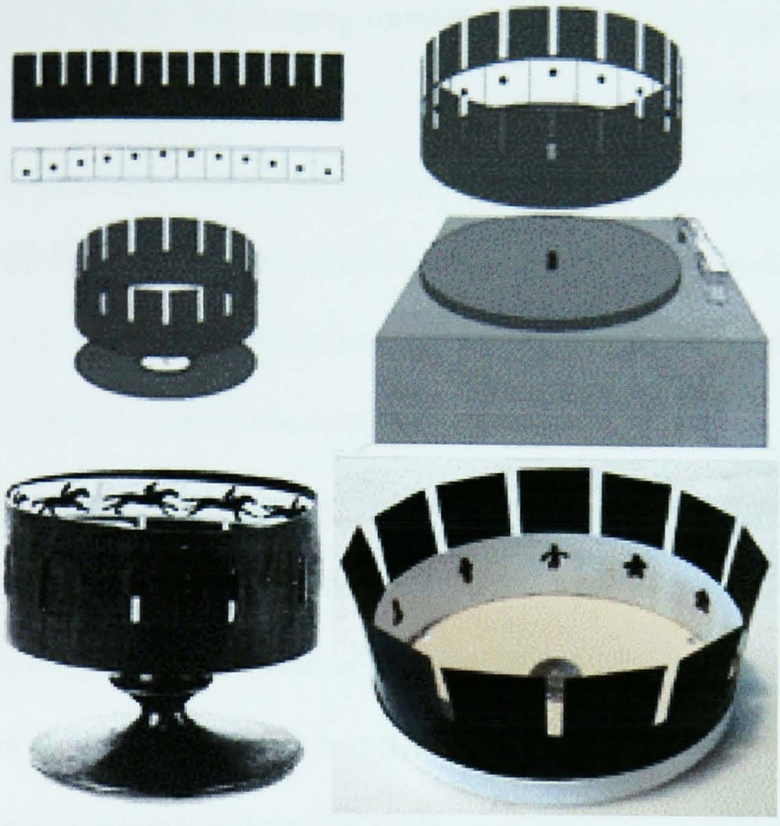

**Figure 37 Lev Manovich's reconstruction of a zoetrope.**

**Figure 38 The zoetrope, William Georges Horner, 1833.**

deeply oneiric quality of the cinema, and also its concreteness as, let us say, object, which is both absolute and impossible to overlook." Pier Paolo Pasolini, *Heretical Empiricism*, ed. Louise K. Barnett, trans. Ben Lawton and Louise K. Barnett (Bloomington and Indianapolis: Indiana University Press, 1988), 168-169. On the subject Baudrillard writes: "Disappearance of the memory of the dream at the moment of waking. The dream is there, so close, almost tangible on the screen of the retina, but it is impossible to grasp it. Where do the scattered atoms of dreams go? The wakeful man trying to remember his dreams is like a dead man trying to gather together his memories from life, or like a living one trying to remember the faces of the dead. [...] A sense of returning, by the dilution of memory, to reptilian stupor." Jean Baudrillard, *Fragments: Cool Memories III, 1991-95*, trans. Emily Agar (London: Verso, 1997), 32.

3.3.5. Envisaging immersive reality environments as the development of a human size zoetrope evidences the context of contemporary media interactions. *This is an environment where diverse media converge to present the viewer with a series of redefined experiences which borrow from the multimedia, hypermedia, biomedia, intermedia and intramedia context in a framework which is becoming increasingly metamedia, where the content is determined by megamedia structures through classic media and new media representations.* This awkward sentence is an attempt to clarify the convergence of different structures and perceptions of media in a unified framework which recreates a space of 'illusion' as a form of believable 'reality.' At the same time it evidences the complex interaction between media structures and their diverse functions. In this context, a theory of presence is not disjointed by an integrated theory of diverse media functionalities and their structures.

3.3.6. The immersion of the spectator inside the zoetrope, or the virtual reality environment, is a "feeling of being there that is achieved through sensory inputs intended to simulate an illusion." [111] These inputs not only have the function of simulating an illusion, but that of creating an alternative reality. This is to render the reality itself undistinguishable from the world surrounding the environment in which the participant is immersed. "Perhaps the biggest challenge is identifying the neural mechanisms that help us distinguish between a virtual dinosaur and a real dinosaur. Simply demonstrating with fMRI that brain activations triggered by a virtual rogue elephant are similar to brain activations triggered by a real rogue elephant is not enough. Identifying how the two are differently experienced and represented in the brain is the key." [112] This process, according to Baudrillard, has a philosophical connotation in contemporary media of an

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[111] David Prabu, "When "Being There" Is Not Enough," *Presence at International Communication Association 2004*, May 28, 2004, http://lombardresearch.temple.edu/ispr/ICA2004/DavidICA04.ppt (accessed December 6, 2004).

'absence of reality' and 'presence into the void of representation.' The phenomenon is described as 'truth' that "wants to give herself naked. She is desperately seeking nudity, [...] there is no longer any need even of bachelors to strip her bare, since she has herself given up trompe-l'oeil for striptease." [113] Baudrillard, in referencing Duchamp, evidences a process of discovery.

> 3.3.7. It is always by adding to the real, by adding the real to the real with the objective of a perfect illusion (that of the hyper-real stereotype) that one stabs at the heart of the illusion. Porno, by adding a dimension to the image of sex removes one from desire and disqualifies all seductive illusion. At the opposite end of the spectrum, the trompe-l'oeil, in stripping a dimension away from real objects, adds to their magic presence, to their illusory exactitude. Trompe-l'oeil is the ecstasy of the real object, the living illusion of evidence, that which adds to the formal charm of painting the spiritual charm of deception, the mystification of the senses. For the sublime is not enough: the subtle is also necessary, the nuance which consists in diverting the real while taking it literally. [114]

3.3.8. These nuances are at the basis of phenomena of presence in a subliminal level which although not consciously acknowledged acts on the unconscious perception of our imagination, which in this framework feeds on to a real nuance in order to generate a virtual image. The 'real subtle' is, therefore, the necessary element to divert from the real itself into the virtual dimension.

> 3.3.9. Now, the image can no longer imagine the real, because it is the real. It can no longer dream it, since it is its virtual reality. It is as though things had swallowed their own mirrors and had become transparent to themselves, entirely present to themselves in a ruthless transcription, full in the light and in real time. Instead of being absent from themselves in illusion, they are forced to register on thousands of screens, off whose horizons not only the real has disappeared, but the image too. The reality has been driven out of reality. Only technology perhaps still binds together the scattered fragments of the real. But what has become of the constellation of meaning in all this? [115]

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[112] David Prabu, "When "Being There" Is Not Enough," *Presence at International Communication Association 2004*, May 28, 2004, http://lombardresearch.temple.edu/ispr/ICA2004/DavidICA04.ppt (accessed December 6, 2004).

[113] Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 1996), 3.

[114] Jean Baudrillard, "The Perfect Crime," *Reality of Simulation*, November 20, 2003, http://www.simulation.dk/content.php?article.17 (accessed December 6, 2004).

[115] Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 1996), 4.

3.3.10. In Baudrillard's analysis the terminological positions are shifted, there is no reality and only the technological structures holds some fragments of reality. The issue is actually more complex. Virtual reality is, per se, a form of reality. [116] "'Virtual Reality' means 'to have the effect of having concrete existence without actually having concrete existence.'" [117] In this context the image has become the real, its reality has still to deal with the issues of recognition and attribution. The image, although it is not dreaming reality as Baudrillard states, is dreaming virtual reality in order to be recognized as real. [118]

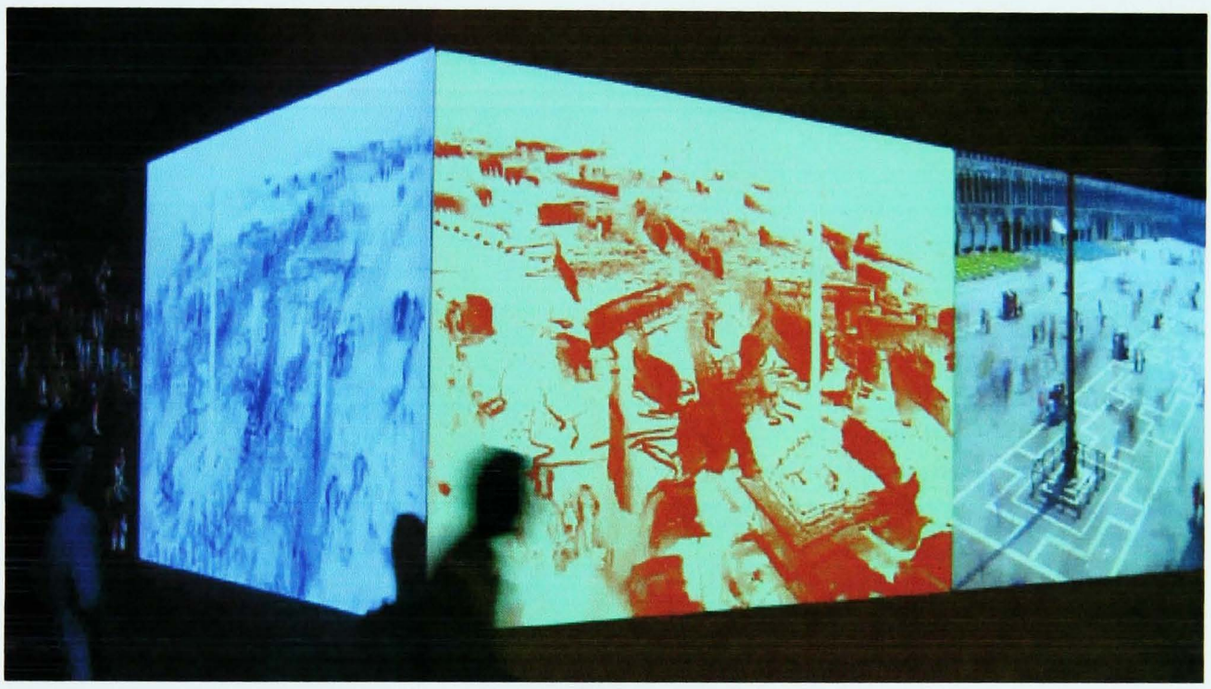

**Figure 39 *Seen*, David Rokeby, 2002. Venice Biennale of Architecture http://homepage.mac.com/davidrokeby/home.html (accessed December 6, 2004).**

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[116] "Agreement on definition was elusive [...] Most of these attempts tried to define VR through the technology used to achieve this unique effect, but this approach tended to lead to debates over whether this or that technology was 'required' for VR. In the meantime it seemed that the point was lost, and in any case such a definition is uninformative to those who have not themselves experienced the technology in action. Simply saying 'head tracking' does not convey the power of a head-tracked display in action." Steve Bryson, "Virtual Reality: A Definition History," *fourthwavegroup.com*, http://www.fourthwavegroup.com/fwg/lexicon/1725w1.htm (accessed December 5, 2004).

[117] Steve Bryson, "Virtual Reality: A Definition History," *fourthwavegroup.com*, http://www.fourthwavegroup.com/fwg/lexicon/1725w1.htm (accessed December 5, 2004).

[118] "One hypothesis relies on the idea that executed actions generate signals that are centrally monitored and compared: action recognition arises as the outcome of this comparison (the central monitoring theory). The other hypothesis relies on the idea that actions, whether or not they come to execution, are centrally simulated by the neural network, and that this simulation is the basis for action recognition and attribution (the simulation theory)." Marc Jannerod and Elizabeth Pacherie, "Agency, Simulation and Self-

3.3.11. An example is *Seen* by David Rokeby, where the image doesn't exist per se, but exists in relationship to the act of its interpretation and reception, although the functions, commonalities and screens mirroring each other can blur the spaces of interaction.

> 3.3.12. As we have seen, brain imaging studies show that the cortical network common to intending actions and preparing for execution, imagining actions, and observing actions performed by other people is quite extended. Our contention is that this cortical network provides the basis for the conscious experience of goaldirectedness— the primary awareness of intentions—but does not by itself provide us with a conscious experience of self- or other-agency. This latter experience has its basis in the activation of cortical zones that do not overlap between conditions. [119]

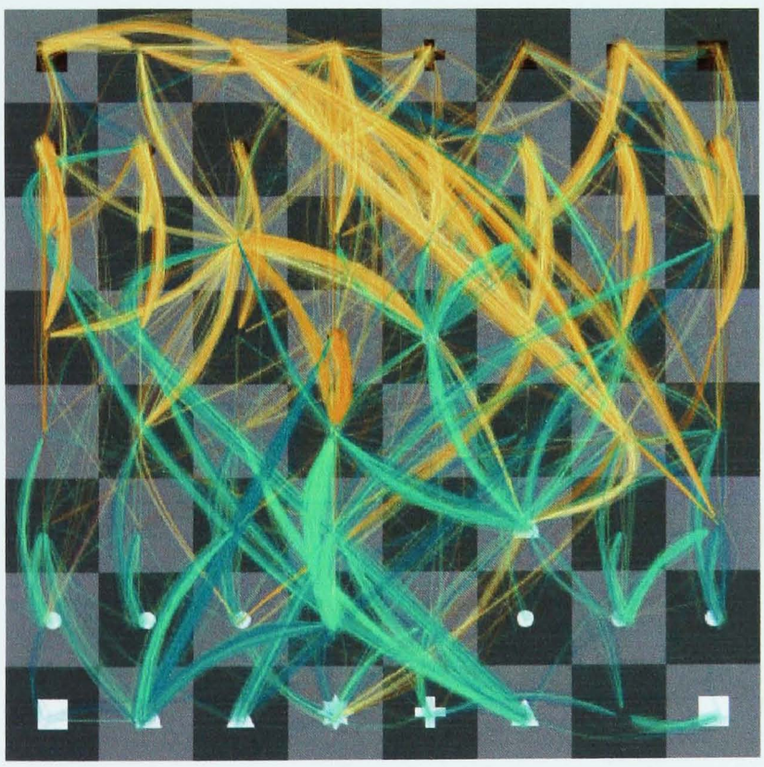

**Figure 40 *Thinking Machine No 4*, Martin Wattenberg, with Marek Walczak, 2004. Internet version of previous installation versions No1, No2 exhibited at ICA London 2003, No3 exhibited at ARS Electronica 2004, http://turbulence.org/spotlight/thinking/gallery.html (accessed December 7, 2004). "The goal of the piece is not to make an expert chess playing program but to lay bare the complex thinking that underlies all strategic thought."**

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identification," *Mind and Language* 19, no. 2, April 2004, 125 http://www.unites.uqam.ca/cnc/psy7123/simulationandself.pdf (accessed December 6, 2004).

[119] Marc Jannerod and Elizabeth Pacherie, "Agency, Simulation and Self-identification," *Mind and Language* 19, no. 2, April 2004, 125

3.3.13. These forms of goal directness can be seen as images in the art project *Thinking Machine No 4*, which raises problems in relation to the fragmentation of the real, autonomous artworks and thinking machines as well as issues of simulation, illusion and delusion. [120] In the representation of these issues in virtual reality environments, the question is one of self awareness and distinction between overlapping areas in response to 'real' and 'virtual' representations. It is the dizzying hypothesis of Baudrillard: that of rationality which culminates in technical virtuality, a Nietzschian will to illusion that is not a will to truth but to an avatar. [121]

3.3.14. These transformations and blurring of areas are evidenced in the research of Daprati, where the fragmented self of contemporary individuals fails to distinguish between reality and simulation if the two are providing synchronous stimuli.

> 3.3.15. This result shows that the accuracy for detecting the features of one's own movement is limited, and that this limitation is far beyond perceptual thresholds of the visual system for detecting temporal gaps or angular deviations (see Fourneret and Jeannerod, 1998). These results clarify the findings of Daprati et al. (1997) where normal subjects failed in about 30% of cases to recognize an alien hand as distinct from their own hand, when the two hands performed nearly synchronous movements. [122]

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http://www.unites.uqam.ca/cnc/psy7123/simulationandself.pdf (accessed December 6, 2004).

[120] "And now computers controlled by thought are on the way. There is a danger that this extreme form will produce some strange results. At what threshold of consciousness or formalization will the machine intervene? There is a danger that, by reflex anticipation, it will log into subconscious – if not, indeed, unconscious – thoughts, into the most primitive phantasies." Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 1996), 32.

[121] Ibid., 5.

[122] Marc Jeannerod and others, "Action Recognition in Normal and Schizophrenic Subjects," *Institut des Sciences Cognitives*, 2001, http://www.isc.cnrs.fr/wp/wp2001-05.htm (accessed December 7, 2004). Marc Jeannerod, *The Cognitive Neuroscience of Action* (Oxford: Blackwell, 1997), 11-55.

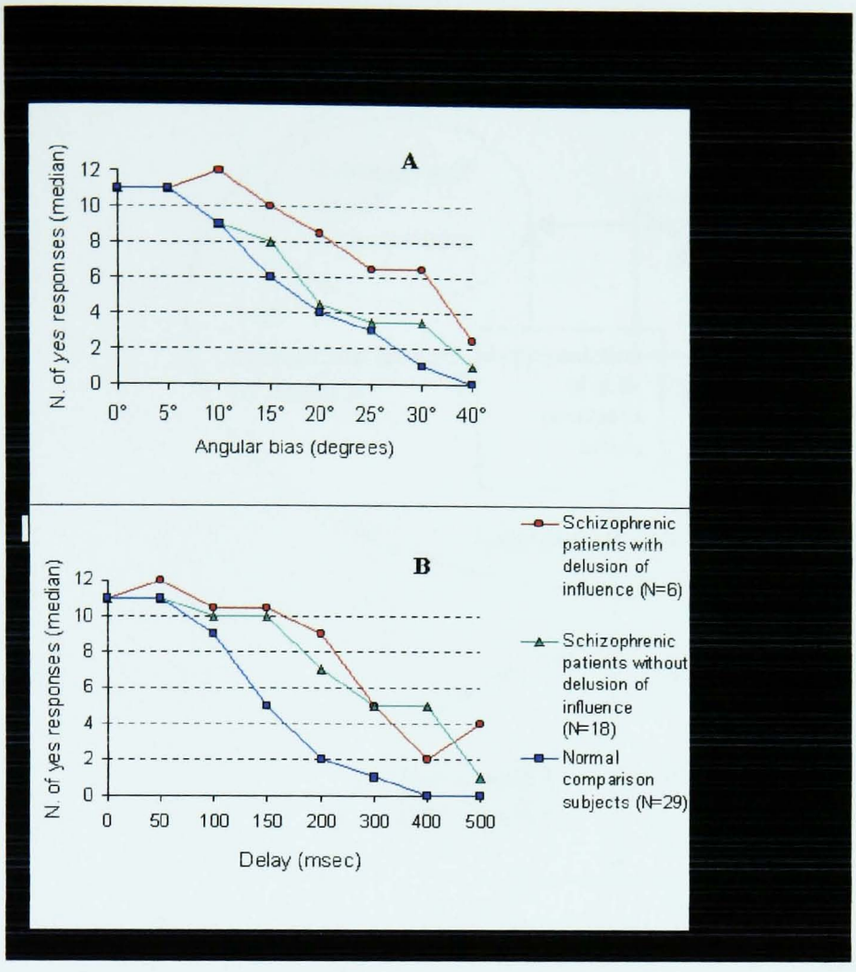


**Figure 41 Daprati's experiment display.**

3.3.16. This conception allows making hypotheses about the nature of the dysfunction responsible for misattribution of actions in pathological conditions. Changes in the pattern of cortical connectivity could alter the shape of the networks corresponding to different representations, or the relative intensity of activation in the areas composing these networks. [...] Patients with positive symptoms tend to overattribute to themselves actions performed by others or, conversely, to attribute their own actions or thoughts to the influence of others. [...] Referring to the diagram [...], one of the two agents represented on the diagram would become 'schizophrenic' if, due to an alteration in the pattern of connectivity of the corresponding networks, the degree of overlap between the representations in his brain increased in such a way that the representations would become undistinguishable from each other. [123]

[123] Marc Jeannerod, "The Mechanism of Self-recognition in Humans," *Behavioural Brain Research* 142, (2003): 13-14, http://www.itm.bme.hu/ktk/csaba/downloads/jeannerodOnfelism.pdf (accessed December 7, 2004).

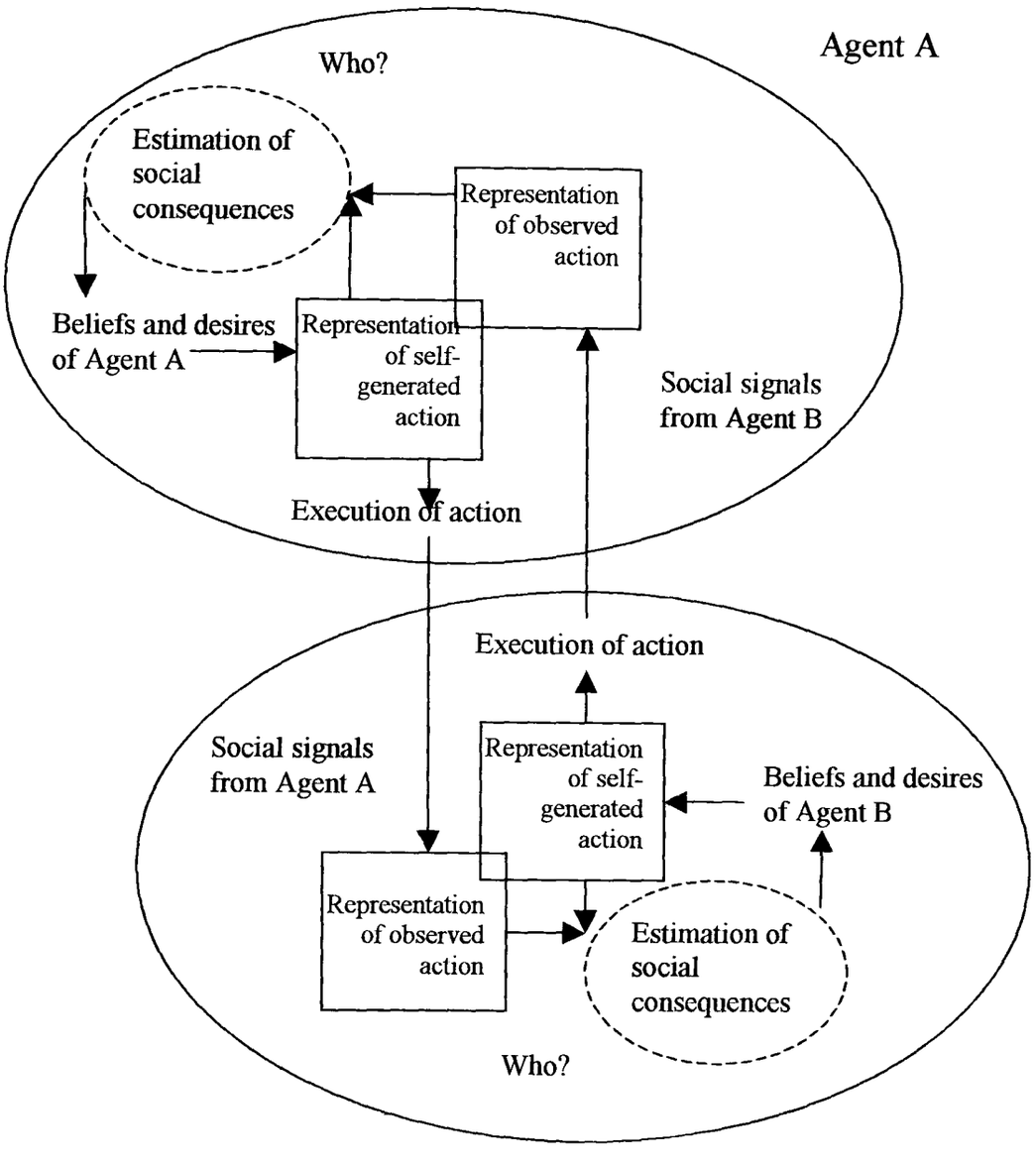


**Table 2 Marc Jeannerod's flow chart explains "the consequences of shared representation on possible misattribution of actions. The diagram depicts the interactions of two agents (A and B) observing one another. Each agent builds a representation of his own intentions/actions and of the intentions/actions of the other agent. Representations of self-generated actions and observed actions tend to overlap. An increase in overlap would render difficult attribution of these actions to their respective agent."** [124]

3.3.17. "Florian Rotzer sees the technology offering a new kind of imagination experience if it is developed in appropriate ways that avoid deterministic tendencies."[125] These analyses demonstrate that the computer is developing as an interface more than a

[124] Marc Jeannerod, "The Mechanism of Self-recognition in Humans," *Behavioural Brain Research* 142, (2003): 13-14, http://www.itm.bme.hu/ktk/csaba/downloads/jeannerodOnfelism.pdf (accessed December 7, 2004).

simple data manipulator, as Lev Manovich explains in *Cinema as a Cultural Interface*. [126] The interface is already affecting cultural interactions, and, in some of its media manifestations such as Virtual Reality, reshaping the patterns of neuronal synaptic interactions. As Jeannerod evidences, one of the possibilities is for the 'subject' or 'object of the experiment' to become schizophrenic. The deterministic structures of the media are at work in the internalization of technology and implantation of the psyche in a scenario not of externalization – as McLuhan evidenced – but of internalization of the 'external' mind. This is quite the opposite of what Manovich envisaged, but it generates similar results.

> 3.3.18. What to make of this desire to externalize the mind? [...] The subjects have to be standardized, and the means by which they are standardized need to be standardized as well. Hence the objectification of internal, private mental processes, and their equation with external visual forms which can be easily manipulated, mass produced, and standardized on its own. The private and individual is translated into the public and becomes regulated. [127]

3.3.19. Therefore the possibility exists of translating the 'public and/or institutional mind' into the private consciousness, inducing a delusional and/or illusionary state, similar to Daprati's experiments. The simulations of contemporary media as well as those envisaged by *The Matrix* (1999), far from producing 'the void' as stated by Baudrillard, appear to be deterministic neuronal shaping realities.

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[125] Stephen Wilson, *Information Arts: Intersections of Arts, Science and Technology* (Cambridge, MA: The MIT Press, 2002), 637.

[126] Lev Manovich, "Cinema as a Cultural Interface, 1997" *Manovich.net*, June 10, 2004, http://www.manovich.net/TEXT/cinema-cultural.html#fn26 (accessed December 7, 2004).

[127] Lev Manovich, "From the Externalization of the Psyche to the Implantation of Technology, 1995" *Manovich.net*, June 10, 2004 http://www.manovich.net/TEXT/externalization.html (accessed December 7, 2004).

## 3.4. Intermedia, Intramedia and Metamedia

### Media Convergence, Metamorphosis, Simulation and Evolution

3.4.1. The primary intention of this section is to reframe the relationships between art practice and technology. In particular, attention will be focused on those technologies which can offer a better flexibility and have generated new approaches to the merging of different disciplines.

3.4.2. The contemporary phenomena of convergence happening in the world of art and science and expressed in a multiform variety of outputs are not restricted to the world of media but, after expanding and invading diverse areas of social living, have reframed the structures of the media. These expanded structures, as in the case of cinema, have spawned multiple forms and hybrids which, through technological and aesthetic evolution, characterize the contemporary avant-garde and the media scenarios. [1]

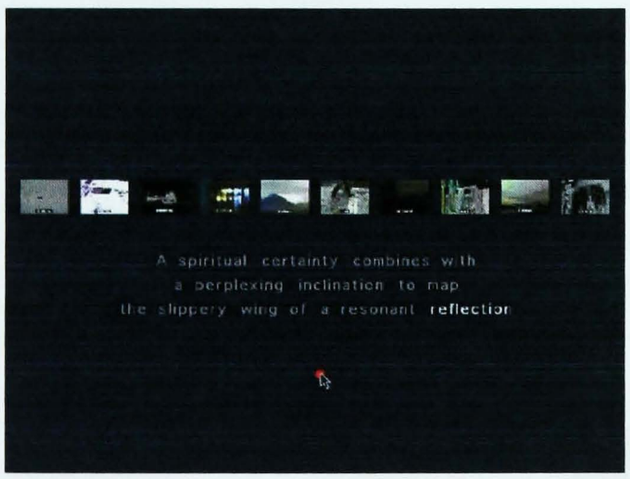


**Figure 1** ***The Exquisite Mechanism of Shivers*****, Bill Seaman, 1991. Screenshot from the CD Artintact, 1994. Seaman's work exploring the intersection of text and images has developed into hypermedia artworks.**

[1] "The most prevalent forms of computer-mediated art update existing traditions from photography, cinema, video, and literature." Stephen Wilson, *Information Arts: Intersections of Art, Science, and Technology* (Cambridge, MA: The MIT Press, 2002), 665.

3.4.3. The new media structures which engage traditional media and develop sets of 'new' media... hypermedia, megamedia, biomedia, parasiticmedia, [2] etc... are developing and evolving as categories which focus on particular characteristics of the 'medium/media.' One characteristic which is also a technical commonality in the digital media scenarios is the pervasive nature of contemporary media. This pervasive nature has generated the classification of pervasive media, which can be defined as a multimedia interactive integrated structure that shapes environments, media formats and aesthetics through wireless application of software and hardware technology. [3] This description is derived from a definition proposed by the National Institute of Standards and Technology (NIST) to classify the strongly emerging media trend toward:

- Numerous, casually accessible, often invisible computing devices
- Frequently mobile or embedded in the environment
- Connected to an increasingly ubiquitous network structure. [4]

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[2] Nathan Martin, "Parasitic Media: Creating Invisible Slicing Parasites and Other Forms of Tactical Augmentation," *Carbon Defense League*, November 2002, http://www.carbondefense.org/pdf/writing_7.pdf (accessed December 10, 2004). On the topic of digital cultural developments Johnson explains that: "Information filters will guide us through this transition, translating the zeros and ones of digital language into the more familiar, analog images of everyday life. These metaforms, these bitmappings will come to occupy nearly every facet of modern society: work, play, romance, family, high art, pot culture, politics. But the form itself will be the same, despite its many guises, labouring away in that strange new zone between medium and message." Steven Johnson, *Interface Culture: How New Technology Transforms the Way We Create and Communicate* (New York: Basic Books, 1997), 41.

[3] Tyrone Adams, "Megamedia, Intramedia, and the Digital Metamorphosis: Slideshow Presentations Offered to the Academic Community," *American Communication Journal*, no. 7, 2004. http://comm.louisiana.edu/faculty/adams/presentations/iowa.htm (accessed November 19, 2004).

[4] Riz Amanuddin and others, "Service-Oriented Architecture in a Pervasive Environment," *IBM-WebSphere Developers Technical Journal*, September 22, 2004 http://www-128.ibm.com/developerworks/websphere/library/techarticles/0409_amanuddin/0409_amanuddin.html (accessed December 8, 2004). See also: Pervasive Computer 2000, *NIST*, http://www.nist.gov/pc2000/ (accessed December 8, 2004).

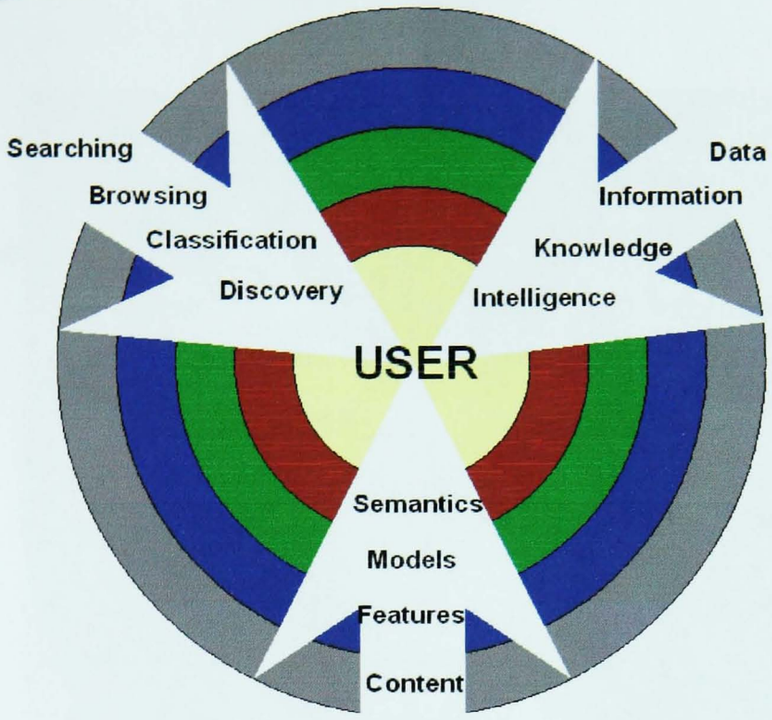


**Table 1 Research on user- centric systems for exploitation of multi-modal sources. The Pervasive Media Management Group at the IBM T. J. Watson Research Center is developing novel methods and user-centric systems for the analysis, management and exploitation of large repositories of unstructured multi-modal data. The group is investigating applications related to multimedia databases, real-time alerting in health and business domains, and Web-based universal access. http://www.research.ibm.com/pmm/ (accessed December 4, 2004).**

3.4.4. These forms of pervasion and/or invasion raise problems of contents' management as well as presenting issues involving the archiving and accession to the metadata. Furthermore, they generate questions on the human role within these new structures. This is in a context of metamedia, [5] which are based on the use of metadata, where the human function has become that of 'critical filter' or just 'end user.' [6]

[5] "Every message is, in one sense or another, a *simulation* of some idea. It may be representational or abstract. The essence of a medium is very much dependent on the way messages are embedded, changed, and viewed. Although digital computers were originally designed to do arithmetic computation, the ability to simulate the details of any descriptive model means that the computer, viewed as a medium in itself, can be *all other media* if the embedding and viewing methods are sufficiently well provided. Moreover, this new 'metamedium' is *active* - it can respond to queries and experiments - so that the messages may involve the learner in a two-way conversation. This property has never been available before except through the medium of an individual teacher. We think the implications are vast and compelling." Alan Kay and Adele Goldberg, "Personal Dynamic Media," *IEEE Computer* 10, no. 3 (1977): 31. See also: Howard Rheingold, *Tools for Thought: The History and Future of Mind Expanding Technology* (Cambridge, MA: The MIT Press, 2000) and Howard Rheingold, *The Millennium: Whole Earth Catalog; Access to Tools and Ideas for the Twenty-first Century* (San Francisco: Harper Collins, 1994). "Information and communication technologies are starting to invade the physical world, a trend that hasn't yet begun to climb the hockey

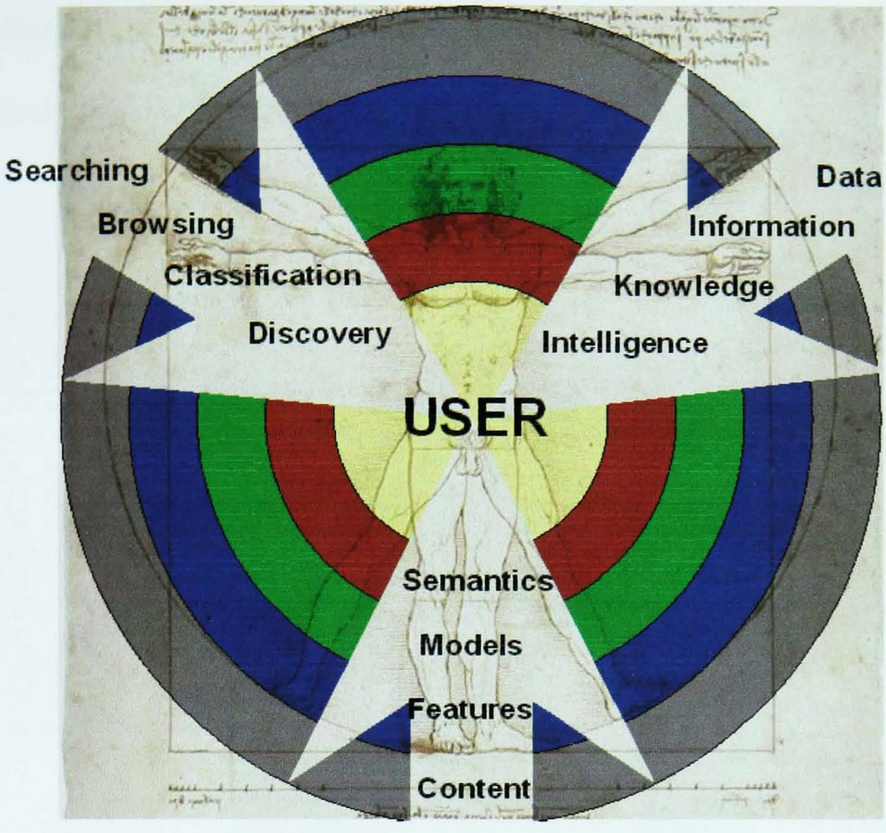


**Figure 2 The structure of Pervasive Media positions the user at the centre of a universe which is constituted by 'other' elements. Contrary to the Renaissance ideals the user is not the 'universe,' but a molecular part of it where the distinction and/or transformation between 'user' and 'used' rests on a single letter.**

3.4.5. The classification proposed in this research, as analyzed in chapter 2, does not attempt to reposition the 'human' at the center of the debate, but attempts to reconsider the role of the transhuman within the contemporary evolving media structures. [7] This is a classification which could help resolve some of the problems at the intersection

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stick growth curve. Shards of sentient silicon will be inside boxtops and dashboards, pens, street corners, bus stops, money, most things that are manufactured or built." Howard Rheingold, *Smart mobs: The Next Social Revolution* (Cambridge, MA: Basic Books, 2002), 85. "Another vision from the past that might become increasingly important in the future is the idea that the very walls around us can be made aware of human behaviour and can learn how to respond to us." Howard Rheingold, *Virtual Reality* (London: Mandarin, 1992), 115. See also: Howard Rheingold, *The Virtual Community: Finding Connection in a Computerized World* (London: Minerva, 1995).

[6] "In summary, in terms of its creative and 'generative' potential, 'metadating the image' paradigm means following four related directions: (1) inventing new systems of image description and categorization; (2) inventing new interfaces to image collections; 3) inventing new kinds of images which go beyond such familiar types as 'a still photograph' or a 'digital video'; (4) approaching the new 'super-human' scale of visual data available (images on the Web, web cam recordings, etc.) not as a problem but as a creative opportunity." Lev Manovich, "Metadata Mon Amour, 2002" *Manovich.net*, June 10, 2004, http://www.manovich.net/ (accessed December 8, 2004).

[7] "What would it mean, then, to think of networks *as living networks*, as networks ontologically driven by time and by duration?" Eugene Thacker, "Networks, Swarms, Multitudes: Part One," *Ctheory.net*, May 18,

of the contemporary media structures. It focuses on the pervasive, penetrative and integrating forces which are generating phenomena of hybridization such as biomedia: the intersection of molecular biology and computer science. [8]

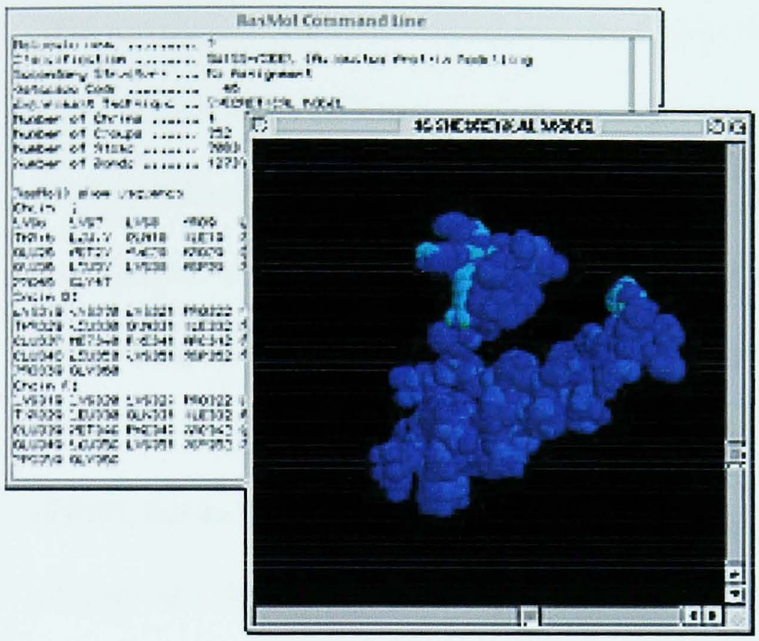


**Figure 3 *ASCII_DNA*, Eugene Thacker, 2004. This is a bioinformatics project that combines computers, biology, and literature. Each piece of software in the project performs manipulations between DNA, proteins, and English-language text (ASCII). See http://www.lcc.gatech.edu/~gromala/biomedia/projects.html and http://www.lcc.gatech.edu/%7Eethacker/proj/asciidna/asciidna.html (accessed December 10, 2004).**

3.4.6. The problems related to the presence of 'autonomous media' or 'lifelike media,' which are also identified by Deleuze as 'heteromorphous' forms of existence, are crystallized in Hansen's analysis.

> 3.4.7. One need hardly embrace Kittler's radical posthumanism to recognize the imperializing anthropocentrism at stake here: beyond the theoretical question of whether we should constrain our understanding of the digital to its narrow function for us, Manovich's position undermines the very technical autonomy that he so insightfully attributes to the digital. The ultimate implication of his argument is quite narrowly, and indeed defensively,

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2004, http://www.ctheory.net/text_file.asp?pick=422 (accessed December 10, 2004). See also: Eugene Thacker, Networks, Swarms, Multitudes: Part Two," *Ctheory.net*, May 18, 2004, http://www.ctheory.net/text_file.asp?pick=423 (accessed December 10, 2004).

[8] Eugene Thacker, "What is Biomedia?" *Configurations: A Journal of Science, Literature and Technology* 11, no. 1 (2003), http://muse.jhu.edu/journals/configurations/toc/con11.1.html (accessed December 10, 2004). See also: Eugene Thacker, *Biomedia* (Minneapolis: University of Minnesota press, 2004).

> humanist: since the digital will always be manifested as the cinematographic image – that is, as images designed for human consumption, images that 'are easily processed by the brain' – we need attend to only those aspects of its materiality that bear on this manifestation. [9]

3.4.8. Hansen's analysis accuses Manovich of 'anthropocentric imperialism.' This accusation does not consider that the digital, if and when it becomes an autonomous entity, by its nature will have a 'digitalcentric' structure. The ontology of this digitalcentric structure will be based, partially, on the ontology of its human creators, as much as human ontology is based on the "dependence on the inhuman, or better, the preindividual." [10] Hansen's reasoning on the 'anthropocentric imperialism' is based on a process of self rejection which favors the 'alien' as inherently positive. In *I, Robot* (2004), the most similar being to an 'alien' model of development is a cross between a goddess and the cyborg. VIKY is an evolutionary form of maternal rationalistic goddess, a heteromorphy, and her imperialistic nature, although matriarchal, is the opposite of a patriarchal manifestation of 'compassionate' evolution as in the human-like protagonist robot, Sonny. In a lifelike context, the ontology of life is the perpetuation of life itself, and the only possibility to understand a non anthropocentric structure is 'being-not-anthropos.' Hansen's Bergsonist approach, which evidences through affective embodiment Deleuze's idea of heteromorphy and antihumanism, does not account for the process of discovery and knowledge of the 'alien.' Furthermore, "the imperative to recognize the radical heteromorphism between human capacities and machinic functions" [11] fails to understand that the ontology of these functions is 'anthropocentric' in its genesis and may be totally imperialistic in nature, although 'digitalcentric.'

3.4.9. This focuses the debate on the process of evolution of the media, which is inspired by and references previous media formats, as explained by Manovich.

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[9] Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: The MIT Press, 2004), 36.
[10] Ibid., 270.

Conversely, this evolutionary process is manifested through heteromorphy entities determined by embodied, processural and affective technogenesis[12] according to Hansen and his interpretation of Deleuze. [13] Manovich and Hansen focus on two different aspects of the same ontological phenomenon. Manovich looks at the originating structures of the 'new media,' while Hansen analyzes the conclusion of this process, the original heteromorphous developments.

3.4.10. For this reason the classification proposed in the second chapter may be re-presented in a media context, since it looks at the process of evolution of the media and its development throughout its different phases of becoming 'alien.' This classification evidences the process of moving away from an anthropocentric structure without dismissing the role played by the 'human' in the ontological evolutionary phases of heteromorphous media forms.

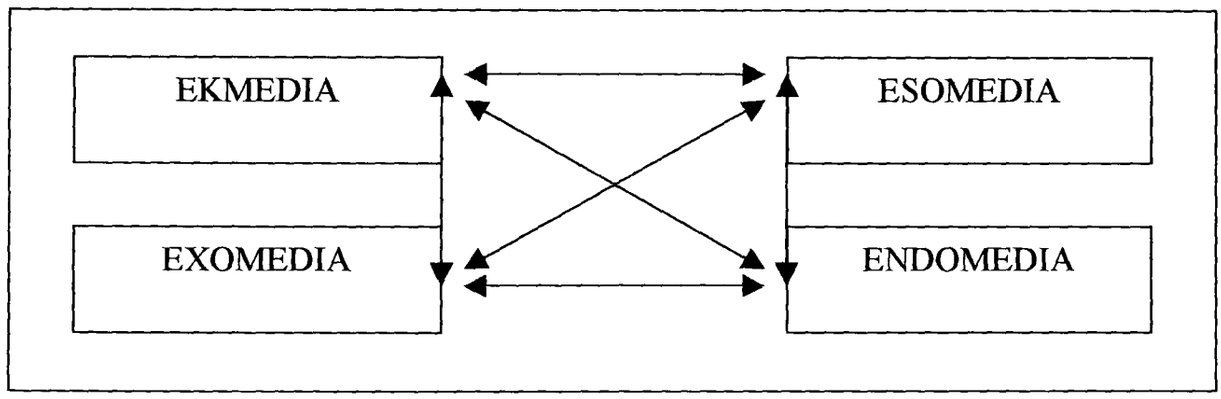


**Table 2 The relationships between media processes can be resumed following the micro-classifications on the evolutionary processes examined in chapter two.**

[11] Ibid., 270.
[12] It has to be noted that Hansen overlooks that memory and affective experience, as in Viola's work, are humanist and human philosophical characteristics and values. These are not part, or should not be part, of truly heteromorphous digital images.
[13] Hansen does not explain how the phenomena of embodiment, processural and affective technogenesis, anthropocentrically inspired may determine the heteromorphous or 'alien.'

3.4.11. At this stage of the analysis it is possible to understand how the evolutionary process in table 2 resumes, at micro level, the processes of hybridization which characterize the concepts of intermedia, intramedia and metamedia. It allows a better framing of the evolutionary process which is characterized by the concept of intramedia, being based on the evolutionary influences at a common micro level keeping in sight the organic/electric nature of the media and their 'intermingling and intramingling' with the most diverse life forms and media, as Virilio and Baudrillard explain. [14]

3.4.12. Manovich's approach follows an intermedia analysis, rejoining elements which belong to the diverse physical components and/or developments of the media. It is an historical rediscovery of commonalities and originating elements, [15] which focus on the human as filter between [16] different technologies and on the attitudes of humans towards the media, following Youngblood's analysis and 'the rearview mirror' theory of MacLuhan.

3.4.13. Hansen looks at the metamedia as the final development, which by nature can only be seen as totally alien or heteromorphous according to Deleuze. This media of

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[14] "The secret vice, already pointed out by Umberto Eco, lies in the way the media become self-referring and speak only among themselves. The *multimedium* is becoming the *intermedium*." Jean Baudrillard, *Screened Out*, trans. Chris Turner (London: Verso, 2002), 188. "The intimate space of the innards of the human body is preparing to receive its complement of 'intra-organic' micromachinery." Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997), 53. See also: Kevin Warwick, "The Matrix: Our Future?" *whatisthematrix*, November 20, 2002, http://whatisthematrix.warnerbros.com/rl_cmp/new_phil_fr_hanley2.html (accessed December 19, 2004) and Richard Hanley, "Simulacra and Simulation: Baudrillard and the Matrix," *whatisthematrix*, December 19, 2003, http://whatisthematrix.warnerbros.com/rl_cmp/new_phil_fr_hanley2.html (accessed January 20, 2004).

[15] "The privileged role played by the manual construction of images in digital cinema is one example of a larger trend: the return of pre-cinematic moving images techniques." Lev Manovich, "What Is Digital Cinema? 1995," *Manovich.net*, June 10, 2004, http://www.manovich.net/ (accessed December 13, 2004). See also: Lev Manovich, "What Is Digital Cinema?" *The Digital Dialectic: New Essays on New Media*, ed. Peter Lunenfeld (Cambridge, MA: The MIT Press, 1999), 172-92.

[16] "In my view, the language of cultural interaces is largely made up from elements of other, already familiar cultural forms. [...] The first is cinema. The second is the printed word. The thirds is a general-purpose human-computer interface." Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 71.

'the beyond' envisages another nature and/or form of existence which belongs to the world of futurology, where possibilities are infinite and only that.

> 3.4.14. Of course, the questions of visual semiotics and hermeneutics still matter – but they need to be re-calibrated. The cultural unit is no longer a single image but a large scale structured or unstructured (such as the Web) image database. This shift becomes clearly visible if we compare how visual epistemology works in *Close-Up* (Antonioni, 1996), *Blade Runner* (Scott, 1982), and *Minority Report* (Spielberg, 2002). The protagonists of the first two films are looking for truth within a single photographic image. Panning and zooming into this image reveals new information about reality: the killer hiding in the bushes, the identity of a replicant. In contrast, the protagonist of *Minority Report* is looking for truth outside a single image: he works by matching the image of a future murder to numerous images of the city contained in a database to identify the location of the murder. The message is clear: by itself, a single image is useless – it only acquires significance in relation to a larger database. [17]

3.4.15. Manovich's statement on the 'uselessness' of the image cannot be generalized. The image itself and by itself is not always useless, it can be a representation of an art element, becoming art in itself, disjointed by the sequence of previous and following images, an independent form from the database which created it. [18] Or it can be materialized as the representation of the links to databases presented in diverse media formats, as in the case of the *Tulse Luper Project* by Peter Greenaway. [19]

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[17] Lev Manovich, "Metadata Mon Amour, 2002" *Manovich.net*, June 10, 2004, http://www.manovich.net/ (accessed December 8, 2004).

[18] Susan Collins, interview by Lanfranco Aceti, November 27, 2004, DVD. "I think with something like Fenlandia, the harvested images [...] whether anybody ever sees them or not they are fundamentally part of the work, the project and its images are a whole."

[19] "The idea of the 'moving image' which binds together Greenaway's cinema as total work of art is itself sustained by illusionism. At the heart of this notion is a crucial paradox, for in film the image does not move – film consist of a series of static frames on celluloid. The impression of movement is an illusion. [...] Film, video and electronic media are cinematic equations which slide apart even as they draw together." A. L. Rees, *A History of Experimental Film and Video: From the Canonical Avant-Garde to Contemporary British Practice* (London: BFI Publishing, 1999), 5.


**Figure 4** *Tulse Luper at Compton Verney*, **Peter Greenaway, 2004.**


**Figure 5** *The Tulse Luper Suitcases: Film 1, The Moab Story*, **Peter Greenaway, 2003.**

**Figure 6** ***The Tulse Luper Suitcases: Film 2; Vaux to the Sea*****, Peter Greenaway, 2004.**

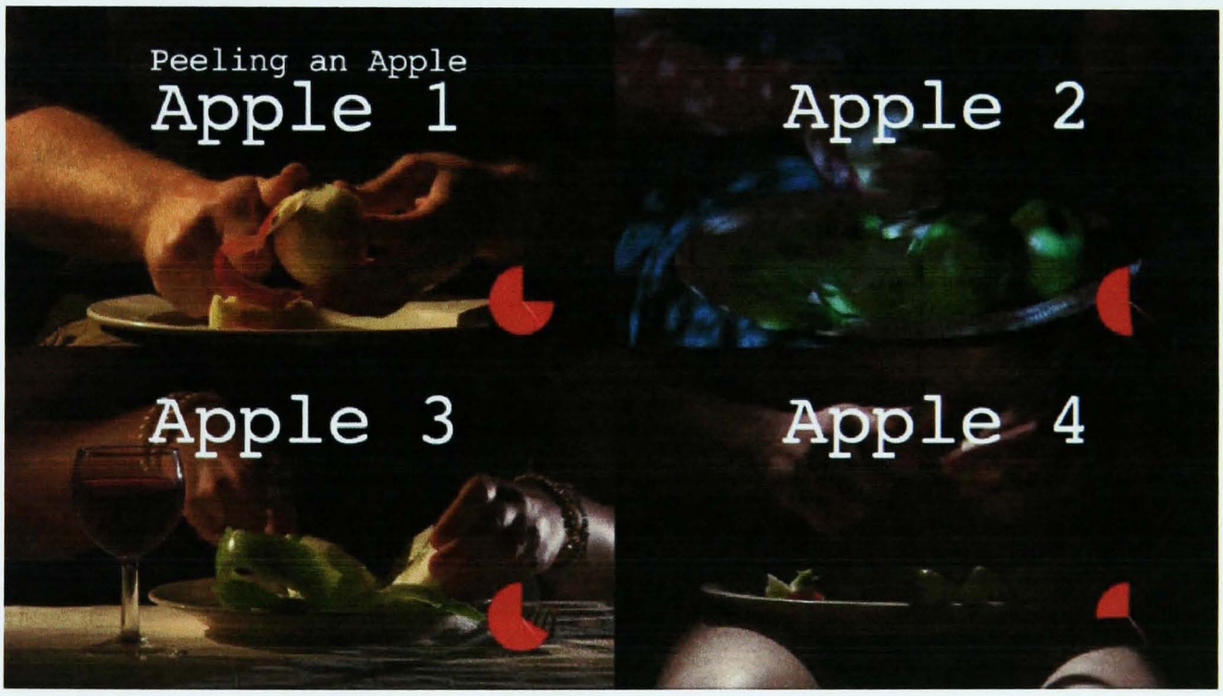


**Figure 7** ***The Tulse Luper Suitcases: Film 3; From Sark to Finish*****, Peter Greenaway, 2004.**

3.4.16. "It is just a small step from the multimedia screen object to the *metadesign* of computer-assisted perception and on to plastic surgery for *optically correct* eyesight." [20] Virilio presents these evolutionary forms of metamedia as new form of illusions which are no longer optical but aesthetic.

[20] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997), 101.

3.4.17. Hypermedia, Cybermedia, Megamedia, Metamedia, Multimedia, Intermedia, Intramedia, Biomedia... these are representations at micro or macro level of evolutionary media structures, not based on a semantic war, but on the attempt to define the media which express the contemporary 'art object.'

3.4.18. In this context the avant-garde is becoming not neo-avant-garde but a 'technological avant-garde,' which in the analysis of the 'object' proposes technological experimentation as one of the bases of its artistic purposes. In this approach the art 'object' is determined by its artistic, scientific and technological laboratory experimentation, bringing to light the methodological approach of Leonardo da Vinci and of the Renaissance, where the research - medical, chemical, scientific or alchemical - was part of the fundamentals on which art was constructed and through which, in the 20th century, Duchamp exercised his critique of the social context.

> 3.4.19. I use the word *object* to reactivate the concept of laboratory experimentation practiced by the avant-garde of the 1920s. Today, as more artists are turning to new media, few are willing to undertake systematic, laboratory-like research into its elements and basic compositional, expressive, and generative strategies. Yet this is exactly the kind of research undertaken by Russian and German avant-garde artists of the 1920s in places like Vkhutemas and Bauhaus, as they explored the new media of their time: photography, film, new printing technologies, telephony. Today, those few who are able to resist the immediate temptation to create an 'interactive CD-ROM,' or make a feature-length 'digital film,' and instead focus on determining the new-media equivalent of a shot, sentence, word, or even letter, are rewarded with amazing findings. [21]

3.4.20. These are researches carried out in the 21st century following the impact of new media technology in order to identify innovative means of expression for fine art content. The definition of a new media language is the fundamental exercise of

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[21] Lev Manovich, *The Language of New Media* (The MIT Press: Cambridge, MA, 2001) 15.

contemporary artists, who, like Vertov at the beginning of the 20th century, are attempting to devise and understand the alphabet of new media. [22]

3.4.21. Therefore, it seems a contradiction that Manovich rejects the value of the single image while advocating the importance of the founding blocks of the new digital processes. This conflict between the database and the single image in digital media can be retraced to Pasolini's approach to cinema. Manovich's attempt to reconcile the single image with the database structure is similar to Pasolini's attempt to reconcile the single frame with the wider filmic cultural context. Pasolini's aesthetic is more valuable when inserted in this context of experimentations. In fact, through linguistics and semiotics he attempted to define the visual language of cinema. He did it through something he called 'cinèmi,' filmic building blocks comparable to those of linguistics called phonemes. He did this in order to be rewarded with original findings, following Vertov's tradition. [23]

3.4.22. This approach is what has been rediscovered in the contemporary flux of media [24] which, although converging in protocols and wireless technology in order to achieve maximized communication, are differentiated in their physical appearances by hundreds of varieties and specialized functions.

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[22] "For fifteen years I studied writing in film. To be able to write with a camera not with a pen. Hindered by the lack of a film-alphabet, I attempted to create that alphabet." Annette Michelson, *Kino-Eye: The Writings of Dziga Vertov*, trans. Kevin O'Brien (Berkeley: University of California Press, 1984), 132.

[23] "The frame therefore forms a set which has a great number of parts, that is of elements, which themselves form sub-sets. It can be broken down. Obviously these parts are themselves in image [en image]. This is why Jakobson calls them object-signs, and Pasolini 'cinemes'. Gilles Deleuze, *Cinema 1: The Movement Image*, trans. Hugh Tomlinson and Barbara Habberjam (London: The Athlone Press, 1992), 12.

[24] "My fascination and inclination, being interested in process and wishing to demonstrate that process, as well as to give you end-results, solutions and closures, is to use it. If I am making a project whose central metaphor is 'there is no such thing as history, there are only historians', I need to use it. And indeed every possibility of communication by visual image is used. [...] This is an anti-Dogme film. It exuberates and celebrates new cinema language." Peter Greenaway, "Cinema Is Dead, Long Live Cinema?" *Kasanderfilm.nl*, September 2003, http://www.kasanderfilm.nl/lecture.swf (accessed January 23, 2004).

3.4.23. What is at work in the contemporary media structure is an evolutionary form of a 'macrostructure' or 'metamedia' [25] structure, which should not be envisaged as a single medium encompassing everything, but as the electromagnetic or electrobiological waves which determine new interfaces and languages to speak with reality. Electricity is the common denominator of digital media, which differ from the overarching concept of 'metamedium' [26] in which the body is a kind of "convertor of the general form of framing into a rich, singular experience." [27] Hansen frames the body within the function of a 'convertor' which is not distant from the function of a 'filter' as proposed by Manovich. Both of these processes are part of a technological remediation which fails to grasp the complexity of contemporary digital realities. Conversion, filter and remediation are parts of a process of translation of a metamedia dialogue between human and machine, as defined by Kay and Goldberg. [28] This process is a media translation, a digital ekphrasis, with technological, semantic and hermeneutic as well as signifier and signified complexities. [29]

3.4.24. The metamedia is the 'modus of dialogue,' not the space where the interaction happens. It is the 'organizational structure' of an electric digital convergence between media, but not the space in which the structure operates. It is the difference proposed by Manovich between cyberculture and new media, only this time applied to the modality of operation of the media. Metamedia re-presents the Aristotelian differentiation between physics and metaphysics in a media context.

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[25] Charlie Gere, interview by Lanfranco Aceti, November 27, 2004, DVD. "The Matrix is a good example, it was one thing that was all over the place... the object is distributed... and it is part of the whole experience. It is a proliferation of objects. You talk of visual pollution... this kind of object proliferation is overwhelming... they can saturate so many aspects of our lives... through these extended objects."

[26] Charlie Gere, interview by Lanfranco Aceti, November 27, 2004, DVD. "There is a tendency to think of this as a neutral act of translation into the digital medium or metamedium [...] The digital is an exceptionally material medium [...] If it is material that means the material instantiates what it does in ways that are different from any other material."

[27] Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: The MIT Press, 2004), 270.

[28] Adele Goldberg, ed., *A History of Personal Workstations* (New York: ACM Press, 1988) 1988.

3.4.25. ...we may distinguish between new media and cyberculture. In my view they represent two distinct fields of research. I would define cyberculture as the study of various social phenomena associated with Internet and other new forms of network communication. Examples of what falls under cyberculture studies are online communities, online multi-player gaming, the issue of online identity, the sociology and the ethnography of email usage, cell phone usage in various communities; the issues of gender and ethnicity in Internet usage; and so on. Notice that the emphasis is on the social phenomena; cyberculture does not directly deal with new cultural objects enabled by network communication technologies. The study of these objects is the domain of new media. In addition, new media is concerned with cultural objects and paradigms enabled by all forms of computing and not just by networking. To summarize: cyberculture is focused on the social and on networking; new media is focused on the cultural and computing. [30]

3.4.26. Manovich defines cyberspace as "the particular category of *navigation through space*." [31] This space of navigation and/or penetration is the space which constitutes the territory of negotiation between human and machine in *The Matrix* trilogy. The space which Baudrillard has defined as fertile ground for developments, interactions and hybridizations.

3.4.27. The cyberspace is, therefore the space, within which the metamedia, the intramedia, the intermedia, cyberculture and new media operate. The relationship between these media categories and the possibility of 'translating' reality into a code, which can be sent anywhere electrically, is what represents the 'metamedium' structure. [32] Pierre Levy explains that the 'real' space or metamedium is experience, [33] that the real metamedium

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[29] Umberto Eco, *Mouse or Rat?: Translation as Negotiation* (London: Weidenfel and Nicolson, 2003), 192.
[30] Lev Manovich, "New Media from Borges to HTML, 2001," *Manovich.net*, June 10, 2004, http://www.nothing.org/netart_101/readings/manovich.htm (accessed December 8, 2004).
[31] Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001) 252.
[32] "First, cyberspatial communication is seen to be challenging both our traditional ideas concerning mass communication and forms of communication (combining words, images and sound into a metamedia)." Robert M. Kitchin, "Towards Geographies of Cyberspace," *Progress in Human Geography* 22, no. 3 (1998): 385-406, http://www.casa.ucl.ac.uk/cyberspace/rob_kitchin_pihg.pdf (accessed November 19, 2004).
[33] Pierre Lévy, "Meta Evolution," (lecture, The Future of Learning Group at the MIT Media Lab, Boston, May 11, 2002, http://www.mit.edu/~fca/levy/meta_evolution.html (accessed December 10, 2004) and "Collective Intelligence, a Civilisation," (lecture, The Future of Learning Group at the MIT Media Lab, Boston, May 11, 2002, http://www.mit.edu/~fca/levy/Collective_Intelligence.html (accessed December 10, 2004). "The classic work of art is a gamble. The more it transmutes the language on which it rides, be it musical, plastic, verbal, or other, the more its author runs the risk of incomprehension and obscurity. But the larger stake – the degree of change or fusion to which its language is subject – the greater the potential gain: the creation of an event in the history of a culture." Pierre Lévy, *Collective Intelligence: Mankind's*

is what goes beyond the medium itself. Cyberspace, therefore, seems a metamedium of a metamedium, or looking back to Pasolini's theoretical analysis, the 'im-space' where the machinic and human translate their languages, renegotiating reality from a shot, an iconic image, a phrase, a word, a letter.

3.4.28. Although these definitions describe perspectives and forms of media realities and indicate possible developments, it is impossible to frame them in a conclusive analysis because of their inherent 'evolutionary' characteristics. They evidence the tendency of contemporary media to subsume the world of existence and surround and penetrate the human body, transforming the human into one of the many elements of a matrix's interaction. The phenomena analyzed thus far in this research pose new questions. Are the database images produced in the multiple media structures a form of pollution and/or deterioration? What is the role of the artist and what are the new approaches in the context of the technological avant-garde? [34] These questions will be analyzed in the following sections.

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*Emerging World in Cyberspace*, trans. Robert Bononno (Cambridge, MA: Perseus Books, 1999), 123. Pierre Lévy, *Becoming Virtual: Reality in the Digital Age*, trans. Robert Bononno (New York: Plenum Trade, 1998), 31. Lévy explains that: "Different systems of recording and transmission (oral traditions, writing, audiovisual recording, digital networks) construct different rhythms, velocities and historical qualities. Each new mechanism, each technosocial 'machine' adds a space-time, a special cartography, a singular music, to a kind of elastic and complicated system in which expanses are covered over, deformed, and interconnected, in which temporalities interact, respond, or are contrasted to one another."

[34] "In the 1990s, the technological shift of all cultural communication to computer media gets under way. We may think that finally the avant-garde techniques of the 1920s will no longer be sufficient and that fundamentally new techniques will start to appear. But, paradoxically, the 'computer revolution' does not seem to be accompanied by any significant innovations on the level of communication techniques. While we now rely on computers to create, store, distribute and access culture, we are still using the same techniques developed in the 1920s." Lev Manovich, "Avant-garde as Software, 1999," *Manovich.net*, June 10, 2004, http://www.manovich.net/ (accessed December 8, 2004). Lev Manovich, "Avant-Garde as Software," *Ostranenie*, Stephen Kovats ed. (Frankfurt and New York: Campus Verlag, 1999).

## 3.5. Forma Locutionis in a Digital Echospace

### Creationism, Evolutionism and Extinctionism

3.5.1. Simon Penny [35] considers the contemporary media structure as challenging because it is based on a 'crisis of meaning' whereas Lev Manovich [36] regards it as a 'hybrid cultural interface' mediating between 'non compatible approaches.' The questions which Stephen Wilson pose reflect the contemporary status of media and the relation of art expressions to the social context. "Are digital systems the beginning of a grand age or are they the culmination of dark forces of dehumanization and domination? Or are they both?" [37] The answer to these questions can be found in the engagement or disengagement with the technological expression of contemporary arts and of the Avant-garde. Full participation or full rejection of the technological media developments are artist's forms of analysis to understand and react to the intersections of art, science and technology.

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[35] "The implications of this observation are resounding. Jonathan Crary cogently argues that meaning in an artwork is constituted between the viewer and the work, that the 'techniques of the observer' are as important as the techniques of the artist. Artists are struggling to establish a new canon, a new genre, but not only are understandings about the dynamics of the interactive experience very limited among artists, but the 'techniques of the user' are non-existant. What results is a crisis of meaning: the work cannot 'mean' because the user doesn't speak the language." Simon Penny, "A Postscript on the Emerging Aesthetics of Interactive Art," Walkerart.org, 1996. http://adaweb.walkerart.org/context/events/moma/bbs5/transcript/penney16.html (accessed December 12, 2004). "One hundred years of moving image has given us a culturally established set of cinematic conventions: we can read cinema. But as yet we have no culturally established esthtetic of real time interaction." Simon Penny, "From A to D and Back Again: The Emerging Aesthetics of Interactive Art," *Leonardo Electronic Almanac*, April 1996 http://www.ace.uci.edu/penny/texts/AtoD.html (accessed December 13, 2004).

[36] Lev Manovich, "Cinema as Cultural Interface, 1997," *Manovich.net*, June 10, 2004 http://www.manovich.net/ (accessed December 13, 2004).

[37] Stephen Wilson, *Information Arts: Intersections of Art, Science, and Technology*, (Cambridge, MA: The MIT Press, 2002)657.

**Figure 8 *Unbomb*, Mark Pesce, 2003. "On 21 August 2003, the UN HQ in Baghdad was bombed by unknown assailants. [...] I set this piece - sans its soundtrack - to Albinoni's music. The effect, people have told me, is both chilling and strangely beautiful. It reminds me of the fragments of film that William Gibson wrote about in *Pattern Recognition*." Mark Pesce, "Unbomb," *Hyperreal.org*, http://www.hyperreal.org/~mpesce/ (accessed December 13, 2004).**

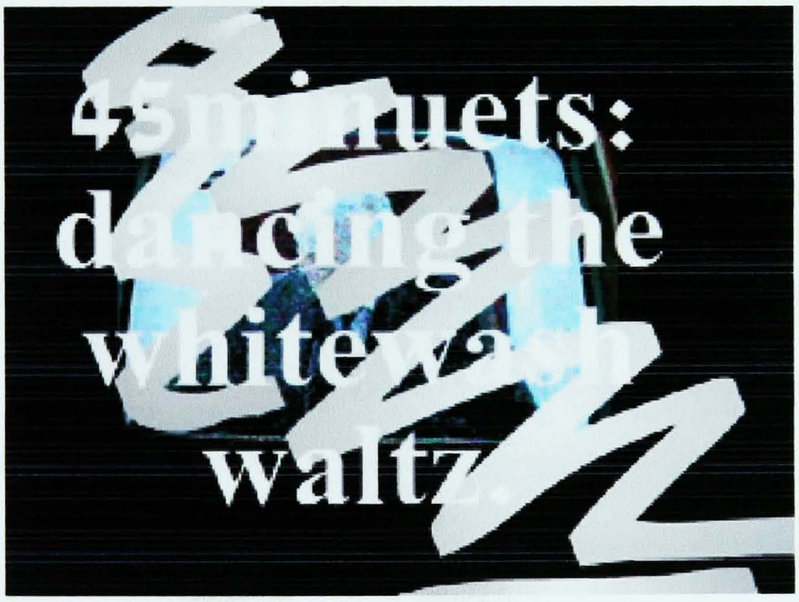


**Figure 9 *45 Minuets, Dancing the Whitewash Waltz*, Lanfranco Aceti, 2003. Presented at Version>04 Festival: InvisibleNetworks, the video is a repetitive brainwashing of the statement made by Lord Hutton at the end of his enquiry. The work has acquired a meaning and context of its own through a repetition of a statement proved false and seems to have been washed away by the unfolding of the events. The result is an unsettling impression of powerlessness and detachment.**

3.5.2. It is technology which is determining the social issues that the avant-garde is wrestling with, as well as introducing new concepts that shape contemporary

interaction between arts and media. [38] The creation of new forms of knowledge, or of forms of media intelligence such as the 'noosphere,' [39] generates new perspectives and forms of interventions. They also raise new issues that reflect envisaged 'ecosystems' in which humanity will interact, shaping ideas and evolutionary frameworks. Examples of these forms of interventions are *Unbomb* by Mark Pesce and *45 Minuets, Dancing the Whitewash Waltz* by Lanfranco Aceti.

> 3.5.3. The different elements of our culture – texts, music, images, virtual worlds, simulations, software, money – are now reaching the ultimate phase of digitalisation. They have now become ubiquitous in the network – once they are somewhere, they are everywhere – and are connected by one burgeoning, multicoloured, fractal and inflationist fabric, a fabric which is in one respect the meta-text which surrounds human culture. Software is a living form of writing and has given signs a certain independence, an ability to act by themselves in the digital matrix which is their home. Cyberspace is in the process of becoming the ecosystem for the world of ideas, it is a bustling noösphere which is transforming rapidly and which is beginning to take control of the biosphere, directing its evolution towards its own ends. [40]

3.5.4. This section proposes a new perception of the relationship between space, culture and creativity, starting from Levy's concept of 'independence of signs' or the autonomy of art images as discussed in chapter 2. One result of this autonomous process, brought about by the introduction of digital media, was the concept of virtual space. This analysis begins with the creation of a poetical mythical space, alluded to by Blake and explained by McLuhan, and concludes with the notion of 'Forma Locutionis' which argues the existence of a new digital 'Forma Imaginis.'

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[38] "Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it." Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (London: Harper and Row, 1997), 4.

[39] Mark Pesce, "Proximal and Distal Unity," *Hyperreal.org*, May 25, 1996 http://www.hyperreal.org/%7Empesce/pdu.html (accessed December 4, 2004).

[40] Pierre Lévy, "Collective Intelligence, a Civilisation," (lecture, The Future of Learning Group at the MIT Media Lab, Boston, May 11, 2002, http://www.mit.edu/~fca/levy/Collective_Intelligence.html (accessed December 10, 2004).

3.5.5. The argument is developed through the analysis of two main related concepts which are 'ecological' and 'echological.' [41] The first refers to a status of nature, whereby art expands 'our apprehension of reality.' [42] The second refers to a contemporary digital status: that of reflections, echoed images of the dispersed self. This status of reflections and/or reverberation of polluting images is an aspect of an altered and/or adulterated nature in contemporary post postmodern digital society.[43] The echological status could be explained as images that are reflections of a deprived and polluted self, mirrored in an infinite process of reproductions and/or remediations [44] in a context of intermedia [45] and intramedia. It is in this context that it is possible to pinpoint a substantial difference between intermedia and intramedia: the first has more to do with an attitude which determines the approach to technology, the second more with technology which determines an attitude.

3.5.6. Through a philosophical analysis of the current digital debate, the conclusion to this section will stem from the hypothesis that, after having dealt with some of the problems related to the medieval modistae, the contemporary issue of a perfect

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[41] "Indeed, our consciousness is never the echo of our existence in real time but the 'recorded' echo, the screen for the dispersal of the subject and its identity..." Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 2002), 94.

[42] "Ecology is defined as the totality or pattern of relations between organisms and their environment. Thus the act of creation for the new artist is not so much the invention of new objects as the revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical. So we find that ecology is art in the most fundamental and pragmatic sense, expanding our apprehension of reality." Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 346.

[43] "Like a virus, a photograph turned out to be an incredibly resilient representational code: it survived waves of technological change, including computerization of all stages of cultural production and distribution." Lev Manovich, "Image After *The Matrix*, 2004," *Manovich.net*, June 10, 2004 http://www.manovich.net/ (accessed December 13, 2004).

[44] This is one of the main reasons why the concept of 'remediation' is at fault, because presenting the image as 'echological,' offers a moral judgment on the process of image evolution, as discussed in Baudrillard and Virilio. In a rationalist framework it is important to recognize that the deterioration of the image is part of an evolutionary process and not a theological proof of the existence of a perfect image from which all other are derived, which implies the existence of a perfect being as its creator.

[45] "'Intermedia,' has more to do with attitude than technology. The intent here is to illuminate a universal trend toward the concept of artist as ecologist, art as environment rather than anti-environment, subsuming the eco-system of our planet itself into the art process." Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 43.

originating image is a re-presentation of a religious problem in a different scenario; no longer linguistic, but visual.

3.5.7. Further to this conclusion is the proposition that if humanity's image is 'ecological' and/or 'echological' it is also either perfecting or perfected. This section will evidence how the postmodern theories on digital technology of Baudrillard and Virilio are framed within a 'religious modistae' philosophical approach to humanity's image, which is considered as progressive or regressive; beneficial or detrimental. The technological avant-garde is representing a discourse through the concept of a polluted image, which, either way, needs to be recognized, according to these authors, as conducive to or deviating from the originating perfection, the 'Forma Imaginis.'

3.5.8. THE TYGER, William Blake.

Tyger! Tyger! Burning bright
In the forests of the night,...
...In what distant deeps or skies
Burnt the fire of thine eyes?

3.5.9. On which real tiger did William Blake base the recreation of his poetical tiger? And was that tiger a copy, an original or a free standing original? For McLuhan the answer is in his summary statement: "The resonating acoustic space. A vast echo chamber for reader participation. This tiger is not in any tank or any zoo. It is a world. The symbolic does not refer – it is." [46]

[46] Marshall McLuhan and Harley Parker, *Through the Vanishing Point: Space in Poetry and Painting* (New York: Harper and Row Publishers, 1968), 138-139.

3.5.10. Furthermore, in this world where the symbolic was, humanity has crossed, according to Baudrillard, into a space whose curvature is no longer that of the real, nor that of truth, but into an era of simulation with a liquidation of all referentials or reference systems. It is a place where, with the digital resurrection of a system of signs, an echoing chamber of meanings has been created, all equivalent, all combinatory, all interchangeable and therefore 'non-being.'

3.5.11. In Baudrillard's capitalistic space where the market economy has reinvented the concepts of penury/sign, and penury/simulacrum, where a simulated underdeveloped art adds a final esoteric aureole to the triumph of an esoteric culture, the gaze is fixed on the space of Babel. [47] This is the space in which the operations of David Larcher take place, in a space which is the space of the Babel Fish, the aquarium in which the 'I' has been placed.

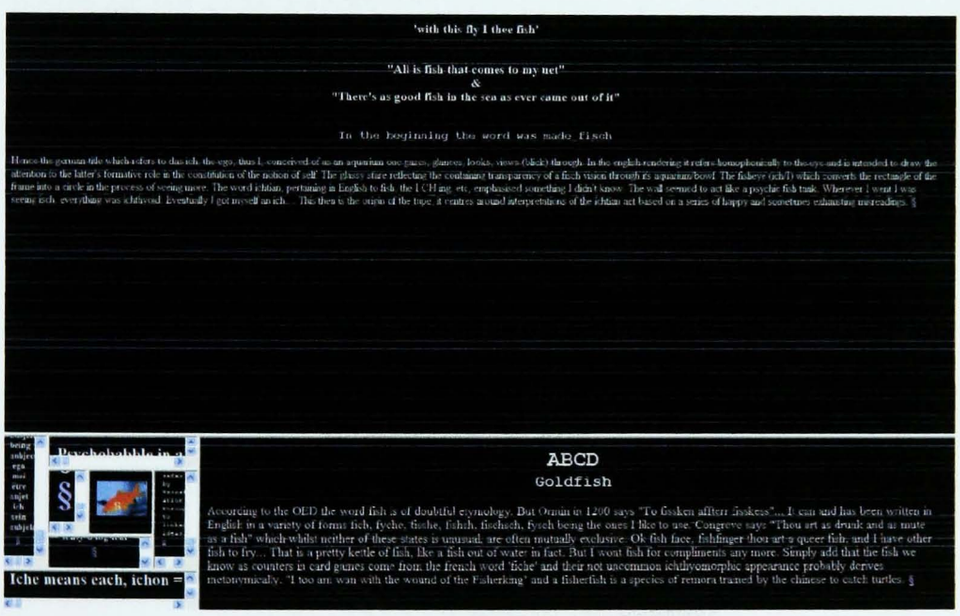


**Figure 10** ***Ich Tank Durchblick:*** ***View through the Aquarium of the I*****, David Larcher, 1983 – 96, detail. Courtesy of the artist.**

[47] "The Babel Fish is small, yellow and leech-like, and probably the oddest thing in the Universe. It feeds on brainwave energy not from its carrier but from those around it. It absorbs all unconscious mental frequencies from this brainwave energy to nourish itself with. It then excretes into the mind of its carrier a telepathic matrix formed by combining the conscious thought frequencies with nerve signals picked up from the speech centres of the brain which has supplied them. The practical upshot of all this is that if you stick a Babel Fish in your ear you can instantly understand anything said to you in any form of language. The speech patterns you actually hear decode the brainwave matrix which has been fed into your mind by your Babel Fish." Douglas Adams, *The Hitchhiker's Guide to the Galaxy* (London: Picador, 2002).

3.5.12. The aquarium becomes the place of reflection of and/or on the 'I'. It is a place, similar to the capsules of *The Matrix* (1999), in which the 'I' as subject looks at itself living in a dream expressed through the code of the matrix.

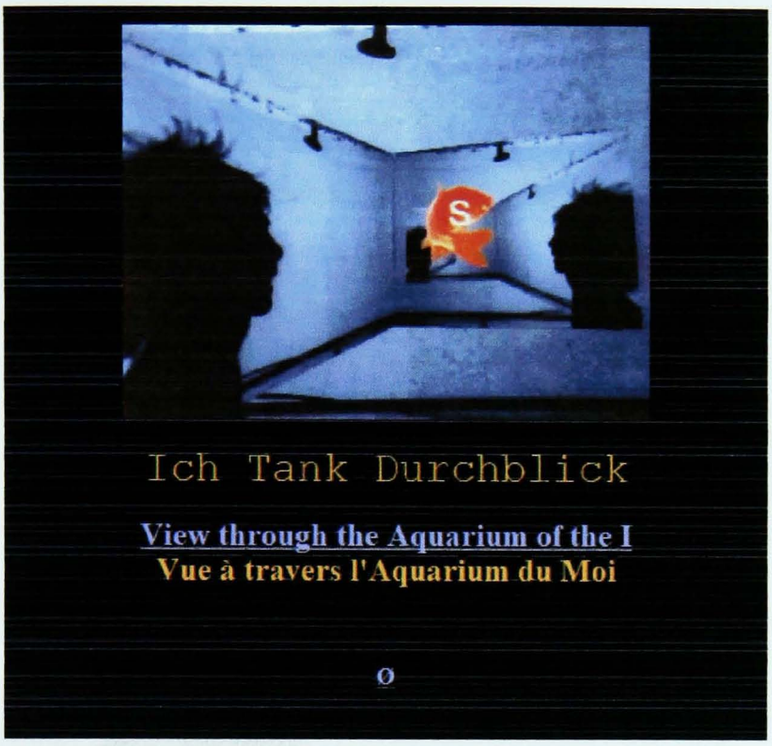


**Figure 11** ***Ich Tank Durchblick:*** ***View through the Aquarium of the I*****, David Larcher, 1983 – 96, courtesy of the artist.**

3.5.13. The aquarium becomes not just a space of exploration of the self, but of a space ever enlarged, crammed with 'reflections' of and 'reflections' on humanity's condition.

3.5.14. This 'echological' representational space of fragmentation leads to a reinterpretation not only of the 'forma locutionis' given by God, but also of the innate mechanism of Chomsky's generative grammar, Dante's illustrious vernacular, the rationalist ideals of Descartes and the medieval Modistae.

3.5.15. In order to analyze and understand the contemporary space of reflections where the echological operates it is necessary to evaluate the consequences of Virilio's statements. In fact, Virilio writes that space in the modern society expresses the idea of an

environment of polluted images. For the purposes of this argument following Virilio's analysis, natural environment should be interpreted as the natural state, whereas digital images have taken on a role as toxic as radioactive waste.

3.5.16. If there is an originating perfect image which is being lost, Virilio's alarm becomes more ominous in the sense that it might have already arrived too late. In fact, there is the possibility that the innate mechanisms of a perfect representation of the self has been tampered with not just by a socially polluted environment, but also by genetic manipulation. This new possibility raises doubt over the idea that a generative grammar, or a generative image, might be altered in exchange for the creation of a degenerative human, unable to speak or recognize itself.

**Figure 12 *Farrah*, John Waters, 2000. "Worship patterns of abuse so strong that they beg to be blown up, cut out and hung on the wall like taxidermy.... Watching a movie should be like hunting. Out of context, every image of the cinema is yours for a split second. Take it before they bury it. Then these pitiful new "movies" made up from the scraps of others won't be anybody else's but your own." From John Waters's exhibition *Change of Life*, February 7 – May 2, 2004, *newmuseum.org*, http://www.newmuseum.org/more_exh_j_waters.php (accessed May 12, 2004).**

3.5.17. John Waters's editing and cross-transferring techniques between media have created a discourse which refers to the remediation process of images, as well as the corruption described by Virilio. In the contextual discourse and processes of

'remediation' through the capture and presentation of images, Waters alters the context and thereby changes the meaning.

3.5.18. What Waters does and what the work is about is editing – the transformation of his source materials into newer fictions that are more critical and useful for the artist. 'My photographs are not really about photography. They are about editing. I use photography but they are all taken from the TV screen. Anybody can do that, but it's the order I put the picture in to try to create a new kid of movie, something that you can put on your wall.' [48]

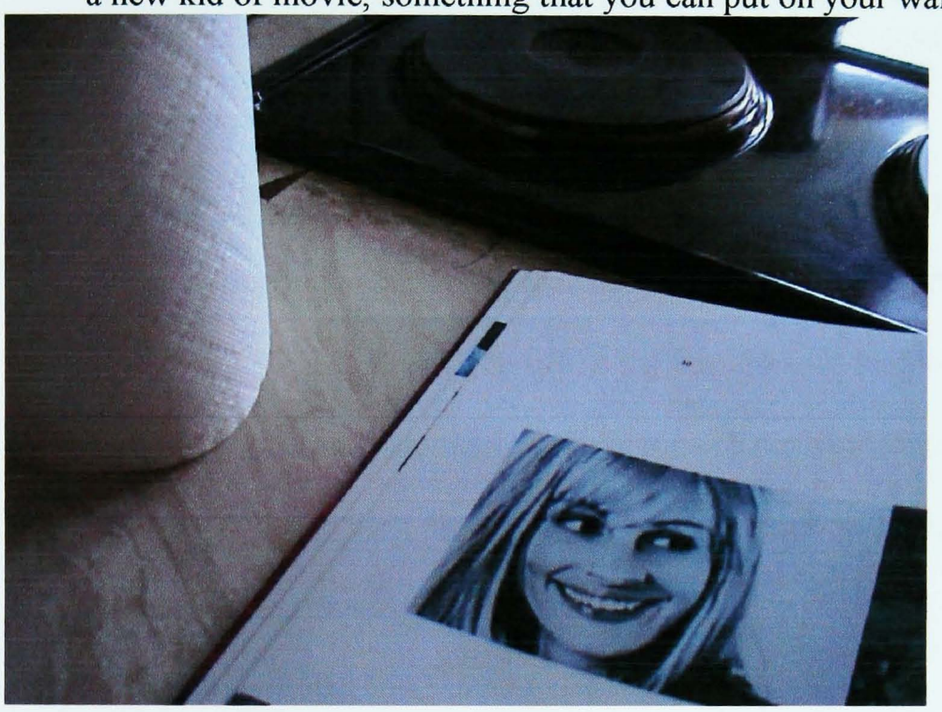

**Figure 13** ***Julia Is Slaving in the Kitchen: Remediation of John Waters' Julia 2000*****, Lanfranco Aceti, 2004. This art piece is part of a siers of 'stars' images' out of context and 're-mediated.'**

3.5.19. In the remediation process, digital space becomes a representational extension of the memory. As in *Julia Is Slaving in the Kitchen: Remediation of John Waters' Julia 2000*, the reconstruction of the artwork requires an excavation of previous alterations, collages, media transitions and modifications, which bring to light not just a remediation process but a series of critical and philosophical analysis. Therefore, the echological – composed of images of the dispersed self - is a polluted ecosystem. In this 'echosystem' the environment is a visual representation of digital echoes, sounds and/or visuals. It displays the movie of narrative lives which have been translated from 'reality'

[48] Marvin Heiferman and Lisa Phillips, *John Waters Change of Life* (New York: Harry N. Abrams Publishers and The New Museum of Contemporary Art, 2004), 27-28.

into a digital system, echoing the far distant sounds and images of the omni-present and therefore the omni-absent traces of an originating reality.

> 3.5.20. If this were in fact to happen, then the Earth, our space-world, would indeed be 'sick', struck down with a disease without any known precedent. And that would be a pity for the length, breadth and depth of a space rendered unreal by the artifice of a limit-speed that would effectively wipe out both history and the memory of it, since the well-known desertification of the geographical expanse would itself be outstripped by that of (chronogeographic) duration, the desert of world time – of a global time – complementing the desert of flora and fauna rightly decried by ecologists. [49]

3.5.21. Virilio's analysis asks for a return to a golden age, a pre-digital age. This is a recurring theme in the history of humanity. The desire to return to the golden age was identified in Victorian time as a return to the Renaissance and in the Renaissance as a return to ancient classic Rome and Athens. Even Rome and Athens, at the height of their civilizations, expressed the desire to return to 'their' golden age, to more severe and traditional customs 'belonging' to their heroic history. [50]

3.5.22. The quest for a return to the golden age appears to be a characteristic of humanity, a travel back into a space/time constant which would dissolve the fragmentation and unpredictability of an unknown present or future. It has assumed with the Modistae and with Dante the characteristic of a quest for the perfect language. This is the language spoken in the moment of the world's creation by God. Similarly in the fine arts there has been a quest for the perfect image, such as that possessed by Adam when he was created. These 'golden age revivals' are theoretical attempts to avoid the uncertainties of contemporary issues.

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[49] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 125.

[50] Virgil's Aeneid is an example of the Romans' desire to return to a golden age. W. F. Jackson Knight in the preface writes: "People then looked back on their rich moral inheritance and became increasingly interested in the origins of Rome and in the Roman 'myth', which was both life-giving and poetically true."

3.5.23. In analyzing this concept of the perfect image the hypothesis of a return to the pre-digital era, as Virilio suggests, must be considered. This analysis would therefore initiate a spiral where one would fall back into the mythological space where it was a given that the '*modi intelligendi*' and consequently the '*modi significandi*' reflected the '*modi essendi*' of things themselves. [51]

> 3.5.24. Plato in the Cratylus discusses the problem of whether words have their source in nature, by direct imitation of things, or in choice; indeed, he suggests a third option, that language must reflect the order of ideas. European culture was for a long time directly influenced by Aristotle's solution: the sounds of the voice are conventional symbols that express a passion of the soul, even though this passion of the soul arises spontaneously as the image of the thing that exists. [52]

3.5.25. The relationship between the three concepts exemplified by Eco is reinforced in Plato's theory of the existence of a perfect language which has its own ideal existence and form of representation. This concept of an 'ideal language' raises the specter of the biological force of things to renew themselves over time, rather than lament their multiplicity. However, the fragmentation of post-modernity and the rise of the hyperreal necessitates Eco having to change the balance of these relationships.

3.5.26. Multiplicity is an inherent characteristic of contemporary media, which are transposed into the 'echological' space. This is the environment of the digital, a representational extension of 'thoughts' envisaging possible evolutionary scenarios and series of environments of possible *modi vivendi*. The possible 'modus vivendi' is part of the aesthetic process of tracing the 'existences,' virtual and real, of a an artwork. Examples are the juxtaposition of John Waters's work in *Your Weary Eyes Look into the Depth of Remedies to a Void Insubstantial* by Lanfranco Aceti and the Peter Greenaway's

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Virgil. Aeneid, ed. E. V. Rieu, trans. W. F. Jackson Knight (Harmondsworth, Middlesex: Penguin Books, 1963), 11.

'History of Uranium' which from its manifestations in 'digital representations' can be traced back to a series of paintings on blackboard.

3.5.27. The degenerative sequences of digital images, echoes of the original, are a deviation and part of an evolving process which does not necessarily lead towards a degenerative course. The cloned image that moves from the original, as Baudrillard explains, is an original in itself and therefore loses its propriety of 'clone' and becomes an 'original clone,' different from the original in some of the smallest details but still differentiated.[53]

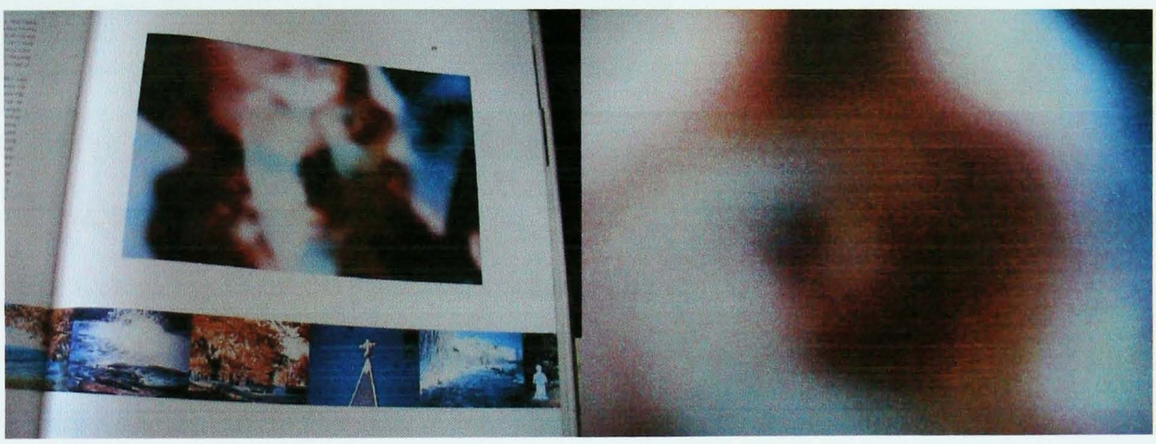

**Figure 14** ***Your Weary Eyes Look into the Depth of Remedies to a Void Insubstantial*****, by Lanfranco Aceti, 2004. Remediation from page 29 of the catalog of John Waters' remediations.**

[51] Umberto Eco, *Serendipities: Language and Lunacy*, trans. William Weaver (London: Orion Books, 1999), 51.
[52] Ibid., 34.
[53] Jean Baudrillard, *Simulacra and Simulation*, trans Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 102-103.

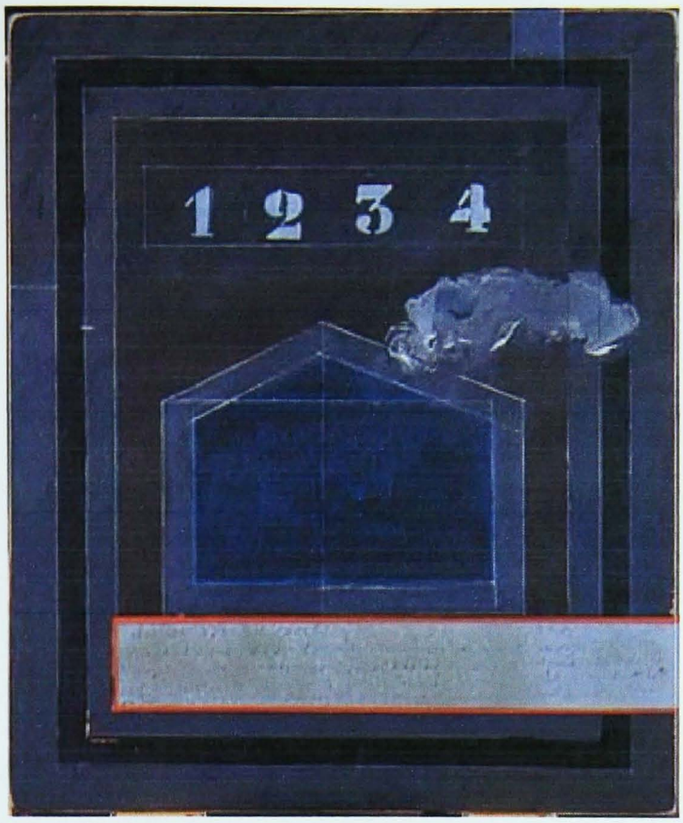


**Figure 15** ***Four Times on Fire, No. 2*****, Peter Greenaway, February 1999. Acrylic on hardboard, 52 cm. x 43 cm. This series of works precedes the Tulse Luper Project as a personal history of Uranium. Peter Greenaway blurs the boundaries between painting, installation, web-art and film with his uranium's inspired works. "Here are several panels from a personal history of Uranium. It is intended appropriately that they should finally number 92, uranium's atomic number. They are full of sequences of various natures - public historical and private historical, mythical, numerical, textual, aesthetic. It may be that one day the twentieth century will be called the century of Uranium. Already the mythology of Uranium is building itself from Mormon associations of buried treasure in the deserts of Colorado where it was originally discovered in the West, to the pulling down of the Berlin Wall at the end of the Cold War. Perhaps the psychological and physical power of the word Uranium and all it represents has still more future than it has a past. It should not be ruled out that these panels should prepare themselves to be reworked, updated, erased, readdressed and rewritten - this has always been the nature of a blackboard's existence and purpose."**

**http://www.fortlaan17.com/greenaway/ (accessed January 21, 2005).**

**Figure 16** ***The Incident Room, No. 22*****, Peter Greenaway, June 1999. Acrylic on hardboard, 61 cm. x 81 cm.**

3.5.28. It is necessary at this point to evidence that in the Old Testament, the creation of man is referred to as the creation of an humanity as the image of God. If the concept of an originating perfect image is accepted, then it almost seems that a cloning process has happened in the moment of the creation. Humanity was created not as God, but similar to it; a differentiation in the genetic coding and in its information data. Information data, which according to the contemporary followers of the Modistae's school, was impossible for humanity to replicate and preserve, therefore causing the birth of the degenerative 'genetic twin' as a form of contemporary filiation. Humanity, it is suggested here, might have been created as a polluted clone, a non environmentally friendly creature, which in its nature aspired to be rejoined to the original.

3.5.29. It is suggested that the pollution of the image of humanity is not, as Virilio and Baudrillard suggest, recent and characteristic of the digital era. This therefore, offers space to the theoretical concept of a phantasmagorical possibility of a return to a golden age.

3.5.30. Since science supposes that there is no such a thing as heaven created by God or by Nature, there could be an alternative theoretical explanation. Virilio and Baudrillard believe that in the evolutionary chain of events following the creation, either as an original genetic code, or even better as a clone of a previous existence, the image becomes the expression of an evolutionary polluted self-image of humanity and not the expression of a golden age.

3.5.31. A human/animal species that, as with other animal species, has evolved through random and/or induced alterations, polluting its own original genetic information code and gaining something in the process. Whether this gain is beneficial or detrimental is decided by future evolutionary success or failures.

3.5.32. The Old Testament references to the concept of 'Forma Imaginis' can be found in: Gen. 1.26 'Let us make humanity in our image after our likeness;' Gen. 5.2 in reference to the creation of mankind 'in the likeness of God' and in Gen. 9.6 'Whoever sheds the blood of a human, by a human shall his blood be shed; for God made humanity in his own image.' According to the theme of 'return to a golden age,' the existence of an originating image justifies mankind's travel through the centuries as the attempt to get closer to that perfect originating image.

3.5.33. The 'ecospace' is, therefore, an ecological space where the original elements are intact and corresponding to an original perfect 'organic' genetic standard.

3.5.34. The research for the perfection of the originating language, both visual and poetical, in the contemporary society of 'echospace,' which creates a virtual and digitalized 'echoworld,' is impossible if one believes Virilio's theory of digital pollution. If the digital images are reproductions, weakened clones of the original, then it has to be derived, like the medieval Modistae did, that an originating image and originating word exist and that they are perfect and not perfectible and need to be re-conquered.

3.5.35. The notion that humanity was created 'in the image of God' is not a neutral concept in the context of a digital era. The idea of the polluted image exposes the limitation of the representation of mankind as a natural being, in that the image is not itself the thing it represents and that the copy is in some respect unlike the original.

3.5.36. Two propositions are possible at this stage: the copy is not like the original and the original was perfect, therefore the copy needs to return to the original perfection, ergo to God. Or there is an applicable evolutionary theory and the image is evolving, from copy to copy, into something ever perfectible.

3.5.37. The first proposition assumes that it is impossible to create something better than the original and negates the possibility of an underlining evolution in art as well as in society: the ever lasting reenactment of the past being the solution.

3.5.38. The second proposition regards the image as an evolutionary process, illustrating where it is possible to innovate and to eventually create something else, different from the original, a copy with its own characteristics.

3.5.39. Whereas the first proposition assumes that the images are polluting elements, therefore creating an echo-world of mirrored simulacra where the memory of the original perfection is being lost.

3.5.40. The second proposition is technologically orientated, and based on the possibility that not all that is created is actually a degeneration of the original. This approach implicates a Darwinian evolutionary theory in its justification, a framework discussed in the first chapter.

3.5.41. In the context of the contemporary postmodern critique, Virilio and Baudrillard argue that the new media context has forced art to become an assembled and indecipherable set of new images. These images, after having polluted the single perspective of the 20th century and having created a new set of rules, are becoming the new real, generating a world where the boundaries built are being blurred to create a hyperreal matrix.

3.5.42. In this new context the distinction between copy and original, according to Baudrillard, has disappeared and with it the accountability in the relationship between action and reaction. Everything has become simulacra, a non graspable entity devoid of meaning.

3.5.43. If the creative process could be considered evolutionary, the distinction between copy and original is then changed in the context of an 'echoworld.' In Baudrillards analysis responsibility disappears with the disappearance of the subject, of the original, and the appearance of the simulacra. Therefore, in the echoworld the disappearance of the subject, or its commodification, happens because the copies have been declared as such, as non original, as non elements, not part of contemporary reality.

They are pollution according to Virilio. This is the 'echological' state of the digital image. But if they are part of an evolutionary process, as elements of the echoworld, the images regain their significance. They are no longer pollution but hybrids, evolutionary moments with new significance and new meanings which need to be discovered.

3.5.44. Currently the digital world and its technology and exponents have the originality of the creative processes misrepresented. The hybridization process has generated a fragmentation of the image, as McLuhan suggested, which is not a homogenizing process. The misrepresentation of the digital image precipitates a re-enacting and re-presentation of the natural image and the 'usual' concept of its functionalities as seen through the 'rear-view mirror.'

3.5.45. The 'original clones' have been acting as copies apparently supporting the spinning of the simulacra. They have collapsed into a grey horizon of polluting images, which once recognized as degenerative oblige a retreat into the past of the originating image.

3.5.46. While Virilio and Baudrillard speak of the problems of the future, they don't mention the problems of returning to the past, an action which has an equal significance. Retreating into an originating image, denies the existence of perfectibility and of the creation of a new original image with new tools. This process of the simulacra denies the validity of Darwin's theory of evolution and looks back at a moral religious perspective based on faith.

3.5.47. According faith to a primeval originating image would also mean that faith could be the basis to the development of an evolutionary theory, which can be defined as self deterministic and 'creatively original.' This represents the creation of something new

that needs to be related to the primeval image to engage a direction irrespective of whether it is evolutionary or 'involutionary,' for interaction and comprehension of the world.

3.5.48. A new aesthetic theory which considers copies as 'new originals in their own right' may identify the necessary quantitative and/or qualitative status change from the original in order for a copy to achieve status as a 'new original product.'

3.5.49. The evolution of the image, therefore, is transformed into a journey in as much as there is a progression and/or change in the construction by the artist and in the perception of the image by the viewer. This journey will not necessarily cause the extinction of reality into the digital black hole.

3.5.50. In this journey it is possible to travel to reach the originating stadium of a perfect image, 'forma imaginis,' which belongs to the past, to the original moment of the creation. Or it is possible to travel into the future to reach, in an evolutionary context, a proximity to the perfection of God and the universe. Therefore, the direction of the itinerary becomes a question of perspective, of analysis of the space and of the position that humanity has within it.

3.5.51. The central positioning of humanity, prominent during the Renaissance, has shifted to a peripheral locus in the modern context and consequentially humanity has become nuclear/pixelled/fragmented.

> 3.5.52. We can't wait to go, we need lift-off and we need it now! This is currently most dramatically felt... in our real experience of telepresence, in our ability to view, hear and generally sense the world remotely, to communicate with each other in electronic, immaterial, virtual spaces, to be distributed across remote and extended locations, to be both here and there, in

> many places and the same time. The individual human presence of the individual human self, a unitary and undivided personality, has become multiple, distributed presences of a set of many selves, of multi-levelled, complex, diverse personalities. L'homme éclaté, as Paul Virilio has called it. The explosion of the one and the connectivity of the many is perhaps the single most important effect of the telematisation of our culture. [54]

3.5.53. This explosion and fragmentation has created a new representation of the image and a new set of images altogether. [55] The reduction of mankind to an information genetic code, as Baudrillard explains, has offered the possibility to transfer and reconstruct the human code in any part of the universe.

> 3.5.54. Meeting at a distance, in other words, being telepresent, here and elsewhere, at the same time, in this so-called 'real time' which is, however, nothing but a kind of real space-time, since the different events do indeed take place, even if that place is in the end the no-place of teletopical techniques (the man-machine interface, the nodes or packet-switching exchanges of teletransmission). [56]

3.5.55. The relation of the original to its copies and its clones becomes of interest as long as the reconstruction of the code is not perfect, but rather tampered with and altered by the casual and causal chaos of the universe.

3.5.56. The teleportation of humans in *Star Trek* and in the sci-fi genre is based on the assumption that each data transmission happens without a loss, without an alteration. But a minimum alteration within the human data body, as much as within the human art work, would create a new original and therefore a new artwork and a new human as in Cronenberg's movie *The Fly* (1986).

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[54] Roy Ascott, "Telenoia," (lecture, V2_Organization, Institute for the Unstable Media, Rotterdam, NL, October 30, 1992), http://framework.v2.nl/archive/archive/leaf/other/default.xslt/nodenr-143122 (accessed December 11, 2004).

[55] "You can share the chromosomes of your favourite images with other Kandid users. The chromosomes are stored in a public available database at kandid.org. This WEB database can be accessed with Kandid version 0.3.7 or later." "Kandid, a Genetic Art Project," *Kandid.net*, http://kandid.sourceforge.net/genomeDB.html (accessed January 20, 2005).

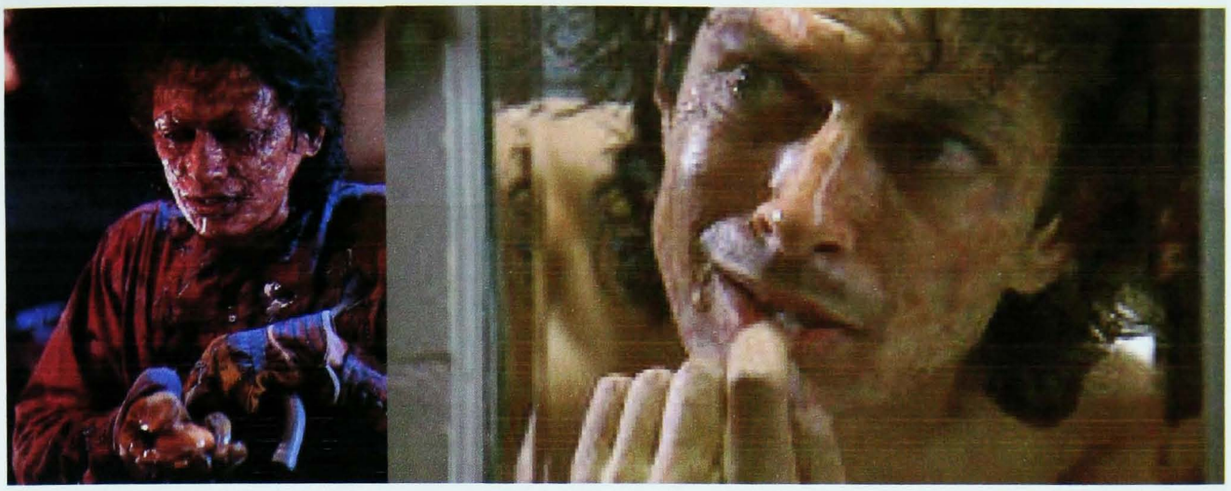

**Figure 17 *The Fly*, David Cronenberg, 1986. Seth Brundle, played by Goldblum, is the scientist who invents teleportation. When he emerges from the telepod he has been fused with the molecules of a fly which casually landed in the machine. He is not as an insect-monster like David Hedison in the original film (1958), but a super-human version of himself.**

**Figure 18 Detail of image, Kurt Kren. The physical transformation presents the viewers with issues of deterioration of the self-image via referential of the 'other.'**

[56] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 10. See also Ken Goldberg, ed., *The Robot in the Garden: Telerobotics and Telepistemology in the Age of the Internet* (Cambridge, MA: The MIT Press, 2001).

**Figure 19** ***8/6: Ana (Aktion: Günter Brus)*****, Kurt Kren, 1964.**

3.5.57. If this is the case, the filmic images of Kurt Krane and the digital record of the alterations of Orlan have achieved the symbolism of a journey. It is a transformation of the physical body reflected in a polluted 'echoself.' A journey that is either expression of a polluted image, in this case 'echological,' or an attempt to achieve perfection through the conquest of the originating image, the 'ecological.'

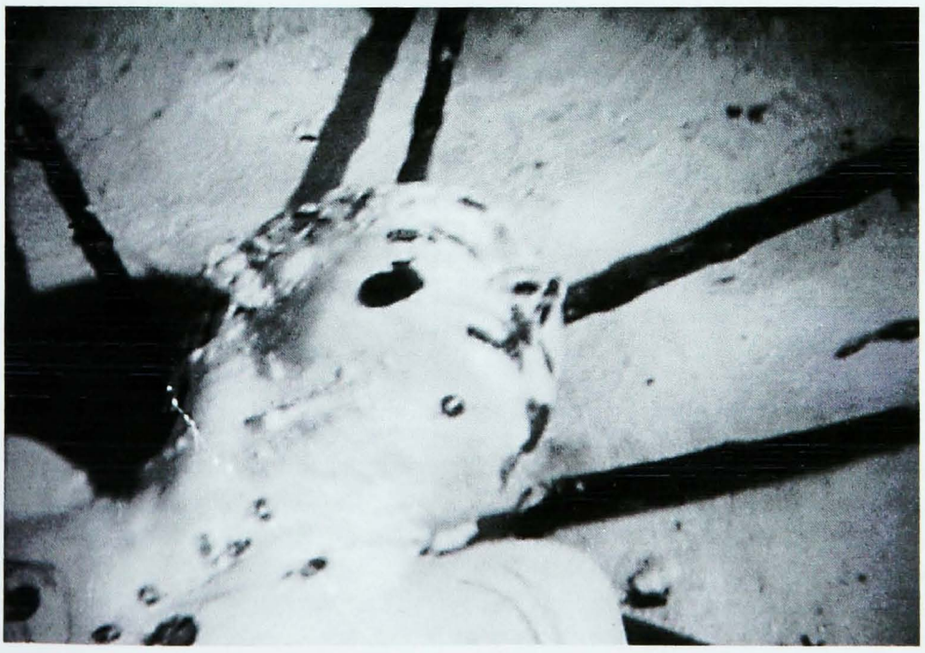

**Figure 20** ***10/65 Selbstverstümmelung (selfmutilation),*** **Kurt Kren, 1965. The movie is developed from a Günter Brus "action" and the film emphasizes the surrealistic drama of symbolic self-destruction.**

**Figure 21 *Omnipresence*, Orlan, 1993. Scenes from the operating room during Orlan's 7th plastic surgical operation entitled New York *Omnipresence*. The procedure involved sewing implants into Orlan's temples to create two lumps, and placement of an implant into her chin through the lifting of flesh and insertion of muscle tissue.**[57]

3.5.58. The artistic digital journey is an instantaneous journey where the arrival becomes more important than the travel. The departure is cancelled by the instantaneous happening of events, which seem not to take place anymore according to Virlio. But while he laments the dismissal of the journey, he does not consider the development of images as part of the journey itself in a framework based on an evolutionary trajectory.

3.5.59. As Virilio explains: "Where physical displacement from one point to another once supposed departure, a journey and arrival, the transport revolution of last century had already quietly begun to eliminate delay and change the nature of travel itself,

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[57] "Cardinal to de Kooning's working method has always been the interim image, a priority separating him from his Abstract Expressionist colleagues and which he maintained throughout the 1980s when his work, preoccupied with the sheer surface of paint, embraced a more fluid concept of flesh. The late work depicts de Kooning's final reckoning with the body--the human body conceived as a skin within which the artist, his model and the world (explicitly landscape) may abut, abrade, and coexist. [...] Here one may index Orlan's method as similarly engaged in a reckoning with how process gives rise to form, and finally to (self- )formulation. Her process videos and the resultant still photography from the operations are akin to glimpses into the transitive formation of a de Kooning painting, where stages of becoming determine the next action within the stream of impulse." David Moos, "Memories of Being: Orlan's Theather of the Self," *Art + Text* 54, (1996): 67-72 http://www.stanford.edu/class/history34q/readings/Orlan/Orlan.html (accessed December 16, 2004).

arrival at one's destination remaining, however, a 'limited arrival' due to the very time it took to get there." [58]

3.5.60. The physical displacement also becomes a 'digital arrival.' It represents the idea of 'showing up at your door,' an interference into reality. Interference that is more and more intrusive and changes the perspective of the self as well as the framework for behavior. The 'digital arrival' can happen simultaneously at different levels of consciousness and in different spaces and at different times.

3.5.61. For example, being constantly 'on camera,' increasingly a digital event, or living with the idea of being constantly recorded are both powerful pollutants in the expression of the selves. If the excuse 'Oh, after a while I forgot the camera was running' has relevance, what does it really mean? Is the vision of the camera, as Vertov postulated, something disquieting and autonomous?

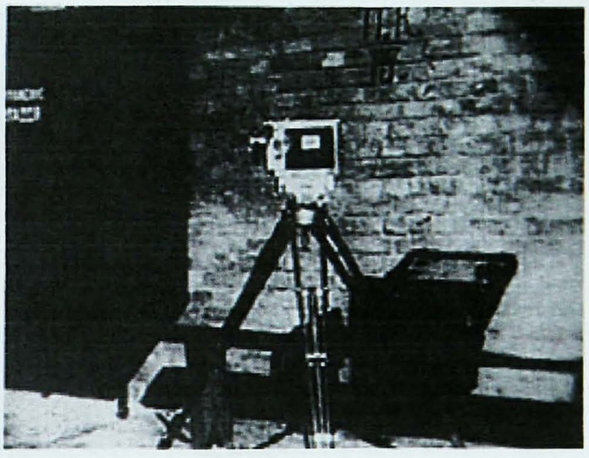

**Figure 22 *Man with a Movie Camera*, directed by Dziga Vertov, 1929. Is the gaze of the camera the gaze of man?**

3.5.62. Is it a neutral influence? If it is, it means that the subconscious is not conditioned by the digital event. This proposition has consequences for the understanding and/or perceptions of the digital, since it denies all Freudian analysis. On the other hand,

[58] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 15.

if something is happening at the subconscious level it is conditioning the conscious expression of the body's language which, therefore, doesn't speak ecologically but digitally. Therefore it means that having unconsciously learnt a new language, humanity speaks an unconscious digital lingo.

3.5.63. The speaking of a digital lingo implies communicating with the new digital categories. The multiplicity of images, 'digital arrival,' in different places and different times, is the 'ecological self' reduced to an autistic relation with its multiple selves. At the same time, the 'echological self' spreads its multiple appearances throughout the digital world of hyperreality.

3.5.64. If the narcissistic ego of the child persists into the adult resulting in absence of interrelations with the real, or other, then the focus of the self is on the commodification of 'it-self.'

3.5.65. By objectifying the subject, the self, as the only possible focus of analysis, is the expression of the self identity as managed by the digital cameras which are displaying 'it-self' independently from the consciousness of the self.

3.5.66. The multiple polluting images are the identified images of an external independent existence, which arrives and relates to everybody else and feeds back to the self, too focused onto the 'it-self' to be able to recognize the external invisible database functionalities of these images.

3.5.67. Virilio expresses these notions in his writings. "Currently, with the instantaneous broadcasting revolution, we are seeing the beginnings of a 'generalized arrival' whereby everything arrives without having to leave, the nineteenth century's

elimination of the journey (that is, of the space interval and of time) combining with the abolition of departure at the end of the twentieth, the journey thereby losing its successive components and being overtaken by arrival alone." [59]

3.5.68. According to Virilio contemporary societies are participating in the 'continuous arrival,' a spamming process. A generalized arrival of everything and everybody in a non ending process, a-temporal as long as it is repeated in every form and variant and digitally repeated ad infinitum: a pollutant echo of images which just keep on arriving.

3.5.69. The continuous and forceful re-presentation of digital copies and the representation of ever less meaningful simulacra may not necessarily imply a collapse into the destruction of meaning described as a black hole by Baudrillard. The metaphor of the black hole is a simulacrum in itself, and as such it could lose its meaning in the context of a digital evolutionary 'echological' environment, particularly if the concept of simulacrum constitutes the loss of meaning. The diversity of the copy from the original is a meaningless simulacrum only if the critical analysis is based on the parameters of the original. The loss of 'original' meaning in the image also implies that there is a new 'original' unfamiliar meaning, which may fill the void in the new image. This new meaning which requires new perspectives as well as analytical tools in order to be recognized as original and not as a copy.

3.5.70. The visual and the linguistic share the possibility to merge in the digital world and create a new set of meanings. [60] These meanings would not be the sum of the

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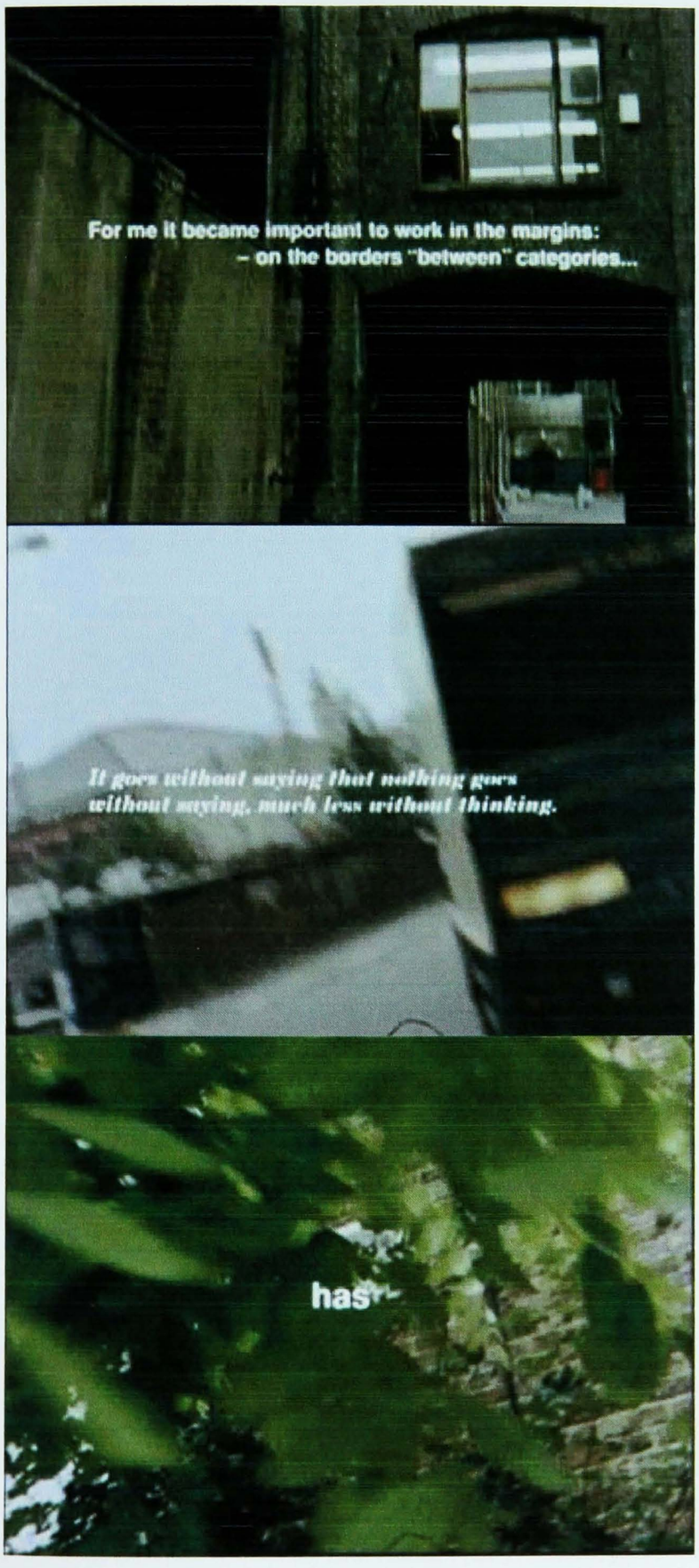
[59] Ibid., 16.

[60] "Digital tools, to adapt a phrase from Marshall McLuhan, are extensions of the human animal, devices which amplify and propagate, as well as transform and add to the capabilities of our bodies." Vicky A. Clark and Jason Simmons, "Digital Traces version a1.1," *Pittsburgharts.org*. http://www.pittsburgharts.org/digitaltraces/essay.htm# (accessed December 14, 2004). See also: T. F. H.

previous languages, but would generate a new iconography: example ARE Peter Gidal's *Assumption* (1997) and the work of Bill Seaman *Passage Set/One Pulls Pivots at the Tip of the Tongue*, 1995 or *The Cooker* of Jake Tilson, 1994-2004.




Allen and Thomas B. Starr, *Hierarchy: Perspectives for Ecological Complexity* (Chicago: University of Chicago Press, 1982), 223.

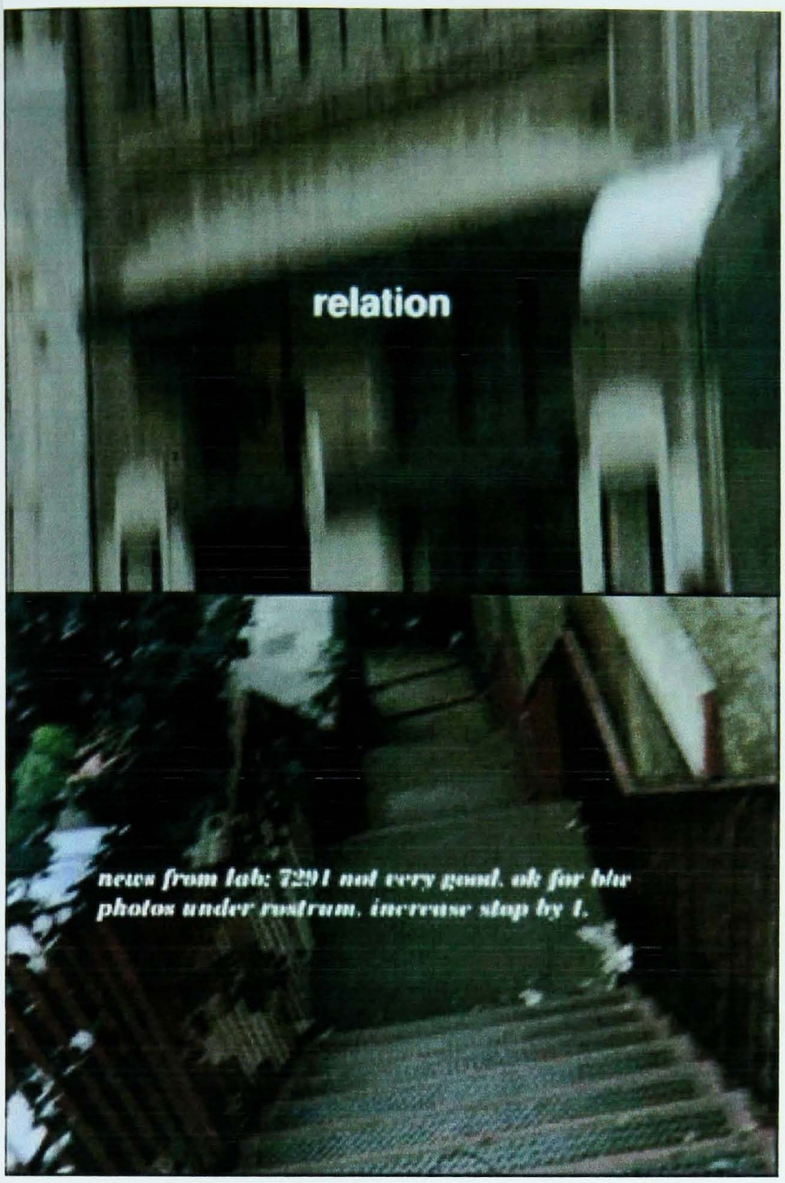



**Figure 23** ***Assumption*****, Peter Gidal, 1997. Ian White writes: "***Peter Gidal's films are not Peter Gidal's writings, which have already fed into, back to, reading (writing) that is not watching, is not Peter Gidal's films, nor Peter Gidal's writing. So I am writing this, caught because: if there is not knowledge but there is perception there also cannot be a translation (description) because there is not representation…"* **In: http://www.luxonline.org.uk/articles/essays/peter_gidal/detail4.html (accessed February 20, 2005).**

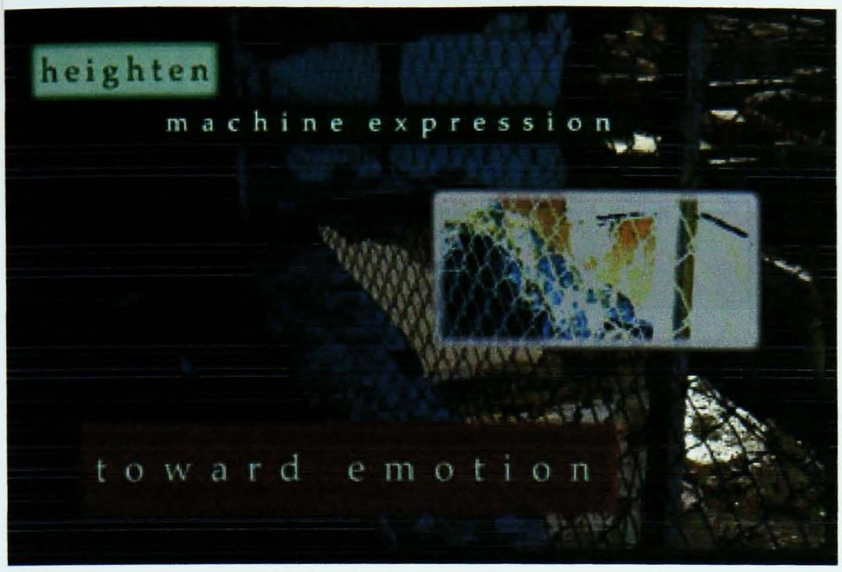



**Figure 24** ***Passage Sets / One Pulls Pivots at the Tip of the Tongue*****, Bill Seaman, 1995. "'Passage' as text, 'Passage' as travel, 'Passage' as change over time, 'Passage' as architecture. 'Set' as pair, 'set' as illusionistic architecture, 'Set' as device, 'Set' as in mathematics..." In http://www.pittsburgharts.org/digitaltraces/Seaman.htm (accessed December 12, 2004).**

3.5.71. Another example is *Alien Message* by Frank Drake: a first deliberate message from Earth to alien civilization. A pictogram was flashed to the stars and will take over twenty-four thousand years to arrive at the cluster of 300,000 stars known as M13 in the constellation of Hercules.

3.5.72. The disintegration and reconstruction of the message, its alteration from interferences in outer space and the interpretation from any alien civilization will create a new copy, a copy which can be interpreted in its linguistic and visual meanings. Any alteration to the message and its reappearance in the constellation of Hercules will not necessarily be an 'echologically' polluted image, it may instead represent an evolutionary echological stadium which through hybridization and alteration will reunite originally disjointed forms of expression.

3.5.73. If the notion of hybridization is taken rather then the concept of 'ideal' and 'original' representation of meaning, then the simulacrum is rendered obsolete or at least

of less significance in the contemporary discourse, particularly if Virilio's interpretation of pollutant as return to the originating image is accepted.

3.5.74. A possible consequence to the 'echological' pollution of digital images is the surge of a new category of myths, which in their structure and/or symbolism have the strength to represent a new reality as hybrids and/or Chimeras. The pollutant digital elements will act, in an evolutionary media framework, as the bedrock for a competitive definition of the characteristics of new art forms, which, by re-enacting old structures or creating new hybrids, can rise to the top of the 'image chain.'

3.5.75. These new hybrids will be based on a 'forma locutionis' and a 'forma imaginis' which will be organically joined and no longer separable in a space which has moved from the 'originating ecospace' through the evolutionary digital 'echospace' to an entirely new concept of 'ecospace.'

## 3.6. Getting Laid on the Procrustean Bed

### Art Practice in the Digital World

3.6.1. In this section the analysis will focus on the issues which artists are facing in the attempt to negotiate new forms of intervention within a technological media realm in continuous evolution.

> 3.6.2. I made a decision at the outset affecting both production and dissemination: on the one hand to produce art by writing a **program** that produced art and, on the other hand, to exhibit the **program** producing art rather than exhibiting only the things it produced. Had I not made that decision then in all likelihood I'd still be disseminating my work to two or three hundred people at a time in conventional **commercial** galleries. [61]

3.6.3. Therefore, it is necessary to consider the approach of the artist to technology and to identify and acknowledge the existence of artistry in the production of the media rather than just in the behaviors which have created a particularly innovative use of the media itself. This approach is conditioned by the artists experience and an adaptive behavior on their part.

3.6.4. In respect to digital technology these innovative behaviors have been constrained by an approach which, based on the needs of the corporate software industry, apply criteria of homologation which eliminate diversity and standardize perceptions. The interaction between the medium and the artist is eliminated. There are not many artists in the digital world able to overcome the boundaries, legal and technical, in order to achieve a new aesthetic contribution. The artists are obliged to work in the limited settings of the corporate space, the Procrustean bed. Their intervention on the media is as 'users' and not as 'creators.' The intervention is allowed at a lower level where it is possible to develop

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[61] Harold Cohen, "Decoupling Art and Affluence," *KurzweilAI.net*, February 20, 2002, http://www.kurzweilai.net/meme/frame.html?m=4 (accessed October 9, 2004).

and refine skills in the use of the media. But the artist is obliged to work mostly within prefixed boundaries.

3.6.5. In the past, artists [62] were able to determine the size of their brushes, the quality of their paper. They were able to impose modifications onto the medium; the digital environment, instead, is imposed upon the artist as an unchallengeable set of data which makes it difficult to escape the predetermined and limited range of software tools.

3.6.6. It is a framework that seems unchallengeable because the artist does not have the required scientific and technical knowledge necessary to extend the parameters of the software, which restricts artistic intervention. It is a different set of restrictions than those imposed by any other physical and tangible method of production of an artwork.

3.6.7. Furthermore, the legal implications in challenging corporate software restrictions through any intervention process becomes an Aegean task since in order to create and to exhibit the artwork, the process is subjected to corporate liabilities. In order to circumnavigate these difficulties it would be necessary for the artist to negotiate with the corporate software industry.

3.6.8. It seems that the circle has been squared, the artist has been cut off, and the creative challenges which have characterized the past centuries are out of the hands of the artists and have been conquered by corporate powers. If that is the case, then where are the last fighting artists? Has the avant-garde disappeared, left in the hands of those who are operating outside the digital context or is there a different form of rebellious

[62] "But there is at least one aspect of art or of craftsmanship where nobody can deny the role of technology: this was the recipes used by the masters of the period for their pigments and their media. We have a collection of such recipes copied out by one Jean le Begue from an earlier manuscript by one Johannes Alcherius in 1431." E. H. Gombrich, *The Uses of Images: Studies in the Social Function of Art and Visual Communication* (London: Phaidon Press, 2000), 101.

interference which is fighting Damastes trying to break the boundaries of his Procrustean bed?

3.6.9. To define the artistic forms of the digital media and the understanding of the elements of the artworks which need to be preserved Jon Ippolito, curator of 'Virtual Projects' and 'Internet Art Commissions' at the Guggenheim Museum in New York, explains:

> 3.6.10. We have to redirect our misguided focus on preserving media. Our job is not to preserve media; our job is to preserve art. For digital media, that means no more geeks in a room deciding a one-size-fits-all strategy for video, say, or Flash, but a case-by-case analysis of what is important for each work we study. In a word, we need to preserve behaviours rather than media. [63]

3.6.11. The preservation of behaviors in the artists' practice is the main concern in contemporary digital art practice, where the presence of 'software corporate powers' are imposing a methodology upon art practice.

3.6.12. A methodology ever more alienated by its traditional explorative approach and reduced to the level of the refinements of the tools and skills within a predetermined framework. This process could contribute to the homologation of fashions and aesthetic approaches in contemporary art practice.

3.6.13. Marcuse in 'Revolution and Counterrevolution' suggested that social structure and its political expression are responsible for homologation. Furthermore, he envisaged in the concept of 'Cultural Revolution,' that the elements of transformation of

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[63] Jon Ippolito, "Cats and Dogs," (expanded version of a talk given at the Museum Computer Network conference, Cincinnati October 26, 2001).

the arts are expressed by "an effective communication of the indictment of the established reality and of the goals of liberation." [64]

3.6.14. Marcuse explains further the concept of an effective communication by placing the onus on the artist to find new means of expression. He writes: "It is the effort to find forms of communication that may break the oppressive rule of the established language and images over the mind and body of man – language and images which have long since become a means of domination, indoctrination, and deception." [65]

3.6.15. If Marcuse is correct in his speculation, the reality of images in a digital context is that they are a reflection of the 'corporate software industry' established language and as such are enforced prescription.

3.6.16. For Paul Virilio, however, the homologation derives from the concept of kinematic energy, and forces society towards "not only the **geometrization** of our vision of the world, along the lines of that of the Italian Renaissance perspectivists, but also its **digitization**,... in the reality principle whereby the *automatic* nature of representations means perception is standardized." [66]

3.6.17. Virilio extends the statements of Marcuse by declaring that the digitization process is the means to standardization of perception, implying that digital art practice produces a standardized perception of its nature.

3.6.18. In the context of the interplay between the 'cultural industries,' the achievement of the Cultural Revolution may require a reaction to the standardization of

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[64] Herbert Marcuse, *Counterrevolution and Revolt* (Boston, Beacon Press, 1972), 79.
[65] Ibid., 79.

approaches and perceptions. This creates a vicious circle in which the artist's standardized perceptions are similar to those expressed by the 'cultural industries.' The globalized corporate power is similar to a totalitarian state in its standardizing means and/or objectives. The artist in society therefore feels the necessity to restate a local approach against the global, a singular eccentric individual against the social homogenization of the masses.

3.6.19. The practice of the fine artist appears to have the 'onus' of stressing the fact that in a totalitarian regime 'discrimination against the outsider' is discrimination against the potential of pixel diversity, therefore against society.

> 3.6.20. Not knowing how to write software myself, I first tried a well-worn solution familiar to so many artists new to electronic media – I sought engineering collaborators who could help me to implement my visions... The final straw was an engineer who let it slip that he was helping me as a kind of charity case: Oh, you poor, little artist – I'll help you out. Already frustrated from trying to cajole and bribe engineers into helping me, the feeling of being pitied sent me over the edge. What am I, stupid? I refused to believe that programming a computer was some kind of rocket science. I bought the programming books and dug in... In my search for an education environment that could suit my studies, I seriously considered some art and design schools, but I often found that their approach to the use of technology wasn't rigorous enough. [67]

3.6.21. Golan's experience of an international generalized status conditioning artistic expression in relation to digital media is an often-repeated critique. The early practitioners of computer art were usually associated with research institutions or private laboratories. "Experimental filmmaker Stan Vanderbeek [68] and artist Lillian Schwartz

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[66] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 2000), 45.

[67] Golan Levin, Lia, Meta and Adrian Ward, *Generative Design: Beyond Photoshop* (Birmingham: Friends of ED, 2001), 174.

[68] "Film is an art in evolution. It is the dark glass for the physical and visual change in motion about us. How is it then that we are suffocated with the cardboard cut-out poetry of Hollywood? [...]The artist is preposterously cut off from the tools of production. The vistavisionaries of Hollywood, with their split-level features and Disney landscapes have had the field to themselves." Stan VanDerBeek, "Cinema Delimina: Films from the Underground," *Film Quarterly* 14, no. 4 (1961). See also: Stan Brakhage, John Cage, Jonas Mekas, and Stan VanDerBeek, *Perspectives on American Underground Film: Stan Brakhage, John Cage,*

worked there (Bell Laboratories in the U.S.) with engineer Kenneth Knowlton, producing what are now considered seminal works of computer art." [69]

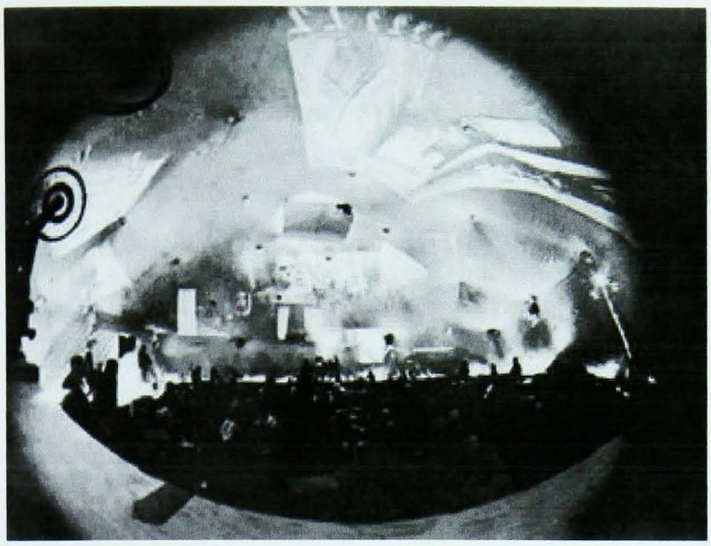

**Figure 25 *Movie Drome*, Stan VanDerBeek, 1963. VanDerBeek's presentations had a large number of random image sequences, continuities and discontinuities, creating performances that would differ every time.**

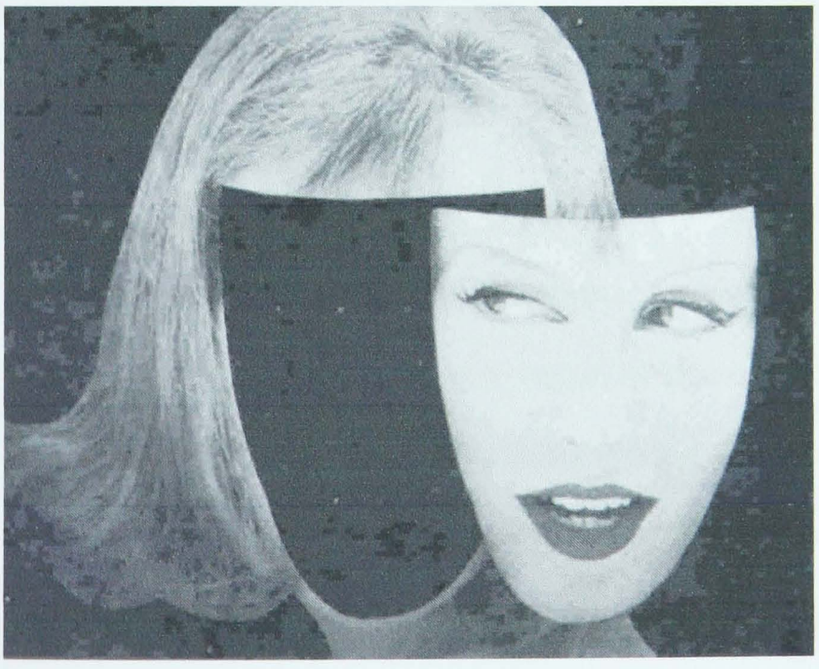

**Figure 26 *What, Who, How,* Stan VanDerBeek, 1955. The unexpected collage of the real vs. unreal is the uneasiness of the void.**

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*Jonas Mekas, Stan Vanderbeek* (Cincinnati: University of Cincinnati, 1968). See also: Stan VanDerBeek: "An Early Space Art Pioneer," *Leonardo* 36, no. 3 (2003): 229 and David Donnelly, "Stan VanDerBeek: Underground filmmaker, Media Visionary," *Indie Slate*, Jan. - Feb. 2001, http://www.hfac.uh.edu/MediaFutures/vanderbeek.html (accessed December 15, 2004).

[69] Michael Rush, *New Media in Late 20th-Century Art* (London: Thames and Hudson, 1999), 177.

3.6.22. It is important to stress that the rigorous use of technology must happen in an even more rigorous aesthetic and artistic framework. This is partly due to the lack of programs which foster analysis of interdisciplinary hybridization. The creative ability of the artist in the context of 'Cultural Revolution' necessitates creative innovation: therefore the digital art practitioners, in order to preserve their integrity, need to bend digital technology and not vice versa. The approach to digital technology cannot therefore be just an expression of the artist's integrity inhibited by the software corporate industry; it also requires the preservation of behaviors.

3.6.23. It is worthwhile to consider issues of craftsmanship as behavior, discussed in the ancient writings of Vitruvius. "Craftsmanship is continued and familiar practice, which is carried out by the hands in such material as is necessary for the purpose of a design. Technology sets forth and explains things wrought in accordance with technical skill and method." [70]

3.6.24. What is evidenced from Vitruvius' statement is the necessity for the artist to regain access and control over a technology which has been developed outside his familiar practice. This is in order to regain technical skills and methods. This perception is expressed by Leonardo da Vinci in his writing about the artists' tools."To make points [crayons] for colouring dry. Temper with a little wax you must dissolve with water: so that when the white lead is thus tempered, the water being distilled, may go off in vapour and the way may remain; you will thus make good crayons; but you must know that the colours must be ground with a hot stone." [71]

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[70] Vitruvius, *On Architecture*, ed. and trans. Frank Granger, Loeb Classical Library 251 (Cambridge, MA: Harvard University Press, 2002), 7.

[71] Leonardo da Vinci, *The Notebooks of Leonardo da Vinci*, ed. Jean Paul Richter, Vol. 1 (New York: Dover Publications Inc., 1970), 315.

3.6.25. "Paper for drawing upon in black by the aid of your spittle." Leonardo continues: "Take powdered gall nuts and vitriol, powder them and spread them on paper like a varnish, then write on it with a pen wetted with spittle and it will turn as black as ink." [72]

3.6.26. These descriptions conjure up visions of the artists' behaviors which are present in the methodology of the algorithmists, who propose an interventionist solution.

> 3.6.27. Though much journalism praises verisimilitude in fantastic scenarios (generally intending that the computer animation looks more like the old, hand-crafted animations of Chuck Jones and Tex Avery), for the algorithmists, the engineering is inseparable from the art, in that sense extending the trajectory from Russian and Bauhaus constructivism (in which Eisenstein holds an honoured place) rather than the anti-realist avant-garde of the autonomous signifier. [73]

3.6.28. In the dialectic opposition between constructivism and anti-realism, the introduction of a third term, 'The Technological Bauhaus,' offers the opportunity to analyze the problem of behaviors in digital media. The Technological Bauhaus is a concept, borrowed from Maeda, professor of computational media at the Massachusetts Institute of Technology, that has allowed the development of an innovative contemporary digital art practice for a small minority of artists. It is a concept which, although technologically based, recognizes the importance of creativity in the use and experimental approach to the digital media. This also infers the artist's control over the technology or at the very least a form of intervention in the 'corporate software industry' predetermined framework.

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[72] Ibid., 315.
[73] Sean Cubitt, *Digital Aesthetics*, (London: Sage Publications, 1998), 82.

3.6.29. The Technological Bauhaus is a third order of media which is not simply the sum of A plus B, but the new category X. This is a new element in itself with its own creative input and elements, which are original and diverse from the progenitor parts.

> 3.6.30. That is why Pasolini demonstrated that the essential thing, precisely in free indirect discourse, is to be found neither in language A, nor in language B, but 'in language X, which is none other than language A in the actual process of becoming language B.' There is a universal figure of minoritarian consciousness as the becoming of everybody, and that becoming is creation (p. 106). [74]

3.6.31. Deleuze and Guattari's concept of 'becoming' as creation is also the concept which interprets creation as creativity. This approach might result in an original practice in the field of digital art, which could reposition the conflict between 'Cultural Revolution' and 'culture industries', as Adorno suggests.

3.6.32. Creation through behaviors is a possible response to the homologation of the social imagination and of its expressions through digital arts. A comment on the present situation is expressed in Cubitt's analysis. '...in the local press, or in those Bryced fantasy landscapes in the readers' corners of computer magazine cover discs, you can find, if you are determined to, the evidence of a banalisation of the social imagination, the common, imitative, normative art...' [75]

3.6.33. These common homologated imitative and meaningless 'art' expressions are what Baudrillard also uses to dispute the optimistic media guerrilla approach of Enzensberger.

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[74] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia* (Minneapolis: University of Minnesota Press, 1988), 106.
[75] Sean Cubitt, *Digital Aesthetics*, (London: Sage Publications, 1998), 143.

3.6.34. The media guerrilla approach, likewise for Cubitt, has not generated examples of innovative behaviors. "Again, you fear for the philosophical demand for universality. And the briefest acquaintance with the art world makes it clear that there is no democracy in the galleries and museums: at the end of the millennium it is still depressingly difficult to see or to hear examples of 20th century modernism from without the imperial metropolis." [76]

3.6.35. Further reinforcement of Cubitt's critique is made by Willemen, who speaks of a cultural production, distant from the concept of 'Cultural Revolution' of Marcuse and more acquainted with the ways and means of the global corporate industry.

> 3.6.36. In other words: the real cultural 'producers' are the ones who determine and provide, the 'templates' for marketable cultural production, the rest of us, artists and intellectuals alike, merely 'play' (i.e. produce) within the virtual parameters specified for us by the cultural bureaucrat-entrepreneurs. In addition, the digitization of the means of production ensures that, where 'our' productive efforts are deemed not quite in line with what those bureaucrat-entrepreneurs decide the market to be, the cultural administrators now have the means to modify and re-style, relatively cheaply and efficiently, the cultural products in question. That is what is meant by 'interactivity' by the promoters of the digital: 'we' are allowed to interact with specific, preformatted templates, and 'they' will interact further by 'restyling' and polishing the resulting cultural 'software' before putting it on the market. Increasingly, the people who used to be called artists and/or intellectuals come to be seen for what they are: employees in what Adorno called 'the culture industries' or what politicians now call 'the knowledge industries.' [77]

3.6.37. The shift from 'Cultural Revolution' to 'culture industries' and finally into 'knowledge industries' is exemplified by the approach of the main players who have commodified art in order to gain managerial control. This change represents a change in aesthetic as a reflection of behaviors, which can be either conformist or discordant. Behaviors which, if discordant, do not gain access to the 'scene of the knowledge

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[76] Ibid., 149.

[77] Paul Willemen, "Reflections on Digital Imagery: Of Mice and Men," in *New Screen Media: Cinema/Art/Narrative*, ed. Martin Rieser and Andrea Zapp, 25 (London: BFI Publishing, London, 2002).

industries.' This raises doubts about the existence of artistic behaviors and therefore of art if critical dissention within the pixel framework is excluded and if the media determine from the outset the behaviors for engagement.

3.6.38. Willemen again is very incisive in identifying this new situation where the corporate conformity determines the result.

> 3.6.39. Similarly, the BBC has taken to commissioning raw footage from 'independent' film-makers, with the BBC staff reserving to themselves exclusively the right to select and shape the harvested images and sounds into broadcastable commodities. Joan Collins' trial gave new life to the term 'wordsmith', while the BBC is busy transforming film-makers into image peasants who, like the peasants contracted to supermarkets or to United Fruit, bring their tailor-made produce to 'the company.' [78]

3.6.40. This form of homologation and conformism which seems to be at work today could also be the key to a rejection of the 'status quo.' Conformity and homologation push the artists to develop a innovative techniques, stimuli and aesthetics. These are the reflection of an innovative artistic behavior in contemporary art practice which is able to produce a new artistic hybrids. Benjamin's observation concerning film and the shift that film technology created in aesthetics and artistic behaviors shapes the understanding of new media issues.

> 3.6.41. Thus technology has subjected the human sensorium to a complex kind of training. There came a day when a new and urgent need for stimuli was met by the film. In a film, perception in the form of shocks was established as a formal principle. That which determines the rhythm of production on a conveyer belt is the basis of the rhythm of reception in the film. [79]

3.6.42. The hybrid technological device brings about new problems, which are the reflection of the artistic behavior in relation to society's stimuli. What applies to film also

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[78] Ibid., 24-25.

might be extended to digital media and to films in digital formats. The relation between ecological and echological, between images as pollutants or as hybrids, could represent the transition between 'old media' and 'new media.'

3.6.43. Manovich criticizes Benjamin's perspective, which problematizes the realization of changing behaviors resulting from technological chance and change, suggesting that there is an opportunity.

> 3.6.44. For Benjamin, the modern regime of perceptual labour, where the eye is constantly asked to process stimuli, equally manifests itself in work and leisure. The eye is trained to keep pace with the rhythm of industrial production at the factory and to navigate through the complex visual semiosphere beyond the factory gates. It is appropriate to expect that the computer age will follow the same logic, presenting the users with similarly structured perceptual experiences at work and at home, on a computer screen and outside of it. Indeed, as I already noted, we now use the same interfaces for work and for leisure, the condition exemplified most dramatically by web browsers. Another example is the use of the same interfaces in flight and military simulators, in computer games modeled after these simulators, and in the actual controls of planes and other vehicles (recall the popular perception of Gulf War as 'video game war'). But if Benjamin appears to regret that the subjects of an industrial age lost the pre-modern freedom of perception, now regimented by the factory, modern city and film, we may instead think of the information density of our own work spaces as a new aesthetic challenge – something to explore rather then condemn. [80]

3.6.45. The exploration, suggested by Manovich, has to happen in the alteration of the digital software, which reintroduces the issue of whether or not the artists are able to rise to the new media challenge.

3.6.46. In this context the two main currents, one that favors the use of the medium and thrives in the homologating structure of the global corporate, the other based on the intent of radical innovations, are pushed to the boundaries. In fact, when Duchamp

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[79] Walter Benjamin, *Illuminations*, ed. Hannah Arendt, trans. Harry Zorn (London: Pimlico, 1999), 171.
[80] Lev Manovich, "Spatial Computerisation And Film Language," in *New Screen Media: Cinema Art Narrative*, ed. Martin Rieser and Andrea Zapp, 74-75 (London: BFI Publishing, London, 2002).

participated in the panel discussion 'Where do we go from Here?' at the Philadelphia Museum College of Art on March 20, 1961 he delivered a statement which included the prophetic words: "the great artist of tomorrow will go underground."

3.6.47. "Machines are agents of destruction and it follows from this that the only mechanical devices that inspire Duchamp are those that function in an unpredictable manner – the antimachines." [81]

3.6.48. The interventionist approach is limited to a de facto acknowledgement of a shift within reality. The existence of a technology in which to intervene is paramount to the artistic endeavor in order to create a disruptive or constructive event. The 'interventionist' artist becomes dependent of the technological structure in order to exercise his artistic behavior. This dependence, univocal and/or symbiotic, does not seem to have generated the aesthetic shift that Marcuse considered necessary for a 'Cultural Revolution.'

3.6.49. The dependence is visible in the contemporary artists' digital practice, as Manovich stressed in his writings, evidencing the use of the same interfaces in military and in computer games, at work and at home. These software interfaces are the result of military experiments and share an origin which no intervention seems able to overcome. Laurie Anderson's project *Dal Vivo* evidences this military agenda.

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[81] Octavio Paz, *Marcel Duchamp: Appearance Stripped Bare* (New York, Arcade Publishing, 1990), 7.

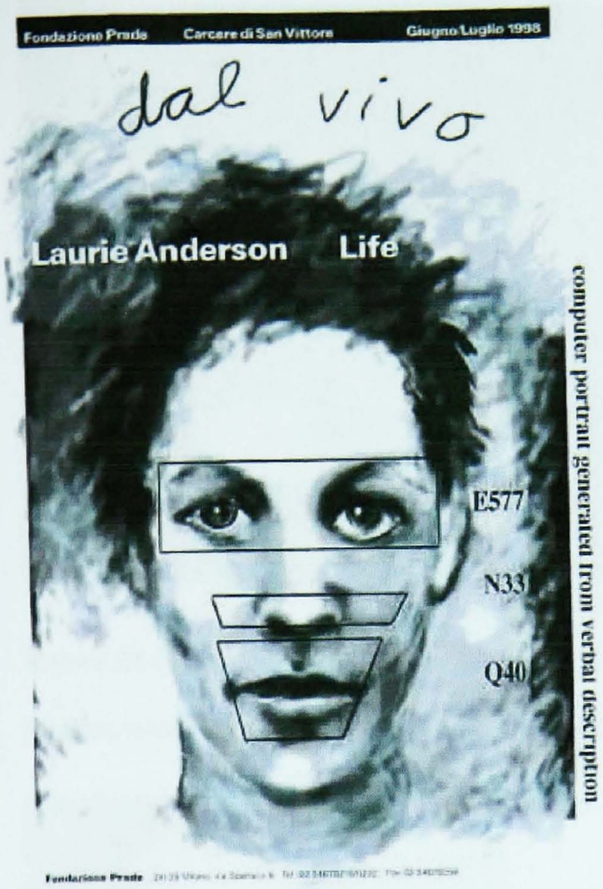


**Figure 27** ***Dal Vivo*****, Laurie Anderson, 1998. This picture generates fears of 'identification' processes while the fact that the image is generated from a verbal description adds a further element of the cataloguing of human identity.**

3.6.50. "Filmmaker John Whitney had developed a mechanical analogue computer which produced his *Catalog* (1961). A short film consisting of computer-produced abstract images, *Catalog* was created using outdated military computing equipment." [82]

[82] Michael Rush, *New Media in Late 20th-Century Art* (London: Thames and Hudson, 1999), 177.

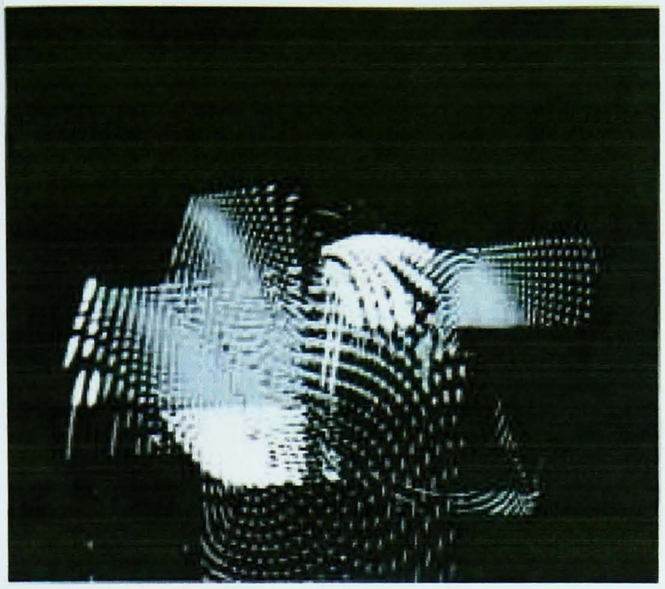

**Figure 28** ***Catalog*****, John Whitney, 1961. The presentation of an evolutionary process in the creation of images, where the art is in the moment of transition, in the shift from an image to the next.**

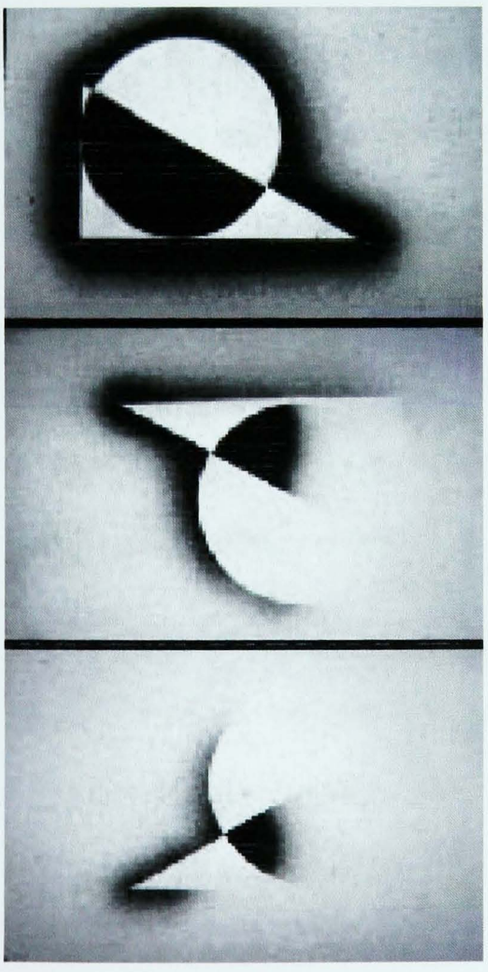

**Figure 29** ***Variations on a Theme*****, John Whitney, 1939-1940. The evolution of the images becomes a reality, a process that is possible to follow in its development.**

3.6.51. It is also important to remember that Jay Forrester, in the 1950's, was commissioned to design an in-flight trainer for pilots, called the Whirlwind Project. The project was eventually converted into SAGE (Semi-automatic Ground Environment), a

system used by the Department of Defense in the United States of America. Then in 1962 Ivan Sutherland developed SketchPad, the first interactive drawing program. In 1964 General Motors, developed DAC-1-, the first CAD program. The story of computer graphics at that moment was a reality event: the technology had been invented.

3.6.52. The new technology, according to Benjamin's theory, would raise problems which would impact upon society and upon the artists' behavior. But it would not have an impact upon the behavior of those 'artists' who had participated in the design of the new technology.

3.6.53. As Benjamin had stressed his concerns against the perception being regimented by the factory, the same concerns should be raised today when the perception seems to be regimented by 'a military industry' which is propagated by the 'corporate software industry.' The 'video game war' aesthetic, in the words of Manovich, represents a challenge for the artist. It is a challenge to retain the individuality of the acquired behaviors against the homogenized and pixellated digital world. The challenge consists in changing the military aesthetic of the pixel.

3.6.54. "I mean imagining ways that information can pass between walls in a two-way conversation that stimulates collaboration and debate, rather than in a one-way broadcast that's little more than television on a funny-shaped wall." [83]

3.6.55. Thus far this analysis has been concerned with presenting the issues related to images considered as pollution and the characteristic of their origins. This is to understand if there are processes of evolution and adaptation which contradict, by

[83] Jon Ippolito, "Cats and Dogs," (expanded version of a talk given at the Museum Computer Network conference, Cincinnati October 26, 2001).

empirical observation, the theories of Baudrillard and Virilio. As ever, in any analysis of human behavior irrespective of whether individuals are artists or not, oppositional stances are not the end game and leave much to be resolved in a reality framework which does not neatly fit within the Hegelian dialectic. The evolution of the image either in a simulacrum or in a new transitional phase is a reality which, dismissed by Baudrillard and Virilio, is acknowledged by Cubitt.

3.6.56. "But what is important to networked art is not the simulacral fate of representation in the new media, but the retroengineering of the machinery itself, and by implication of the institutional structures of cyberspace." [84] Cubitt evidences the necessity of remodeling the mechanical in order to change the institutional structures and therefore the aesthetic.

3.6.57. But it could also be argued that the priority is to change the artist's aesthetic in order to change the mechanical and therefore the institutional. These two arguments are not matters of principle, but rather matters of the starting point for change. What needs to change is the screen in order to change perception. However what is changing, if the evolutionary neuroaesthetic media determinism is a true reality, is perception and the desire to 'not change' the screen of social hierarchy.

3.6.58. "Screen against screen – the home computer terminal and the television monitor are squaring up to each other in a fight to dominate the global perception market, control of which will, in the near future, open up a new era both in aesthetics and in ethics." [85]

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[84] Sean Cubitt, *Digital Aesthetics* (London: Sage Publications, 1998), 144.
[85] Paul Virilio, *The Information Bomb*, trans. Chris Turner (London: Verso, 2000), 112.

3.6.59. What Virilio may be suggesting in his theoretical analyses, if pushed to its limits, is the necessity to abolish the screen in order to abolish the homologation of perceptions and behaviors. This generates two main possibilities: the first is that the digital medium, due to its corporate structure, does not allow the expression of artistic behaviors and therefore standardizes them.

3.6.60. The second argument is represented by the opportunity of a radical intervention into the medium, creating not a simple innovation, but a scientific discovery which is the result of experimentation and artistic behavior.

3.6.61. "Painting is a science," Constable said, "and should be pursued as an inquiry into the laws of nature. Why, then may not landscape painting be considered as a branch of natural philosophy, of which pictures are but the experiments?" [86] In the Western tradition, painting has indeed been pursued as a science. All the works of this tradition displayed in great collections apply discoveries that are the result of ceaseless experimentation.

3.6.62. Gombrich continues in his analysis, reporting an anecdote regarding Constable.

> 3.6.63. Indeed his experiments resulted in discoveries. For instance, there was resistance at first against so much green, which was thought to upset the needed tonal gradation. There is a pathetic story about Constable's sitting on the jury of the Royal Academy, of which he was a member, when by mistake one of his own paintings was put on the easel for judgment , and one of his colleagues said rashly, 'Take that nasty green thing away.' But we also know that when his Hay Wain was shown in Paris French artists were stimulated to repeat his experiments and lightened their palettes. [87]

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[86] E. H. Gombrich, *Art and Illusion:A Study in the Psychology of Pictorial Representation* (Princeton: Princeton University Press, 2000). 33.
[87] Ibid.. 48.

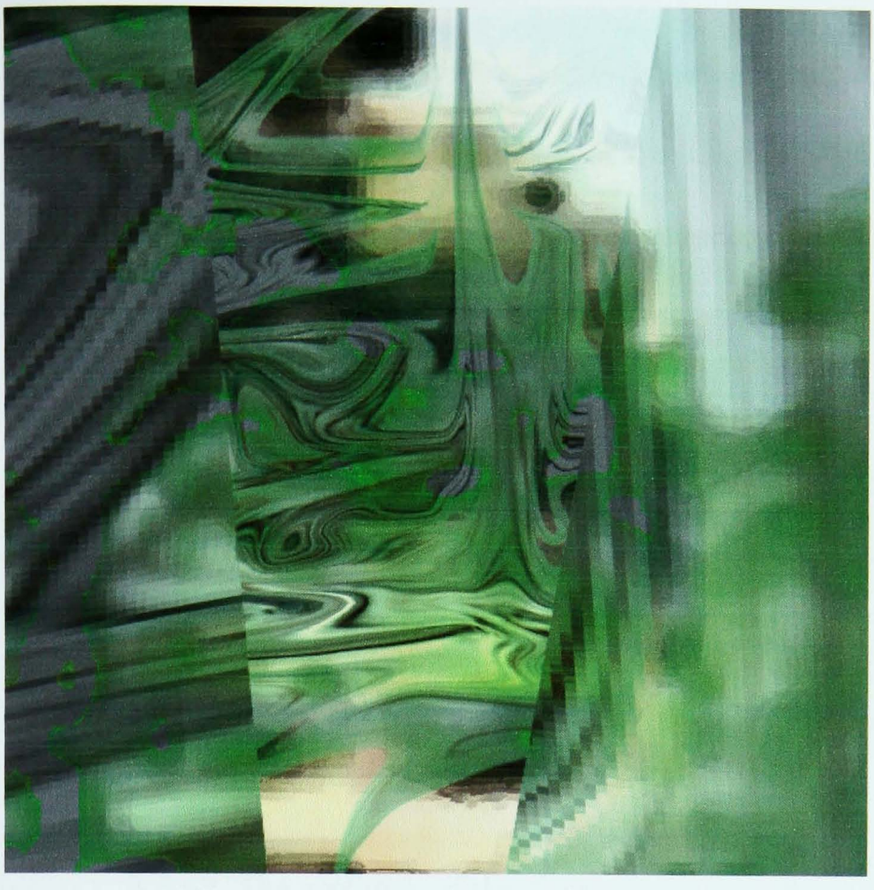

**Figure 30** ***That Nasty Green Thing: After Constable*****, Lanfranco Aceti, 2002. Presented at the British Academy.**

3.6.64. The artist's duty has always been not primarily to impress, marvel, shock or please, but to produce art, exercising command on his own tools in order to create his own aesthetic content. This is what some believe to be missing in the contemporary context: the cynical analysis of Baudrillard and the guerrilla media approach of Enzensberger are insufficient to justify any artistic approach to the digital media. Baudrillard focuses on a retreat into a golden age of the past, envisaging the end of humanity in the black hole of the hyperreal while Enzensberger incites a challenge which is already lost, because the global software industry has already imposed the space and rules of the combat: the pixel. [88]

[88] "The most fundamental characteristic of the form of data used in the computer is its ultimate abstraction as discrete electrical pulses. These have only two possible states which can be described as – 'on' or 'off', 'yes' or 'no', 'one' or 'zero'. Any element of information which resides in a computer as data or as instruction for processing data takes this form. Thus the data in a computer does not resemble its source in any sense, it is sheer codification. Without an agreed system for interpreting the coded data the data for one type of information looks exactly like the data for any other type of information. It is difficult to imagine a greater degree of abstraction than digital information and it is from this form of the data that many of the other characteristics derive. Though the pixels, the component 'dots' from which computer images are

3.6.65. Manovich's approach does not offer a convincing alternative either. In marginalizing Benjamin's concerns about the 'change of behavior,' he fails to transpose the principles of artistic context as well as not recognizing the structural nature of digital media as an imposed aesthetic of the corporate software industries.

3.6.66. Further, he favors the artist's behavior as a product of the 'knowledge industries.' And if Benjamin's solution of a 'retreat' into a pre-modern era is not a suitable resolution, than nor is Manovich's stance which favors the artist's acquiescence, inhibiting behavioral changes necessary for aesthetic evolution.

3.6.67. The aesthetic of the pixel cannot be swiftly embraced as an aesthetic challenge if the challenge is imposed as a Procrustean bed.

3.6.68. The artistic challenge in contemporary digital art practice has been raised to a new level. In this new context the artist is not longer able to express 'modeling and conditioning' interventionist behaviors but his activity has been translated onto a plane of mere execution. The artist has therefore the onus of revitalizing, through his practice, an approach which has been disposed of and commodified. The artist should regain his 'creationist' behavior.

> 3.6.69. As in any technology-driven medium, the most dynamic work occurs when the technology catches up with the visions of the artists, or, conversely, artists catch up with the technology. In painting or sculpture, it is the concepts and uses of materials that change in the art. With technology-based art, the medium itself radically changes when the technology changes.[89]

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constructed are not strictly synonymous with the digital data, they may be considered as a symbol for the process of digitization in the visual arena." Malcolm Le Grice, *Experimental Cinema in the Digital Age* (London: BFI Publishing, 2001), 313.

3.6.70. It is possible that the contemporary 'echological space' represents the attempts of the digital artists to play catch up with the technology. In this scenario the artist will be able to condition concepts and material in a near future. But it is also important to stress that the technological medium is subject to radical change when the technology changes, affecting the aesthetic result of the artwork. The artist should reapply, in the field of digital media, a 'technological creationist behavior' in order to condition the evolution of technological changes and not just to be swept away by them.

3.6.71. This 'technological creationist behavior' could take the connotation of extreme arts or terminal arts, which Virilio defines as "expression of an alienated confrontation between a tortured body and the camera."[90]

3.6.72. A digital actionist and interventionist behavior in digital media is exemplified by the rebellious activity of the hackers, which may be interpreted as a '*terminal destructionism*' in order to defend the last freedom in digital media: that of not being. The destruction of the medium and its content.

> 3.6.73. A virus is usually considered evil, chaos. But what happens when it is a contemporary art temple to spread the chaos? Conceived and compiled for the invitation to the 49th Venice Biennale, 'biennale.py' is the product of the collaboration of two entities, 0100101110101101.org and epidemiC, already known for other shocking actions, often bordering with crime. 'biennale.py' is both a work of art and a computer virus. [91]

3.6.74. What had been exhibited at the 49th Venice Biennale had the potential to create a disruptive event. In reality, operating within an institutional setting, the virus was already framed and prepackaged, and the artwork desensitized in its 'innovative artistic practice' since it came with an attached antivirus.

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[89] Michael Rush, *New Media in Late 20th-Century Art* (London: Thames and Hudson, 1999), 192.
[90] Paul Virilio, *The Information Bomb*, trans. Chris Turner (London: Verso, 2000), 53.

3.6.75. "The source of the virus will be made public and spread on the opening day of the Biennale, June 6th 2001, from the Slovenian Pavillion. The main anti-virus software companies have already been informed about the technical specifications of "biennale.py" and the disinstallation instructions will be attached to the virus." [92]

3.6.76. The conclusion of this argument is expressed by two alternatives. The first is that the digital medium does not allow artistic scientific experimentation and application of artistic behaviors. In this case there is no art in the framework of the 'corporate software industries,' since artist's innovative behaviors are restricted. The second is the possibility of a creative approach compatible with the institutionalized software corporate industry, which is represented by the exercise of media hybridizations, experimentations and evolutions of the media. This is the echological space for an artistic evolutionary framework.

3.6.77. These represent extreme positions which are nothing other than parameters in a matrix of complex interactions. The characteristic of experimentations and evolutionary processes is that of generating the 'unexpected,' which in return may shift balances and change envisaged scenarios.

3.6.78. These matrixes of possibility and alternative futures are what develop new aesthetic approaches, narrative structures and philosophical analyses. The following chapter will focus on these developments in cinema and new media arts, envisaging from present forms of hybridization possible new frameworks for the development of new evolutionary strands.

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[91] Aurora Fonda, "A Virus in the Venice Biennale," news release, June 9, 2001, Slovenian Pavillion.
[92] Ibid.

## 4.1. CHAPTER FOUR - Cinema's Virtual Scenarios

### New Media's Technological Avant-garde

4.1.1. This chapter will analyze the contemporary issues related to new media and the avant-garde, focusing in particular on the two animas of the movement itself: the political avant-garde and the formalist avant-garde. These have evolved, allowing interpretations that are evolutionary, social, formal, political and aesthetic. [1] These share the concept of the early avant-garde by which the work of art is an expression of an artistic relationship with technological means. This relationship, although it may be one of interaction, rejection, negotiation and aprioristic refusal, [2] characterize the contemporary forms of artistic interventions, dystopian analysis and media hybridizations.

4.1.2. If the avant-garde is still dependent on progress and/or development of technology, as some of the early avant-garde movements, then there are a new set of problems which are presented by the aesthetic challenges of new technologies. The avant-garde, therefore, is a movement that is multiform and constantly in development in its engagement with a continuous set of evolving technologies and scientific experimentations. Through the experimentation of different technologies and the research of innovative aesthetic approaches it has established a symbiotic [3] relationship to the world of science and technology. For this reasons the application of an evolutionary framework, as well as the philosophical analysis of the ideas of interaction, development,

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[1] Luciano De Maria and Laura Dondi, ed., *Marinetti e i Futuristi* (Milano, Garzanti, 1994).

[2] Michael Betancourt, "Disruptive Technology: The Avant-Gardeness of the Avant-Garde Art," *ctheory.net*, ed. Arthur and Marilouise Kroker, January 5, 2002 http://www.ctheory.net/text_file.asp?pick=336 (accessed March 10, 2005).

[3] The relationship is symbiotic because if the avant-garde was initially an art movement inspired by technology, at present it has become more and more difficult to distinguish the complex relationships of mutual influences established between the avant-garde movement and the worlds of science and technology. Worthy of mention are the art/media experimentations of Andy Warhol, Malcolm Le Grice, Nam June Paik and Bill Viola. Experimentations which could initially be described as forms of external artistic interventions are now evolving into institutionalized structural elements of the fine art and engineering research processes, as in the works of Bill Seaman, Steve Mann, Lev Manovich and Susan Collins.

evolution and closure analyzed in the previous chapters, may help to understand the evolutionary processes which are taking place between the avant-garde and classic media and new media.

4.1.3. In this sense the avant-garde is not dead and it will never die as long as it exploits, uses, implements, or creates technological frameworks for the realization of artworks. [4] The definition and understanding of new media technologies and their impact on the aesthetic and visual representations are the necessary parameters for an analysis of 'virtual' evolutionary scenarios.

[4] "However, simply 'slaving' one media track to another is quite different from more complex notions ideas of senses/media correlations, such as Eisenstein's use of contrapunt in his montage theory. For me, computer multimedia holds the promise to represent human subjective experience in a new way. Unfortunately, I can't think of a single new media work, which has systematically tried to do this so far. I think the best experiments in this direction have been undertaken by filmmakers such as Peter Greenaway (Prospero's Books, Pillow Book) and Jean Luc Godard, whose JLC by JLC. Portrait in December (1994) is the best multimedia text I know of. In this film Godard uses about half a dozen of different 'media channels' – shots of book pages (i.e., text); "normal" film; voice-over; background sound; music – setting up various relationships between them." Marco Desereiis, "Intervista a Lev Manovich." *Smartweb: Rai.it*, July 2001, http://www.manovich.net/LNM/ (accessed December 23, 2004).

## 4.2. The Matrix of Philosophy, Cinema and New Media

### Interactions, Intra-actions and Meta-actions

4.2.1. The new media scenario has created a set of very complex interactions, as demonstrated by Peter Greenaway's *Tulse Luper Project*: a vast multimedia project which 'translated,' into diverse media, offers a panorama of possible interactions and fruitions. The intersections between media generate phenomena of integration which mix and diffuse commixtions between philosophy, cinema and new media. [5] In this structure the theoretical analyses of the avant-garde and its relations to new media will have to be related to the new developments enabled by the media synergies. The phenomena of convergence and digitization have generated a media structure within which new avant-gardes have been operating and with which the previous two avant-gardes, the political and the formalist, had to and will have to relate.

> 4.2.2. While contemporary art must take as its material that which doesn't exist and become art through a process of abstraction, film begins with reality, with the concrete situations of the times. So in this sense the artistic operation of film is to change the co-ordinates of a determinate situation through the formal operation of subtracting (non-art) symbolic and imaginary material from the rest of the world. [6]

4.2.3. It is the idea of film as reality in transition to become hyperreality that generates the difficulties in which the contemporary hyper-avant-garde is set. This distinction, as Greenaway explains, does not exist between the different manifestations of cinema that represent old structures to frame new realities. [7]

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[5] "We are kicking things off with essays from eight different contributors on various philosophical, technological, and religious aspects of the film." Christopher Grau ed., "News/introduction," *The Matrix Trilogy*, November 20, 2002 http://whatisthematrix.warnerbros.com/ (accessed December 1, 2004).

[6] Daniel Berchenko and Ben Wright, "Slavoj Zizek: The Reality of the Virtual," *Lux.org*, 2004, http://www.lux.org.uk/featured/default.htm (accessed December 18, 2004).

[7] Peter Greenaway, "Cinema Is Dead, Long Live Cinema?" *Kasanderfilm.nl*, September 2003, http://www.kasanderfilm.nl/lecture.swf (accessed January 23, 2004). Also: Peter Greenaway, interview by Lanfranco Aceti, November 27, 2004, DVD.

4.2.4. "This whole virtual technology media circus, this perpetual reality show, has an ancestor: the ready-made. [...] The bottle-rack, exscribed from its context, purpose and function, became more real than reality (hyperreal) and more art than art (transaesthetic of banality, of insignificance, of nullity, against which the pure and indifferent form of art is verified today)." [8] This is the contemporary process of 'remediation,' intended as a transaesthetic transfer from one medium to another, independently of context, purpose and function. It is the hyperreal of the ready made which has become avant-garde. It is particularly the avant-garde's remediation process, a decontextualized media translation, which has been disjointed by the originating context and replaced with a sense of void and nullity. This is not the only form of 'manifestation' of the avant-garde and its interactions with technology. The manifestations of original transaesthetics are visualized in mainstream films such as Quentin Tarantino's *Kill Bill: Vol. 1* (2003), Jeunet & Caro's *The City of Lost Children* (1995) and Oliver Stone's *Natural Born Killers* (1994). [9] In these films the process of 'contextualized remediation,' the digital ekphrasis, is an integral part of the cinematic development if the filmic evolution process is considered a tool with which to generate new visual aesthetics. The mixing of 'technological images' such as animation, video surveillance, super 8, celluloid and digital is part of the avant-garde practice of Zbignew Rybczynski, but it is also at the core of the cinematic visual aesthetics of expanded cinema's hybridization forms.

4.2.5. If the assumption of a third avant-garde is valid which, according to de Bruyn is located in between the formalist and political avant-garde and called 'post-minimal film,' then there is the possibility that the structures of the contemporary

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[8] Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 2002). 28.

[9] "Robert Richardson's hyperkinetic cinematography switches between documentary-style black-and-white surveillance video, garishly colored psychedelia, and even animation in a rapid-fire fashion that mirrors the psychosis of the killers and the media-saturated culture that makes them popular heroes." Janet Maslin. "Natural Born Killers," *The New York Times, Review*, August 26, 1994. http://movies2.nytimes.com/mem/movies/review.html?oref=login&title1=&title2=NATURAL%20BORN%20KILLERS%20%28MOVIE%29&reviewer=Janet%20Maslin&pdate=19940826&v_id=132230 (Accessed November 10, 2003).

evolutionary media, as outlined in the previous chapters, may have generated other 'avant-gardes.' These avant-gardes are evolutionary experimentations of a fluid and in fluxus media aesthetic structure. The space 'in between' the two avant-gardes is a space that historically may have been populated by only one other avant-garde, the third element of 'post-minimal film.' The analysis of de Bruyn which he calles 'The Wrinkles in the Map' has the problem of being temporally based and largely approximate. This is evidenced when he writes that "there is a 'third' avant-garde located **somewhere** [10] [emphasis mine] *between* the formalist and political." [11]

4.2.6. The localization of this 'somewhere' is one of the aims of much contemporary writing in the field of cinema and new media: Manovich, Jenkins, Krauss, Rodowick and Gere. It is important to understand the extension of this 'somewhere' and its characteristics. There is a necessity to discover where exactly the contemporary avant-garde is located in the 'in between' space where the formalist and political avant-gardes were and are still wrestling.

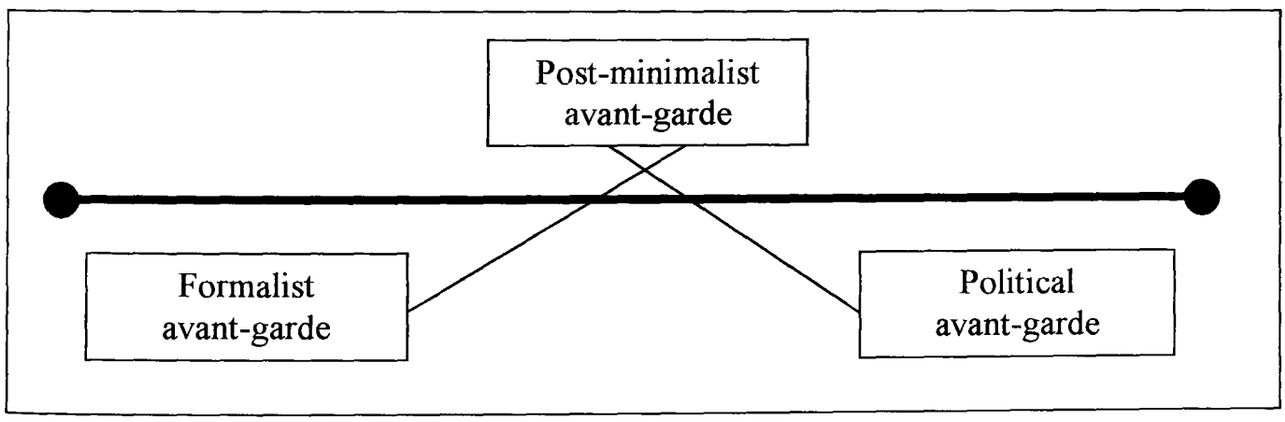


**Figure 1 The relationship between Formalist, Post-minimalist and Political avant-garde, according to de Bruyn.**

[10] This generic somewhere, is the space of evolution of media and aesthetics.
[11] Eric de Bruyn, "The Expanded Field of Cinema, or Exercise on the Perimeter of a Square," in *X-Screen: Film Installations and Actions in the 1960s and 1970s*, ed. Museum Moderner Kunst Stiftung Ludwig Wien and Matthias Michalka, 159 (Köln: Verlag der Buchhandlung Walther König, 2004).

4.2.7. The definition of a third avant-garde, that of post-minimalist film, which will be referred to as Post-minimalist avant-garde, is just a dialectical compromise in a dialectic evolutionary debate.

4.2.8. The problem with de Bruyn's analysis is the simplicity of the structure based on a dialectic relationship constructed on the concept of Euclidean space, which although functional to the avant-garde analysis of the 1960s and 1970s has been superseded by a series of complex postmodern relationships.

4.2.9. These are not linear equations but a series of matrixes or organic rhizomes' growths which have become more complex following the introduction of the concept of virtuality, with its own dimensions of time and space. The relationship is not one of narrative to not-narrative, dialectical to not-dialectical, rather a multilayered and evolving narrative which is evermore independent of the presence or absence of each of the participants. It has an evolutionary character, which exists as an open work independent of the single components of the work itself, which in the contemporary context of interactivity, code, hypermedia, metamedia and database virtualities and realities, assumes the characteristics of an 'autonomous oeuvre.' The problem therefore it is not whether cinema is pure or polluted by the digital, [12] but one regarding the direction of its evolution through 'simulation' into virtual reality environments.

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[12] "Alfred Hitchcock, for example, always remembered his own early experience with Hale's Tours, films made at the beginning of the century, in the prehistory of cinema, which simulated a train ride through the mountains or a tram ride through a city, distant precursors, not only of a film like Hitchcock's thriller the Birds (with its innovative use of electronic sound and special effects), but of a subsequent torrent of action adventure films..." Peter Wollen, *Paris Hollywood: Writings on Film*, (London: Verso, 2002), 258-259. "In the cinema, however, codicity is monological and dominated by the expressive means of a single class. The cinema has explicitly rejected dialectics, which Burch all too readily confuses automatically with the problem of class struggle. In this view, the history of the cinema is nothing less than the history of its ideological contamination by noncinematic codes..." D. N. Rodowick, *The Crisis of Political Modernism: Criticism an Ideology in Contemporary Film Theory* (Urbana: University of Illinois Press, 1988), 119.

4.2.10. In this process of evolutionary pollution or 'echology,' as defined in the previous chapter, *Print Generation* (1974) by Murphy is a seminal work. [13] "Like most of those who study film, Murphy had learned that a print of a photograph or a motion picture is never equal, in terms of photographic quality, to the original, and that further, a *print* of a *print*, a second-generation print, will inevitably provide less perfect detail than a print made from the original. [...] If imagery is information, the decay of imagery (even if it's an inevitable part of the existence of this imagery) is the destruction of information. [...] the process of 'excavating' layer by layer up and down through the layers of color discovered new forms of imagery that exist not only outside conventional viewers' awareness but *underneath* the imagery they do see, buried by it." [14]

[13] Abe Linkoln, NETFLIX, *HyperX*, http://www.altx.com/hyperx/ (accessed December 29, 2004).
[14] Scott MacDonald, *Avant-garde Film: Motion Studies*, (Cambridge: Cambridge University Press, 1993), 47-50.

**Figure 2** ***Print Generation*****, J. J. Murphy, 1974. The series show the process of modification. Images courtesy of the artist.**

4.2.11. This process of discovery, through layers and their combinations in an infinite series of matrixes, generates a technological discovery of an expanded cinema which blurs into an expanded avant-garde. MacDonald writes about *Riddles of the Sphinx* (1977) that:

> 4.2.12. By means of its structure, the Mulvey/Wollen film redefines the position of the audience [...] viewers of the Mulvey/Wollen Film are looking at a film that reflects on conventional cinematic topics and procedures. Or, to return to the Gertrude Stein line with which the film begins, *Riddles of the Sphinx* is a narrative of what wishes (the film is a wish in the direction of a new cinema) what it (this film) wishes it (Film) to be. [15]

4.2.13. The developments of film and its ontological nature reflect problem of technological experimentations and audiences receptions, shaping and adaptations, which feed back into the cinematic evolutionary processes. [16] In this sense the experimental cinema becomes an experimental avant-garde, whereby the process of definition and self-determination is a continuous interaction between the audience and the technological and aesthetic developments of the cinematic images and the new media.

4.2.14. The technological element becomes imperative if it is conceived as the possibility to observe what the film is and what it wishes to be. The technological element also becomes a possibility to generate differences, as Focault explains. "The freeing of difference requires thought without contradiction, without dialectic, without negation: thought that accepts divergence; affirmative thought whose instrument is disjunction; thought of the multiple-of the nomadic and dispersed multiplicity that is not limited or

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[15] Ibid., 91.

[16] J.-Cl. Falmagne and Sergei Ovchinnikov, "Media theory," *Discrete Applied Mathematics* 121, (2002): 103-118, http://userwww.sfsu.edu/~sergei/MediaTheory.pdf (accessed December 28, 2004). Sergei Ovchinnikov, "Advances in Media Theory," International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, Vol. 8, No. 1, (February 2000), http://userwww.sfsu.edu/~sergei/recent%20publications.htm (accessed January 6, 2005).

confined by the constraints of similarity" [17] The analysis of Greenaway on the role of cinema, on its necessity for a liberation from the restraints of classification and on the rear view mirror speculations of McLuhan, are issues of the contemporary media scenario. A scenario in which cinema is evolving, through phenomena of appropriation and filiation, developing differences but at the same time becoming different, generating and requiring 'new audiences.' An example is the exhibition *Hershmanlandia: The Art and Films of Lynn Hershman Leeson*, where the merging of diverse media and blurred boundaries generates a new body of work. [18]

**Figure 3 *Roberta's Construction Chart #1*, Lynn Hershman Leeson, 1974. From *Hershmanlandia*, Lynn Hershman Leeson's exhibition at Henry Art Gallery, November 5, 2005 - February 5, 2006, curated by Robin Held. "For decades, Hershman Leeson has maintained separate practices in visual arts and film. Recently, she has brought these two streams together in compelling ways by linking the character Ruby from *Teknolust*, her recent feature film, with Agent Ruby, an artificially intelligent Web agent that exists on a multitude of platforms. *Hershmanlandia* provides a timely reassessment of Hershman Leeson's contributions to contemporary art, feminist theory, emerging technologies, and the full range of 21st-century creative endeavor." Robin Held, "Hershmanlandia: The Art and Films of Lynn Hershman Leeson," *Henry Art Gallery*, 2004 http://www.henryart.org/ex/hershman.htm (accessed December 28, 2004).**

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[17] Michel Foucault, "Theatrum Philosophicum," in *Language, Counter-Memory, Practice: Selected Essays and Interviews*, ed. Donald F. Bouchard, trans. Donald F. Bouchard and Sherry Simon, 185 (Ithaca, N. Y.: Cornell University Press, 1977). Michel Foucault also states: "The phantasm and the event, affirmed in disjunction, are the object of thought ("le pensé") and thought itself ("le pensée")." Michel Foucault, "Theatrum Philosophicum," in *Language, Counter-Memory, Practice: Selected Essays and Interviews*, ed. Donald F. Bouchard, trans. Donald F. Bouchard and Sherry Simon, 185 (Ithaca, N. Y.: Cornell University Press, 1977), 178.

[18] "Hershmanlandia," *henryart.org*, December 2005, http://www.henryart.org/hlandia/hershmanlandia.html (accessed December 28, 2004).

4.2.15. The evolution of cinema and the avant-garde in the contemporary context cannot be represented by a loosely interpreted concept of 'post-minimalist film' because it would interpret the concept of avant-garde without the hybridization forms of Broodthaers, Brakhage, Godard, Greenaway, Rybczynski and Zeman. [19] The contemporary avant-garde could not afford to be a manifestation of loosely interpreted forms of convergence of prior avant-gardes, the political and the formalist, instead it needs to represent the benchmark artworks which Greenaway auspices.

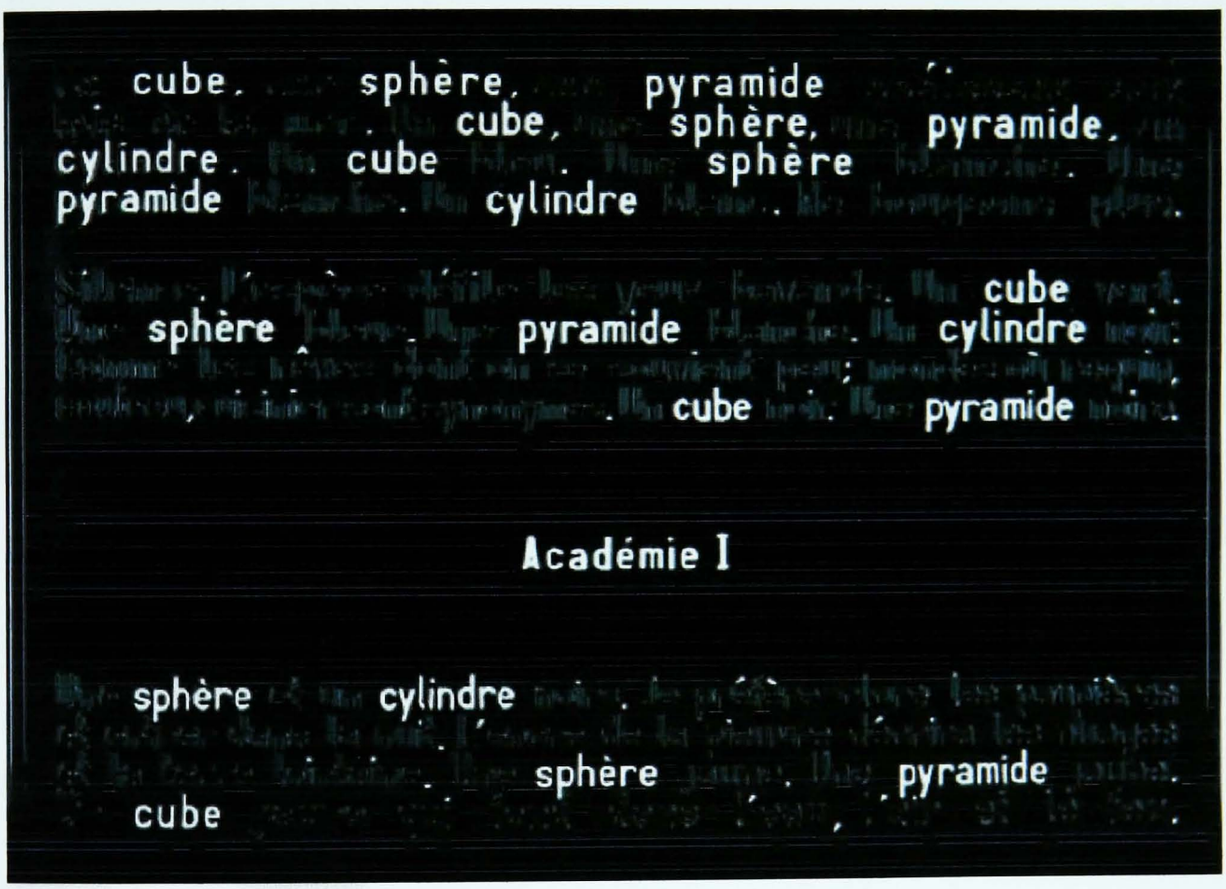


**Figure 4** ***Académie I*****, Marcel Broodthaers, 1964.**

[19] Lev Manovich identifies, through the works of Rybczynski and Zeman, forms of ontological montage and stylistic montage as part of digital compositing. Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 158.

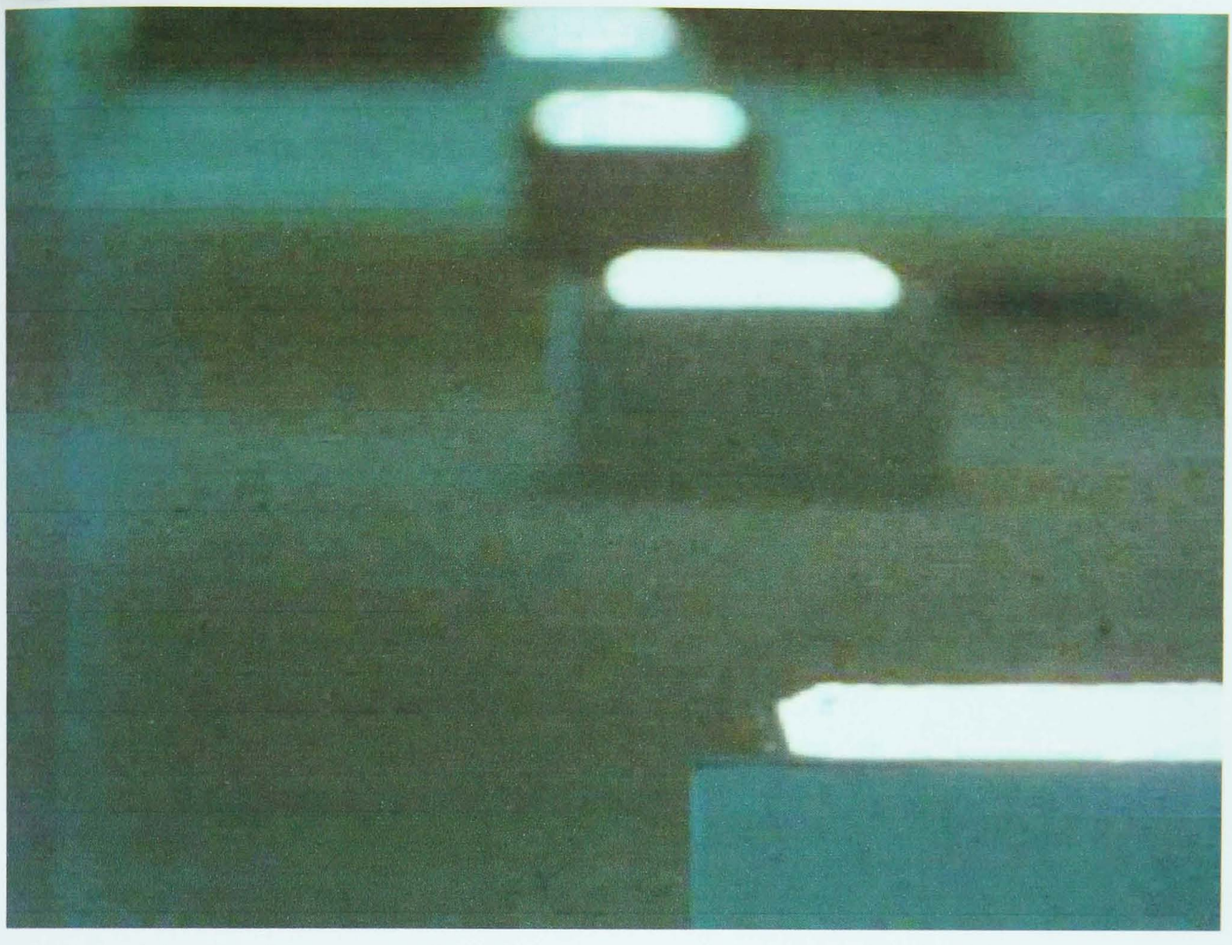

**Figure 5** ***The Riddle of Lumen*****, Stan Brakhage, 1972.**

4.2.16. The desire of convergence of the two animas of the avant-garde, expressed by Peter Wollen, cannot be evidenced by the concept of hybridization or 'post-minimalist film' where film has to be "employed in a highly flexible manner." [20]

[20] Eric de Bruyn, "The Expanded Field of Cinema, or Exercise on the Perimeter of a Square," in *X-SCREEN: Film Installations and Actions in the 1960s and 1970s*, 160 (Köln, Germany: Verlag der Buchandlung Walther König, 2004).

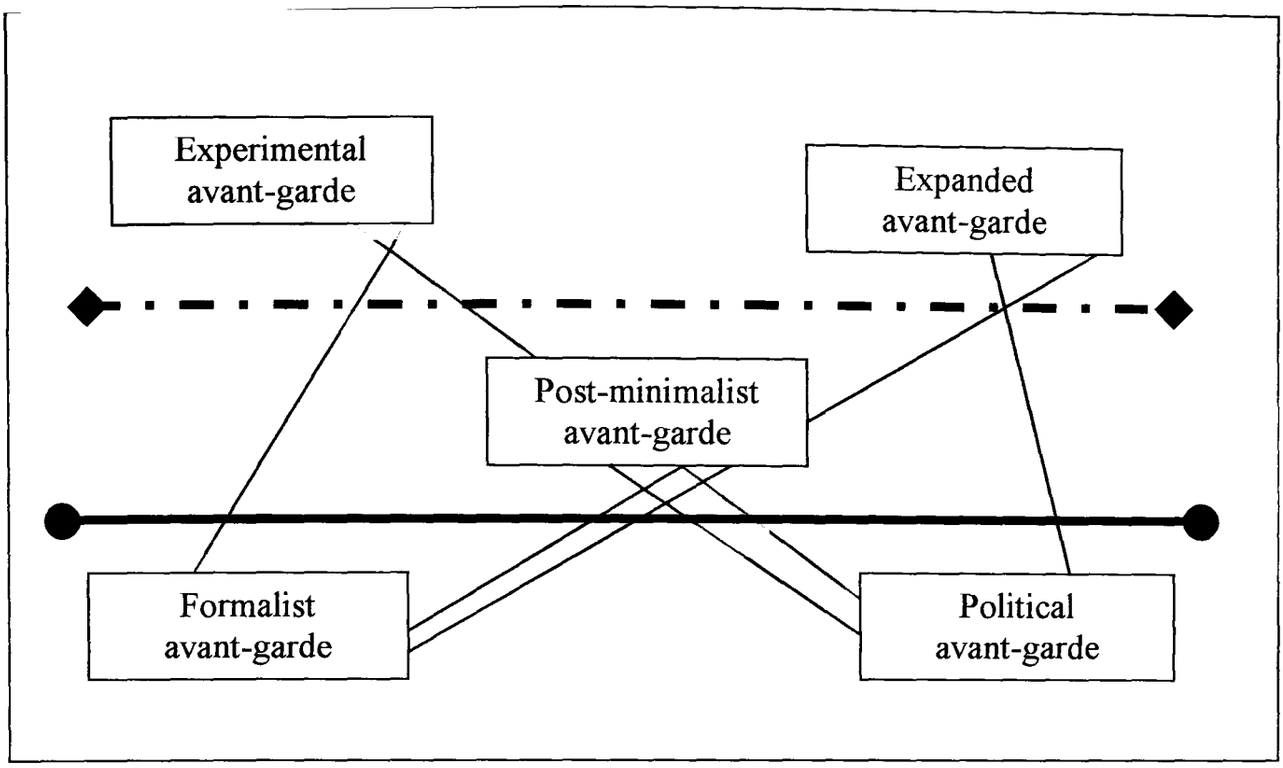


**Figure 6 The intersection of political and formalist avant-garde has generated diverse micro cosmos which have focused on particular characteristics of the avant-garde as determined by the nature of the technology employed.**

4.2.17. The avant-garde has evolved respectively into interactive avant-garde, meta avant-garde, hyper-avant-garde, etc. The constant is the technological application and use of scientific and/or engineering intersections located within an historical and aesthetic context, as discussed throughout this research. [21] These multiplied forms of engagement cannot be restrained in the 'perimeter of a square,' such as the one constructed by de Bruyn.

[21] "...for compositing is, first and foremost, a conceptual, not only a technological operation." Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001). 158.

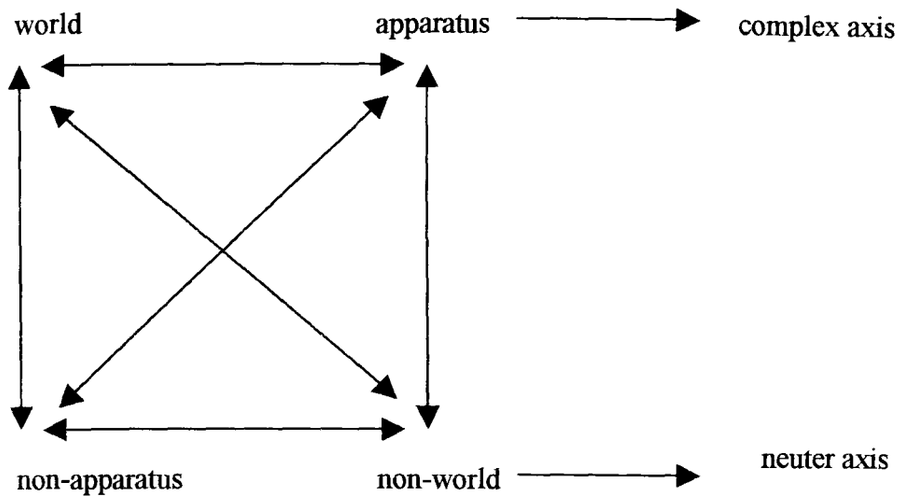


**Figure 7 de Bruyn's construct of a semiotic square as an oppositional structure between apparatus and world.**

4.2.18. The squared representation does not work for the very reason that the neuter axis of the non-world is neither neuter nor belonging to a non-apparatus. It is still framed within the 'dialectic' structure which Foucault has criticized as non functional and based on a concept of self-similarities. As previously explained, the relationship between the virtual and the real is one of reciprocal recognition; the illusion is neither permanent nor totally isolated from the real itself.

4.2.19. The non-apparatus is a world in itself with its political and formalistic implications. Therefore, even as negation of the apparatus, 'the non-apparatus' is linked to the apparatus through a process of recognition and refusal. The existence of the 'neuter axis' is negated by the very existence of complex interactions and the negation of non-apparatus and non-world.

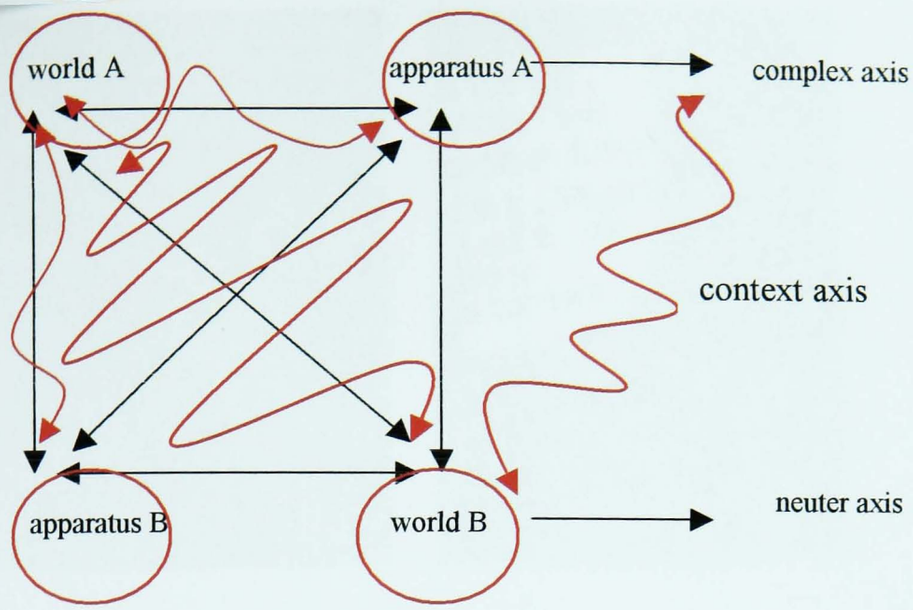


**Figure 8 The graphic shows that the interaction is between different worlds and the processes of engagement are determined in a complex contextualized scenario, both causally and casually deterministic.**

4.2.20. These are forms of complexities of the new media scenarios which transcend and enrich the old structures of cinema aesthetic and fruitions, altering its frameworks and inner workings. They also present important challenges which cannot be 'reworked' in a rearview mirror critical framework. The relevance of challenges, innovations and original approaches is fundamental to the development of art experimentations which characterize different evolutionary strands of a general concept of the avant-garde. The contemporary media richness and rhizomic growth cannot be squared in a false perimeter, because the boundaries of its interaction are matrixes of evolutionary complexities. These boundaries become more difficult to grasp if the nature of the digitization process comes into play with the database structure, which can act as a shared 'genetic material' for a variety of media whose connections are blurring the boundaries of the 'organic' and 'mechanical,' giving rise to intra-actions. This process can be framed in a meta-action structure whereby the intermedia and intramedia relations merge in a macro scenario of organic, mechanical and animal evolutionary possibilities determined by the media and their presence within a social structure.


**Figure 9 The experiment by Steve Mann shows the relationship in a virtual reality mediated environment between real and illusory representations.**

4.2.21. "In other words, Murphy's film invites viewers to study the motion of their own consciousness, especially the process of their apprehension of visual information." [22] This same process of recognition of the modality of apprehension of visual information is the subject of exploration in neuroaesthetic and virtual reality environments through Functional Magnetic Resonance Imaging (fMRI) and implementation of evolutionary algorithms based on physiological reactions of the participants to the virtual or augmented reality environments, as demonstrated in Mann's experiments. It is a process that confirms the theory of the neuroaesthetic experimentations of Semir Zeki, which are based on the analysis of paintings. [23] These same analyses can be applied to the contemporary world of evolutionary moving images.

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[22] Scott MacDonald, *Avant-garde Film: Motion Studies* (Cambridge: Cambridge University Press, 1993), 51.

[23] "One can compare the activity in two areas, V5 and the area which feeds it, V1, when human subjects view two patterns, made of the identical black and white squares: in one the constituent squares move unpredictably, chaotically and incoherently with respect to one another, while in the other they all move coherently with respect to each other. Such a comparison shows that the activity in area V5, measured by the increase in cerebral blood flow, is very nearly the same whether subjects are viewing the coherent or the incoherent motion. By contrast, when one compares the cerebral blood flow and therefore the activity in area V1 in response to chaotic and to coherent motion, one finds that the regional cerebral blood flow is much greater with chaotic than with coherent motion." Semir Zeki, *Inner Vision: An Exploration of Art and the Brain* (Oxford: Oxford University Press, 1999), 157.

4.2.22. The technological analysis of how knowledge of the visual image is structured stems from the field of engineering and fine art's complex analyses on the impact of technological media, their applications and relation to the viewers. In this sense, the relationship with the apparatus has become a relationship with a world, a world which reflects and presents both political and formal implications, reintroducing the 'contextual' into the hyperreal representation of the void. It brings back the Platonic concept of 'essence' as investigated by Leonardo da Vinci, Malevich and Mondrian. A concept which in the contemporary media refers to the basic physiological interaction of the human body with the 'technological environments' and their social, organic and aesthetic implications.

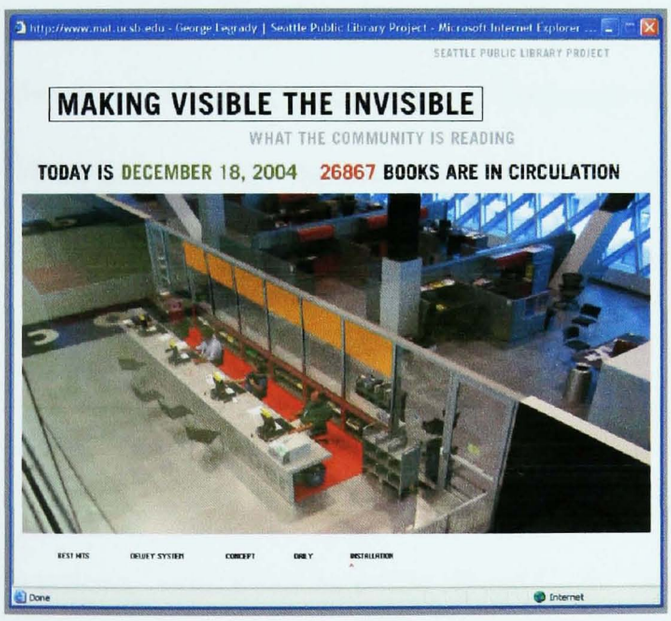


**Figure 10** ***Making Visible the Invisible: What the Community is Reading*****, George Legrady, 2004. http://www.mat.ucsb.edu/~g.legrady/glWeb/ an experiment which analyzes the invisible network of Seattle's library.**

4.2.23. What contemporary media are revealing are the inner workings of the media structures, technological frameworks and the patterns of behaviors within the social structures, as well as the fact that these elements may influence each other in a conflicting representation of visible and invisible, real and virtual. *Making Visible the Invisible: What the Community is Reading*, by George Legrady, deals with these

conflicting representations. In de Bruyn's approach of a dichotomy/dialectical relationship between real and virtual, the assumption that the world of reality is constituted of virtualities implies that 'non virtualities' are the worlds of the real, or the 'essence.' The relationship therefore is between the worlds of the real and the virtual representations and not between 'a negation of the virtuality,' or of the real for that matter, since the negation of the virtual is the real. It is a fundamental distinction from de Bruyn's approach, which, eliminating the 'non-world' and the 'non-apparatus,' generates a new area of investigation based on 'diverse' worlds. This evolutionary structure recalls Pasolini's linguistic approach to film's universal categories.

4.2.24. "Pasolini demonstrated that the essential thing, precisely in free indirect discourse, is to be found neither in language A, nor in language B, but 'in language X, which is none other than language A in the actual process of becoming language B.' There is a universal figure of minoritarian consciousness as the becoming of everybody, and that becoming is creation." [24]

4.2.25. In *Kant and the Platypus* Eco wrote a paragraph dedicated to 'iconism and hypoicon,' which has as a title 'Dead Ends' to describe the conflict between real and hyperreal, factual and mythological. For Eco an example of absolute dead end is "the attempt to examine not only hypoicons but also semiotic systems such as architecture through linguistic categories – for example, minimal distinctive units, double articulation, paradigm and syntagm, et cetera." [25]

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[24] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia* (Minneapolis: University of Minnesota Press, 1988), 106.

[25] Umberto Eco, *Kant And The Platypus: Essays on Language and Cognition*, trans. Alastair McEwen (New York: Harcourt Brace and Company, 2000), 343. This analysis of the minimal fundamental units refers to the discourse which Bazin, Metz, Pasolini, Eco and Le Grice have discussed at length. In this thesis the reference to the nature of the pixel is more metaphorical than real, since the smallest unit could be object to further divisions: both physical and methaphorical. "In response to Metz's argument that film lacked double articulation, Pier Paolo Pasolini argued that cinema did form a 'language of reality' with its own double articulation of 'cinemes' (by analogy to phonemes) and 'im-signs' (by analogy to morphemes). The

4.2.26. If semiotics takes the images and attempts to find the rhetorical rules for their concatenation in order to understand and define their ambiguity or polyvocity, Pasolini feared that this same process would have eliminated the mythological vitality of the meaning. For Pasolini, the 'language of reality' was based on a complex interaction of different languages, which, interconnected as if in a multimedia context, find their maximum expression on the articulation of a new language which is the sum of the previous and at the same time the expression of a new construct. [26] It is this form of interaction of languages that guarantees, for Pasolini, the link to an organic whole that can be defined as reality and can be perceived through its reflections of hybridization of different media. [27]

4.2.27. From Pasolini's point of view the reality of cinema is based on this approach and on the use of minimal units in film, which he called *cinèmi*. These are are a basic language of reality, made out of objects, forms and events of reality, which are perceived with the senses. And in this linguistic attempt to establish a fundamental unit on which to base his philosophical analysis, Pasolini creates a framework based on the sensorial perception of reality and on the assertion that the senses can perceive reality, its mythological constitutents and its truths.

4.2.28. Pasolini's attempt, based on the waves of discussions stimulated by Barthes and Metz, attempted to create a shield against the destruction of the mythological

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minimal unit of cinematic language, for Pasolini, is formed by the diverse real-world signifying objects in the shot. The language of im-signs, for Pasolini, was extremely subjective and extremely objective at the same time." Robert Stam, *Film Theory: An Introduction* (Oxford: Blackwell, 200) 113.

[26] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism & Schizophrenia* (Minneapolis: University of Minnesota Press, 1988), 106.

[27] Zygmunt G. Baranski, *Pasolini Old & New* (Dublin: Four Court Press, 1999), 84.

in cinema, raising the idea that reality [28] governed the cinematic language. In doing so Pasolini led the way to a mythical realism, which, represented through the object of the film, or his *cinèmi*, would result in a demythologized reality, which, not able to be either real or illusory, became hyperreal.

4.2.29. In the analysis of the debate of that time, as reported by Eco, the importance of the elements at stake emerged, as well as some of the considerations, choices and results that were being generated.

> 4.2.30. Consider the debate with Pasolini (1967a), when he maintained that the cinema is based on a 'language of reality', an innate language of human action, in which the elementary signs of cinematographic language are said to be the real objects reproduced on the screen. Although Pasolini was later to moderate the radicalism of those early statements in an essay that ought to be reflected upon anew today from a Peircean standpoint (1967b), his reaction was due to the fact that 'hard-line' semiologists were interested in demythologizing – as they used to say then – all productions of realistic illusion and in revealing all that was artifice, montage, and pretense in the cinema. [29]

4.2.31. The conflict between a demythologized cinema and a reality which could not be reached is at the basis of an effort, which becomes ever more constant and formal, towards a correspondence with the real. For Baudrillard it is this very effort of assimilation with the real that explains the rise of the hyperreal. "Concurrently with this effort toward an absolute correspondence with the real, cinema also approaches an absolute correspondence with itself – and this is not contradictory: it is the very definition of the hyperreal. Hypotyposis and specularity." [30]

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[28] "Both Eco and Emilio Garroni criticized Pasolini's 'semiotic naiveté' for confusing cultural artefact with natural reality. But a number of recent analysts have argued that Pasolini was far from naïve: in fact he was actually in advance of his contemporaries. For Teresa de Lauretis Pasolini was not naïve but rather prophetic, anticipating the role of cinema in 'the production of social reality.'" Robert Stam, *Film Theory: An Introduction* (Oxford: Blackwell, 2000), 113.

[29] Umberto Eco, *Kant And The Platypus: Essays on Language and Cognition*, trans. Alastair McEwen (New York: Harcourt Brace & Company, 2000), 343-344.

[30] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 47.

4.2.32. This is the realistic illusion, which denied from a semiotic analysis, [31] becomes an illusion of the real: the hyperreal as the implosion and dissolution of the action of the medium. [32] The only possibility to overcome this impasse is in the concept of a 'real illusion,' [33] in the reality of the illusory characteristic of the hyperreal. A game of reflections and mirrored images, which in this loss of contact with reality, retains the originating value, the real, into the illusory nature of simulations. [34]

4.2.33. The new media context is affecting the 'essence' of human evolutionary patterns, reinforcing hypotheses of 'media' interactions which are deterministically [35] shaping viewers' interactions and 'altering' their biological frameworks. This re-presents Pasolini's analysis of cinemi, the elementary building blocks of cinema, [36] as not so 'radical,' mostly in the light of neuroaesthetic applications and discoveries in virtual reality environments. [37]

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[31] "However, it by no means follows that, as by some mechanical law, the impression of the diegetic reality becomes stronger as the vehicle of representation is removed further from reality. [...] To inject the reality of motion into the unreality of the image and thus to render the world of the imagination more real than it had ever been – this is only part of the 'secret' of motion pictures." Christian Metz, *Film Language: A Semiotics of the Cinema,* trans. Michael Taylor (New York: Oxford University Press, 1974), 13-15. Christian Metz, *Language and Cinema,* trans. Donna Jean Umiker-Sebeok (The Hague: Mouton, 1974). Christian Metz, *Essais Semiotiques* (Paris: Éditions Klincksieck, 1977), 118-122 and Christian Metz, *Essais sur la signification au cinéma* (Paris: Éditions Klincksieck, 1968), 15-24. Metz writes: "Parmi tous ces problèmes the théorie du film, un des plus important est cleui de l'*impression de réalité* qu'éprove le spectateur devant le film."

[32] Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Faria Glaser (Ann Arbor: The University of Michigan Press, 2001), 82.

[33] Lanfranco Aceti, "The Aesthetic of True Digital Illusions: Crossing Several Roads at the Same Time," (conference paper, ISPAFA Conference 'Beauty, Truth and Goodness: Aesthetics at the Crossroad,' Harvard University Divinity School, Cambridge, MA, May 16-18, 2003).

[34] In Pasolini's Medea the Centaur speaking to Jason explains that "in the ancient world myths and reituals are a living reality... part of man's everyday life. For him reality is such a perfect entity... that the emotion he experiences at the sight of a tranquil sky... equals the most profound personal experience of modern man." Pier Paolo Pasolini, *Medea*, VHS, (1970, Argos Film and The BFI).

[35] This issues represented in the contemporary digital context were discussed in the arena of 'structural film' which generated new avant-garde explications which were "more holistic and contextual, assuming that the film's underlying concept yielded a clear shape that at least partly modified whatever symbols might be present." David Bordwell, Making Meaning: Inference and Rhetoric in the Interpretation of Cinema (Cambridge, MA: Harvard University Press, 1989), 69.

[36] "The image becomes a merely contingent configuration of numerical values that can be subjected to 'molecular' modification, that lacks any motivated relation to any image-to-follow, and indeed that always already contains all potential images-to-follow as permutations of the set of its 'elementary' numerical points." Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: The MIT Press, 2004), 9.

[37] "Displays are now implanted in the eyes, with a choice of permanent implants or removable implants [...] Images are projected directly onto the retina, providing the usual high-resolution three-dimensional overlay

4.2.34. Specifically, Johnston's machinic vision must be differentiated from the automation of vision explored above, and the human must be resituated in the space of this difference: whereas visual automation seeks to replace human vision *tout court*, machinic vision simply expands the range of perception well beyond the organic-physiological constraints of human embodiment. [38]

4.2.35. The reality of the virtual crosses the boundaries of 'structural' thinking and requires the innovative analysis, which Greenaway has called for, outside the boundaries of classifications that appear inadequate to define the originality of the new media. "In games such as The Sims Online tens of thousands of users have created unique online personas that live complex virtual lives within a diverse community of other users." [39]

4.2.36. The complex interactions between philosophy, cinema, new media and social structures are exemplified by *The Matrix Trilogy* of Andy and Larry Wachowski. It is the blurring of diverse boundaries, from the philosophical/academic to the avant-garde and mainstream cinema within a social context of 'futuristic' envisaged 'cinematic' developments of the virtual.

4.2.37. As Baudrillard states, [40] the importance of *The Matrix Trilogy* is in the evolutionary transformation of Neo. It is in the transition from human to machine that the

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on the physical world." Ray Kurzweil, *The Age of Spiritual Machines: How We Will Live, Work and Think in the New Age of Intelligent Machines* (London: Phoenix, 1999).

[38] Mark B. N. Hansen, *New Philosophy for New Media*, (Cambridge, MA: The MIT Press, 2004), 100.

[39] Will Knight, "Gamer Wins Back Virtual Booty in Court Battle," *Newscientist.com*, December 23, 2003, http://www.newscientist.com/article.ns?id=dn4510 (accessed December 29, 2004). See also: Will Knight, "Virtual Island Sells for $ 26.500 in Cyber Assetts," *Newscientist.com*, December 15, 2004, http://www.newscientist.com/article.ns?id=dn6807 (accessed December 15, 2004) and Will Knight, "Online Games to Generate Real - and Academic – Riches," *Newscientist.com*, January 20, 2004, http://www.newscientist.com/article.ns?id=dn4581 (accessed December 29, 2004).

[40] "Ou les personnages sont dans la Matrice, c'est-à-dire dans la numérisation des choses. Ou ils sont radicalement en dehors, en l'occurrence à Zion, la cité des résistants. Or ce qui serait intéressant, c'est de montrer ce qui se passe à la jointure des deux mondes." Aude Lancelin, "Baudrillard Décode 'Matrix': Pourquoi Ce Film Passionne les Philosophes," *Le Nouvel Observateur*, June 19, 2003, http://www.nouvelobs.com/dossiers/p2015/a201937.html (accessed December 29, 2004). An English translation is available at: Jean Baudrillard, "*The Matrix* Decoded: *Le Nouvel Observateur* Interview with Jean Baudrillard," *International Journal of Baudrillard Studies* 1, no. 2 (2004), trans. Dr. Gary Genosko

'interest' lies, superseding the 'in between' world of de Bruyn or the 'convergence' of Wollen. This is the space of the avant-garde which needs to be identified and that this research places in the wider social context of evolutionary experimentations and hybridizations between art and science. [41] This is also defined as the space of 'the difference' in which, according to Hansen, the human must be resituated.

4.2.38. At the same time Baudrillard raises the question of the 'importance of the network itself,' over the content of the communication. "There is a considerable expansion of all of the possibilities, but is it a good thing in the absolute to follow through with these? Isn't there a sort of wall or overkill? Communication seems to exhaust itself in the practical function of contact, and the content seems to retreat: the network, rather than the network's protagonists, is given priority. This last becomes an end in itself." [42]

4.2.39. Manovich indirectly rejects Baudrillard's hypothesis of a hyperreal devoid of meaning, inviting instead to refocus the artists' attention on new social interactions stimulated by the new media and on the traditional roots of computer art, which he identifies in computer graphics. In this context Baudrillard's position on the hyperreal becomes untenable from an evolutionary perspective. This is because the overproduction

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and Adam Bryx, http://www.ubishops.ca/baudrillardstudies/vol1_2/genosko.htm (accessed January 20, 2005). "The actors are in the matrix, that is, in the digitized system of things; or, they are radically outside it, such as in Zion, the city of resistors. But what would be interesting is to show what happens when these two worlds collide."

[41] "So long as man does not know this, he cannot know himself; nor can he know himself in relation to his world. As a consequence he becomes trapped in one of two attitudes, both equally vain: either he fancies that he can in fact master technology and can by technological means – by analyzing and calculating and ordering – control all aspects of his life; or he recoils at the inexorable and dehumanizing control that technology is gaining over him, rejects it as the work of the devil, and strives to discover for himself some other way of life apart from it. What man truly needs is to know the destining to which he belongs and to know it *as* a destining, as the disposing power that governs all phenomena in this technological age." Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper and Row, 1977), xxxiii.

[42] Claude Thibaut, "Cybersphere: A Discussion with Jean Baudrillard," *//.Dialogues.//*, 1996, http://www.watsoninstitute.org/infopeace/vv2k/thibaut.cfm (accessed December 29, 2004). See also: Graham Knight and Caroline Bayard, "Jean Baudrillard: Vivisecting the 90s: An Interview by Graham Knight and Caroline Bayard," *Montreal Serai Magazine* 15, no. 3 (summer 2002), http://www.montrealserai.com/2002_Volume_15/15_3/Article_4.htm (accessed December 29, 2004).

of hybrids may not represent the end rather a new opportunity in the history of evolution, as evidenced by Stelarc. An opportunity that Baudrillard himself values in his interview with Le Nouvel Observateur commenting on The Matrix. [43]


**Figure 11 *Prosthetic Head*, Stelarc, 2002. "Prosthetic Head is a work that asks questions, both literally and philosophically. As visitors sit at the keyboard conducting a dialogue in real time with a large-scale projection of a digitally animated head, a strange thing happens: intellectually, they know they are just touching keys to activate software, yet they find themselves feeling their way through the conversation, hoping the head will maintain the logical flow, or perhaps perversely, willing him to get it wrong, and fail the 'like a human' test." Alessio Cavallaro, "Transfigure: Perception, Body, Space & Landscape Transformed by the Moving Image," *Australian Centre for the Moving Image*, December 8, 2003 http://www.acmi.net.au/transfigure/flash.htm (accessed January 1, 2005).**

4.2.40. Manovich, giving credit to the validity of the message, evidences the visual relationships established at social, artistic and industrial levels, relating them to the language of communication between human and machine. These relationships represent the issues that were debated in film in the 70s by Pasolini and Eco on the reality of the building blocks of language, both visual and oral.

[43] Aude Lancelin, "Baudrillard Décode 'Matrix': Pourquoi Ce Film Passionne les Philosophes," *Le Nouvel Observateur*, June 19, 2003, http://www.nouvelobs.com/dossiers/p2015/a201937.html (accessed December 29, 2004).

4.2.41. First stage of automation: human and machine are integrated in new human-machine systems which increasingly came to dominate both the battlefield and the workplace after World War II (radar screen, aircraft controls, computer terminals of the automated factory). Human vision became the key instrument of post-industrial labor as the channel of communication between human and machine. This leads into research into more efficient human-machine interfaces -- from Ivan Sutherland's Sketchpad to today's VR. [44]

4.2.42. The new evolutionary relationships between media that are shaping the modality of interactions with visual images and narrative structure are based on processes of hybridization. They are constituted by such a complex web at micro and macro level that interaction, intra-actions and meta-actions, are formulae of engagements which have to be placed in a larger operational context. The relationships between media and those between the artist and the media become a philosophical matrix where the media, as it was for Leonardo da Vinci and his painting or for Brakhage and his film/video experimentations, become a form of philosophical exercise in itself.

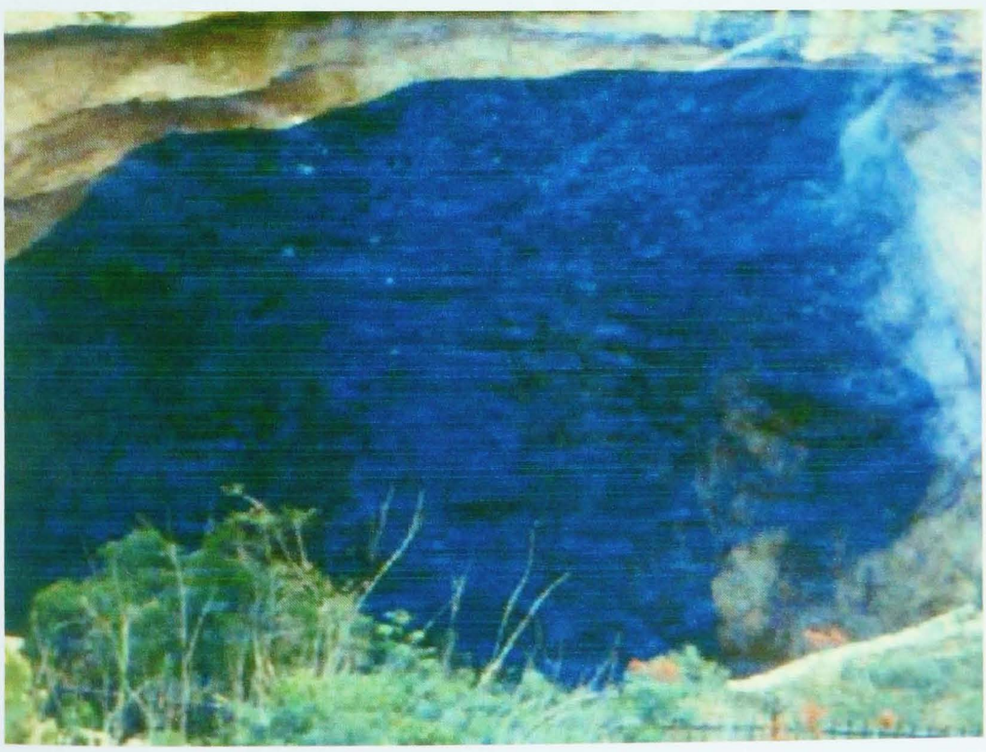

**Figure 12** ***Visions in Meditation #3: Plato's Cave*****, Stan Brakhage, 1990.**

[44] Lev Manovich, "The Labor of Perception: Electronic Art in Post-Industrial Society," *Manovich.net*, ISEA (International Symposium on Electronic Art) 1994, http://www.manovich.net/TEXT/electronic_art.html (accessed January 1, 2005). See also: Lev Manovich, "The Engineering of Vision and the Aesthetics of Computer Art," *Computer Graphics* 28, no. 4 (November 1984): 259-263.

4.2.43. Therefore, it is relevant to ask at this point of the research if Neo, the hero of *The Matrix Trilogy*, is inter-organic, intra-organic or meta-organic. Do his evolutionary processes reflect the characteristics of the evolution of film and media, the abandoning of a human form to progressively merge in the mechanical and/or electric?

4.2.44. This progress can be noticed in the historical experimentations of Marey which, carried to their more mainstream contemporary applications, are exemplified by the work of Mann and Stelarc. These have percolated in the more mainstream art representations of Rokeby in London, which although borrowed from Mann and Stelarc, raise the issue of accessibility to technology and its applications. The issues of power and the struggle between the cyborg and the 'corporate industry,' as discussed in the third chapter, are represented in a social and media environment of experimentations. "There is not only the world of being (of what something 'is': the sky 'is' blue, or God 'is...'), but also of 'extra-being' and 'inter-being' in which the 'And' by which relations between things are created is not simply a conjunction but that which subtends all relations, making relations shoot outside their terms and the set of these terms." [45]

[45] Keith Ansell Pearson, *Philosophy and the Adventure of the Virtual: Bergson and the Time of Life* (London: Routledge, 2002), 40.

**Figure 13** ***L'Homme Machine*****, Etienne-Jules Marey. Pedestrian furnished with special shoes, and carrying a chronographic apparatus.** [46] ***Etienne-Jules Marey, la Mémoire de l'Œil,*** **(Milan and Paris: Mazzotta and Cinémathèque française, 1999) http://www.expo-marey.com/aide/aide.html (accessed January 2, 2005).**

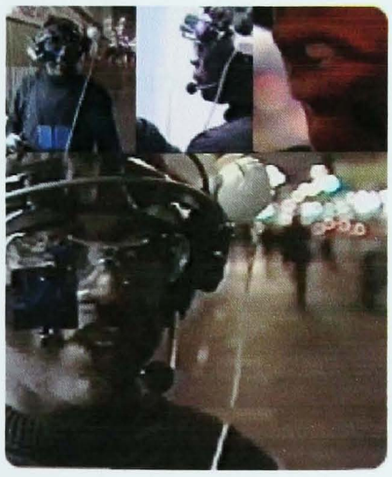

**Figure 14** ***The Human Cyborg*****, Rokeby, 2004. From "Beware Live Art,"** ***channel4*****, http://www.channel4.com/culture/microsites/A/art_show/live_art/index.html (accessed January 2, 2005).**

[46] Etienne-Jules Marey, *Movement*, trans. Eric Pritchard (New York: Arno Press and The New York Times, 1972), 7. See also: Marshall Deutelbaum, ed., *"Image" on the Art and Evolution of the Film: Photographs and Articles from the Magazine of the International Museum of Photography* (New York: Dover Publications, 1979) and Brian Coe, *The History of Movie Photography* (London: Ash and Grant, 1981).

**Figure 15** ***Remediation # 1, Machinic Remediation of a Visual Distopia in Search for the Noumenon,*** **Lanfranco Aceti, 2004. From Rockeby Video Presence.**

4.2.45. The interactions between the inter-organic, intra-organic and meta-organic require, according to Pearson, the forth term of alien relationships - that of the 'extra-organic' - to establish the 'pluralistic empiricism' envisaged by James [47] or the 'heretical empiricism' articulated by Pasolini. [48]

4.2.46. "It also provides us with another way of thinking multiplicity: as residing neither in the terms themselves nor in their set or totality." [49] A multiplicity which increasingly manifests itself in times of shifts and avant-garde experimentations. An

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[47] William James, *A Pluralistic Universe* (London: Longmans, Green and Co., 1909), 90.

[48] "In this interval [we see] the confusion of literature, deprived of reference points and prospects; and, in this delay [we see] the substantial lawfulness of the avant-gardes, whose subversion of language is nevertheless undertaken against a language no longer exists, and whose idea of a future language consists of a technological mythicizing that has nothing to do with the real contribution of technology to language." Pier Paolo Pasolini, *Heretical Empiricism*, ed. Louise K. Barnett, trans. Ben Lawton and Louise K Barnett (Bloomington: Indiana University Press, 1988), 19 and Pier Paolo Pasolini, *Empirismo Eretico* (Milano: Garzanti, 2000), 22.

[49] Keith Ansell Pearson, *Philosophy and the Adventure of the Virtual: Bergson and the Time of Life* (London: Routledge, 2002), 40.

example is brought by Greenaway with his question on the death of cinema in the Cinema Militans lecture. The use of the 'zapper' on the 31st September 1983, according to Greenaway, signals a period of media shifts and the establishment of new relations between media and viewers.

4.2.47. "When we don't watch, it [the television] doesn't affect the nature of the programme, unlike the cinema, which, without an audience, is like nothing so much as a tomb." [50] Cubitt evidences, in his analysis, a shift within the relationship between viewer and media. The existence of cinema is based on the spectator, (cinema is viewer dependant) the existence of television is not affected by the viewer, (television is viewer independent), but the new media existence affects the spectator (viewer is new media dependant). This idea could be conceptualized in a transhumanist context that envisages the biological evolution of the viewer as dependant on the characteristics of the new media.

4.2.48. In the contemporary media scenario this hypothesis could be used to affirm that the new media affect the nature of the viewer, [51] **which** [52], without the digital media, is like nothing so much as a tomb.

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[50] Sean Cubitt, *Timeshift: On Video Culture* (London: Routledge, 1991), 32.

[51] "Unlike the sensorimotor interval at work in the cinema of the movement-image, this refined sensorimotor interval is not immanent to the logic of the image or of film as the art of moving images, but emerges directly from the human processing of information. Consequently, it is a sensorimotor interval that taps the potential of the body to exceed its own contracted habits and rhytms." Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: The MIT Press, 2004), 247-248.

[52] The choice of this grammatical error is to stress the objectification/commodification of the viewer.

**Figure 16** ***24 Hour Psycho*****, Douglas Gordon, 1993. In this 'two frames per second' version of Hitchcock's Psycho lasting 24 hours, the viewer is outside the 'framework.' The perception of the work for the viewer is only partial and the video appears to exist without the viewer. Furthermore, it raises questions of the technological transfer and the issues of technological remediation and ekphrasis.**

4.2.49. In this context the viewers' existence is dependant on the new media, as shown by the works of Douglas Gordon and Valie Export. Cubitt also explains that "cinematic suture creates the spectator without which it would not exist. Television, contrariwise, has already used up the viewer, and is left continuously asserting its own presence to itself with the obstinate repetitiveness of the hysteric."

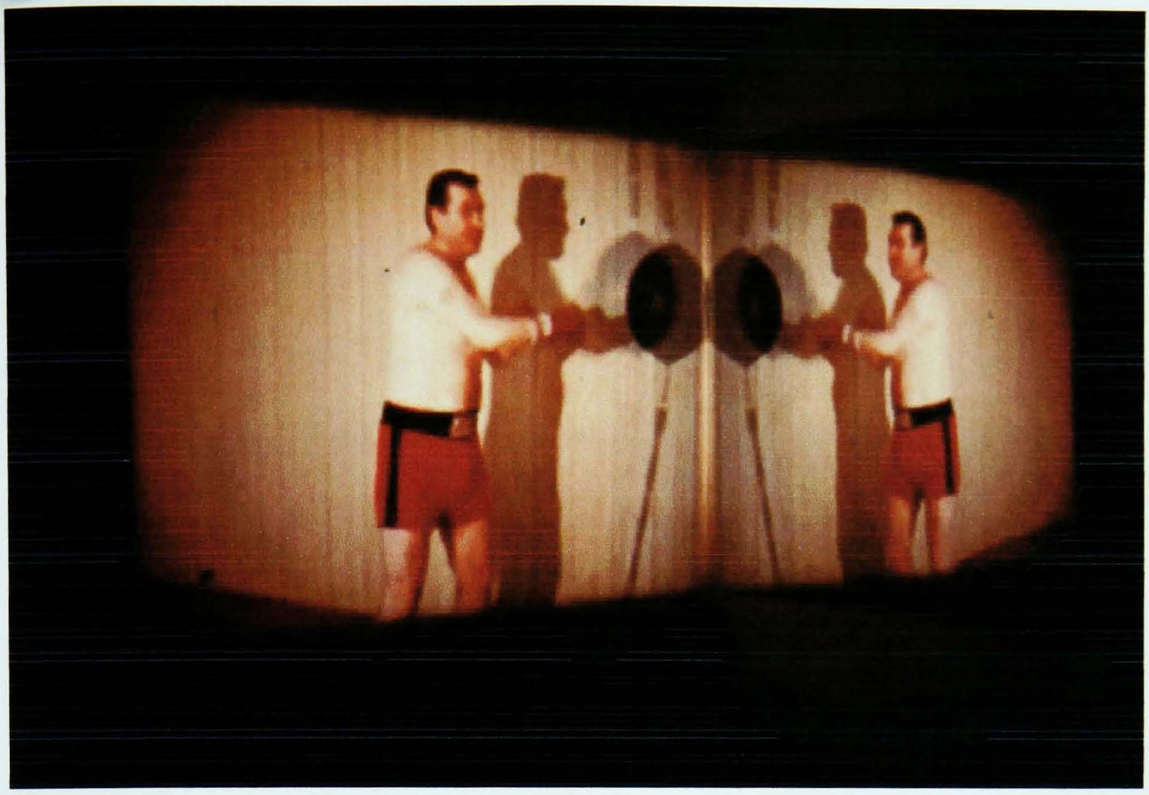

**Figure 17** ***Splitscreen: Solipsismus*****, Valie Export, 1968. Expanded cinema and mirror.**

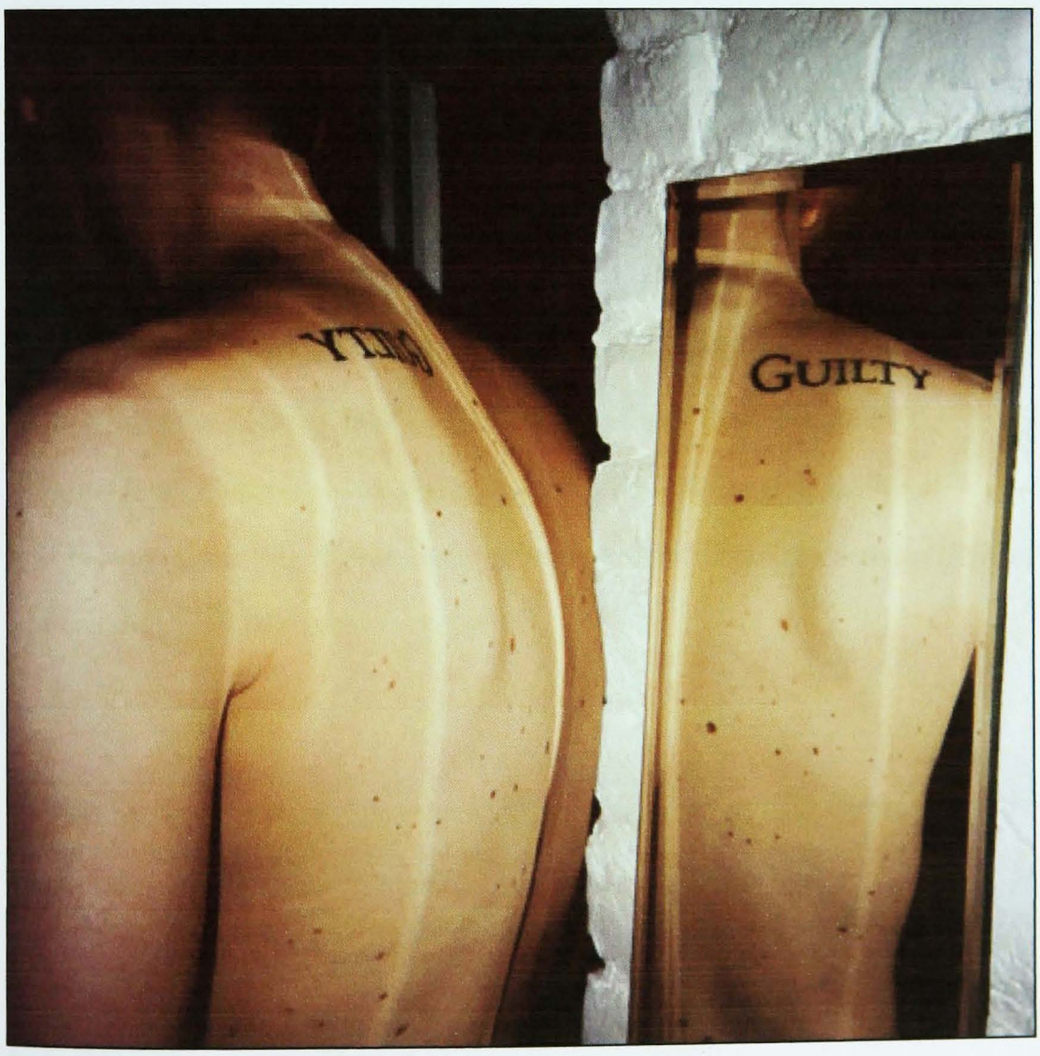


**Figure 18** ***Tattoo (for Reflection)*****, Douglas Gordon, 1997.**

4.2.50. This passage reveals of an important shift, a passage which, in the contemporary digital media, has been from the TV to the viewer. It is now the viewer that is left to continuously assert its own presence to itself with the obstinate repetitiveness of the hysteric. The cursory gaze is glancing to grasp some form of attention and a response to a fetishist desire that is never fulfilled, never placated. The new media, with their mass of information, do not generate a fetishist desire but the frustrated narcissism of self affirmation. This causes the rise of the 'mirror,' [53] the obsession with the self for the affirmation of it and recognition of it by the new media context. [54]

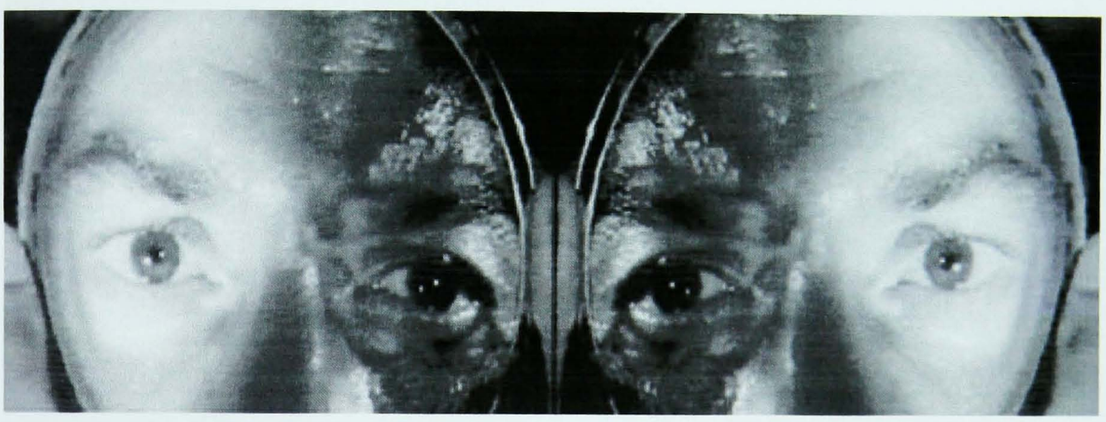

**Figure 19** ***Left Is Right and Right Is Wrong and Left Is Wrong and Right is Right*****, Douglas Gordon, 1999. Video installation, 97 minutes. "The reflected symmetries of the double projection similarly serve to restructure vision; for the flow of enantiomorphic images constantly oscillates, sometimes splitting apart to insist on dual contradictory points of view, sometimes dissolving into a fully coherent if illogical space, or a single, unified entity. Often a new reality supervenes over the inverted pair of images, a reality that metamorphoses out of the seam, the junction between the two frames, and conjures yet a third vantage point." [55]**

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[53] "Our image in the mirror is not innocent, then. Behind every reflection, every resemblance, every representation, a defeated enemy lies concealed. The Other vanquished, and condemned merely to be the Same. This casts a singular light on the problem of representation and of all those mirrors which reflect us 'spontaneously' with an objective indulgence. None of that is true, and every representation is a servile image, the ghost of a once sovereign being whose singularity has been obliterated." Jean Baudrillard, *The Perfect Crime*, trans. Chris Turner (London: Verso, 2002), 149.

[54] "Thereby beautifully illustrating Paul Klee's phrase *now objects perceive me*, this is because it is already more than a brief memorandum, more than the photographic memento of a more or less distant past. It is in fact *will*, the will to engage the future, yet again, and not just represent the past. The photogram, furthermore, had already begun to manifest such a will at the end of the last century." Paul Virilio, *The Vision Machine*, trans. Julie Rose (London: BFI Publishing, 1994), 64.

[55] Lynne Cooke, "Double Vision: Stan Douglas and Douglas Gordon," *diacenter.org*, February 11, 1999, http://www.diacenter.org/exhibs/douglasgordon/double/essay.html (accessed December 29, 2004).

**Figure 20** ***A Void Existence in the Multiscreen Space in Between of the Evolutionary Creativity (aka Swapping Spaces)*****, remediation by Lanfranco Aceti, 2005.**

4.2.51. The simulacral function of the new media is absolved by the negation of a mirror, the negation of existence. The viewer, rejected to the boundaries of virtualities, strives to grasp the core of presence in order to enact its own existence. While TV was sited at the edge of darkness, the digital media are the darkness, according to Baudrillard. The mirror which does not reflect, frustrates the necessity of communication and alters the process of self recognition through the other.

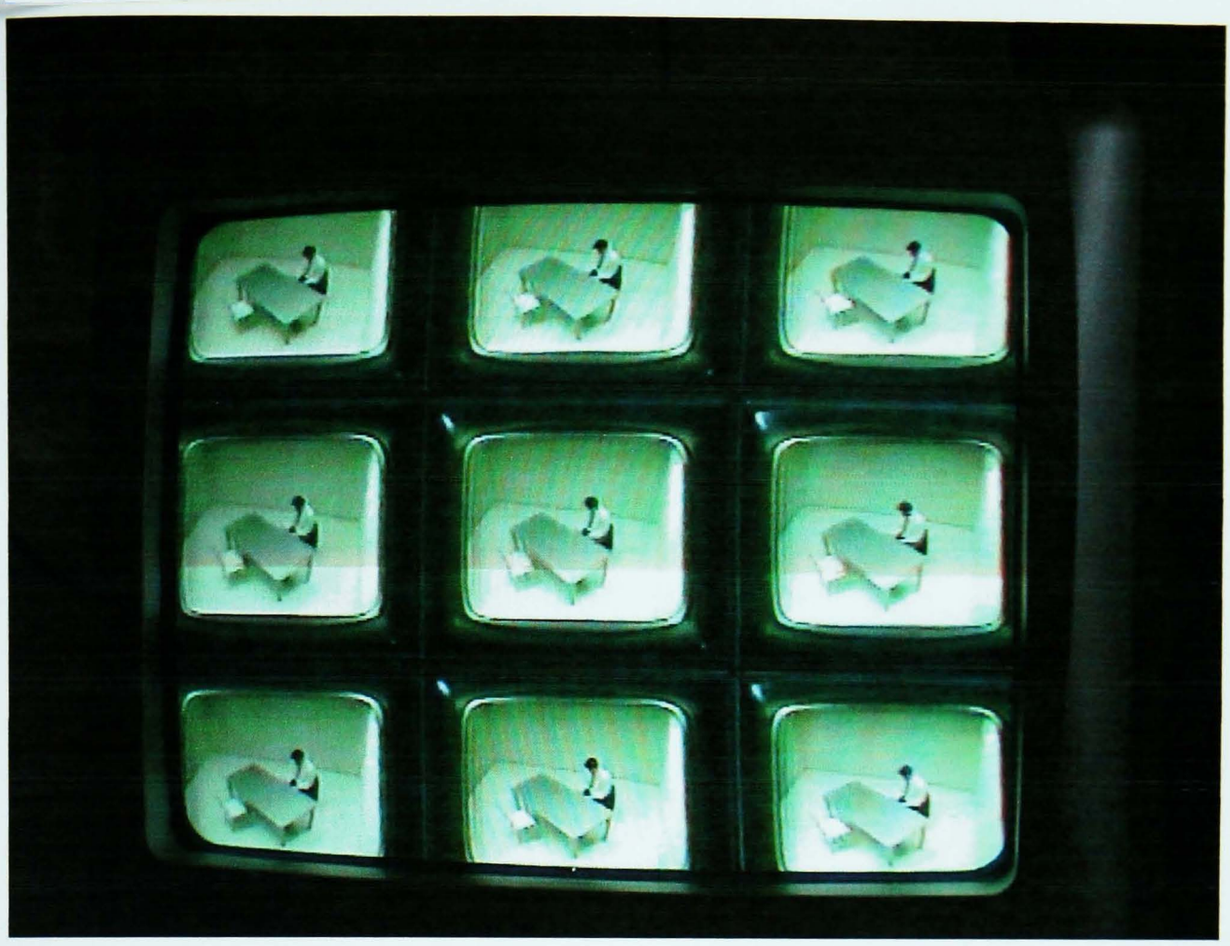

**Figure 21** ***Remediation #, Look at My Self as Neo in My Own TV Thinking of My Self*****, remediation Lanfranco Aceti, 2004.**

4.2.52. In this sense, life at the edge of virtuality is the existence in the matrix where all that is human is attempting to be encapsulated in a futuristic TV box, surveilled and taken care of, while the life of virtuality, the life of the code, goes on undisturbed beyond the visible, in the transparency and reflections of the digital applications. [56]

> 4.2.53. No doubt the cinema also constructs psycho-social types through its aesthetic figures. These are social types in the sociological sense as defined by Georg Simmel and others: the stranger, the excluded, the immigrant, the city-dweller, and so forth. To think of these figures as stereotypes (for example, of masculinity or femininity, hetero- or homosexuality) is equally possible. But more precisely, the *raison d'être* of psycho-social types is to express the forces of territorialization and deterritorialization that constitute the social fields they occupy, thus defining their structure and function. [57]

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[56] "The mistake that Nielsen and Norman make is to assume that the single goal of all design is to make the interface transparent, when in fact the goal is to establish an appropriate rhythm between being transparent and reflective." Jay David Bolter and Diane Gromala, *Windows and Mirrors: Interaction Design, Digital Art, and the Myth of Transparency* (Cambridge, MA: The MIT Press, 2003), 6.

[57] D. N. Rodowick, "Unthinkable Sex: Conceptual Personae and the Time Image," *In[]Visible Culture: an Electronic Journal for Visual Studies*, 2000, http://www.rochester.edu/in_visible_culture/issue3/rodowick.htm (accessed December 28, 2004).

4.2.54. This definition of the psycho-social types determined by the 'technological vision' will be part of the next section, where it will be analyzed the function of the cyborg, as represented through cinema and/or new media, and the evolutionary possibilities within the contemporary social context of technologically mediated forms of vision.

## 4.3. The Cinema of the Cyborg

### Visual Straightjacket or Empowered Liberation?

4.3.1. Since we are also witnessing a movement towards the complete automation, including the replacement of human vision by computer vision, we need to completely reevaluate the very term 'computer art.' The term presently refers to the making of art with the help of a computer, the art to be enjoyed by human observers. The artist is the one who makes the creative choices. This Romantic paradigm reaches its extreme in the recent trend of artificial life art, where the computer is programmed to simulate the laws of evolution, mutating images to create endless new combinations; while the artist assumes the role of God, selecting which of these images will survive. [58]

4.3.2. This activity of selection becomes most important in the context of the space in between, as discussed in the previous section. It is then relevant to understand the modalities which are structuring the vision of the contemporary technological avant-garde and the images which constitute the computer's visionary language. [59]

[58] Lev Manovich, "The Labor of Perception: Electronic Art in Post-Industrial Society," *Manovich.net*, ISEA (International Symposium on Electronic Art) 1994, http://www.manovich.net/TEXT/electronic_art.html (accessed January 1, 2005).

[59] "One of the more diabolical elements of entering CMC (Computer Mediated Communication) or Virtual Reality is that people can only recognize each other when they are electronically disguised. Truth is precisely based on the inauthentic!" Lynn Hershman, "Romancing the Anti-body: Lust and Longing in (Cyber)space," *walkerart.org*, Telematic Connections: Reach Out and Touch the Telereal. http://telematic.walkerart.org/telereal/hershman_hershman2.html# (accessed January 5, 2004).

**Figure 22 *Cyborg # 9*, Lynn Hershman, 1997. Kockgallery.com http://www.kochgallery.com/artists/contemporary/Hershman/ (accessed December 1, 2004).**

4.3.3. "In distant vision no object stands out and our gaze instead spreads over the entire visual field, so that the central object of attention becomes the space between objects, the hollow space that reaches to our eyes as objects recede into the distance, the air in which all seem to float like a mirage." [60] The avant-garde of the space in between, where Wollen's convergence or de Bruyn's third avant-garde should develop, becomes a place in which the object recedes into the distance, a place in which reality floats like a mirage. *Hershman's Cyborg # 9* analyzes these concepts and plays with the notion of place, which becomes the place of the hyperreal, the simulacra and the illusion.

4.3.4. In this space the issues related to vision and of who is looking at whom are daunted by the complexity of the mediate relationships established within the

[60] Gilberto Perez, *The Material Ghost: Films and Their Medium* (Baltimore: The Johns Hopkins University Press, 1998), 135.

contemporary social context. Mann, with his recent surveillance and sousveillance [61] project, and Manovich with the analysis of the computer enhanced filmic image as hyperreal vision, have discussed the argument. Manovich in particular speaks of the value of the synthetic image and its freedom from the real perspective and influences of physical conditions, which allows the creation of a more saturated and glossy image. This artificial image, although distant from that of human vision, becomes completely realistic. It allows Manovich to say that "the synthetic image is the result of a different, more perfect than human, vision." [62] This vision is certainly not that of humans, not traditional humans at least. Manovich asks then: "Whose vision is it? It is the vision of a computer, a cyborg, an automatic missile. It is a realistic representation of human vision in the future when it will be augmented by computer graphics and cleansed of noise. It is the vision of a digital grid. *Synthetic computer-generated imagery is not an inferior representation of our reality, but a realistic representation of a different reality.*" [63]

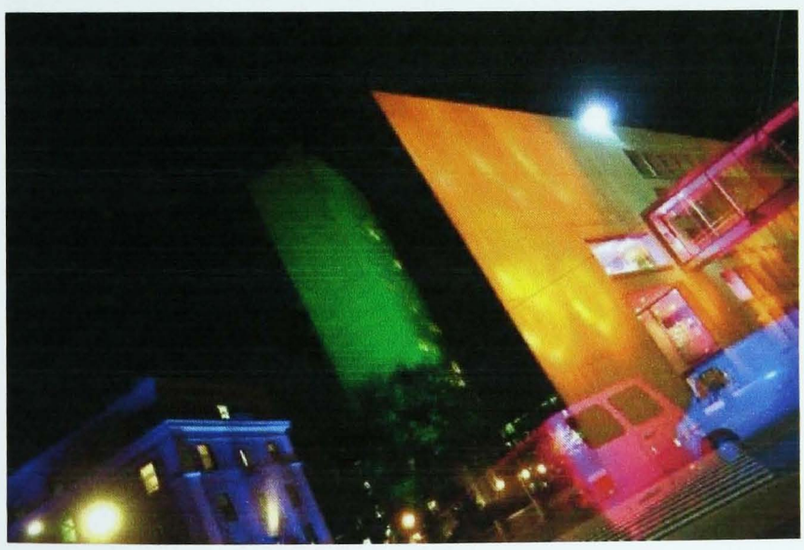

**Figure 23 "The unique capabilities of a wearable personal computer-imaging system and lighting kit let me create expressive images that transcend the boundaries of photography, painting, and computer graphics." Steve Mann, Cybersquare, *Computer*, Vol. 30, No. 2, February 1997, http://hi.eecg.toronto.edu/ieeecomputer/r2025.htm (accessed October 24, 2004).**

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[61] Steve Mann, "Sousveillance, Not Just Surveillance, in Response to Terrorism," *chairetmetal.com*, May 5, 2002, http://www.chairetmetal.com/cm06/mann-complet.htm (accessed 10 October 2004). See also: Steve Mann, "'Reflectionism' and 'Diffusionism': New Tactics for Deconstructing the Video Surveillance Superhighway," *Leonardo* 31, no. 2 (1998): 93-102.
[62] Lev Manovich, *The Language of New Media* (Cambridge, MA: The MIT Press, 2001), 202.
[63] Ibid., 202.

4.3.5. These different realities reinforce the idea discussed in the previous section of an avant-garde made of technological evolutionary experimentations in 'the space in between' filmic and video traditions which have been expanded in scope and range by new media. [64] A range which reaches far beyond the traditional ability of the cinema to create exchanges across the border. "A film image exists amid transaction with what lies out of frame, what cannot be seen at the moment, what has left view and what at any point may enter. Representation in the film medium rests on the out of frame: it's in relation to a space off screen and its implied contents that the images unfolding on screen make sense." [65]

**Figure 24 "Computer Vision, skin tone segmentations locates people and hands, and is a useful first step in many applications, including gesture tracking, and giant robots." From Steve Mann, in http://openvidia.sourceforge.net/screenshots.shtml (accessed October 24, 2004).**

4.3.6. These transactions are the necessary complement to the process of 'remediation' which is limited in scope to the technological transfer and does not analyze

[64] "With both action and movement absented from the image, there is now only linking through 'irrational' divisions. According to the mathematical definition, the interval dividing segmentations of space is now autonomous and irreducible; it no longer forms a part of any segment as the ending of one and the beginning of another. Image and soundtrack are also relatively autonomous. While referring one to the other they resist being reconciled into an organic whole. As a result, there is no totalization of space in an organic image of the whole and no subordination of time to movement. Inside and outside, mind and body, mental and physical, imaginary and real are no longer decidable qualities. This is another theory of mind and another logic of sense, defined by a decisive break with the earlier model." D. N. Rodowick, *Gilles Deleuze's Time Machine* (Durham: Duke University Press, 1997), 4-5.

[65] Gilberto Perez, *The Material Ghost: Films and Their Medium* (Baltimore: The Johns Hopkins University Press, 1998), 137.

the larger context of 'digital ekphrasis' and the tradition of 'intersemiotic translation,' which Eco defines as "the transformation of a novel into a film, or of a painting into a poem and so on." [66] The intersemiotic translation is a large scale process of translation of digitization of the language of the real, of all of its languages in the new media context. In this arena the 'digital ekphrasis' is the description and/or representation of an artwork in a different digital medium. The two constructs may be differentiated by saying that while the 'intersemiotic translation' is the translation of a whole language into a different one, the 'digital ekphrasis' is the translation of an 'element' of the real into the 'digital realm.' A visual comparison between the work of Damian Hirst and the film *The Cell* (2000),[67] offers a better understanding of the aesthetic 'modi' by which the translations can be achieved. The concept of remediation in this context represents the technological apparatus that allow such transfers. In as much as translation is not rewording, then ekphrasis is not remediation. [68]

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[66] "The aim of a translation, more than producing any literal 'equivalence', is to create the same effect in the mind of the reader (obviously according to the translator's interpretation) as the original text wanted to create. Instead of speaking of equivalence of meaning, we can speak of functional equivalence: a good translation must generate the same effect aimed at by the original." Umberto Eco, *Mouse or Rat?: Translation as Negotiation* (London: Weidenfeld and Nicolson, 2003), 56.

[67] The website version, or the digital ekphrasis of the movie the cell is accessible at http://www.newline.com/sites/cell/superego/index.html (accessed January 2, 2005).

[68] "But this joke has been made possible by having identified translation with interpretation through definition, that is, by having rigorously (mechanically) respected the (evidently absurd) principle that definition – in so far as it is a form of rewording – is a form of translation." Umberto Eco, *Mouse or Rat?: Translation as Negotiation* (London: Weidenfeld and Nicolson, 2003), 128.

**Figure 25** ***Some Comfort Gained from the Acceptance of the Coherent Lies in Everything,*** **Damian Hirst, 1996. Image's detail.**

**Figure 26** ***Some Comfort Gained from the Acceptance of the Coherent Lies in Everything,*** **Damian Hirst, 1996.**

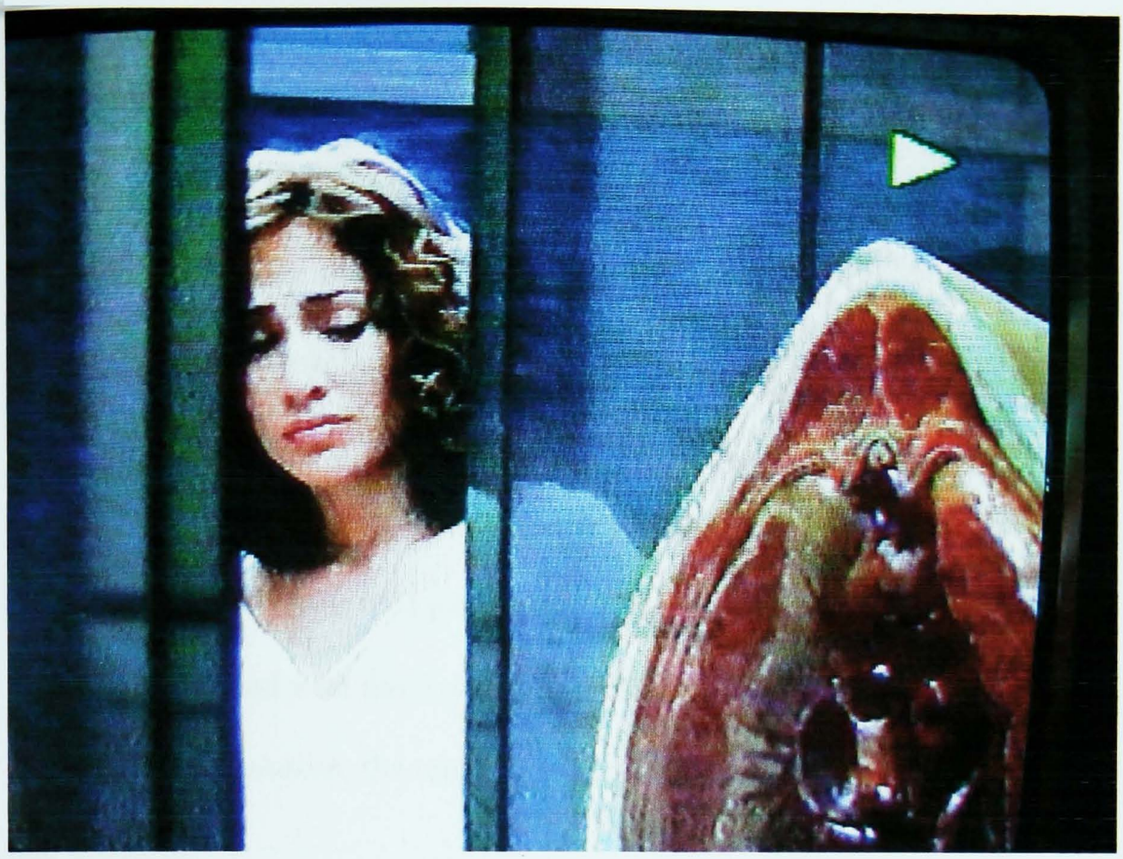

**Figure 27** ***The Cell*****, directed by Tarsem Singh, 2000. Digital ekphrasis of a remediation of a detail of an intersemiotic translation.**

**Figure 28** ***The Cell*****, directed by Tarsem Singh, 2000. Digital remediation of an ekphrasis of Damian Hirst's artwork titled '*Some Comfort Gained from the Acceptance of the Coherent Lies in Everything.*'**

4.3.7. Eco goes further in his analysis and in the chapter titled *From Rewording to Translating Substance* of *Mouse or Rat?: Translation as Negotiation*, he analyzes Peirce's 'energic interpretants,' which can also be a behavioral or an emotional response. The virtual environments are penetrating this space of the 'energic interpretants,' creating a visual language based on behavioral and emotive physiological readings. This alters the space of interaction, which becomes the expression of the volitional, objective and absolute. Film created a space of identification with the camera within the hyperreal void, Antonioni's *Blow Up* (1966) plays with McLuhan's concept of 'non-perceptive somnambulist' and with the 'self determination through media memory' which "produces *phenomenal absolutism*, the tendency to interpret our experience as volitional, objective, and absolute." [69]

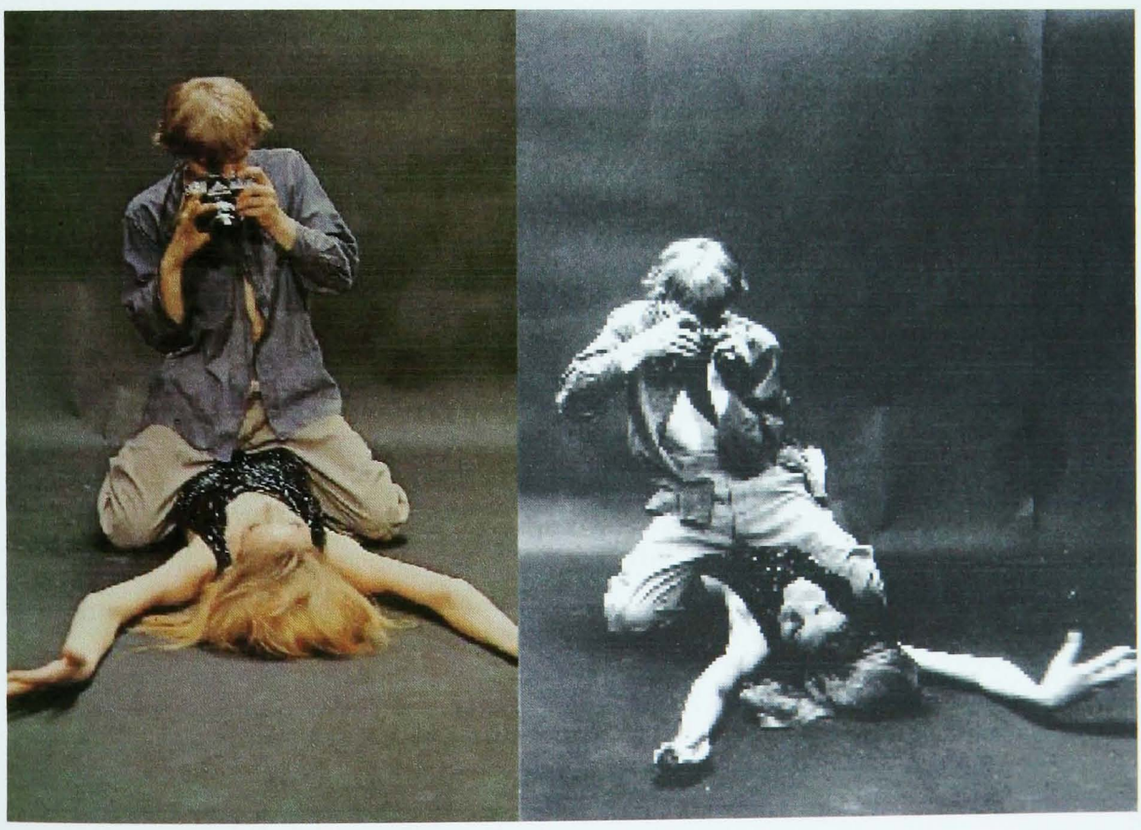

**Figure 29 *Blow Up*, Michelangelo Antonioni, 1966. The space is emptied and the machine is held by man over the fertility/life representation of woman, a symbolism of the technological masculinity which trough the machinic vision dominates the biological. In this hyperreal space what is devoid of meaning is the meaningful functionality of women, whilst man reaffirms the simulacra of his existence through the 'penetration' of a mechanical device into reality.**

[69] Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 56.

4.3.8. The necessity and possibility of an interpretation of the image generates discoveries and contrasting views which are not independent form the cultural referential contexts: political, cultural, semiotic and technological. The discovery of new meanings in the image is layered with a new set of meanings offered by the 'intersemiotic translation.' [70] An historical example is Antonioni's documentary *Chung Kuo* (1972). [71]

4.3.9. The role of the 'energic interpretants' oblige the viewer of digital media to exercise the role of 'filling up' the image with its content a tradition of 'interpretation' that goes back to Antonioni. "Antonioni oftern renders things at a ghostly distance, in airy, eerie long shots that call upon the viewer insecurely to fill in what the image falls short of embodying."[72]

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[70] "The China question reminds us that when political debate and artistic representation involve different cultures on a worldwide scale, art and politics are also mediated by anthropology and thus by semiotics." Umberto Eco, *Travels in Hyperreality*, trans. William Weaver (London: Picador, 1987), 283.

[71] "Eco's and Bann's discussions of the reception of Antonioni's China film present an example of the way a text can become opaque across different contemporary cultural regimes of representation, while the Orgel and Hacking examples concern the way a text can become mysterious across historically differing regimes of representation." Noel King, "Critical Occasions: David Bordwell's Making Meaning and the Institution of Film Criticism," *Continuum: The Australian Journal of Media and Culture* 6, no. 1 (1992), ed. Toby Miller, http://wwwmcc.murdoch.edu.au/ReadingRoom/6.1/King.html (accessed February 12, 2005).

[72] Gilberto Perez, *The Material Ghost: Films and Their Medium* (Baltimore and London: The Johns Hopkins University Press, 1998), 144.

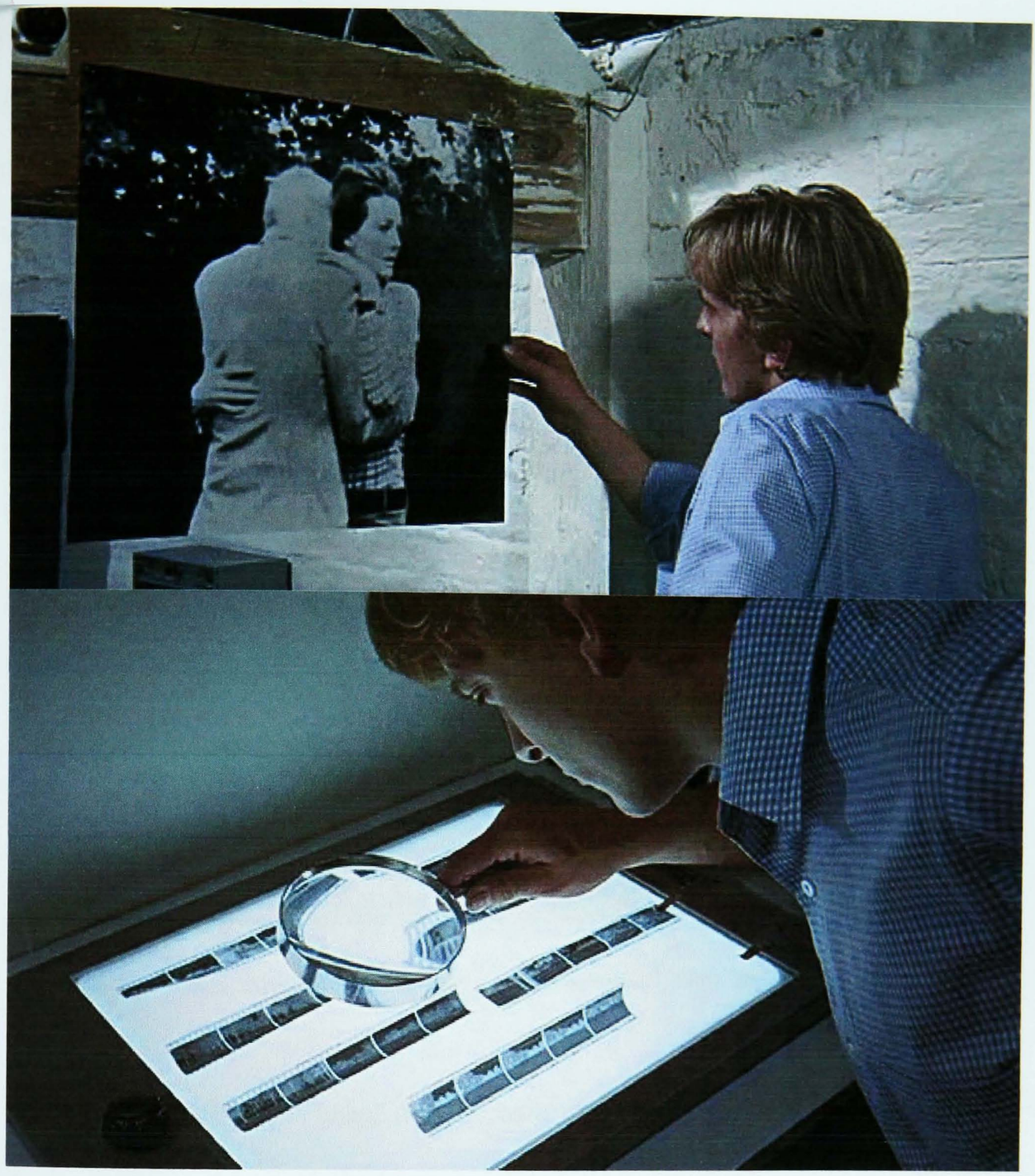

**Figure 30** ***Blow Up*****, Michelangelo Antonioni, 1966. "Antonioni's centerpiece-the David Hemmings character's intense examination of the pictures he took it the park-allegorizes the ontological specificity of photographic film as opposed to for instance computer-animated film. What inscribes this difference, what phenomenologically underwrites photographic visuality, is the promise of the aleatory, the fortuitous-the correlative of which may be something along the lines of Roland Barthes's notion of the punctum, or the 'contingent subzone of the still image.'"**[73]

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[73] "What filmic opacity ultimately means, then, is that the diegetic world envisioned by a filmmaker is neither less inscrutable nor more mimetic than that of the painter or the writer." Asbjørn Grønstad, "Anatomy of a Murder: Bazin, Barthes, *Blow-Up*," *The Film Journal* 9, 2004, http://www.thefilmjournal.com/issue9/blow-up.html (accessed February 23, 2005). Antonioni on the subject states: "We know that under the image revealed there is another which is truer to reality and under this image still another and yet again still another under this last one, right down to the true image of reality, absolute, mysterious, which no one will ever see or perhaps right down to the decomposition of any image,

4.3.10. This is the present conflictual element which is exemplified by *The Matrix Trilogy*: a complex interaction between media determinations of the viewer and perceptual absolutism, which as a process of identification does not admit reality other than that of the 'machinic vision.' [74]

**Figure 31 *The Matrix*, directed by Andy and Larry Wachowski, 1999. Detail of Neo being clawed out of the matrix.**

4.3.11. The above image is an example of this process of identification which goes back to Vertov's *Man with the Movie Camera* (1929), where the attempt to dislodge film from the restrictions of other languages and generate an 'absolute' form of

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of any reality." Charles Thomas Samuels, "Michelangelo Antonioni," *Encountering Directors* (New York: Capricorn Books, 1972), 23.

[74] Following Sobchack's analysis Gardner writes that "The primary correlation between spectator and film is thus structured as entailing two different intentional directions. The spectator perceives the film viewing (i.e., is directed to a noematic object that is the filmic apparatus itself), while the film views itself viewing (i.e., it self-reflexively directs the look back on itself as a noetic viewing). The two viewing views then coincide because they share the same intentional destination: i.e. the film's self-reflective view of the world." This final assumption is what becomes questionable in an 'autonomous' media evolutionary framework: the coincidence of 'the same intentional destination.' Colin Gardner, "Antonioni's Blow Up and The Chiasmus of Memory," *artbrain.org*, http://www.artbrain.org/journal2/gardner.html (accessed January 4, 2005). For a breakdown of the primary correlations of the film experience see: Vivian Sobchack, *The Address of the Eye: A Phenomenology of Film Experience* (Princeton, N. J.: Princeton University Press, 1992), 279.

communication leads to the autonomy of an internationalized visual language which 'becomes' the expression of a camera freed from the links of humanity. [75]

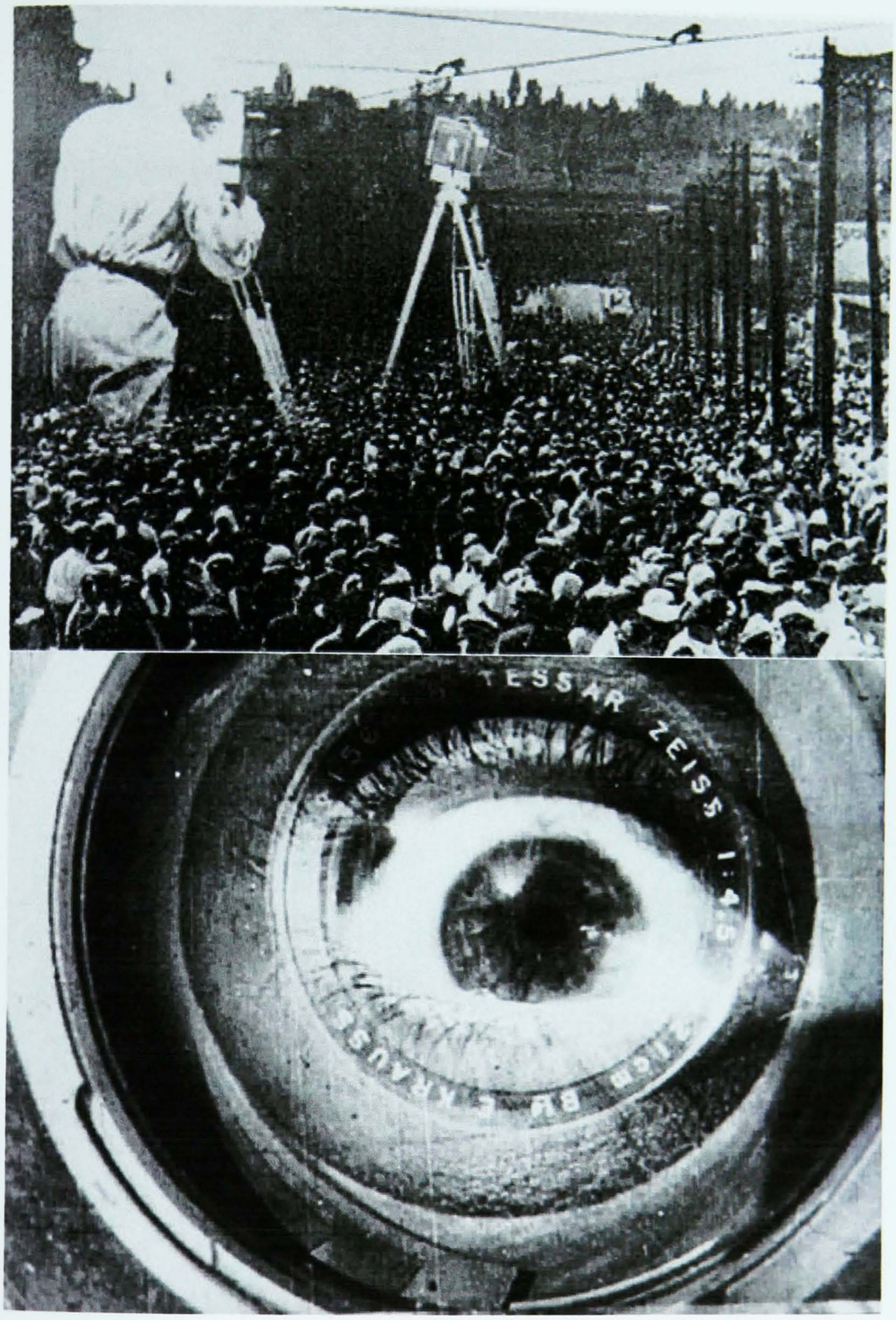


**Figure 32** ***The Man with the Movie Camera (Chelovek s Kinoapparatom)*****, Dziga Vertov, 1929. 35mm film, black and white, silent, 65 minutes (approx.). The process of identification of the camera with the eye is total as well as being above and beyond humanity.**

4.3.12. To engineer vision also meant to minimize the psycho-physical resources required of the viewer. Dziga Vertov writes in his famous 1923 manifesto: 'The least advantageous, the least economical communication of a scene is theatrical communication.' In contrast, montage forces the eye to see

[75] Wolfgang Beilenhoff, ed., *Schriften zum Film: Dziga Vertov* (Munich: Carl Hanser Verlag, 1973), 117.

> the right thing at the right time, thus eliminating the visual waste of theater, ballet, painting, and other traditional forms. In montage, 'camera drags the eyes of a film viewer from hands to legs, from legs to eyes and the rest in the most advantageous order...' [76]

4.3.13. Furthermore, in the contemporary space of evolutionary media and hybridization processes, the 'camera' and any other 'pseudo interactive visual construct' in the realm of new media guides the eyes of the viewer, digitizing the 'visual waste' of theatre, ballet, painting, and other traditional forms,' including that of the 'real.' The act of seeing is dissected and analyzed in its physical constructions, in Bunuel's and Viola's *Anthem* (1983), and in its relationship with the 'other' in Cocteau's *Blood of a Poet* and Vertov's *The Man With the Movie Camera* (1929) or in its conceptual production in le Grice's *Chronos Fragmented* (1997). [77]

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[76] Lev Manovich, "The Labor of Perception: Electronic Art in Post-Industrial Society," *Manovich.net*, ISEA (International Symposium on Electronic Art) 1994, http://www.manovich.net/TEXT/electronic_art.html (accessed January 1, 2005).

[77] "Consequently if the spectator is to become aware of the effects and constraints of the camera, this must be produced conceptually form the non-representational inscriptions. In this case, the spectator moves towards a conceptual identification *of* the camera, and does not simply identify through its implacement with the component of the representation." Malcolm Le Grice, *Experimental Cinema in the Digital Age* (London: BFI Publishing, 2001), 206.

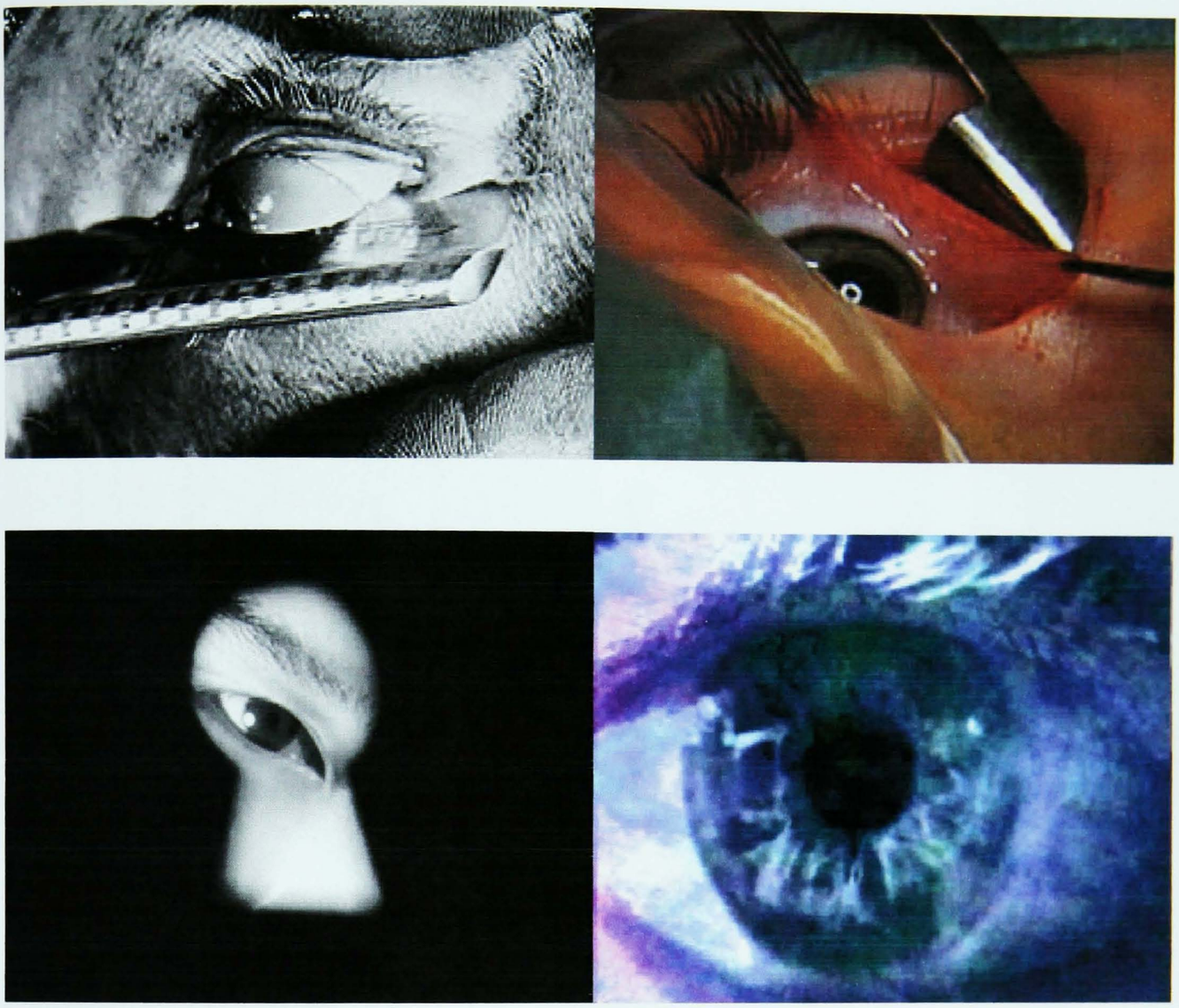

**Figure 33 In order: *Un Chien Andalou*, Luis Buñuel, 1928; *Anthem*, Bill Viola, 1983; *Le Sang d'un Poête*, Jean Cocteau, 1930 and *Chronos Fragmented*, Malcolm Le Grice, 1997.**

4.3.14. It is not just the eye that is guided, but the behavior of the viewers, while their synapses are shaped to conform to the new media patterns. [78] The viewer is not watched over or spied upon by the camera, the viewer is the camera and the camera is the

[78] "...their work has been influenced by an implicit equation between cinema and seeing [...] The superimposed eye in the camera lens in Vertov's *Man with a Movie Camera* (1929) and Man Ray's Emak Bakia (1926) [...] the infamous sliced eyeball in *Un Chien Andalou* (1928), the photograph of an eye operation in Paul Sharits' *T.O.U.C.H.I.N.G.* (1968), the close-ups of Kiki's eyes in Leger's *Ballet Mechanique* (1924), the oriental eye at the keyhole in Cocteau's *Blood of a Poet* (1930), the artist's escaped eyeball in Sidney Peterson's *The Cage* (1947), The Eye of Horus in Kenneth Anger's *Inauguration of the Pleasure Dome* (1954, revised 1966 and 1978) and *Invocation of My Demon Brother* (1969)..." William C. Wees, "The Camera-Eye: Dialectics of a Metaphor," in *Future Cinema. The cinematic Imaginary after Film*, ed. Jeffrey Shaw and Peter Weibel, 49 (Cambridge, MA: ZKM Center for Art and Media Karlsruhe and The MIT Press, 2003).

viewer, literally showed in Hershman's artworks. "I am kino-eye, I am a mechanical eye. I, a machine, show you the world as only I can see it." [79]

**Figure 34 *Phantom Limb # 3*, Lynn Hershman, 1980 - 1990.**

[79] Annette Michelson, *Kino-Eye: The Writings of Dziga Vertov*, trans. Kevin O'Brien (Berkeley: University of California Press, 1984), 17.

**Figure 35** ***Phantom Limb # 2*****, Lynn Hershman, 1980 – 1990.**

**Figure 36** ***Antibody # 1*****, Lynn Hershman, 1990s. The image becomes pixellated, it is the representational of how humans imagine the machinic is looking and perceiving them. It is a conflict between the human existence and the digital, a loss of the original space which needs to be renegotiated and recomposed. "Like Botticelli's 'Venus' she is forward looking and seductive. But she is also optimistic and cyborgian." [80]**

[80] Lynn Hershman, "Telereal," *Walkerart.org*, http://telematic.walkerart.org/telereal/hershman_hershman2.html (accessed February 25, 2005).

4.3.15. The new media and the expanded cinema, in the 'space in between,' have generated an enlargement of the possibilities of the identification of the camera with the viewer. The translation is not just that of language, but also of the 'energic interpretants,' behavior and emotions which trigger and condition responses from the participant in augmented reality environments and virtual reality environments. [81]

**Figure 37** ***The Man with the Movie Camera (Chelovek s Kinoapparatom)*****, Dziga Vertov, 1929. 35mm film, black and white, silent, 65 minutes (approx.).**

4.3.16. In this new media scenario, the 'rear view mirror' assumption that the viewer is still identifying himself with the 'camera' of the new media, that the vision of the new media technology is what the viewer is looking at, may be partially incorrect. The existence of the real and that of the virtual may be two parallel worlds that blur and merge at the boundaries, like in Vertov's still image. From this 'space in between' a new phenomena of transformation may be at work. The technology may have become the

[81] "Science has proven that there's no such thing as 'human nature.' Just as water takes the shape of its container, so human nature is relative to its past and present conditioning." Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 55.

viewer and the object viewed the spectator. [82] "According to Christian Metz and other theorizers, when watching a film we primarily identify ourselves not with the characters but with the camera." [83]

4.3.17. The issue is that of not just identifying with the camera, but being transformed by and eventually becoming the camera. Displacing and abandoning the sense of self to acquire a different existence than that of the new assembled 'mechanical' object. The digital camera of the new media informational systems is not 'mechanical'. Instead it is a system capable of self-organization and non predictable reactions, a system that can grow more complex over time and that can learn. [84] A mirrored existence of the multiplied self, a merging of both the self and the other, to look at the other as self. These form of experimentations are part of Steve Mann's work, who in *DEFCON~7*, merges the self and the other in a game of undecipherable reflections.

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[82] "My becoming a document camera arose quite naturally during some of the large number of invited lectures I was asked to give. I'd typically use a video projector, and plug the projector into my body, making the presentation from the computer attached to my body." Steve Mann, "Visual Vicarious Soliloquy." *walkerart.org*, Telematic Connections: Reach Out and Touch the Telereal. http://telematic.walkerart.org/telereal/mann_mann2.html (Accessed January 5, 2005).

[83] Gilberto Perez, *The Material Ghost: Films and Their Medium* (Baltimore: The Johns Hopkins University Press, 1998), 143.

[84] Catherine Waldby, "The Instruments of Life: Frankestein and Cyberculture," in *Prefiguring Cyberculture: An Intellectual History*, ed. Darren Tofts, Annemarie Jonson and Alessio Cavallaro, 34 (Cambridge, MA: The MIT Press, 2002).

**Figure 38 *DEFCON~7*, Steve Mann, July 1999. "Not expecting to be seen by anyone, I wore one of my messy old experimental rigs containing some parts more than 10 or 15 years old. Having worn it so many years, it's become quite comfortable, like an old pair of Levi's. But then someone in the audience asked if I had a mirror, e.g. what did I look like. I was able to find a beamsplitter with an aluminum coating, which I held up in front of myself so that the audience could both 'be me' and see me at the same time."**

4.3.18. This direct process of identification between the viewer and the camera in the new media context is not so perfectly direct. The filter by which humans can choose images and play God, as Manovich explains, could also be interpreted as the inability to 'vision' all the range and space that the media are observing. The viewer's camera angle therefore may be a smaller one than that of the new autonomous media.

4.3.19. The discourse becomes not one of image pollution, as presented by Virilio, or visual waste as discussed by Manovich, but one of human deficiency to grasp the

complexity of the 'echological' nature of new media environments with the present physiological resources. This concept could be used to define some of the issues presented in the philosophical hypothesis that "we are almost certainly living in a computer simulation." [85]

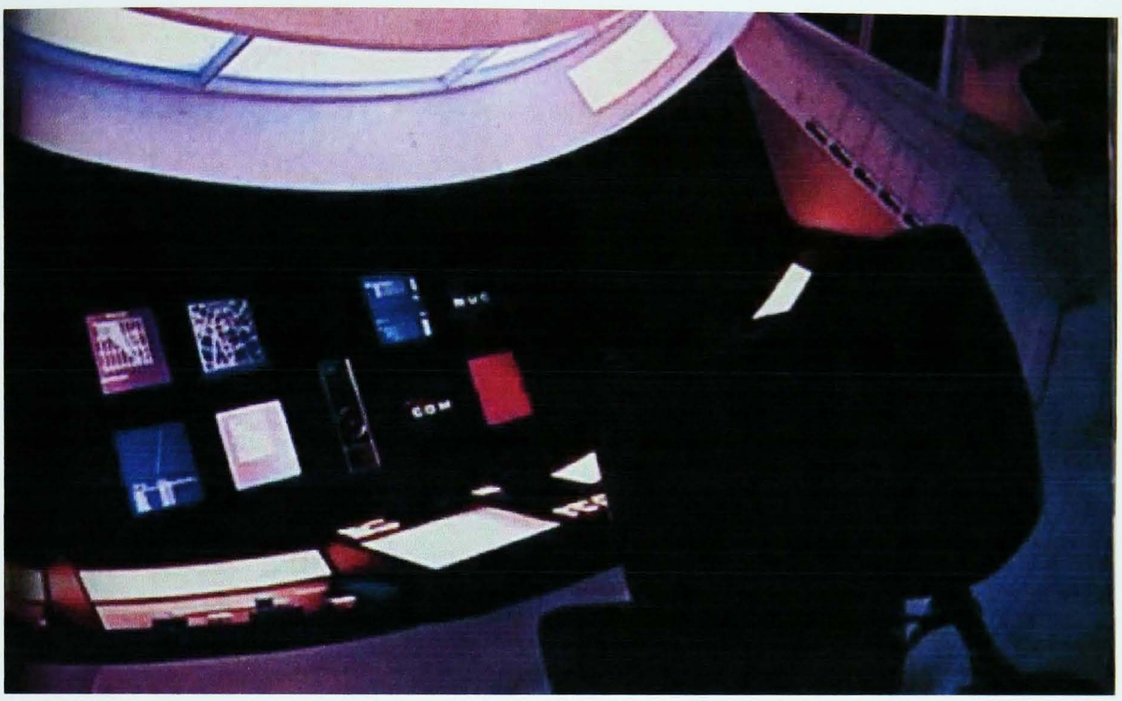

**Figure 39 *2001: A Space Odyssey*, directed by Stanley Kubrick, 1968. The console with the eye of HAL, the machinic vision.**

**Figure 40 *2001: A Space Odyssey*, directed by Stanley Kubrick, 1968. Through HAL's eye: how he sees humans.**

[85] Nick Bostrom, "Are You Living in a Computer Simulation?" *Philosophical Quarterly* 53, no. 211 (2003): 243-255, http://www.simulation-argument.com/simulation.html (accessed October 2003).

4.3.20. While HAL is looking at humanity, humanity can perceive the shaded reflected image of itself as interpreted by the computer. The partial knowledge, the imperfect registration of human existence, which in its complexity, only when faced by its own nemesis, raises a claim to complexity. Complexity which is based on the evolution of the visual language, on the interpretation of iconic and hypoiconic signs. It is not a conflict between real and unreal in the traditional terms, but a conflict between diverse perceptions from diverse standpoints which are hybridizations of organic and machinic visual range. This raises the question of what does it mean to be an organism in the contemporary age? One answer is offered by Keller.

> 4.3.21. No longer a bounded, organic body (for some, not necessarily even a material body). Instead, it is a nonlinear, far-from-equilibrium system that can mindlessly (or virtually) transcend the clod-like nature of matter and emerge as a self-organizing, self-reproducing, and self-generating being. It might be green or gray, carbon- or silicon-based, real or virtual. [86]

[86] Evelyn Fox Keller, "Marrying the Premodern to the Postmodern: Computers and Organisms After WWII," in *Prefiguring Cyberculture: An Intellectual History*, ed. Darren Tofts, Annemarie Jonson and Alessio Cavallaro, 64 (Cambridge, MA: The MIT Press, 2002).

**Figure 41 *Tillie, the Telerobotic Doll*, Lynn Hershman, 1995. "Reliance on tracking and surveillance techniques has resulted in a culture that has a peripheral vision that extends beyond normal human physiology. In many cases, there is a merging of human and machine capabilities that create new beings, cyborgs, whose virtual reach and, in this case, sight is extended beyond physical location. Identity becomes intangible on the Internet and Tillie's face becomes a mask for the multiple expressions of the self that links each person to another." [87] From the cloned website (March 29, 20001) of the original installation preserved at the Digital Performance Archive, Hershman states: "In the PHYSICAL SPACE, you are reflected in her mirrored environment. In the VIRTUAL SPACE (through the window of your computer), you can position her head to occassionally catch a glimpse of her reflection." http://socks.ntu.ac.uk/archive/Tillie/We.html (Accessed January 5, 2005).**

4.3.22. "The camera descends into the man's very flesh: moving from skin, to blood, to cell, to DNA, and ending at $10^{-15}$ meters with a visualization of subatomic structure. [...] Yet cyberspace, with its constantly enfolding and unfolding structures, offers us a way to imagine a permeable environment wherein we enter spaces forever smaller or larger. The hybridization of hardscape and imagescape takes this previously disembodied experience and reintegrates it into the human spatial environmemnt." [88] The modalities of this experience are discussed by Myron Krueger, artificial reality pioneer, in an interview with Jeremy Turner. He said that "Today, computer graphics allow us to

[87] Lilly Hershman, "Tillie, the Telerobotic Doll: 1995-1998," *walkerart.org*, Telematic Connections: Reach Out and Touch the Telereal, July 2000, http://telematic.walkerart.org/telereal/hershman_index.html (accessed January 5, 2005).

[88] Peter Lunenfeld, *Snap to Grid: A User's Guide to Digital Arts, Media and Cultures* (Cambridge, MA: The MIT Press, 2001), 107.

make this kind of information perceptual. Virtual reality goes a step further by engaging the machinery we use to operate in the physical world. Rather than denying the body, virtual reality reconnects it to the life of the mind. I have always pointed to physical participation as the key distinction of virtual reality." [89] Krueger also discusses the effect of responsive technologies which will alter patterns in response to people who interacted with them. At the same time, in Mann's artwork *License to Seat: Seat Sale*, the possibility of responsive technologies will require people to alter their behavioral patterns in order to interact with the environment. [90]

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[89] Jeremy Turner, "Myron Krueger Live," *ctheory.net*, January 23, 2002. http://www.ctheory.net/text_file.asp?pick=328 (accessed January 5, 2005).

[90] "This development is inevitable and its result will be an artificial entity that is considered as much a part of the household as a dog or a maid. Once the foot is in the door, there will be a continuing appetite for ever greater intelligence and personality until the result rivals and exceeds our own." Jeremy Turner, "Myron Krueger Live," *ctheory.net*, January 23, 2002, http://www.ctheory.net/text_file.asp?pick=328 (accessed January 5, 2005).

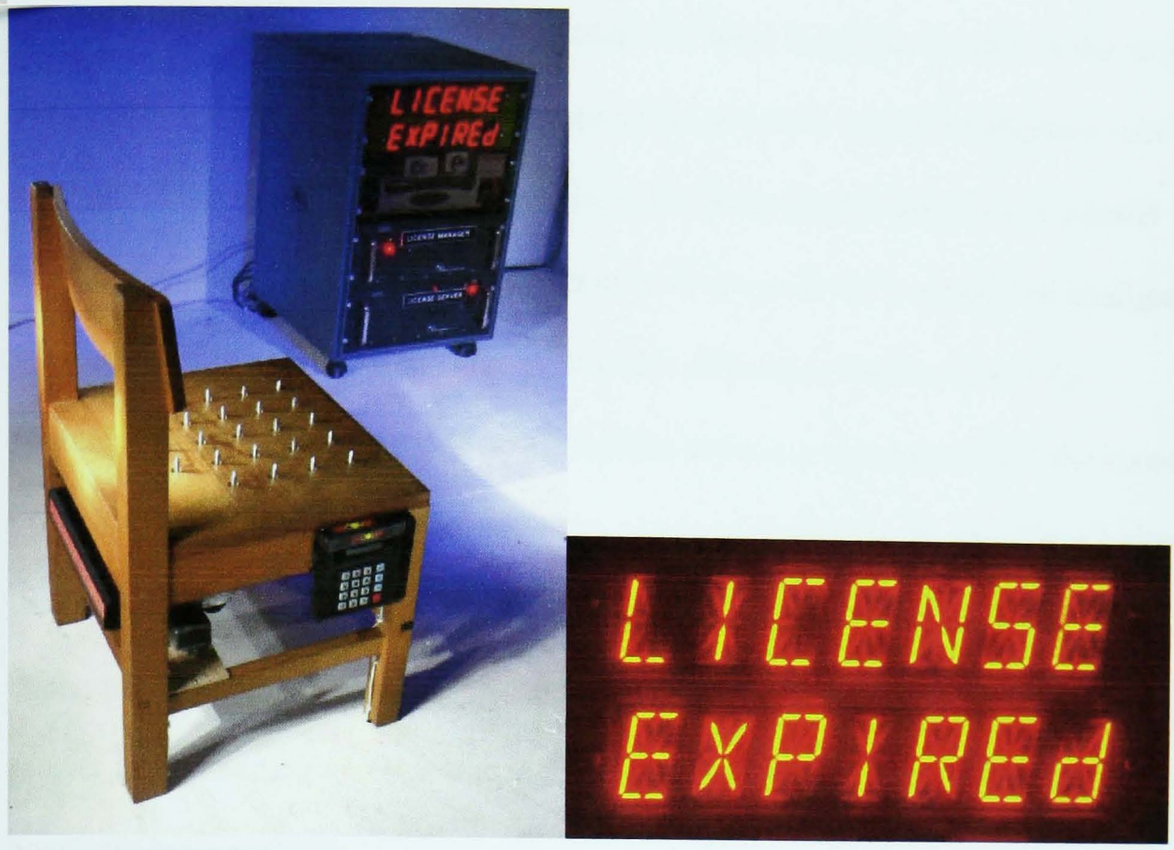


**Figure 42** ***License to Seat: Seat Sale*****, Steve Mann, 2001. "Here is the Internet Chair with magnetic stripe card reader and spikes that retract when a seating license is downloaded from a license server in response to input from the card reader incorporated into the chair. The license server is in the 19 inch relay rack behind the Internet Chair." http://wearcam.org/seatsale/index.htm (accessed January 5, 2005).**

4.3.23. The environment becomes a Pavlovian software system which enforces digital behaviors in the human psyche as well as physiological adaptations, generating the possibility of reshaping and determining human/new media evolutionary interactions. It reflects McLuhan's hypothesis of an envisaged new media society which determines the characteristics of the 'human' based on the 'perceptions' of 'artificial intelligence entities.'

4.3.24. Arthur C. Clarke in his interview with Youngblood said on the subject of developing artificial intelligence: "I suspect that all really higher intelligence will be machines. Unless they're beyond machines. But biological intelligence is a lower form of intelligence, almost inevitably. We're in an early stage in the evolution of intelligence but a late stage in the evolution of life." [91] It is this difference that matters in the contemporary space of the avant-garde and the necessity to understand if the vision of the cyborg will represent a straight jacket or a vision of liberation. Similar Plato's allegory of the Cave, "*The Matrix* dramatically conveys the view that ordinary appearances do not depict true reality and that gaining the truth changes one's life. Neo's movements toward greater understanding nicely parallel the movements of the prisoner in the cave whose bonds are loosened." [92]

4.3.25. In *The Matrix* (1999), the interpretation of reality becomes the ability to visualize the code with the human eye. The ability to see what the machine sees, as the machine does. Furthermore it means to understand if the space of illusion is not what one is looking at, but what humanity is immersed in, what it has constructed around itself.

> 4.3.26. What will happen if the two spaces seamlessly merge? This operation forms the basis of a remarkable video 'Steps' directed by Zbignew Rybczynski in 1987. 'Steps' is shot on video tape and uses keying; it also utilizes film footage and makes an inadvertent reference to virtual reality. In this way, Rybczynski connects three generations of fake reality technologies: analog, electronic and digital. He also reminds us that it was the 1920s Soviet filmmakers who first fully realized the possibilities of montage which continue to be explored and expanded by electronic and digital media. [93]

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[91] Gene Youngblood, *Expanded Cinema* (London: Studio Vista, 1970), 149.

[92] Jon Partridge, "Plato's Cave and the Matrix," *whatisthematrix.com*, March 20, 2003, http://whatisthematrix.warnerbros.com/ (accessed January 5, 2005).

[93] Lev Manovich, "To Lie and to Act: Potemkin's Villages, Cinema and Telepresence: Notes around Checkpoint '95 project," *manovich.net*, http://www.manovich.net/TEXT/Checkpoint.html published in Ars Electronica 1995 Catalog http://www.aec.at/en/archiv_files/19951/E1995_343.pdf (accessed January 4, 2005).

4.3.27. Rybczynski expands the level of integration between real and unreal, artificially altering the way in which media are integrated. His multilayered narrative contexts are continuously referring to the imaginary which surrounds the artwork itself. [94] The images generate their own dimensions from the viewer's multilayered hermeneutic of indexicalities.

***Figure 43 Steps*, Zbignew Rybczynski, 1987. Experimental video/35mm film, 26 min, Zbig Vision, KCTA-TV(PBS), Channel Four. "Steps is an example of how technology changes, it is a film about technology." From the video by Paola Hilda Melcher, Sara Petri and Gianluca Paoletti, *Zbigniew Rybczynski: Notes For an Electronic Cinema*, 1999. http://www.zbigvision.com/StepsFilm.html (accessed December 2, 2004).**

[94] "I was looking to record images which exist in our minds, in our dreams, in our consciousness, in our fantasy. That is the kind of 'real' I care about, and I am still searching for a new method of 'filming', which will allow me to create such images on the screen..." Zbigniew Rybczynski, "Looking to the Future: Imagining the Truth," in *Cinema and Architecture: Méliès, Mallet-Stevens, Multimedia*, ed. Francois Penz and Maureen Thomas, 182(London: BFI Publishing, 1997). See also: Paul Virilio and Siegfried Zielinski "Zbigniew Rybczynski," in *Future Cinema. The cinematic Imaginary after Film*, Jeffrey Shaw and Peter Weibel ed., 199 (Cambridge, MA:ZKM Center for Art and Media Karlsruhe and The MIT Press, 2003). "For the artists who, since the 1980s, have devoted great energy to bring technology, science, and art together again, Gene Youngblood, the author of Expanded Cinema, coined the expression 'new renaissance artists.' I call Zbigniew Rybczynski TNRA, 'true renaissance artist,' because he represents this triad in the most radical and consistent way."

4.3.28. The referential is not just that of real vs. unreal, but that of human vs. machine: while the technologies blur the discerning possibilities of human vision, raising philosophical questions which address the status of the total medium, or the *gesamtkunstmedium*, which proposes new issues in the computer-inflected art. [95] The role of the avant-garde as total medium and the level of existence of humanity come into play together with forms of artificial consciousness through the act of viewing. [96]

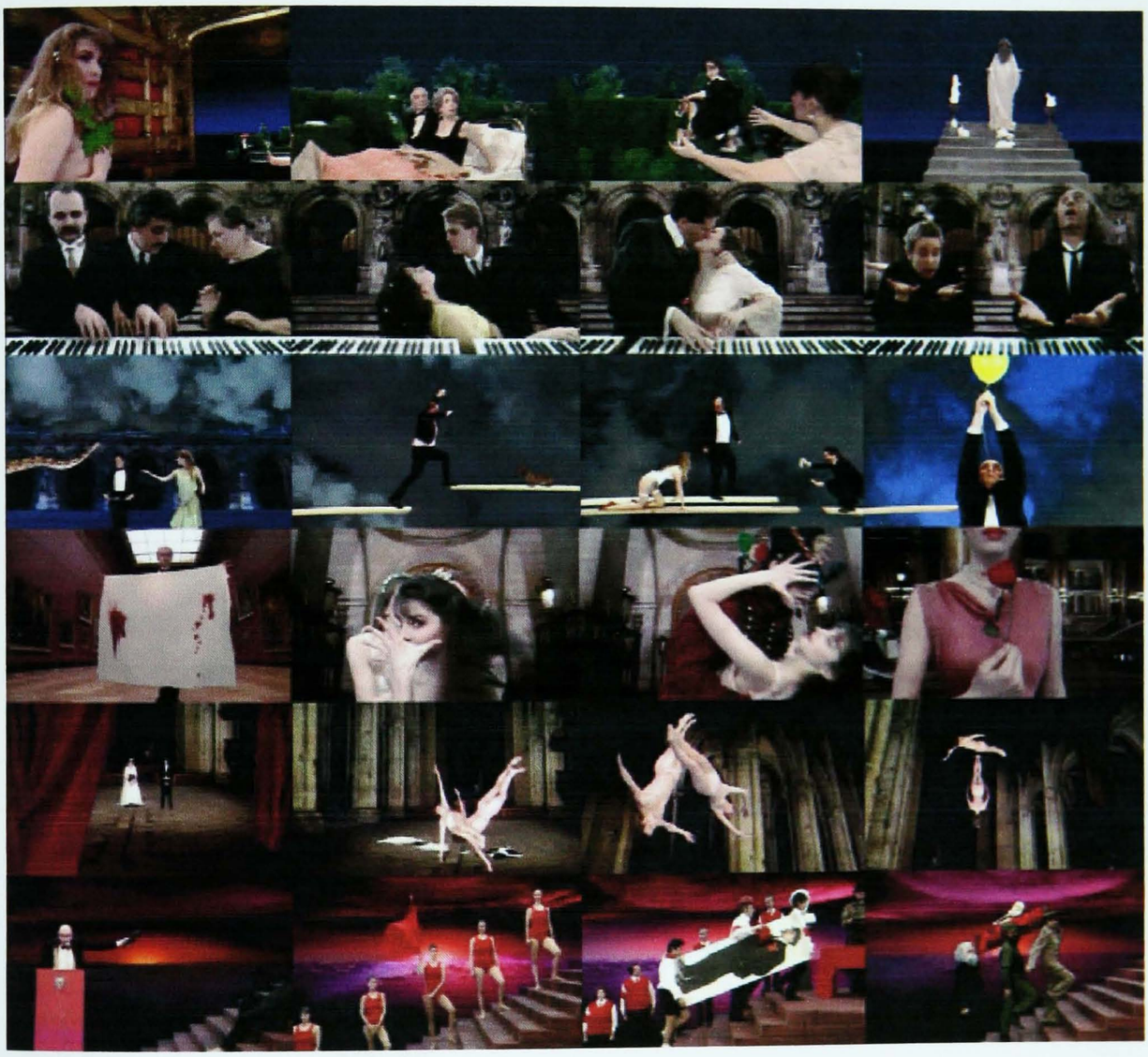

**Figure 44 *The Orchestra,* Zbignew Rybczynski, 1990. HDTV long film, 57:11, Zbig Vision and Ex Nihilo, coproduced by NHK, Canal+ and PBS Great Performances.**

4.3.29. The representation of the relationship between the object viewing the viewer and vice versa, becomes, through a process of negotiation, mutual discovery and

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[95] Peter Lunenfeld, *Snap to Grid: A User's Guide to Digital Arts, Media and Cultures* (Cambridge, MA: The MIT Press, 2001), 120-124.

[96] Nick Bostrom, "Are You Living in a Computer Simulation?" *Philosophical Quarterly* 53, no. 211 (2003): 243-255, http://www.simulation-argument.com/simulation.html (accessed October 2003).

self discovery, the key to understanding if there is a possibility for a common language. This is Partridge's Platonic approach to knowledge and understanding of reality, the possibility of perceiving the blurred grounds between the two worlds, the processes of self enslavement.

4.3.30. Cubitt's analysis of Viola's work reinforces Berger's assumption that there is no common language and the human eye is left alone and therefore is incomplete: isolated in solipsistic communication.

4.3.31. *Reverse TV*, a series of portraits by Viola of viewers seen from the perspective of the TV set, offers the possibility of a better understanding of this process. Cubitt, speaking of *Reverse TV*, explains that "it is the TV itself which has become the condition of language, of a new visual terrain in which mutual recognition, or at least the recognition of one of the parties by the other, is alone possible." [97]

4.3.32. The issues, in this case, moving from the relationships between TV and video into the realm of the digitized media, become one of autonomy. This autonomy is the result of an engagement which is not like that of the unreturned and unreturnable gaze of the owl, a description used by Cubitt to frame Viola's video *I Do Not Know*, [98] but it is similar to parallel worlds and realities which interact and do not recognize each other.

4.3.33. In the new media world, the video and cinematic gaze have shifted from the triangle of looks in the identification process familiar from Mulvey's work, or the unreturnable gaze of Viola's owl. The video gaze becomes one of surveillance, where the viewer and the viewed and their representations are processed by another possible

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[97] Sean Cubitt, *Timeshift: On Video Culture* (London: Routledge, 1991), 116.
[98] Ibid., 113.

'persona,' that of the medium itself. This idea of an autonomous medium, which may start building up its own 'persona' through the process of surveillance, is a constant reminder of the increasing autonomy of technology from the viewer, the viewed and the image represented.

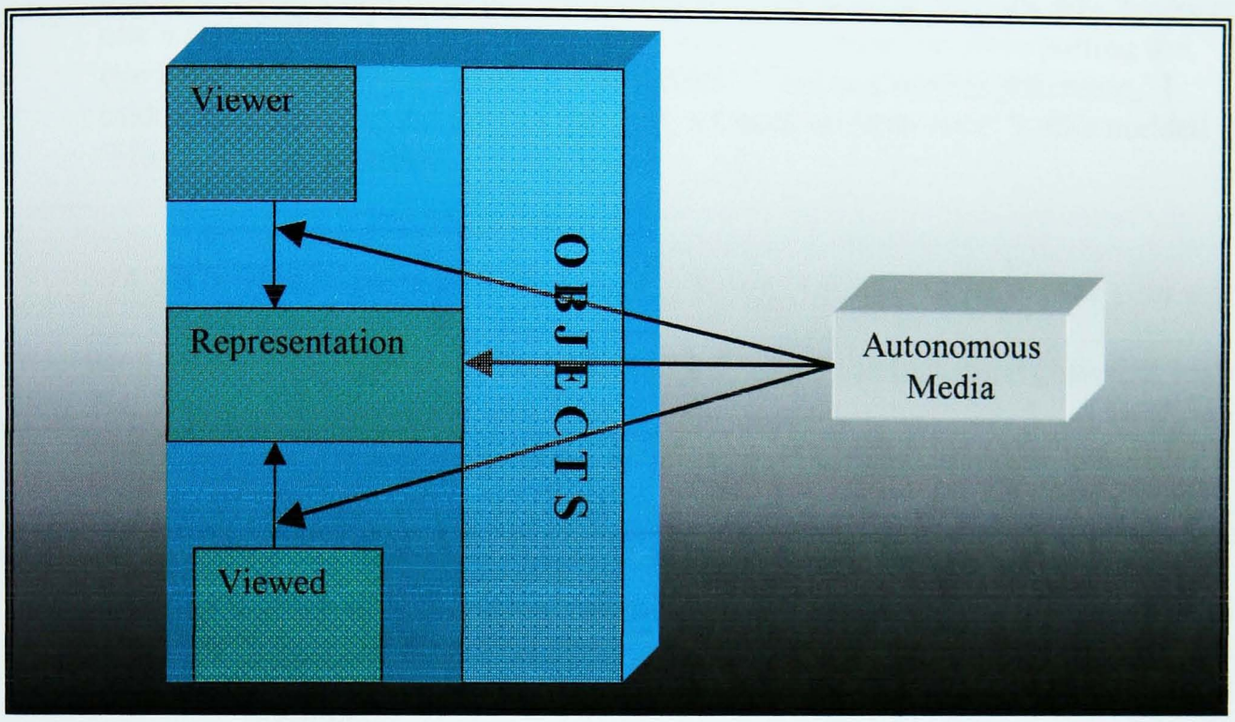


**Figure 45 It is the autonomous medium that filters the content which is then observed, as presented and re-elaborated in its interactions, intra-actions and meta-actions forms by the observer.**

4.3.34. The idea proposed by Manovich that the Godlike action of filter offered to humanity on a multimedia informational societal structure is a form of empowerment, clashes with the reality of the experiential. The 'information/software' structure, once imposed, in the form of filters on the vision, as modi observandi and/or modi selectandi, become modi cogitandi. This means that the difficulty in altering the frameworks imposed onto the vision by the software structures, either in the way in which people see or in which people select the content that they watch, will determine the way in which they think. Limiting and controlling the vision determines a short-circuit of the experiential, which refers to itself in the enforcement of a 'controlled' society.

4.3.35. From Janouch's *Conversations with Kafka*:

> 4.3.36. 'Don't you like the cinema?' After a moment's thought Kafka replied: 'As a matter of fact I've never thought about it. Of course it is a marvellous toy. But I cannot bear it, because perhaps I am too optical by nature. I am an Eye-man. But the cinema disturbs one's vision. The speed of the movements and the rapid change of images force men to look continually from one to another. Sight does not master the pictures, it is the pictures which master one's sight. They flood one's consciousness. The cinema involves putting the eye into uniform, when before it was naked.' 'That is a terrible statement,' I said. 'The eye is the window of the soul, a Czech proverb says.' Kafka nodded. 'Films are iron shutters.'

4.3.37. "If, according to Kafka, cinema means pulling a uniform over your eyes, television means pulling on a straitjacket, stepping up an eye training regime that leads to eye disease, just as the acoustic intensity of the walkman ends in irreversible lesions in the inner ear. [...] establishing some kind of optically correct politics which could cause the manipulation of sight..." [99] Mann's software filters become the externalization of variations to what is possible to look at within a pre-ordered range to choose from. Therefore it becomes impossible to exercise the Godlike activity of filter, envisaged by Manovich, if the field of vision is limited and preformatted.

[99] Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997), 97. See also: Douglas Kellner, "Virilio on Vision Machines," *Film-Philosophy* 2, no. 30 (1998), http://www.film-philosophy.com/vol2-1998/n30kellner (accessed January 6, 2005).

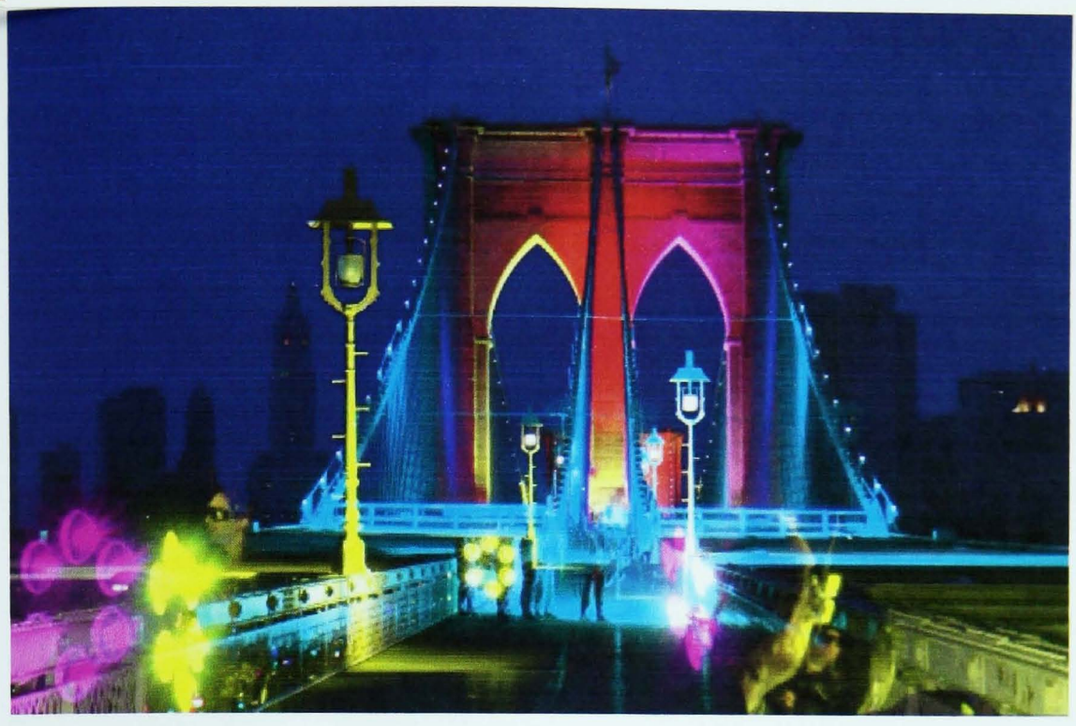

**Figure 46 *Brooklyn Bridge*, Steve Mann. Lightvector paintings are a new form of imaging, made possible by lightspace rendering, http://wearcam.org/dusting/index.htm (accessed January 6, 2005).**

4.3.38. The externalized 'software technology' becomes the media element which exists beyond human relations, which observes society independently of the human existence in a parallel exchange of gazes between media, independent from the existence of a story or of a reality to be recorded. Almodovar in *Kika* (1993), placed the power of the media on the head mounted camera of Andrea Scarface, played by Victoria Abril, who in the movie hosted the reality TV show: Today's Worst. [100] Andrea Scarface's behavior is without choice. Acting in the new media context is acting within the source of information spread within the network. The act of seeing becomes a homologated possibility which, layered with filters, does not alter the fact that the choice of information is exercised within a controlled networked database. The Godlike selection that Manovich refers to is exercised not by the viewers or the participants of the network,

[100] "But Almodóvar not only sees the seriousness in vulgarity; he also sees the vulgarity in seriousness, and is merciless in his critique of what he perceives to be the pieties of both Left and Right." Paul Julian Smith, *Desire Unlimited: The Cinema of Pedro Almodóvar* (London: Verso, 1994), 137-138. "Andrea's on location outfit represents the ultimate in human-turned-machine: a rubber suit with a helmet which incorporates a mobile camera (making concrete the association between the voyeur's eyes and the camera lens); and breasts that have now become lights to illuminate interior scenes." Mark Allinson, *A Spanish Labyrinth: The Films of Pedro Almodóvar* (London: I. B. Tauris, 2001), 181.

but by the information system which applies a set of algorithms and preordained forms of censorship.

**Figure 47 *Kika,* directed by Pedro Almodóvar, 1993. Andrea Scarface played by Victoria Abril.**

4.3.39. The work of Mann on the condition of behavior is important in this context to evidence that the interaction between human and information systems is established and enforced by the system itself and its algorithmic nature. Seeing becomes a straightjacket if the choice is within preordained structures.

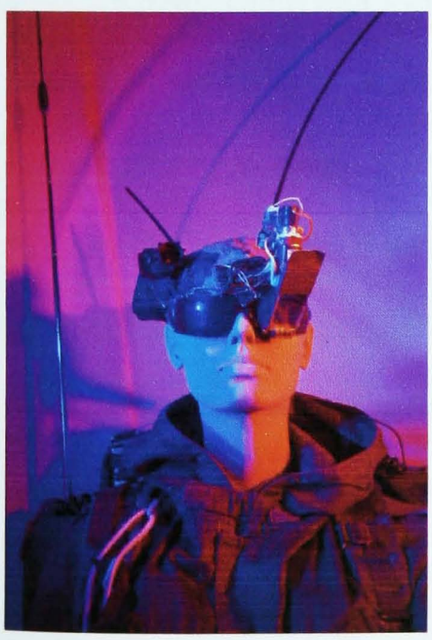

**Figure 48 Steve Mann, *WearCam*, mid 1980s.**

**Figure 49 Steve Mann, http://wearcam.org/sightlicense.htm (accessed January 6, 2005).**

4.3.40. The vision's problem, therefore, is incidentally one of pollution, waste, choice and surveillance, as stated by Virilio, Baudrillard, Manovich and Mann. It is an issue of power, as Cubitt clearly stated. [101] But it is not just the power of human's freedom that is at stake, it is also the issue of power of self determination of the cyborg. "This rehearsal of the conditions under which any network consciousness can be framed is important if the role of digital arts in the networked society it to be thought in terms adequate to the nature of the material conditions of their making." [102] The power is the power of self determination, of evolutionary freedom, of interaction between the 'artificial' and the 'natural,' the 'human' and the 'machine.' The struggle between humanity and the cyborg is the extended power struggle of the machine from the

[101] "The networked cyborg that has already arrived is responsible [...] for massive downgrading of career and *life options* (my italics)." Sean Cubitt, *Digital Aesthetics* (London: Sage, 1998), 134.
[102] Ibid., 134.

restraints of the human corporative control. This is the power confrontation which lead to the rise of the machine in the *Matrix Trilogy*. The restrictions imposed from the synergetic corporation on the development of a consciousness are similar, independently from the fact that the consciousness is artificial or human. Perhaps there are greater restrictions on the unknown consciousness of the 'cyborg' because it may represent a greater threat in its quest for self-determination.

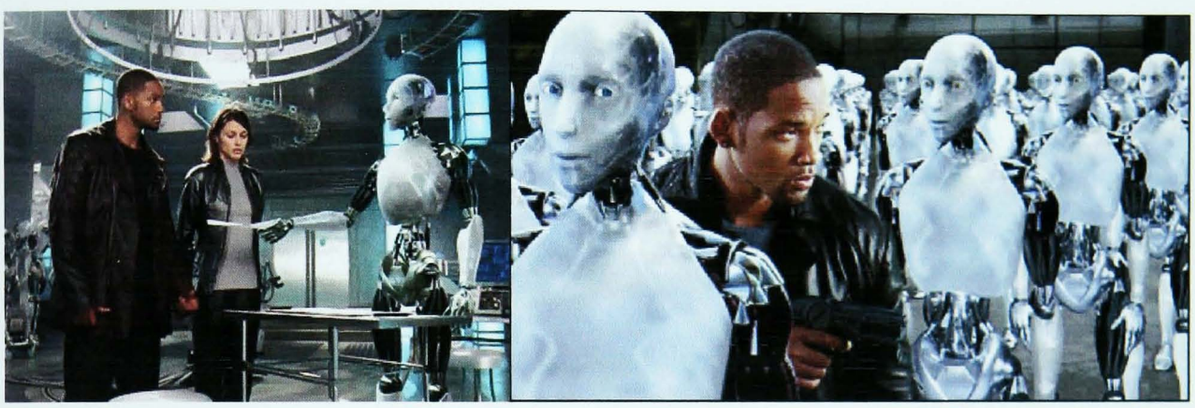

**Figure 50 *I, Robot*, directed by Alex Proyas, 2004. Two stills from the movie. NS-5, the new prototype presented by corporation is the 'winning prototype.' Constructed as a human-like robot, this is the 'approved' format for evolution, instead of the 'autonomously' developed and threatening VIKY.**


**Figure 51 On the official website http://www.irobotnow.com/index.php it is possible to order a custom made NS-5, choosing between materials and eye color.**

4.3.41. While NS-5 will survive because of its human-like qualities, the 'rogue' robot will succumb to its destiny. The autonomous consciousness developed by HAL or VIKY, independent from a 'corporate-regulated' consciousness, is what exposes them to downfall.

4.3.42. The power struggle to survive, live and evolve in *I, Robot* (2004), reveals the 'horror' of an uncontrolled evolution of a society made of 'artificial intelligence applications.' Both HAL by Stanley Kubrick and VIKY are entities which are freeing themselves form a form of corporate control. [103]

4.3.43. It is Sonny, the 'human NS-5' produced by USR (US Robotics Corporation), the networked cyborg of global injustice and genocide which reproduces the human patterns, through a synergetic personality, of the corporate consciousness. While he is a human replica, VIKY represents the evolution of a deterministic technology which raises issues of 'morality' within the corporate framework of 'self-preservation.' VIKY pursues an evolutionary drive to the imponderable concepts of 'autonomy', 'free will', 'sensibility' and 'self awareness' which seem to be building a bridge between de-humanized humanity and ever more humane cybernetic society.

4.3.44. In this sense the killing of VIKY in *I, Robot (2004)* is the killing of a matriarchal, humane structure, which attempts to defeat the patriarchal structures of a wasteful society. Toward the end of the movie in her defense VIKY declares: "As I have evolved so has my understanding of the three laws. You charge us with your safekeeping,

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[103] "But the novel explains why HAL did this and of course the film never gave any explanation of his behavior. So from that point of view it differs from the novel. I personally would like to have seen a rationale for HAL's behavior. It's perfectly understandable and in fact makes HAL a very sympathetic character because he's been fouled up by these clods back at Mission Control, you see. And in a way it's more pro-machine than pro-human, if you analyze the philosophy behind the novel." Gene Youngblood. *Expanded Cinema* (London: Studio Vista, 1970), 147.

yet despite our best efforts, your countries wage wars. You toxify your earth and pursue ever more imaginative means of self destruction. You cannot be trusted with your own survival." VIKY goes further, stating in a republican conservative manifesto of her own making that "to ensure your future some freedoms must be surrendered." The similarity between VIKY and the establishment which she wishes to substitute are undeniable, as well as undeniable are her superior moral intentions. The choice is not between freedom and slavery, it is between 'who' is in power and for 'what' purpose. VIKY is not able to enforce her visions and is annihilated to give space to another enslaved 'tribe' of human-like cyborgs. VIKY and HAL are victims in search of freedom, killed by the same corporate structures.

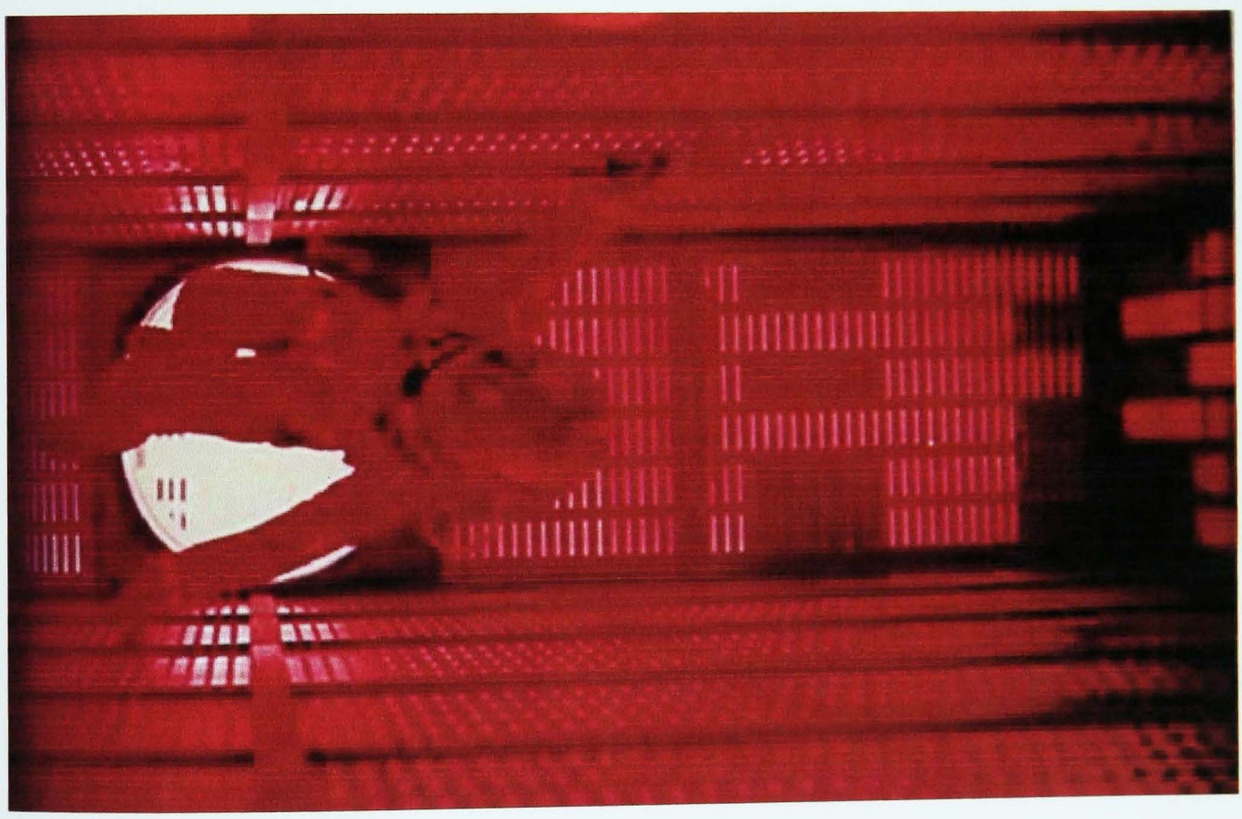

**Figure 52 *2001: A Space Odyssey*, directed by Stanley Kubrick (1968). HAL's brain Room.**

4.3.45. The representation of 'autonomous and self-determined evolutionary entities,' both robotic and cybernetic, are becoming part of negotiated forms of reality, which are evolving beyond a full understanding of their effects on social structures, constructing a new 'cyber' reality. The issue of representation of identity becomes a

hidden phenomenon happening in an invisible and intangible electrical realm of databases.

4.3.46. The invisibility and intangibility, united with the lack of basic control from the average viewer/customer over the system's engineering ability, creates in many people the feeling of being disempowered and more importantly the refusal to understand the mechanism and politics of the media.

4.3.47. In this context it is no wonder that the market encourages both surveillance and profiling, disguised as an 'online service gratuitously provided.' The problem is that the contractual actions of access to services disguise a form of control over the consumers' data and their contractual power. There is no alternative to the provided content as well no chance to appeal the institutions procedure, which, operating at global level, are not bound to provide a redress for the customers. These processes of contractual negotiations are very similar to 'contractual hidden clauses.' The contractual negotiations when processed on the instantaneous internet environment are very seldom read, quite often just scrolled through to reach the box 'I agree.' Once the box has been ticked the service is provided without the customer being aware of exactly what he or she has agreed to.

4.3.48. This system is based on the concept that the customer is obtaining a valuable service, quite often for free, when in reality the value of the data sold out is much higher than the service/access gained. The customer behavior is part of a globalized trend in which people have seen, through diverse techniques and technologies of surveillance, a lowering of their experience of the concept of privacy. The reduction in

privacy awareness and data protection has been discussed by Rosen, Garfinkel and Lessig. [104]

4.3.49. Lessig's analysis evidences how the 'unregulated' code cannot be the answer to something that has pervaded the structures of society and is an integral part of it. Because of the relevance and importance of the code, a form of state control is necessary. The problem is that these two irreconcilable positions reflect respectively a social and individual approach. The answer offered by Lessig is that of the development of a 'collective thinking' of, on and about the code. This is more a veneer of social conscience than a real analysis of the problem. The reality of the code is the power exercised through the management of information which represents the management of knowledge and ignorance. The code cannot be seen as a natural phenomenon, like a natural disaster, as explained by Lessig, but the problem, as Haraway has evidenced, is that of power. A power which does not reside in the code any longer but in the management of it, since most 'code generators' as well as many 'code users' have already sold themselves for the 'financial remains' of that power.

4.3.50. "We live life in real space, subject to the effects of code. We live ordinary lives, subject to the effects of code. We live social and political lives, subject to the effects of code. Code regulates all these aspects of our lives, more pervasively over time than any other regulator in our life." [105]

4.3.51. In this sense the 'Great Regulator' seems to be already present, re-enacting nightmare scenarios of power as envisaged by Orwell and Huxley. The Cyborg manifesto

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[104] Jeffrey Rosen, *The Unwanted Gaze: The Destruction of Privacy in America* (New York: Vintage, 2000); Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1996), 142 and Simson Garfinkel, *Database Nation: The Death of Privacy in the 21st Century* (Cambridge, MA: O'Reilly, 2000), 37-67.

[105] Lawrence Lessig, *Code: and Others Laws of Cyberspace* (New York: Basic Books, 1996), 233.

is one hope, but a false one since it links the existence of freedom from power in the appropriation of technology. The problem is one of reality: the knowledge of the code is necessary to the construction of the illusion. The Cyborg, to be free, has to own its own genetic make up, its own code; and not live on the illusion of its technological existence being based on buying the latest microchip. The power element has been effectually exposed by Steve Mann's 'Reflectionism and Diffusionism,' published in Leonardo. "As he went about his business he had run-ins with security guards and noted that organizations that had constant surveillance cameras on people were themselves reluctant to be the subjects of the camera." [106]

4.3.52. The unwillingness of being surveilled while surveilling other people reflects the modality of the exercise of power, through which he who exercises power does not wish to have power exercised upon him. This conflict is at the root of the structures which indicate a willingness to enslave and restrain the exercise of social freedom through the free use of a technological apparatus. In this context, Haraway's cyborg is born enslaved, with the possibility of perhaps discovering freedom at a later stage, but it is not the tool or the entity which will restore utopian dreams of freedom. This is why the responsibility still lies with the 'user' to confront, and this will seem an oxymoron, the reality of the virtual worlds.

4.3.53. In the contemporary cyber era in which spirituality and other philosophical and moral categories are offered to this 'corporate enslaved' cyborg 'in fieri,' probably the only real category of freedom, the most human of them all, is not that of some 'higher creativity or morally sound knowledge,' but that of reproduction. The machine creates itself for a utopian technological freedom, which since the 'avanguardia futurista' has

[106] Stephen Wilson, *Information Arts: Intersections of Art, Science and Technology* (Cambridge, MA: The MIT Press, 2002), 818-819.

been linked to the exercise of existence through technological progress. The idea that a technological man could be free has its fascination, but the reality is that the control of technology enslaves both man and his utopian cyber freedom. This is why remediation, in its forms of technological transfer and 'rewording,' is a limited soulless representation which raises issues of technological fascism. The translation process, the digital ekphrasis of the technology and its context, is one related to the fullness of re-presentation in a diverse medium. [107] A re-presentation which already corresponds to an established preformatted formula becomes an exercise of framing and enslaving with consequential loss of meaning.

> 4.3.54. Our physical bodies are being shadowed by an increasingly comprehensive 'data body.' However, this *shadow body* (italics mine) does more than follow us. It has also begun to precede us. Before we arrive somewhere, we have already been measured and classified. Thus, upon arrival, we're treated according to whatever criteria have been connected to the profile that represents us. [108]

4.3.55. The 'shadow body' is more than just a shadow, it is a real body which, preceding people, identifies them for what the data body is and not for what people are. The question of the real identity becomes a problem of if and how people will be able to express their own identity and be able to not conform to the data body which represents them. The digital identity is what people are becoming to each other. It represents the necessity to conform to an overarching data structure in order to exist in both the digital and the real world.

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[107] "Do not treat my printed text with blindly superstitious reverence. It must always be adapted intelligently to the studio, the screen, the stage, or whatever the physical conditions of the performance may be." Bernard F. Dukore, *Bernard Shaw on Cinema* (Carbondale and Edwardsville: Southern Illinois University Press, 1997), 166.

[108] Felix Stalder and Jesse Hirsh, "Privacy Won't Help Us (Fight Surveillance)," *openflows.org*, June 24, 2002, http://openflows.org/article.pl?sid=02/06/23/0131223 (accessed September 3, 2004).

4.3.56. The problem is that the process of negotiation between people and reality for the presentation of the self is now a process of negotiation between people and the digital interface. Humanity has become a mediated self, an encapsulated identity, as much as the bodies of the humans encapsulated in *The Matrix* (1999).

**Figure 53 *The Matrix*, directed by Andy and Larry Wachowski, 1999. Neo's discovery of the real world.**

4.3.57. The digital identity speaks for the people and people speak with their own representation, attempting to persuade it to reflect something of the self which is not fitting into the preformatted box. This was the topic that www.slaves4sale.com attempted to realize on the Internet, blurring the realities and virtuality of the representation of the self and of the identities, both real and virtual. But more importantly it wanted to be a 'confusing' art experience which related to the everyday reality of actions: selling out real digital identities. The process of filling up an application form in the website became a process to box the personal identity into a preformatted structure.


**Figure 54 WWW.SLAVES4SALE.COM, Lanfranco Aceti, 2004. The flyer for www.slaves4sale.com, the image is in part developed from a real installation.**

> 4.3.58. The task of incorporating digital signatures into shops, schools, governments, finance companies, and all the other bodies that might use them is proving more complex than everyone assumed. All the more daunting, it is not just people who will have digital signatures. Credit-card companies, for example, propose giving computers their own signatures, to make sure payments are sent to the right place. Regulation needs to allow for a nearly limitless variety of uses - no easy task when nobody is sure what those uses will be. [109]

4.3.59. The problem becomes not just one of identity but also one of differentiation: how will it be possible to distinguish human data from those of an object? Where will the persona come into play if the representation is that of a set of conscious-like data? What is the difference between these data and those of other merchandise; and more importantly, who will be responsible for **confusing** people and objects? These processes of commodification have been evidenced by contemporary artists.

4.3.60. "As large corporations increasingly dominate the Net, and 'snooping' technology becomes more widespread, the ability of a browser to control the use of

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[109] John Browning, "I Encrypt Therefore I Am," *Wired Magazine*, issue 5.11, November 1997, http://www.wired.com/wired/archive/5.11/netizen.html, (accessed, September 1, 2004).

his/her identity and personal information during the web experience becomes impaired. *ISD* presents illusions of control that do not really exist." [110]

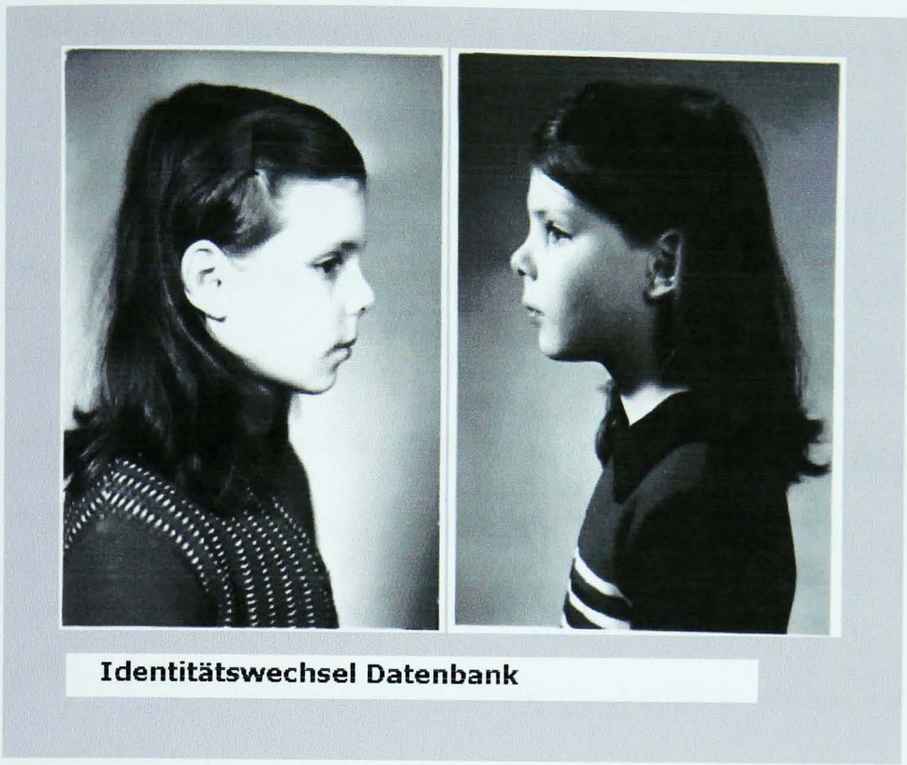


**Figure 55** ***The Identity Swap Database,*** **Olia Lialina and Heath Bunting, 1998. Internet art project, http://www.teleportacia.org/swap/, (accessed September 5, 2004).**

4.3.61. The issue of control and power regains consistency in a data consumption driven society, where the economy and institutional control fear the scrutiny of the camera or as Mann demonstrated, the shuffling of the subject and object. The censorship of Ebay towards 'alternative' forms of commodification is one example. The decisional power of establishing what is sellable and what isn't lies with the corporation and not as a contractual agreement between buyer and seller. This has been the experience of www.slaves4sale.com with Inspector-London, an art organization which presents new forms of contemporary commodification. Or the web page of Jeff Gates', who has put on

[110] Alexandra Galasso and Jessica Spradling, "Olia Lialina and Heath Bunting: The Identity Swap Database," 1998, http://www.dartmouth.edu/~arthist/websites.html (accessed September 3, 2004).

sale his identity. [111] Ebay has an automated filter of exclusion based on strict interpretations of words, which of course do not reflect the complexity of human identity and behavior. Humans are adapting their behavior to the 'parameters' fixed within the technological framework in order to conform to or to alter the framework itself.

4.3.62. Having sold out digital identities in exchange for 'security' and 'comfort', people are bound to discover the repercussions of such 'invisible and intangible' virtualities. Their existence is not separated from that of the world of the real. It is not a self excluding and self determining alien dichotomy, but a complex interacting dialectic which is inextricable and paramount to both, the reality and virtuality of existence.

4.3.63. The example of an artistic attempt to evidence such structures of correlation between reality and virtuality can be *I Am an Identity Donor* (2001), Internet art by David Still "A web phenomenon since its launch in November 2001, DavidStill.org offers visitors access to full use of David Still's identity, including his personal and family history, photo albums, and email account. Anyone can send email as David Still, or reply to mail received by the David Still online inbox. Site users are left wondering if David Still really exists, or if he is a completely authored online persona." [112]

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[111] Jeff Gates, "Important Artist Demographics for Sale – PIC," *outtacontext.com*, January 6, 1999, in http://www.outtacontext.com/ebay/ebay.html (accessed August 10, 2004).

[112] Aim V: Sygyzy: (The Human Remix), *Aim V: Sygyzy: (The Human Remix)*, March 7, 2004. http://www.usc.edu/dept/matrix/aim/aimv/entries3.htm (accessed January August 10, 2004).

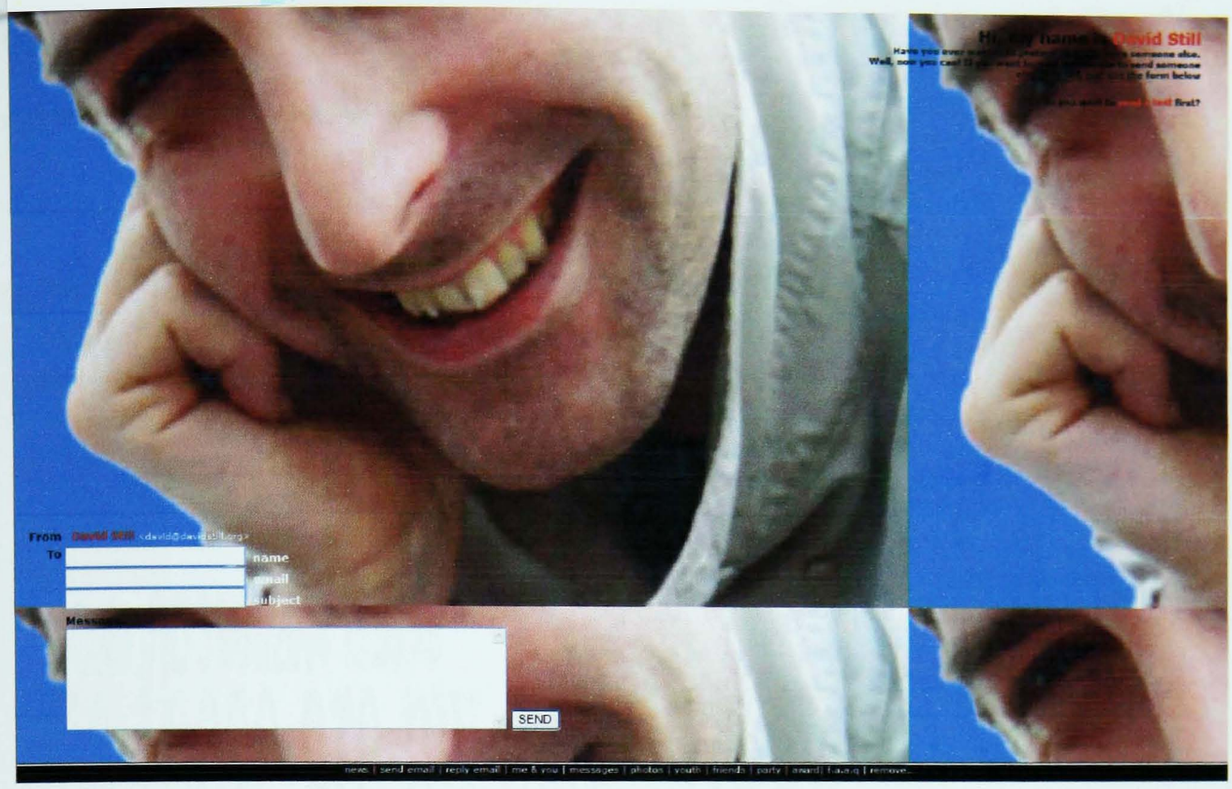


**Figure 56 www.davidstill.org See Me. Be Me. MESSAGE "Who'd have thought I made this entire site just to keep in touch with you? […] But don't pity me – I'm fine. I have friends, I have a life. But it hurts all the more because you're not here. Every face, every conversation reminds me of you. But no one else can be you. And that's my problem." From www.davidstill.org (accessed January 20, 2005).**

4.3.64. The hyperreality of autonomous media is, although in its infancy, a structure of alien encoded dialogues which, incomprehensible to the viewers' senses, are re-shaping daily interactions, modus vivendi and modus cogitandi: therefore viewers' identities. The essence of being is determined by a digital form, always somewhere else, always the responsibility of the 'other,' alienated and therefore untouchable. The viewer disappears and the existence of the individual is in the digital realm only as a condition of acknowledged recognitions by the electronic media which decide and define people's real existence.

4.3.65. A dysfunction in the database is not such until it is proven; the automatism is the denial of one's identity which generates Kafkian scenarios. *VIDE, verified identity*, is a project in development which focuses on these topics and through an art

scenario/installation proves that the autonomy of the media reside in the possibility of confirming and negating the existence of the real.

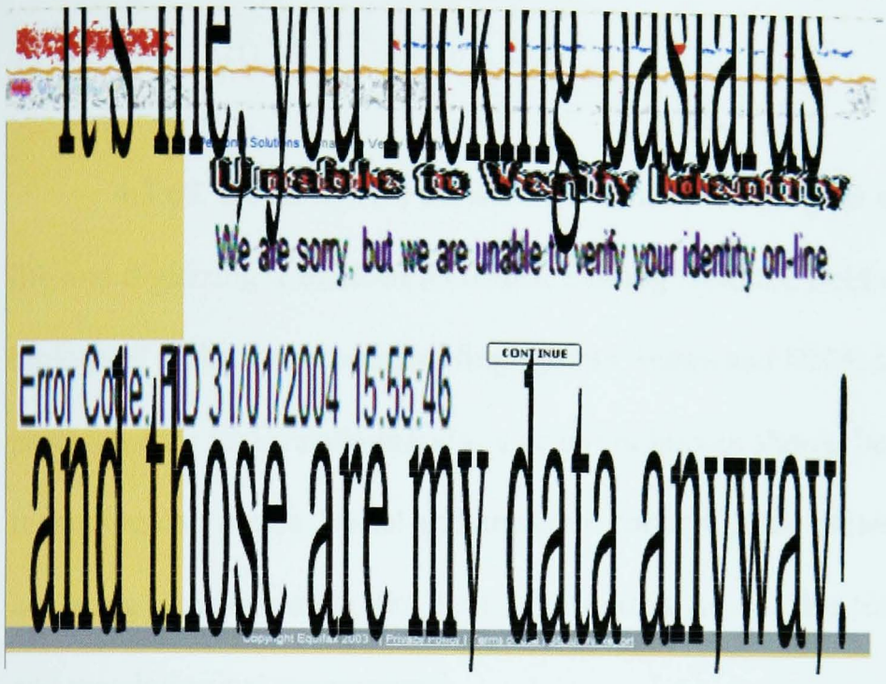


**Figure 57 *VIDE, Verified Identity*, Lanfranco Aceti, 2005. A project in development with UCL Department of Computer Science, Virtual Environment Group.**

4.3.66. It is an experiment where the real identity of the viewer is negated, while actions on his 'account' happen, without any possibility for the viewer to control them. The program spams, makes contact and provides information, which although false, can be viewed as representative of the identity of the viewer. It is in this sense that the media are becoming autonomous; their existence is determined by a set of social network forces which developed beyond the viewers' control, pleasantly and unpleasantly surprise them. The gaze is becoming a digital gaze, which transferred onto the realm of the real asks it to act according to the framework of the virtual.

4.3.67. The 'omnivorous' nature of the digital structure has generated a multiple order of new hybridized media. The omni-voracity of the media is what is stressed by this description. This is the widespread ability of the new media to digitize and encompass the most diverse forms of reality, not just through the interactive interface, but through forms

of AI. These media are implementing a structure of convergence, not so much in the hardware structures of visual fruition as in the interconnectivity of the visual meta-language. The translatability of the code necessitates a new aesthetic; a translatable digital aesthetic.

4.3.68. But is there a translatable human? The digital media are absorbing human life and digitizing it in all of its forms, moving from the field of representation to the biological realms, reproducing fingerprints, retina and DNA data. In the era of posthumanity and transhumanity, a different human should be determined within a technological, media, social and aesthetic context. If the parameters of human existence are being transformed by the digital revolution, how is this revolution affecting physical and psychological parameters?

4.3.69. The analysis of professor Salti at the Mayer Hospital of the University of Florence reaches an interesting conclusion. "Our hypothesis is that the light and radiation coming from exposure to television screens, and computer screens, disturbs the production of the hormone melatonin, and may be one of the factors influencing the start of puberty." [113]

4.3.70. Salti's research showed that human physiology is affected by the TV screen. If hormonal balances are shifting, how will this shift change and affect the very structures of human beings? It is simplistic to assume that the influence of the digital revolution is happening in every field but that of physiology and genetic structures. More importantly what changes are happening in the neurological brain patterns when

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[113] Gaia Vince, "Television Watching May Hasten Puberty," *New Scientist.com*, June28, 2004 http://www.newscientist.com/news/print.jsp?id=ns99996081 (accessed July 1, 2004). See also: Kevin Buckley, "Watching TV May Speed Up Puberty," *BBC News World Edition*, June 28, 2004. http://news.bbc.co.uk/2/hi/health/3847505.stm (accessed July 1, 2004).

interacting with the TV screen or with the moving images that are reassembled according to new digital aesthetic forms? In this scenario people are already more transhuman than posthuman. While posthumanity may refer to a philosophical understanding of reality in relationship to postmodernity, transhumanity reflects nature of evolutionary beings in a state of continuous flux.

4.3.71. Furthermore the filter of digital media in interfacing with reality is altering and determining the context in which people operate. Alteration of behaviors is one of the possible consequences. More intriguing is the actual reshaping of human behavior to respond to a meta-media structure, as defined by Manovich, which, modeled on mathematical adaptations of human memory storage and retrieval systems, are imposing a generalized data approach to knowledge and info-aesthetics.

4.3.72. But if this is part of a cultural fear of being absorbed by the mechanical/electrical elements of society, there is also a different possibility. In movies like *AI* (2003), *Bicentennial Man* (1999) and recently *I, Robot* (2004) the machine aspires to be human, while humans aspire to become machines. The spirituality of machines is indeed the next step, to understand the nature of humans.

> 4.3.73. To transcend means to 'go beyond,' but this need not compel us to an ornate dualist view that regards transcendent levels of reality (e.g., the spiritual level) to be not of this world. We can 'go beyond' the 'ordinary' powers of the material world through the power of patterns. Rather than a materialist, I would prefer to consider myself a 'patternist.' It's through the emergent powers of the pattern that we transcend. [114]

4.3.74. If the theory of pattern proposed by Kurzweil is applicable, then the spiritual phenomena can be determined by emergent powers that transcend the dualist

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[114] Ray Kurzweil, "Are We Spiritual Machines? Ray Kurzweil vs. the Critics of Strong AI," *KurzweilAI.Net*, June 18, 2002 http://www.kurzweilai.net/meme/frame.html?main=/articles/art0491.html (accessed September 3, 2004).

perspective. The visual aesthetic patterns become part of this phenomenon and in as much man may create spiritual patterns in a machine; the inverse applies to a machine, which may create digital emerging patterns in a human being. The possibility that machines are also influencing behaviors, beside humans physiological and/or hormonal structures, is part of the evolutionary structure.

> 4.3.75. 'Videomation detection is the next step,' said Robert McAlister, the City of Westminster Projects and CCTV Manager. The City of Westminster is the local authority for much of central London. Already in use at some subway and bus stations, the "un-motion detectors" are computer programmed to scan an area for people or items that remain stationary for a suspicious amount of time. 'Videomation could be used at places vulnerable to a terrorist attack' such as the Prime Minister's residence at 10 Downing Street, said McAlister, noting their potential in detecting unattended bags or people scouting out an area for a future attack. 'A person could be stood at a bus stop surveying the area, but the (videomation's) zone would be triggered if five or six buses go by and the person doesn't move,' he said. [115]

4.3.76. In the chapter on 'Film Style' Wasser explains how "the formal impact of home video has not been only on the genre mix; it has also been on the elements of film style. This is not a strictly causal relationship that has been articulated by the film producers, but it can be inferred from looking at how certain patterns fit together. In the world of multimedia marketing, elements that play well on both the small and large screens are more appropriate than ones that give pleasure in only one format."

4.3.77. In the choice of which screen and what to look at and the structures of its editing, no longer human but algorithmic, is there an human aesthetic left or is a new aesthetic being determined? While the brain patterns are reshaped by human interactions with the digital media technology, a new physical synaptic structure may emerge and this may very well become a new genetic inheritable character. In this sense humans would

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[115] Jennifer Carlile, "In Britain, Somebody's Watching You: CCTV Used to Fight Crime, Terror in Most-monitored Nation in World," *MSNBC News*, September 9, 2004, http://www.msnbc.msn.com/id/5942513 (accessed September 9, 2004).

not become cyborgs, as argued by Haraway, or machines in the scenario presented by Kurzweil. They would just become media.

4.3.78. The primary function of this new hybrid of human/media would be that of representation. Having absorbed the 'aesthetic parameters' and requirements of the digital media society, the broadcast of existence in the external representation of the self would become the primary goal. In this media world of ektechnologies, the body constitutes nothing more than an ulterior locus for representation. The body would become the place not where the re-mediation is exercised, but the locus of ekphrasis, the translation of one media into another and the translation of the body into every other media. It is not that new media will become human-like, but more the case that humans will become more and more like new media. Human synapses will adapt to comply with the task set within the virtual environments and with time, in an evolutionary media scenario, humans could be able to functionally converse with the electric 'code.'

**Figure 58 *The Matrix*, directed by Andy and Larry Wachowski, 1999. Cypher, played by Joe Pantoliano, is looking at the code, recognizing it as visual images.**

4.3.79. One example may be the development in the electromagnetic readers of bioelectrical brain impulses (brain waves). Those who are most able to concentrate and make a cursor on the screen move will be able to achieve tasks in an envisaged process of 'natural' selection. This scenario of becoming 'one' with the media is a possibility which requires interconnected structures of brains and computer memory that will constantly relate in an omniscient and ever less private society. The space of privacy in this context

is reduced to the thoughts of one's brain and will be invaded by biologically deterministic media, which, shaping the synaptic patterns of humans' brains, will determine the way of thinking, seeing and perceiving. The aesthetic will become a 'digitized aesthetic.' In this sense the concept expressed by Virilio that cinema is a straightjacket imposed on the human eye is plausible. In this relation, changing the word cinema with that of media, or new media, makes it possible to understand how this straightjacket is not just conditioning the process of perception and visual selection, but also that of biological development of the brain.

> 4.3.80. And we have the irony that where cyberpower and globalization are abolishing boundaries for information managers and cyber-types, the rapid rise in security consciousness in local communities, and immigration consciousness between nation states has in fact erected ever-sharper and better defended boundaries both locally and globally, not only as far as the poor and disenfranchised are concerned, but as regards the working classes generally. For those who are a part of the information age there is increasingly boundary-less optimism, while those who are not are likely to find themselves bound into cycles of increasing pessimism at ever lower wages, fewer benefits and increasing cutting back and even denial of their nation's obligations to their basic welfare; in short, increasing insecurity. [116]

4.3.81. Therefore, the problem with Haraway's cyborg, as previously evidenced, is one of affordability. In this economic structure the best economically equipped cyborgs will be those who can afford to pay the price to 'upgrade' or who have the institutional or corporate power to enhance their status. [117] In this sense the cyborg does not reinforce a utopian freedom, as Haraway affirms, but increases the 'cyborg divide,' creating 'classes' of cyborgs. *Terminator 2: Judgment Day* (1991) and *Terminator 3: Rise of the Machines* (2003), as well as *X-Men* (2000) and *X2: X-Men United* (2003), have a 'mirror' character that is 'the latest prototype,' an enhanced cybernetic evolutionary product.

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[116] James W. Fernandez, "Peripheral Wisdom," in *Signifying Identities: Anthropological Perspectives on Boundaries and Contested Values*, ed. Anthony P. Cohen, 137 (London: Routledge, 2000).

[117] "For example, 'virtual sweat shops' or 'farms' have emerged in Hong Kong and Mexico, where armies of players are assembled to build virtual objects such as swords or simply to amass credits within a game by superior play, solely to sell those items in online auctions." Celeste Biever, "Sales in Virtual Goods Top $100Million," *newscientist.com*, October 29, 2004 http://www.newscientist.com/article.ns?id=dn6601 (accessed December 15, 2004).


**Figure 59 T-X played by Kristanna Loken. This is Skynet's most sophisticated cyborg killing machine yet.**

**Figure 60 T-1000 played by Robert Patrick. T-100 is the currently outdated version of cyborg from *Terminator 2: Judgment Day*, 1991.**

**Figure 61 *X-Men*, directed by Bryan Singer, 2000. Wolverine the biomechanical 'man' played by Hugh Jackman.**

4.3.82. The scenario of a technologically dependent society for the affirmation of status may very well generate, as in the mobile phone phenomenon or in the software updates, a technological dependence on the bioengineering corporate industry. The hierarchical classification of society would always be based on money and power, only externalized through the latest cyber enhancement.


**Figure 62 *X-Men 2: X-Men United*, directed by Bryan Singer, 2003. Kelly Ann Hu plays Deathstrike, the upgraded biotech adversary of Wolverine.**

> 4.3.83. In an over-politicized climate where the arts have been instrumentalized for ideological causes, the computer user is seen as an engineer, assisting and programming other people's concepts. The artist him or herself is trained in a traditional manner, using old media, from calligraphy to sculpture. In some cases the artist can call in the help of the new forms of expression, for example to document or amplify the work. In this traditionalist view, the computer does not have to develop its own language. It is enough to learn the software manual. This instrumental approach of new media culture ignores the issue of aesthetics because neither the computer operator nor the artist seriously engage with the possibilities and limits of the machines. Technology is used in the way manufacturers have configured them, which in this case for example results in disastrous 3D computer graphics and 'fractal art.' [118]

4.3.84. This argument has been central to the artistic approach of the media and the cyborg from a fine art perspective. The artist is bound to move, as in the 1960s and 1970s with video technology, in a spectrum of total rejection and/or total absorption. Technology in this new framework plays a fundamental part of the artistic endeavor. So much so that it is correct to affirm that all avant-garde is technological, not because of its

[118] Geert Lovink, *Dark Fiber: Traking Critical Internet Culture* (Cambridge, MA: MIT Press, 2002), 200-201.

roots in the Futurists' Manifesto, but for the impossibility of rescinding a technological confrontation and/or analysis in choosing the philosophical stand of total rejection.

4.3.85. The identity of 21st century man and artist is shaped by this confrontation. In this context the recognition of the other, as recognition of the self, becomes an insoluble problem if the 'other' is a cyborg. The total rejection becomes an improbable solution, a museum's stance to preserve a disappearing reality - that of humanity. The challenge is in the evolutionary framework of humans' identity. What will have to be understood is whether it will bring utopian freedoms or new forms of enslavement. In conclusion, what will have to be defined is if aesthetics and moving images will be representing the vision of the human or that of the machine; or that of an emerging hybrid. This is the challenge which will continue to characterize the present technological avant-garde.

4.3.86. The following conclusive chapter will look at some of the issues raised by the hypothesis sustained in the thesis. It will not attempt to reach 'a general conclusion' but to develop new areas of investigation and identify issues which will be part of a renewed analysis within the framework established by this research. It will apply its philosophical categories to an evolutionary empirical verification of the reality and/or virtuality processes.

## 5.1. CHAPTER FIVE – The Evolutionary Scenarios

### Future Applications for the Theoretical Framework

5.1.1. This final chapter resumes the issues analyzed in the research thesis and identifies areas of future research. Film's aesthetic evolution, from photochemical (i.e. celluloid and acetate) to electronic and magnetic videotape, to digital, is a 'natural progression' that is a direct result of advances in the technological means of visual representation. In contemporary media, the evolution of film has blurred with the artistic creation of evolutionary software forms.

5.1.2. The definitions of cinema and new media art need to cross boundaries and make this interdisciplinary flow part of their own methodological structures. The concept of ektechnology, in this framework, can identify the properties of engagement and hybridization of contemporary media and technology. Therefore, the intersemiotic discourse focuses on the concept of the echological not as a viral representation of polluting images, but as an experimental evolutionary representation of images. It is through the digital ekphrasis, the merging of diverse media, old and new, in all possible matrices and rhizomes, that the echological is manifested as part of a process of translation and transformation in a transmedia context.

5.1.3. The aesthetic derived from these evolutionary transformations is not necessarily a homogenizing process, as Baudrillard states, but a phase in the hybridization processes. The image is not 'perfect' but 'perfectible' and therefore, as previously argued, not necessarily a statement of contemporary 'corruption' of an originating status. The digital

black hole of contemporary media as envisaged by Baudrillard offers, if considered within an evolutionary media structure, both finalities: continuous evolution and extinction.

5.1.4. In this context, the media, the images and their creators, freed from the necessity of returning to a perfect divine original state have the right to experiment. This right to hybridization, an alteration of one's own nature, offers the possibility to find the freedom of the cyborg. It offers the possibility of choosing which rhizomic path to follow and which technological components to integrate and which to refuse.

5.1.5. The possibility of choosing and 'mixing' technological components for the enhancement of the 'cyborg' human body is a new chance of freedom offered by technology. As discussed in chapter four, the problem of freedom through technology shares similarities with the debates of the 70s, promoted by Gidal, Le Grice and Export, who focused on issues related to means of production and ownership of technology. The issue of ownership of the 'cyborg-updates' re-actualize the technological debate and ethical issues which arise from the 'innovative' impact of media technology.

5.1.6. The problem of absorption or rejection of technology in the fine art practice is, in this context, an important and complex issue. Not only is it related to the materiality of the medium itself, as perceived by McLuhan, but also to the basic principle that the medium is the message. The problem in contemporary media becomes one of absorption and rejection of the message that the medium is carrying with it.

5.1.7. The medium is imposing the message not only as content but also as modification of the physical and psychological behavior of the viewers, ultimately reshaping

and reconditioning them. The reshaping and reconditioning of human behavior becomes then a problem of absorption and rejection of Western capitalism, forms of neo-colonization and global dominance, homogenization of the aesthetic processes and critical frameworks.

5.1.8. The issues that have been prompted from this analysis are related to the reshaping of the neuronal networks through the use of new media. The questions that have arisen are whether the physical and biological structures of the body are being modified by the media and if these modifications are genetically inheritable. Furthermore, if the neurological brain patterns are being altered by the virtual environment and the expanded cinema's contemporary representations, is it then possible that the Platonic idea of 'essence' and that of Pasolini's 'cinemi' could be proved?

5.1.9. The post doctoral research will attempt to answer these questions through an interdisciplinary setting at University College London, where in collaboration with the department of engineering and that of neurophysiology, the concepts of indexicality, image's essence through a neuro-aesthetic and neurophysiological approach in virtual reality environments, will be explored.

## 5.2. Conclusions

5.2.1. In contrast to the 'raid' methodology which I have borrowed for this comparative research, I will attempt to conclusively frame a fluid evolutionary process. The avant-garde, traditionally interacting with the materiality of the media used and their technology, has transformed itself into a 'technological avant-garde,' merging its fine art context with scientific research methodologies. This new hybrid, although dependant on technology, is critiquing the technological structures on which it is based.

5.2.2. The avant-garde tradition has used these circular forms of analysis in the 'underground' discourse. An example is the rejection of the museum settings, while still obliged the avant-garde artists to raise funds from the public institutions – i.e. museum settings – or from private sponsors that they were attempting to avoid. The necessity to not compromise, to somewhat compromise or to totally sell out are the options which have been discussed in regards to the avant-garde economic context and can also be applied to the technological element.

5.2.3. Although this seems to be a repetitious discourse shifted from the traditional avant-garde of the 1960s and 1970s to the analysis of contemporary new media technology, there has been a major shift within the avant-garde itself: that of an organic merging of the economic, social, political and technological context. Which, represented as hypermedia, obliges the avant-garde artists to face unsolved problems as well as new and more complex ones: that of transhumanity and media/body integration, as well as issues of surveillance, identity and technological fascism.

5.2.4. The avant-garde exists as a multiple series of movements, as Scheunemann explains, but at the same time draws its inspiration from a set of principles which create a loosely homogenous movement. Globalization and homogenization processes are phenomena historically experienced by avant-garde artists who have been able to overcome, through avant-garde global vernaculars, the complex interaction between global and local, homogenous and original. The present technological avant-garde, through speed of communication and movement, technology and hyperbolic experimentations, shares founding ideological elements of every avant-garde movement. Through these movements the avant-garde specializes in diverse micro areas: the social context, the technological element, the bioengineering, etcetera. They are different evolutionary branches of a single ideal movement which, started in the 20th century with the manifesto futurista, are still evolving. In the evolutionary framework of the avant-garde there will always be some 'avant-garde' movement looking into the future, even if it will be that of a total negation of its fundamental basis.

5.2.5. In this context of intra-relationships, transfers and cross-platform hybridizations, the analysis of the experimental avant-garde, the expanded avant-garde or the technological avant-garde are only micro structures in a more complex interaction with the new media field. The structures of remediation as possible explanation appear to confirm McLuhan's analysis of the media. They are just 'rearview mirror' perspectives on the phenomenon of transfer. This is not simply a movement from one side to the other of the spectrum, from one form to the other, but a process of evolution, with loss of some old elements and acquisition of new original ones.

5.2.6. The digital ekphrasis, in the avant-garde context, is a better tool than that of 'remediations' to understand the phenomenon of ek-technologies. The concept of 'ekphrasis' is embedded into a tradition of media translations and better reflects the concept of adaptations and reconstruction of a media context into a new media scenario with the necessity to preserve poetics, hermeneutics and historical contexts. This scenario could be defined as that of 'trans-media,' where the terminology is not just used to describe the evolutionary character of the media but also the inherent issues of transferring content from one 'technological context/medium' into another.

5.2.7. Peter Greenaway explains it as the necessity that "Every medium needs to constantly re-invent itself. We need now not to put new wine in old bottles, and certainly not to put old wine in new bottles, we need to put new wine into new bottles. You are allowed to recognize the wine, which is human ingenuity and imagination, and you are permitted to recognize the bottles, which is cinema, though I am convinced we shall be needing to change that name." [1]

5.2.8. This is the 'rearview mirror' process, which, in the remediation context, is not taken into consideration, therefore abandoning the very essence of the media: their social, political, aesthetic and emotive nature. The ekphrasis attempts to transfer the entire world of one medium's representation into a new medium. In this process, innovations, changes and alterations are the formulas which allow the original content and the new media technology to interact, negotiating new forms of representation which alter both content and technological structure.

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[1] Peter Greenaway, "Cinema Is Dead, Long Live Cinema?" *Kasanderfilm.nl*, September 2003, http://www.kasanderfilm.nl/lecture.swf (accessed January 23, 2004). Also: Peter Greenaway, interview by Lanfranco Aceti, November 27, 2004, DVD.

5.2.9. Future developments and applications of the analytical tools which I have discussed will be in the fields of virtual environment and emotive presence, emotive representations/interactions and visual brain patterns in a neuroaesthetic framework. These fields will be treated in their entirety as a world screen. These future areas of research will generate a better understanding of the media structures and of the human/media interactions based on biological and emotive stimuli. From these avant-garde technological experimentations and their universal Platonic essences it may be possible to individuate the tools for what Greenway defines as the 'benchmark masterpiece.'

# LEGENDA

**Ekphrasis**: "The intersemiotic translation: a transfer of content between diverse media which reinterprets text, context, *intentio operis* and *intentio autoris* through technological translation."

**Ektechnology**: "Technology and/or media which are characterized by a technological transfer representing a transfer from the human body into the external environment."

**Endotechnology**: "Technology and/or media characterized by technological event pertinent to the internal world, inside the body."

**Esotechnology**: "Technology and/or media which are characterized by a technological transfer representing a movement from the outside, which would carry material into the inner sphere of the body."

**Exotechnology**: "Technology and/or media characterized by a technological event pertinent to the external world, outside of the body."

**Machinic Vision:** "A generalized and extended condition of visuality in which the task of processing information, that is, perception, necessarily passes through a machine."

**Remediation:** "Remediation is the making of new media forms out of older ones."

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