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Duchamp Meets Turing: Art, Modernism, Posthuman

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DUCHAMP MEETS TURING:

ART, MODERNISM, POSTHUMAN

By

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To my father, Mario.

To Antonio Caronia.

Duchamp Meets Turing: Art, Modernism, Posthuman

Gabriela Galati

In her book *How We Became Posthuman* (1999), Katherine Hayles analysed the process through which the conception of the liberal humanist subject led the way to the posthuman subject, a subject who lives in complete entwinement with the digital. This process, however, was not innocuous: it made the (fallacious) perception that information could do without material instantiation pervasive within many fields of knowledge, a process that Hayles contends originates in the Macy Conferences and the evolution of cybernetic theory. This research identifies an analogous process within the artistic realm: when Clement Greenberg delineated the concepts of opticality and colour field as the main characteristics that "defined" Modernist painting, he conceived of these in a purely disembodied subject (Krauss 1993). In this context, this work proposes to consider that the actual overcoming of modernism comes along with the advent of the posthuman, tracing its origin to Marcel Duchamp and his invention of the readymade, and not with postmodernism, the theoretical consistency of which, at least in the artistic field, this research will question. A first aim of this work will be to unify the main concepts and theories of the artistic field with those of cybernetics, to bring together 'Turing land' and 'Duchamp land' (Manovich 1996).

For achieving this, digitalisation processes are not to be understood as representations of some material reality, but rather as ontological repetitions

through which difference is conveyed. This is why the consideration of the temporal dimension of the archive as event is fundamental for understanding that the archive can only exist in its change, in its movement, in its action, in its metamorphosis, and thus the relevance of digitalisation processes in this regard becomes evident. Therefore, the archive is not only an issue of memory, but also a question yet to come, of conformation both of the future and subjectivities (Derrida 1967b, 1995).

In this context, the present work advances the emergence of a *digital subject* with the emergence of new media, and theorises that the constitution of this subject happens by assuming a 'point of view' (Deleuze 1988) in the technological unconscious (Vaccari 1979). Reflecting upon the effects of digitalisation and actualisation (Deleuze 1968) on the subject, on how the digitised artwork and event affects, and changes, the subject observing and interacting with it, the present research will demonstrate that it is pertinent to talk about *a subject who is embodied in the digital.* In this sense, if the digitised artwork in the archive needs a subject to be actualised, this process also has its consequences for the subject. Therefore, the *digital subject* is the possibility of actualisation of the archive, and at the same time changes with it: she assumes an always-different 'point of view' constituted for her by the floating signifier in the technological unconscious.

All these theories, which are part of the posthuman, are presented as the actual overcoming of modernism to show that the readymade as medium is, at the

same time, both one of the points of rupture and the key link to bring back new media and art theory as art at large.

Keywords: difference-repetition-digitalisation-archive-event-embodiment-technological unconscious-subjectivities-modernism-readymade-posthuman

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Introduction

The present research is about new media and art theory and practice. It pursues the possibility of bringing these practices together to reconstruct, or propose a way to reconstruct, the (broken) feedback loop between both worlds, which has left many loose ends in both realms. As it will be explained below, ‘Turing land and Duchamp land’ (Manovich 1996) should actually be one land.

Lev Manovich wrote a short, provocative article on the web platform *Rhizome* in 1996—dramatically entitled ‘The Death of Computer Art’—stating that a convergence between Turing land and Duchamp land would never happen. As can be easily intuited, Duchamp land refers to the mainstream, object-oriented world of contemporary art, whilst Turing land refers to all new media, art made with computers, the characteristics of which the author describes as:

> 1) Oriented towards the "content." [...]
> 2) "Complicated." [...]
> 3) Ironic, self-referential, and often literally destructive attitude towards its material, i.e., its technology, be it canvas, glass, motors, electronics, etc. [...]
> Let us now look at Turing-land. As we will see, Turing-land is characterized by directly opposing characteristics:
> 1) Orientation towards new, state-of-the-art computer technology, rather than "content." [...]
> 2) "Simple" and usually lacking irony. See below.
> 3) Most important, objects in Turing-land take technology which they use always seriously.

(Manovich 1996)

Manovich's article is obviously provocative. It has many accurate observations, but it is not, and doesn't intend to be, exhaustive. Instead, the text functions more like an avant-gardist manifesto, aimed at creating some kind of response from the public, and even a bit of scandal.

That said, Manovich's claim that the mainstream art world does not pay attention to what he calls 'computer art' because it is process-oriented rather than object-oriented doesn't suffice—nor does the assumption that the art market ignores computer art because there is nothing clear to sell. The market and art institutions have absorbed and virtually deactivated the subversive power and the intention of de-commoditising the artistic object of all conceptual art and institutional critique art—as becomes evident through the presence of artworks by such authors as Joseph Kosuth, Lawrence Weiner, Robert Barry, Art & Language, Daniel Buren, Marcel Broodthaers, or Hans Haacke, just to name the most famous, in the collections of the main museums, and main auctions houses and commercial galleries of the world. Part of Manovich's provocation regarding computer art lies in his contention that it takes itself too seriously and doesn't convey the element of irony that anyone worth calling themselves a follower of Duchamp would instil in a work. Although this claim is not entirely accurate—one need only think of Jodi,

or Olia Lialina, or Eva and Franco Mattes—it hints at part of the problem. Much computer or new media art is still fascinated with the medium in itself, as if using technology, chiefly state-of-the-art technology, would be enough to make a high quality artwork. This is of course not the case with the aforementioned authors, and it is not by chance that the Mattes couple are among the ones to have actually had success in both 'lands'. Yet it cannot be underlined enough that new media art has to develop a coherent and ambitious aesthetic canon by overcoming this sort of 'Narcissus Narcosis Syndrome' (McLuhan1964: 41), which in his famous Playboy interview in 1969, McLuhan defined as follows:

> It's a process rather like that which occurs to the body under shock or stress conditions, or to the mind in line with the Freudian concept of repression. I call this peculiar form of self-hypnosis Narcissus narcosis, a syndrome whereby man remains as unaware of the psychic and social effects of his new technology as a fish of the water it swims in. As a result, precisely at the point where a new media-induced environment becomes all pervasive and transmogrifies our sensory balance, it also becomes invisible. (1969)

Otherwise it cannot, and will not, be considered art. As Armin Medosch mentioned in his keynote at the Renewable Futures Conference in Riga, this kind of use of technology for art-making often results in a 'one trick pony' (Medosch 2015), a kind of sideshow curiosity that will soon lose its currentness, and of course interest.

Still, this is not enough to explain the almost impenetrable divide between both fields. The sixth chapter will explain, as Magda Bijvoet has suggested (1996), how by 1975 almost everyone in the field at the time seemed to have lost interest and moved forward in other directions following a brief moment in which the collaborations and contaminations between art and technology seemed possible. Leaving aside the particular, practical and personal problems in the collaborations themselves, from the point of view of the critique and theory on the field, Bijvoet identified a critical issue: theorists and critics with a classical art historical formation did not have the tools to understand the more experimental and processual approach that was taking place at the moment. She was especially referring to the critical fortune of the *9 Evenings* event. In short, these critics couldn't see the interest in these kind of experiences and were focused exclusively on the results, expecting a finished artwork—if object-based, even better. Yet other theorists with a more "cybernetic" background, such as Jack Burnham[1], could appreciate the effort and interest of bringing together the endeavours and research of artists and technologists, despite the technical problems that arose at the time (Bijvoet 1996).

[1] Jack Wesley Burnham Jr., born in New York in 1931, is the author of *Beyond Modern Sculpture: The Effects of Science and Technology on the Sculpture of Our Time*, 1968, and curator of *Software-Information technology: Its New Meaning for Art* at the Jewish

However, these hypotheses still do not explain why forty years after the moment identified by Bijvoet as the definitive split in two lands[2], the issue is still being discussed[3]. More importantly, these theories do not address why the situation has not changed very much. In this context, this research proposes an exhaustive analysis of some key concepts on digital and art theory to be able to identify some breaking points and propose, in some cases, an alternative theory and point of view that can, hopefully, not only allow a suitable explanation of the aforementioned split, but also work to bring both 'lands' back together.

With this aim, this text examines digitalisation processes in relation to the artistic field and culture at large, and how these affect and are affected by the archive and complex subjectivities. In this sense, this research proposes to consider digitalisation in terms of difference and repetition (Deleuze 1968) to avoid any risk of considering it in terms of representation, so that digitalisation and memory, and thus the (digital) archive can all be considered as kinds of repetition. Moreover, it proposes Jacques Derrida's conception of signification as constant deferral as a complementary model to further explain the continual feedback loops between material and non-material dimensions and

[2] This date is aproximate: For instance, Jean-Francois Lyotard's notorious exhibition *Les Immatériaux* at the Centre Pompidou in Paris took place in 1985.

[3] An outstanding compendium of this on-going discussion is the recent publication *Mass Effect. Art and the Internet in the Twenty-First Century* (Cornell, L. and Halter, E. eds. 2015)

digitalisation processes as a web, a fabric in constant construction and modification.

This line of reasoning leads this research to conceptualise all so-called reality, following Deleuze (1967, 1968), in terms of simulacra: simulacra that do not have any positive or negative connotation, but are the logical consequence of the elimination of any conception of thought in terms of representation. If original and copy do not exist anymore, all that remains is simulacra, repetition with no original.

Furthermore, in this context, to think of the archive is unavoidable, not considered only in the pedestrian sense of "the Web as virtual archive"—although it certainly is one—but also in its constant and inseparable intertwining of digital and material. If the archive is to be kept alive and not become some kind of fossilised and dead dimension, it has to be defined as an event (Deleuze 1988), and memory as repetition, as well as a projection to the future (Derrida 1967b, 1995). The archive is not only the apparatus (Foucault 1977; Agamben 2006) that saves the past, but it also constructs its own conditions of possibility and reading.

All of these processes are actualised (Deleuze 1968, 1988; Lévy 1995) in the subjects, who, assuming a point of view in the plane of immanence of the technological unconscious, also change (Foucault 1969), and are thus constituted as digital subjects. More specifically, the conception of embodiment will be defined in the digital as a collective dimension that

enables the subject to constitute itself through assuming a point of view. The conceptualisation of a technological unconscious, as well as Varela, Thompson and Rosch's (1991) conception of embodied cognition and enactment, open the possibility of thinking of an embodiment in the digital. Reintroducing the phenomenological perspective, particularly that of Maurice Merleau-Ponty (1945), the authors argue that organisms and cognitive agents build their image and perception of the world by interacting and acting in it as situated living bodies (1991: 35, 165-7). Thus, evidently, cognition does not unfold only through neural activity but also through and in the body.

However, this process of the constitution of the posthuman that seems exclusive to digital technologies began some time ago. In the artistic field at least it can be identified in the work of Marcel Duchamp, particularly in his invention of the readymade. Key elements from Duchamp's artistic practice have been singled out as the missing links that rebuilds the feedback loop between digital and non-digital artistic theories: the readymade, the inclusion of mechanised processes and the conception of intertwined machinic and organic subjectivities. These same elements help understand the actual overcoming of modernism—not in postmodernism, which is only its continuation and which has not developed any theoretical tools that would define it as a different theory or approach, but in the posthuman. The conceptualisation and understanding of a posthumanist subject identifies a new kind of

subjectivity that accepts the trespassing of its own boundaries, both bodily and psychological—continuously intertwining with both human and non-human entities and digital and analog environments. This posthumanist subject is what I will call complex subjectivities, digital subjects, or subjects embodied in the digital. And for the understanding of its constitution the conceptual development of the role of the floating signifier in the technological unconscious as a plane of immanence is fundamental. Its aim is to broaden the aforementioned definition of the posthuman, not only to expand its explicative power, but also to introduce the collective dimension that technologies allow in the conformation of new subjectivities. Moreover, it completes the reconstruction of the feedback loop between cybernetics and art theories.

This text consists in six chapters, all of which have a first part that examines the selected theoretical framework to explain and discuss the main concepts that the chapter will deal with. The primary concept, or concepts, is most often the title of each respective chapter, while the second part uses the tools introduced by the first part to discuss a certain topic and/or to propose a new reading. In general, case studies are intercalated in the second part of each chapter or at the end.

Given that one of the main aims of this research is to identify the critical points in which the chasm between new media art and traditional art—or in other words between cybernetics and art theory—came about (in order

to overcome it), the case studies are indistinctly drawn from one or the other ‘land’. Moreover, many examples are not strictly artistic but rather drawn from culture more broadly. Therefore, the text also analyses certain apps, video games, and projects. Some of the artistic examples are contemporary, generally by artists I have worked and spoken with directly, while others are art historical examples. In following this logic, the intention is not only to avoid dichotomies such as digital/material or fragmented/continuous, but also to foster the understanding of the overlap and continuity between them.

The first chapter, ‘Repetition,’ follows Gilles Deleuze’s conceptualisation of difference and repetition (1968) and Jacques Derrida’s theorisation of *différance* (1967a, 1967b) in order to avoid considering digitalisation processes in terms of representation. This chapter proposes considering digitalisation as ontological repetition (Deleuze 1968: 293). It then extends this argument to relate digitalisation to *différance*, that is to say, to think of it as a completely differential process—and never in terms of representing a material referent, reality, or origin. In doing so, the chapter purposively analyses three significant case studies, the first being Elaine Sturtevant’s oeuvre. Sturtevant is known for methodologically putting Deleuze’s theory of difference and repetition into practice in her work by famously reproducing (and not copying) other artist’s works. In Leo Castelli’s words, Sturtevant was ‘the first appropriationist’ (1988). However, in this context, the present

text proposes to read her work in terms of *différance*, and not only of difference and repetition. One reading does not exclude the other, but are on the contrary complementary in their shared pursuit of an understanding of certain processes that intend to avoid representation and therefore dichotomist oppositions of original and copy. The second case study is *LONELY LOS ANGELES* (2005) by Guthrie Lonergan, in which the artist presents screenshots of areas of Los Angeles with very low population density that often look quite abstract. For example, an area where there is only grass will be shown as just a green square. The work evidences how a frame of reference is necessary to read a map, otherwise it becomes completely abstract. But more importantly, it underlines the absurdity of considering such a dimension in terms of representation. The third case study is Eva and Franco Mattes (a.k.a 00011100111.org) *Reenactments* (2007-2010) in which, as the title suggests, the couple of artists re-enacted on Second Life a series of performances from the seventies by Gilbert & George, Chris Burden, Marina Abramovic & Ulay, among others. Analysing specifically *Imponderabilia* (1977), the text contends that the Mattes' work is not simply a digital version, which would imply that considering Abramovic & Ulay's to be an original (in the sense of an origin), but instead approaches the works in terms of constant deferral, of a dialogue between both texts.

The second chapter, almost as a logical consequence of the first, is entitled 'Simulacra.' In this chapter, Jean Baudrillard's quasi neo-

Platonic conceptualisation of simulacra is analysed and criticised. The text proposes to consider Deleuze's conception of simulacra as in his estimation everything is simulacra (1968, 1969): we live in a world of difference and repetition in which considering originals and copies no longer makes sense. In this way, simulacra are stripped from the negative charge that the concept has carried since Plato, and are considered as repetitions in which interstitial differences can be found, art and digitalisation processes included, of course. As a complementary model that can help to overcome dichotomies, Charles S. Peirce's semiotic triadic model is then presented. Peirce's model has many advantages in this sense, especially when considering digitalisation: the first and most evident being that it is triadic, and not binary like Saussure's; secondly, and perhaps most importantly, it considers the production of sense by placing material, non-material, human and non-human signs on the same plane. Following this model, Gabriele Di Matteo's work is analysed because he actively and consciously utilises different kinds of simulacra. Like Duchamp and Sturtevant, he brilliantly plays with the intertwining of mechanical repetition and human agency, primarily in painting. Finally, following Eugenio Trias' (1982) theorisation on the expansion of the possibilities of aesthetic pleasure and the effect of the uncanny as theorised by Sigmund Freud, it is then proposed to consider a further expansion of the aesthetic effect, as suggested by Hal Foster in *The Return of the Real* (1997). At this point, I advance the theory of the

simulacrum as the current aesthetic limit, considering the active use of the possibilities of the simulacra, especially within the digital, as a further aesthetic frontier. In this context, two different artistic projects are compared, both of which use Instagram: Richard Prince's *New Portraits* (2014) and Amalia Ulman's *Excellences & Perfections* (2014). I argue that while the first project simply uses the app as a source of raw material without much understanding of it as a (possible) medium, the second fully exploits, and explodes, its possibilities—putting into evidence many of the problematics conveyed, while also intertwining different levels of reading and using the conscious enacting of simulacra with an ethical and aesthetic impact. In fact, Prince's and Ulman's case studies will be brought back in different chapters because they superbly exemplify field several of the issues addressed by this text, especially the conformation of new subjectivities.

The third chapter is entitled 'Archive.' It deals with the archive's conditions of possibility today and its relation to memory, as well as its projection to the future. For this, Michel Foucault's (1969), and Jacques Derrida's (1967b, 1995) definitions of archive are compared to understand the archive as event (Deleuze 1988) and memory as digitalisation, which is to say, as repetition and *différance* (as defined in chapter 1). But also, following Derrida and Foucault, the archive is understood as a projection to the future, in the sense that it creates the conditions of possibility for its own reading, as well as of what is

archived. In this sense, the archive is understood as a *Wunderblock* (Freud 1925, Derrida 1995), which is a complementary notion to Foucault's hypomnesic memory. Therefore, it is proposed to consider two examples that are chronologically quite distant from current times and digital ubiquity: Giulio Camillo's *Theatre of Memory* (ca.1554) and Aby Warburg's *Mnemosyne Atlas* (1924-unfinished). Both projects are models of archives that, even if separated by centuries, share many points in common with the logic of the Internet and of informatics in general: a spatial, non-linear logic that is closer to "linking" in the hyperlink sense than to the written, linear, causal logic described in McLuhan's *The Gutenberg Galaxy* (1962). Three contemporary examples are analysed in this chapter—two apps (Memoir and Facebook) and a complex artistic project entitled *Future Library* (2014-2114) by Katie Paterson. With these case studies I seek to question what kinds of archives, both of memory and the future, we create with current technologies. What are the existing alternatives? What kinds of new alternatives can we propose?

The fourth chapter delineates the fundamental relationship between technological unconscious and floating signifier to advance the conceptualisation of the technological unconscious as the plane of immanence in which meaning is generated and circulates in the articulation of digital and non-digital environments.

The chapter begins by identifying the floating signifier, as conceptualised by Claude Lévi-Strauss (1950), as the tool that aims to cover the unfitness, the overspill between concepts and the world, or better in this context, between the digital and the analog. Thus these concepts avoid any assimilation of the digital as a transcription or representation of the physical, but they reveal their intrinsic difference. Moreover, the floating signifier will have the fundamental role of constituting the 'point of view' (Deleuze 1988 [1993]) in the digital for the emergence of the digital subject, a subject who is embodied in the digital. Through the assumption of a point of view the subject is constituted and is able to operate, navigate the digital and to generate meaning.

Then, the chapter traces the genealogy of the technological unconscious from Sigmund Freud's definition of technology as prosthetic limbs aimed at expanding human capacities throughout the world to Walter Benjamin's definition of an optical unconscious. It then extends to Vilém Flusser's critique of the program of the photographic apparatus to Rosalind Krauss Lacanian conceptualisation of the optical unconscious. In Franco Vaccari's analysis of the technological unconscious, the chapter identifies the most useful and significant theory on the topic: the technological unconscious implies a partially inaccessible dimension in the photographic device—one that can obviously be extended to any technological apparatus—that has however been symbolically and collectively structured. In all of the analysed authors there can be

detected not only the idea that psychic processes are somehow traversed by a machinic logic, but that any technology has an inaccessible layer that in one way or another generates meaning and concrete effects in the world. Thus bringing together these ideas with the concept of floating signifier as defined above appears to be a suitable methodology for further explaining the generation of meaning and subjectivities in the interactions and overlappings of complex environments.

It is then necessary to define in which kind of space the ‘point of view’ can be assumed. Consequently, different definitions and theorisations of space, place and cyberspace (Gibson 1984, Hillis 1999, Manovich 2001) are explored in order to define the discussed space as ‘electronic space’ (Hillis 1999: 67). The point of view is thus not necessarily constituted in a representational space, but rather in a place: a symbolically structured dimension in which exchanges among actors generate social and relational meaning. Therefore, I prefer to follow Hillis and call this dimension ‘electronic space’. Different examples from the history of art are analysed as case studies to illustrate perspectivism and the point of view in Deleuze’s theorisation, followed by an analysis of the app Periscope as an example of the assumption of one or different points of view in a non representational space. This last example makes evident how the constitution of the point of view and the conceptualisation of an electronic space are independent of any iconic reference to a supposed material reality—in short, to any idea of representation. Microsoft

HoloLens provides an example of both representational and non-representational space projected onto physical space, a sophisticated augmented reality, or a new complex environment. In synthesis, this chapter provides the tools to broaden the conception of the posthuman by further analysing the process of constitution of new subjectivities in the interaction with digital technologies.

The fifth chapter, ‘Embodiment in the Digital’, explores the conditions of possibility for conceptualising the emergence of the digital subject and the consequent conceptualisation of its embodiment in the digital. The digital subject is not just a cyborg, or a digital entity, but is the result of the setting of feedback loops between human and non-human entities in digital and non-digital environments. In this sense, I am following Foucault’s theorisation of a pre-Cartesian active subject and a static object. This conception of the subject can be defined as subject-as-process, who to attain truth has to change, and thus also changes as the object changes. Considering Varela, Thompson and Rosch’s developments on embodied cognition and enaction (1991), this chapter intends to propose the reading of embodiment not only to definitively leave behind the already overcome conception of cognition as computation (as simple processing of information located in the brain), but also to propose the idea that enaction in the digital is also embodied. In close connection with the aforementioned idea, this research also seeks to tackle the issue of a separation between subject and object, which in

this context no longer makes sense, considering Derrida's texts on writing and *différance*, especially his writing on the figure of the poet or writer as a process of complete intertwining with her work: if the writer thinks, shapes, constructs her book, she is also built, determined, influenced, changed by the book at the same time (Derrida 1967a; 1967b; Fusaro n/d).

These ideas imply a further step in finally erasing the separation between subject and object, and in the understanding of their mutual modification—of a subject as process and an object as event. On the other hand, the constitution of the digital subject is enabled by the constitution in the technological unconscious of the point of view through the floating signifier. The technological unconscious is the collective and partially inaccessible dimension that allows for meaning to be generated and to circulate through the different constitutions of the point of view in the floating signifier. Ultimately, this conceptualisation is the possibility of thinking the ways in which the feedback loops between humans and machines generate sense; it is, in other words, admitting that the generation of sense is not exclusively human, even though machines, until today at least, cannot understand meaning—and this point cannot be underscored enough. This model allows us to consider its production as the result of the interactions between complex subjectivities, which are at the same time created and modified by these same processes.

In the sixth and final chapter, ‘Medium,’ all the previous concepts and theories are put in the context of art theory and new media theory, and thus the intention is to locate them in a conceptual-historical perspective. At a certain point, a chasm occurred that divided mainstream art theory from cybernetics and its related artistic production, which is generally labelled ‘new media’ and relates to digital technologies—specifically informatics and the Internet. This chasm can be identified in the invention of the readymade; one of the key concepts that this research identified as a tool to bring both fields back together is to understand the readymade as medium. Moreover, in this chapter it is definitively explained how the true overcoming of modernism, at least in the context of art theory, comes along with the ‘posthuman’, which has its origin in Marcel Duchamp and his invention of the readymade, and not with postmodernism. In *How We Became Posthuman. Virtual Bodies in Cybernetics, Literature and Informatics* (1999)—an instrumental book for this research—Hayles intends to elaborate on a new conception of what it means to be posthuman, ‘to show *the complex interplays between embodied forms of subjectivity and arguments for disembodiment throughout the cybernetic tradition’* (7). With this aim, the author conceptualises the posthuman as the trespassing of the limits of subjectivity of what was defined as the ‘liberal humanist subject’ (3). Consequently, the posthuman does not only imply the invasion of the body by electronic or mechanical prosthesis, but especially the

subjectivities resulting from the constant feedback loops between humans and machines (3-5). This is why Amalia Ulman's work *Excellences & Perfections* is so relevant in this context: because it not only points out at what being posthuman actually means, but more importantly reinstalls the main question Hayles posed in 1999: 'Increasingly the question is not whether we will become posthuman, for posthumanity is already here. Rather, the question is what kind of posthumans we will be' (246).

Thus, analysing the developments of the main theorists and critiques of modernism through the concept of medium (Greenberg 1961, Danto 1981, de Duve 1984, 1991, Krauss 1996, Foster 1998), this research individuated in Clement Greenberg's conception of *opticality* as a purely disembodied medium an analogous and approximately contemporary phenomenon in the definition of information as a pattern with no necessity of any material instantiation, as described by Hayles (1999). Hayles identifies along the book the key moments in which 'information lost its body' and 'how *the cyborg was created as a technological artifact and cultural icon'* (2*)*, in both processes the elaboration of cybernetics as a discipline, and thus also the Macy Conferences in which they were initially delineated was defining:

> During the foundational era of cybernetics, Norbert Wiener, John von Neumann, Claude Shannon, Warren McCulloch, and dozens of other distinguished researchers met at annual conferences sponsored by the Josiah Macy Foundation to formulate the central concepts that, in their high expectations, would coalesce into a theory of communication and control applying equally to animals,

> humans, and machines. Retrospectively called the Macy Conferences on Cybernetics, these meetings, held from 1943 to 1954, were instrumental in forging a new paradigm. To succeed, they needed a theory of information (Shannon's bailiwick), a model of neural functioning that showed how neurons worked as information-processing systems (McCulloch's lifework), computers that processed binary code and that could conceivably reproduce themselves, thus reinforcing the analogy with biological systems (von Neumann's specialty), and a visionary who could articulate the larger implications of the cybernetic paradigm and make clear its cosmic significance (Wiener's contribution). The result of this breathtaking enterprise was nothing less than a new way of looking at human beings. Henceforth, humans were to be seen primarily as information-processing entities who are *essentially* similar to intelligent machines (7).

Paradoxically, the readymade as a fully embodied medium is the origin of the separation between both ‘lands’, and at the same time the missing, or better, forgotten, element that can help reconstruct the feedback loop between them. Complementary to the identification of this forgotten element is the acknowledgment that this sort of blind spot in art theory has also to do with a misalignment in the processes of construction of new subjectivities.

In presenting the aforementioned theories in the context of art theory, cybernetics and new media theory, it is my intention to identify the breaking points of both theories, as well as the possible continuities, in order to open paths that can bring them together; even if, of course, one cannot hope for this change to take effect immediately, as pointed out above. Deconstructing dichotomist narratives like original and copy, real and virtual, and so on—while following Hayles’ model—can bring to

light possible illusory ruptures that will help to better understand the current pervasiveness of complex environments and complex, always embodied, subjectivities: which is of course a theory of the posthuman. [4]

[4] Some of these ruptures include the impossibility of conceptualising the readymade as medium, or the complete snubbing of cybernetic theory by the main art critics and historians at the moment.

1. Repetition

When dealing with digitalisation processes, the issue of representation is crucial. Especially within the artistic field and its related digital archives, there is a tendency to consider digitised artworks as "representations" of the physical object or event (Bolter and Grusin 1999, Manovich 2001).[5] Instead, the present work intends to understand digitalisation processes in a very different fashion: not as forms of representation, but as forms of repetition in which difference is conveyed (Deleuze 1968: 289, 293). In this sense, there is no 'original' and no 'copy'. This holds true whether considering mental images or memories, digitised objects or digital objects with no material referent in the physical world. Instead these different iterations should be understood as 'ontological repetitions' (ibid). With this aim, the definitions of the concept of representation in the context of Western philosophy will be considered in the oeuvre of Gilles Deleuze (1925-1995) and Jacques Derrida (1930-2004), to finally establish that Deleuze's conceptualisation of difference and repetition and Derrida's *différance* are the most suitable models to think about the current state of affairs and to leave the old dichotomies that have haunted most media theories aside.

[5] The digital archive has become increasingly common in the contemporary artistic field and is used by museums, galleries, artist websites, and databases, to name only a few examples. Such archives contain various formats of digitised artworks—whether paintings, photographs, installations, performances, videos or complete exhibitions.

At this point, it is important to explicit the choice of mainly two authors, namely Gilles Deleuze and Jacques Derrida, and in slightly lesser measure also Michel Foucault (1926-1984), as the preferred theoretical frameworks to analyse the present issues. There are certainly other theoretical developments regarding these topics of undeniable relevance, but as one assumes a point of view for proposing certain ideas it is inevitable to also make certain choices. In this case, for example, some of Paul Virilio's writings (1998 [2006]) can be considered as a punctual critique on technology and information in current times, while the interest of the writings of Foucault, Deleuze and Derrida in the context of this research consists in their being conceptual tools useful to develop one's own critique. In the case of both phenomenology and Edmund Husserl's oeuvre, and Henri Bergson's conception of the virtual (1930 [2014]; 1959 [1996]), I considered that in the same measure in which both were fundamental for Derrida's and Deleuze's oeuvres respectively—as becomes evident in several of their works (Deleuze 1966; Derrida 1962, 1967c)—both were at the same time included, expanded and often overcome by these authors. As this work is not aimed at analysing and proposing purely philosophical theories, the choice of the authors was decided considering who provided for the most pertinent theoretical tools for its aims.

1.1 Difference & Repetition

In his book *Différence et répétition* (1968) Gilles Deleuze proposes to understand difference and repetition independently from representation, marking a clear departure from the idea of an original and a copy that has been pervasive in Western culture since Plato.

Deleuze explains how Plato had to give in to the concept of representation, and thus to subordinate difference to it, in order to be able to exorcise the simulacrum from the couple model-copy (1968 [1994]: 265). Plato opposes the model to the copy and then the copy itself to the phantasm in order to distinguish the copy from the simulacrum. In so doing, he subordinates difference to representation. In fact, whilst the model is defined by a position of identity with the Same, the copy maintains an 'internal resemblance' (265) with the model. In this way, Plato tries to legitimate the relationships between Ideas and models, and then between models and copies, while leaving aside the simulacra as second order illusion that does not participate in any way in the truth of ideas, and not even of models (ibid). Thus for Plato in this understanding of representation 'the analogy of being implies both of these two aspects at once: one by which being is distributed in determinable forms that necessarily distinguish and vary the sense; the other by which being so distributed is necessarily repartitioned among well-determined beings,

each endowed with a unique sense' (303). In this way, the distribution of being among the different copies generates a sort of downgrading of their ontological value and a variation in sense. The problem with this subsumption of difference and repetition to representation is that it implies a sort of 'sedentary distribution', as Deleuze calls it, in which the Same, or Idea, would be distributed in the models, through identity, and the model in turn in the copies, as resemblance. In this sense '[R]epresentation essentially implies an analogy of being. However, the only realised Ontology—in other words, the univocity of being—is repetition' (303). In this context, the relevance of leaving representation aside to be able to think digitalisation in terms of difference and repetition, and successive passage as a realised ontology in itself will be further explained, together with its close link to the concept of simulacrum, in the second chapter.

> The idea of representation weakens the ontological entity of the supposed "copies", thus implying a transcendent existence, which would be of higher ontological value in the originals, 'representation is the site of transcendental illusion' (265).

What Deleuze tries to exorcise in turn is the submission of difference and repetition to the concepts of representation, copy and resemblance. It is precisely in the exact repetition of the same that difference can be found, the imperceptible dis-placement produced in each copy is the place for difference to appear, the more identical a repetition is, the more

difference is to be found there, as in ‘Pierre Menard, Author of the *Quixote*’ (1939) by Borges:

> It is always in one and the same movement that repetition includes difference (not as an accidental and extrinsic variant but at its heart, as the essential variant of which it is composed, the displacement and disguise which constitute it as a difference that is itself divergent and displaced) and that it must receive a positive principle which gives rise to material and indifferent repetition [...]. (Deleuze 1968 [1994]: 289)

The transcendental illusion that subordinated difference to representation has four forms that correspond ‘to thought, the sensibility, the Idea and being’ (265). The first two are of interest for this research: ‘In effect, thought is covered over by an “image” made up of postulates, which distort both its operation and its genesis’ (265). In this sense, to think means to create an image of certain things and concepts, including abstract concepts. Consequently, Deleuze explains how a ‘slippage’ in Platonic thought from the ‘Same’ of the Platonic Idea led its way to the world of representation by recognising the identity of the original concept with its ‘representation’ in the thinking subject (265-66). This is how Western thought identified the world of ideas, memories and imagination in a thinking subject as a case of representation; therefore, when remembering an event, a feeling is generally conceptualised as the representation, with more or less fidelity, of a past event. In the same way, imagining a certain situation, object or possibility means, since

Plato, to represent it: to recreate it in one's mind, or on a canvas, in words, and so on. Thus, even something that does not "materially" exist, that does not have a referent, so to speak, is thought in terms of representation, of model and copy, or even more precisely in terms of simulacra, as will be explained in the following chapter.

In the second case, sensibility, the slippage to representation is even more obvious, because in this case difference has been subordinated to resemblance according to perception. In this sense if representation is perceived as similar it will be considered to convey less difference, in the opposite case, obviously more. This is another illusion because difference is not to be expressed according to diverse levels of similitude according to model and copies, precisely, as representation, but on the contrary:

> To restore difference within intensity as the being of the sensible is to untie the second knot, one which subordinates difference to the similar within perception, allowing it to be experienced only on condition that there is an assimilation of diversity taken as raw material for the identical concept. (266)

In this sense, difference is not external anymore, there is no first time, followed by a second and a third time in which difference is disclosed; every time is already a repetition, and it includes difference. Repetition can no longer be negatively defined, it must be conceived for its own value, which in the first place, contains difference:

> Now, each determination (the first, second and third; the before, during and after) is already repetition in itself, in the pure form of time and in relation to the image of the action. The before or the first time is no less repetition than the second or the third time. [...] Repetition no longer bears (hypothetically) upon a first time which escapes it, and in any case remains external to it: repetition bears upon repetitions, upon modes and types of repetition, in an imperative manner […]. (294)

The turn proposed by Deleuze is fundamental to leave behind a hierarchisation of different ontological statuses, which exist, but in which no hierarchy is to be justified: the original, or model, is not more valuable, and does not have a higher ontological status, a higher value of existence than a copy. It is already repetition. In fact, as explained above, to make this distinction does not make much sense anymore.

> The frontier or ‘difference’ is therefore singularly displaced: it is no longer between the first time and the others, between the repeated and the repetition, but between these types of repetition. It is repetition itself that is repeated. Furthermore, 'once and for all’ no longer qualifies a first time which would escape repetition, but on the contrary a type of repetition which opposes another type operating an infinity of times [...]. (294)

All of Deleuze’s work is dedicated to contest transcendence, to a philosophy of immanence that intends to avoid, and possibly eradicate, these opposed dichotomies: a position that is especially fruitful in the context of this text. Trying to think digitalisation processes (and the digital in general, even when there is no material referent to digitise) in terms of difference and repetition and not in terms of representation is the

tool that allows to avoid further dichotomies, and especially, as it will be further developed in the following chapters, the separation between subject and object within the context of the intertwining and constant feedback loops between physical and digital environments. The physical realm cannot be considered as an “original” to be “represented” in the digital. Even things like virtual reality environments, video games or any “representative” configuration—representative in the sense that it hints at a physical, usually spatially recognisable reality—should not be considered as a representation: resemblance, familiarity and recognisability shouldn’t be misleading in this sense. It is instead a question of considering them as multiplicities that can be grouped under the same concept or idea, and not as representations of this idea, or materiality.

1.2 Digitalisation & *Différance*

A complementary approach that enables deepening the understanding of digitalisation processes while avoiding any idea of representation is Jacques Derrida’s concept of *différance.* If in his attempt to move away from Platonism, Deleuze’s work sought to leave behind any form of dualistic dialectic and to think difference in itself could in fact be considered as a radical exercise, Derrida’s concept of *différance* is even

more radical: Deleuze proposes ontological repetition to leave representation behind, Derrida proposes to go beyond ontological difference to avoid any metaphysical search of an 'origin' (Sini 2011).

Derrida proposes to open thought to a kind of difference that is not anchored, at least in Western language, as a difference between *being* and *beings* (Heidegger 1927 [1996]), so what he called *différance* is a difference that goes beyond ontological difference. It is a neologism that tries to explain sense as a dimension of constant deferral. This ontological difference attempts to avoid—which Derrida later admits is in fact impossible—an idea that has grounded metaphysical thought in the Western tradition since Aristotle: a metaphysics understood as the search for the principle of the cause (Sini 2011). In avoiding the search for an origin, Derrida tries to guide thought without thinking about the origin of sense, because there is no origin, or better, because there is only its endless deferral, there are only traces, arche-traces, and this is the *différance*, as Derrida defines it in *Writing and Difference* (1967b [2005]: 75).

In order to achieve this, he proposes that the Western phonocentrism that considers sound, spoken language and the voice as the origin of language (which Ferdinand de Saussure calls '*la langue*' (1916)), and writing as its simple transcription, is mistaken. This dualistic way of conceiving language as voice and writing—the *phonè* being the signified, while

written language functions as the signifier—has marked Western culture's perception and conceptualisation of reality. The result of this kind of binary conception of the relationship between signs and the world is the conception of reality as a series of binary oppositions like mind-body, natural-cultural or virtual-material (Sini 2011).

Every time one tries to express an 'essence' through a word, this essence is expressed, but the expression is not the essence in itself, as it is evident: saying "red" conveys the essence of the colour, but it is not the essence in itself and it is not the colour. In this sense, there is never an identity between the essence and its expression,[6] and this difference is born from the necessity of communication: the need one feels to communicate an essence that is perceived, felt in one's inner being that needs an expression to transmit it to the other's inner being. This phenomenon is due to empirical contingencies, because when one is talking with oneself, so to speak, this mediation is not necessary. One does not need to explain to oneself that "red" is "red". If one is directly in contact with one's intention of speech, there is no need for mediation between one interiority and another one (Sini 2011).

Derrida focuses his critique on the "difference" between signified and expression. To do this, he goes back to Saussure and then extends his

[6] This unfitness is what Claude Lévi-Strauss had called the 'overspill' (*surabondance*) of the signifier, of the world over concepts, and for which he would propose the concept of *mana* in his 'Introduction à l'oeuvre de Marcel Mauss' (1950). This topic will be extensively analysed and developed in Chapter 4.

claim, stating that there is not only a difference between expression and signified, between what one intends to say with the word “red” and “the red”, but also between both sides of the linguistic sense. Signified and expression are nothing but phenomena of deferral, because it is not possible to understand any signified, any meaning without taking into account all the other meanings—there is no meaning that can be isolated from all the others. In this sense, meaning requires a network of other meanings with which to be compared. In short, meaning can be understood only in contrast and by comparison with all other meanings. Furthermore, one speaks *in time,* in history, at a certain moment. Therefore, not only are all these meanings temporal, but the signifier is as well. The expression changes, langue changes in time. At the level of expression there is also a system of opposition between one signifier and all the others. For instance, a “p” sounds like a “p” and not like an “m”, and so on. If a concept has its essence only in contrast with all the others, this is also valid for its expression, which too is defined by differential relations with all the other expressions or signifiers.

Moreover, both parts of the linguistic sign are not only differential in themselves, but also in their reciprocity. This is the paradox of the linguistic sign’s nature. It is impossible to communicate something without knowing and mastering the sounds that form that word, that concept. But how is it possible to articulate the sounds that correspond to a certain word without knowing its meaning, without knowing the

concept itself in the first place? Therefore, Derrida states, the signifier is essential to explain the signified, but the concept is essential to choose the right sounds that express that same concept. So how is it possible to determine where the story begins? This unsolvable problem is the *différance*: this is the non-origin, the impossibility of finding a beginning. Finding the principle of the cause is then a process of constant deferral.

To be able to name things, there must be something that can't be named, which is the *différance*: that "a", which in French doesn't sound, is the "a" of the constant deferral, and it cannot be named. It cannot be heard, but it is actually there, and it is the condition of everything that is said, of everything that is heard. Consequently, for Derrida there is no difference between signified and signifier, the intention of speech becomes corrupted from within by writing, and this is the reason why he calls it *arche-writing:* It is a critique of Western phono-centrism, which has been privileging the voice, the concept for too long, and that has to begin to accept involving the body, the expression and the signifier. In this sense, the Western conception of writing as the simple register, the transcription of the voice, of the spoken language, needs to be thoroughly revised. Writing cannot be considered as pure transcription: spaces, punctuation and fonts cannot be considered a mere transcription of the voice. There is much more: there is an excess, an overspill.

Hence, it is a fallacy to consider the spoken language as that which comes first. What comes first is the *différance*: the non-origin, the impossible origin, the difference as pure deferral. It is that which doesn't exist, but that allows all of the rest to exist. It is pure absence (Sini 2011). Therefore, sense is given, generated, or even more accurately, allowed to emerge through absence. This poses a counter argument to metaphysics—a philosophy of presence—because it cannot escape the presence of an origin.

In this sense, *différance*, an absence, is the condition of the possibility of writing, but at the same time, it is writing that makes difference emerge (Vergani 2000: 50).[7] This is also why, in Derrida's conception, there is no '*primum*'. The text cannot be understood as a '*primum interpretandum'*, as the grounding of any interpretation, because the text is understood as an interwoven fabric of writing that is constantly overwritten, and in constant construction and de-construction: 'The awaiting of sense is revived by the continuous undoing and reassembling of the fabric' (ibid). Thus understood, the text is alive, the text is already event, it is not fixed, and is not completely present because 'sense is constitutively differential' (51). Its conditions of possibility are enabled

[7] This and all successive translations of Mario Vergani from Italian are mine.

by an absence: the absence and continual deferral of the arche-trace, of *différance*.[8]

1.3 Digitalisation as Ontological Repetition

A simple and straightforward definition of digitalisation, the one that Lev Manovich gives in *The Principles of New Media* (2001), can be considered to begin: 'Converting continuous data into a numerical representation is called digitization' (49). Digitisation has two steps: one is sampling at regular intervals—on the duration of these intervals will depend what is called 'resolution'. The second step is quantification, according to a pre-determined scale. Even if older media does involve some kind of separation in discrete units (such as photograms in a film, for example), quantification is exclusive to digital media (ibid).

This is a primarily technical definition of digitisation. However, it is evident that digitisation processes have further implications beyond the technical, and, as mentioned before, this has to do with the perception of digitalisation as a "representation" of a "material" object. In this sense, following Deleuze, the present work proposes to think of the

[8] The useful relationship that has been easily established between the theory of *différance* and Psychoanalytic theory is also evident now. The idea of sense generated by an absence, by an origin that doesn't exist, or that can be considered only as constant deferral is absolutely coherent with psychoanalytic theory.

digitalisation processes in general as ontological repetitions, or even, as will be further shown, in terms of *différance*.

Ontological repetition does not imply a hierarchical difference among diverse ontological statuses, but it simply means that difference can be found between repetitions, which are ontologically equivalent:

> Beyond physical repetition and psychic or metaphysical repetition, an ontological repetition? The role of the latter would not be to suppress the other two but, [...] to distribute difference to them (in the form of difference drawn off or included)[...].
> In a certain sense, the ultimate repetition, the ultimate theatre, therefore encompasses everything. (Deleuze 1968 [1994]: 293)

This seems to be a suitable model to think in a completely diverse fashion about the relationship generated by digitalisation processes between what can be called ‘a virtual archive’—for example, the Web, museum or gallery websites, certain applications and even social networks—and its referent, when it has one.

Jay D. Bolter and Richard Grusin limit their explanation of this process to focus exclusively on media, thus defining ‘repurposing’ as the complete translation of one medium into another one (2000: 45). The typical, best-known example of this would be the repurposing of a novel into a film. In this case, the content of the first medium is completely, and often loosely, translated into the second. One could also understand in these terms an artwork that one can find, and perhaps even buy, on a

commercial gallery website. The materiality of a painting, a print, an installation, or any other medium has been "translated" into code, and then into pixels that are displayed on a screen so that the "translated" piece is recognisable and available online on a certain website. For example, this was the aim of one of the first gallery websites like Artnet (artnet.com) whose mantle has been taken up by newer sites like Artsy (artsy.com). The same element of translation could be said to be at work on almost any gallery or auction house site.

In a second instance, the authors explain and differentiate from repurposing, the concept that lends the book its title, namely, *Remediation*. For this text, they further developed Marshall McLuhan's famous statement in *Understanding Media: The Extensions of Men* (1964) that the content of a medium is always another medium. Bolter and Grusin thus define remediation as 'the representation of one medium in another' (23-24), identifying it as a defining characteristic of all new media, though not exclusive to them. In this sense, for example, one can single out different phenomena of repurposing if one considers each single digitised artwork on a platform like Google Art Project. However, when analysing the whole apparatus in more depth,[9] the project can be

[9] In this context, the concept of apparatus is understood in Giorgio Agamben's formulation: 'I wish to propose to you nothing less than a general and massive partitioning of beings into two large groups or classes: on the one hand, living beings (or substances), and on the other, apparatuses in which living beings are incessantly captured. […] Further expanding the already large class of Foucauldian apparatuses, I shall call an apparatus literally anything that has in some way the capacity to capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions,

better understood if considered in terms of remediation of the museum, or public collection. This would imply, evidently, accepting a very broad definition of medium, again following McLuhan, and to accept including the museum in it. Google Art Project[10] permits its users to access often complete museum and public collections with many or most of the works digitised in high definition. It often offers the possibility of accessing a three-dimensional rendering of the museum building, thus allowing the user to take a virtual visit and see how the collection is actually installed.

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or discourses of living beings. Not only, therefore, prisons, mad houses, the panopticon, schools, confession, factories, disciplines, juridical measures, and so forth (whose connection with power is in a certain sense evident), but also the pen, writing, literature, philosophy, agriculture, cigarettes, navigation, computers, cellular telephones and—why not—language itself, which is perhaps the most ancient of apparatuses—one in which thousands and thousands of years ago a primate inadvertently let himself be captured, probably without realizing the consequences that he was about to face' (Agamben 2006 [2009]: 13-14).

[10] Google Art Project and Google Cultural Institute: https://www.google.com/culturalinstitute/project/art-project?hl=it

The difference consists in that Google Art Project is what users can actually find in online digitised collections. Many museums, though not all of them, have access to the 'Museum View,' which uses the same logic of three-dimensional rendering as Google Street View, with the added possibility for users of navigating the virtual space. Recently Google Street View has included the possibility of entering certain museums, such as the Metropolitan Museum in New York, when navigating through the streets of certain cities. Whereas Google Art Project is the tool for digitalisation and uploading of collections and museum views that Google offers for free to institutions as crowdsourcing. https://www.google.com/intl/it/culturalinstitute/about/users/

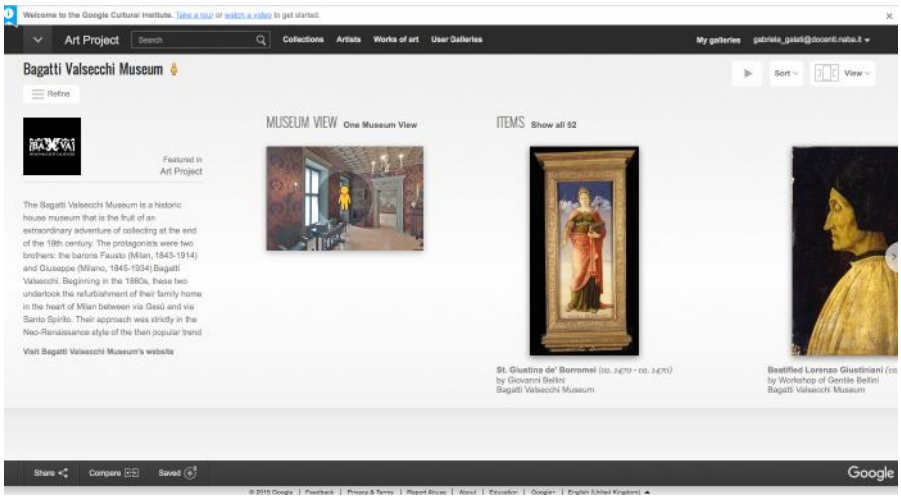

Fig. 1 Museo Bagatti Valsecchi on Google Art Project/Google Cultural Institute (screenshot).

Available e from: https://www.google.com/culturalinstitute/u/0/collection/museo-bagatti-valsecchi?projectId=art-project&hl=en-gb

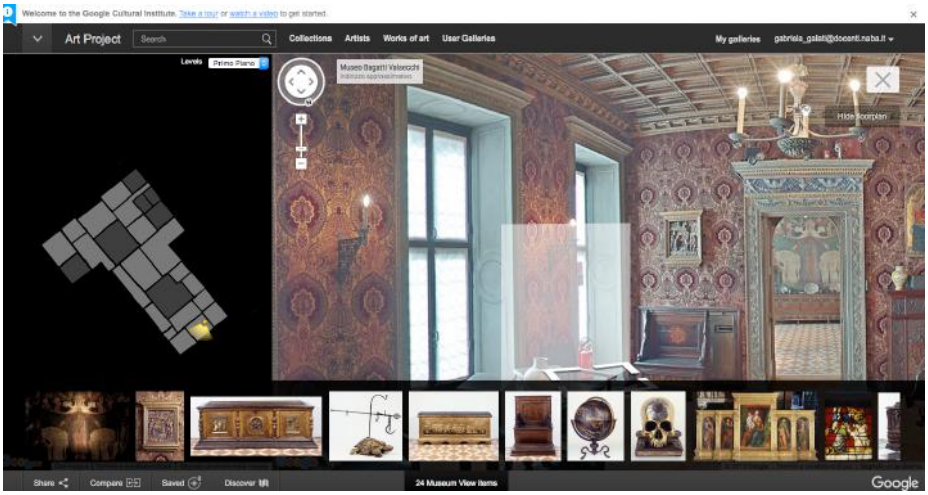

Fig. 2. Museo Bagatti Valsecchi on Google Art Project/Google Cultural Institute, mode Museum View (screenshot).

Available from: https://www.google.com/culturalinstitute/u/0/asset-viewer/bagatti-valsecchi-museum/AgEbD-OZIn6mVA?hl=en-gb&projectId=art-project

Another good example is the Sistine Chapel virtual visit on the Vatican website,[11] which allows the visitor not only to do a 360 degree loop around the space of the Chapel, but also to zoom in on details, like the ceiling or higher points of the Chapel that a "physical" visitor could not normally access.

Fig. 3. Sistine Chapel 3-D rendering (Screenshot).

Available from: http://www.vatican.va/various/cappelle/sistina_vr/index.html

There are many further examples, but these two cases suffice to exemplify what can be understood in terms of remediation: the virtual version of the museum remediating the physical one, 'representing' the works and the physical space of the museum, and at the same time offering features that the physical experience can potentially allow but

[11] http://www.vatican.va/various/cappelle/sistina_vr/index.html

which is in fact very difficult to provide, such as the functionality of zooming in for close-ups.

Both processes, repurposing and remediation, are often read in terms of representation—which in fact, the same definition of remediation contemplates. Representation, as advanced above, is often regarded as a diminished version of "the real thing", whether it's a visit to the museum or the appreciation of a certain artwork. In short, it's positioned as a weaker surrogate[12] of the physical (represented) experience. This kind of reading[13] is what further fosters Manichean dichotomies, a clear example being the opposition of the virtual experience—associated with negative qualities like escapism—to physical reality, which is associated with true, original experience.[14] Following this line of reasoning, it is then possible to detect, in Deleuzian terms, the conceptualisation of reality as an original, and of digital reality—whether it has a physical referent or not, the reading is always the same—as its degraded copy.

[12] This kind of consideration is also at the centre of the critiques of social networks and the weakening of face-to-face social relationships. In this respect, Sherry Turkle has developed an extended and deep reflection entitled *Alone Together* (2011). However, this is not the focus of this work.

[13] By this I mean the interpretation of representation in these terms, and not of course the concepts of repurposing and remediation, which hold great explicative power regarding different processes within the new media landscape.

[14] In the following chapters it will be shown how, depending on the context, this simplistic reading of the virtual as having a weaker ontological status than physical reality—typical in the context of "mainstream," or so to speak, the traditional art world—is overturned in other contexts, such as that of cybernetic theory, as notoriously demonstrated by Katherine Hayles (1999, 2005).

It is not a question of downplaying the experience of actually being inside the Sistine Chapel or in front of any other artwork, thing or person. Nor is it a matter of degrading, or upgrading, an immersive experience in a virtual reality environment or the experience of playing some first-person shooter video game with an Oculus Rift set—or any other (super immersive) device. The key point is to try to think in terms of ontological repetition, to not compare any of these experiences as more intense, truer or worse than the other, but to try to consider them as simply different. They are repetitions, iterations, and they repeat themselves as different ontologies. Difference does not mean that one is of a higher ontological level than the other, that one has a more real experience, but to try to consider that difference is already present between one and the other repetition, as it seems to clearly stem from Deleuze's words: 'there is no doubt that we have the means to distinguish between repetition and simple resemblance, since things are said to repeat when they differ even though their concept is *absolutely* the same' (1968 [1994]: 270).

The importance of this intent consists, first of all, in the aforementioned avoidance of a conceptualisation of the world in terms of binary oppositions. Secondly, and in close relationship with the previous point, it has the advantage of fostering the overcoming of the separation between subject and object: we are already immersed in an intertwined reality of artificial, digital, organic and physical environments. There is no sense in thinking about these environments in terms of oppositions, but it is worth searching for models that can help us

understand the intricacy of these complex environments. In this sense, Derrida's *différance* can be of use to be able to further embrace this complex terrain.

1.4 Digitalisation & *Différance* in Art

It is not easy to think of digitalisation in terms *différance*, as it was possible to do above with Deleuze's conceptualisation of ontological repetition, but undoubtedly it helps to clear the terrain of further oppositions and add a necessary level of complexity to the model.

Mario Vergani[15] proposes that *différance* can be thought as a non-oppositional but only differential response to dialectics (79), a response that is of course of constant deferral, otherwise it would be a dialectics in itself. Would it thus be possible to think of digitalisation processes and, more broadly, of complex environments in terms of *différance*, of a constant deferral? The concept of *différance* intends to go beyond ontological difference. In this sense, I propose that the conception of *différance*, as quoted above as the condition of possibility of writing, but

[15] Mario Vergani (1968) is an Italian Researcher and Professor of Philosophy at the Università di Milano-Bicocca. He wrote several books on theorethical philosophy and phenomenology, among which: Vergani, M. (2012) *Separazione e relazione. Prospettive etiche nell'epoca dell'indifferenza*. Pisa : ETS; (2011) *Levinas fenomenologo. Umano senza condizioni*. Brescia : Morcelliana.; (2007) *Dal soggetto al nome proprio. Fenomenologia della condizione umana tra etica e politica.* Milano : Bruno Mondadori; (2000) *Jacques Derrida*. Milano : Bruno Mondadori.

also of writing as the dimension in which *différance* emerges (50), can be of use to think about the digital not in terms of a (degraded) version of material reality, but as always deferred. Reality can no longer be considered as a '*primum interpretandum*' (the grounding of all interpretations), regarding which digital (or other) realities are compared, or considered to derive from—it is a 'differential game' in permanent construction and deconstruction which generates meaning, but upon which meaning emerges elsewhere too.

It is important not to consider material reality as the origin of the digital, as its original, but to consider their relationship, when one exists, in terms of a permanent deferral that generates sense, in the same way that it is generated in other texts. In this sense, digitalisation can be considered as an archi-trace; in the same sense that Derrida's writing is a writing of writing. This means that the trace exists in the extent to which it is repeatable, iterative, and does not have an origin (in reality, or otherwise), but is re-written constantly in the uncountable (if not infinite) feedback loops with all actors and environments with which it is interwoven.

Three interesting cases are now proposed to begin to consider these issues from the proposed perspective. While the first implies reproduction and repetition performed by a human agent, namely artist Elaine Sturtevant, the second and third examples involve, and evolve, in

the context of digital technologies. One is *LONELY LOS ANGELES* (2005) by Guthrie Lonergan and the other is a piece by the Italian duo Eva and Franco Mattes (a.k.a. 0100101110101101.org) from the series *Re-Enactments* (2007-2010).

Sturtevant (1924-2014) was an American artist, and it could be said that her oeuvre remained under-recognised for approximately twenty years (until the 1980's). As Leo Castelli claims in an interview with Dan Cameron and Sturtevant for *Flash Art International* in 1988, she was possibly the first appropriationist. No other artist was doing what she did at the time when she started (in the Sixties), and it was incredibly original (Cameron 1988 [2014]: 63). Sturtevant's work opens up avenues to think about a human (artistic) activity or performance that, even when manual and unique, conveys the flavour of mechanical reproduction. This direction was of course first hinted at by the work of Marcel Duchamp, but Sturtevant seems to have extended this logic further. While Warhol repeated his own works—and he purposely repeated them imperfectly so that they could be unique—Sturtevant repeated the works of others.

Deleuze exemplifies his theories with the work of Andy Warhol in *Difference and Repetition*. He dedicates a whole page to art when speaking about ontological repetitions and a distinction between repetition as habit and repetition as memory that will be further

commented on chapters 2 and 3,which is worth considering here,

especially his comment on Andy Warhol:

> Perhaps the highest object of art is to bring into play simultaneously all these repetitions, with their differences in kind and rhythm, their respective displacements and disguises, their divergences and decentrings; to embed them in one another and to envelop one or the other in illusions the 'effect' of which varies in each case. Art does not imitate, above all because it repeats; it repeats all the repetitions, by virtue of an internal power (an imitation is a copy, but art is simulation, it reverses copies into simulacra). Even the most mechanical, the most banal, the most habitual and the most stereotyped repetition finds a place in works of art, it is always displaced in relation to other repetitions, and it is subject to the condition that a difference may be extracted from it for these other repetitions. For there is no other aesthetic problem than that of the insertion of art into everyday life. The more our daily life appears standardised, stereotyped and subject to an accelerated reproduction of objects of consumption, the more art must be injected into it in order to extract from it that little difference which plays simultaneously between other levels of repetition, and even in order to make the two extremes resonate - namely, the habitual series of consumption and the instinctual series of destruction and death. […] Each art has its interrelated techniques or repetitions, the critical and revolutionary power of which may attain the highest degree and lead us from the sad repetitions of habit to the profound repetitions of memory, and then to the ultimate repetitions of death in which our freedom is played out. We simply wish to offer three examples, however diverse and disparate these may be: first, the manner in which all the repetitions coexist in modern music (such as the development of the *leitmotiv* in Berg's *Wozzeck);* second, the manner in which, within painting, Pop Art pushed the copy, copy of the copy, etc., to that extreme point at which it reverses and becomes a simulacrum (such as Warhol's remarkable 'serial' series, in which all the repetitions of habit, memory and death are conjugated); and finally the novelistic manner in which little modifications are torn from the brute and mechanical repetitions of habit, which in turn nourish repetitions of memory and ultimately lead to repetitions in which life and death are in play, and risk reacting upon the whole and introducing into it a new selection, all these repetitions coexisting and yet being displaced in relation to one another. (293-294)

Yet Sturtevant is the artist who systematically tried to apply what she read in this book to her own work, as she declared in an interview with Bruce Hainley and Michale Lobel (Eleey 2014). Sturtevant learned the necessary techniques to carefully reproduce the work of other artists, almost exactly, but not quite. As she explained (Cameron 1988 [2014]: 62-67), many artists knew what she was doing, although she wouldn't ask for permission to copy their work. Sturtevant declared that even if Claes Oldenburg was a huge supporter of her work from the beginning and that he deeply understood the concept behind it, evidently the emotions that seeing his work "appropriated" elicited were too strong to be able to intellectualise them (65). Similar were cases repeated over her career. In a posthumous exhibition at the Staatliche Museen zu Berlin entitled *Sturtevant: Double Drawing Reversal* (2015) it was possible to appreciate all of the trial and error proofs in her work process, until she arrived at the almost-perfect repetition. Famously, Andy Warhol allowed her to reproduce his works, but he wouldn't tell her how to do them. Later, when someone asked Warhol how a certain work had been done, his answer would be 'I don't know. Ask Elaine' (Obrist 2014).

In the same *Flash Art* interview, Castelli tells her that he owns one of her works, the eggs and frying pan that she realised for an exhibition with Oldenburg, that in fact he could perceive a difference, and states 'I recognized it. So anyway, you did what you did and you tried to reproduce the thing as best as you could.' Sturtevant's answer is

significant: ‘Not as best as I could because that implies something different—as closely as I could without copying it. When you copy something it becomes something else’ (Cameron 1988 [2014]: 64).

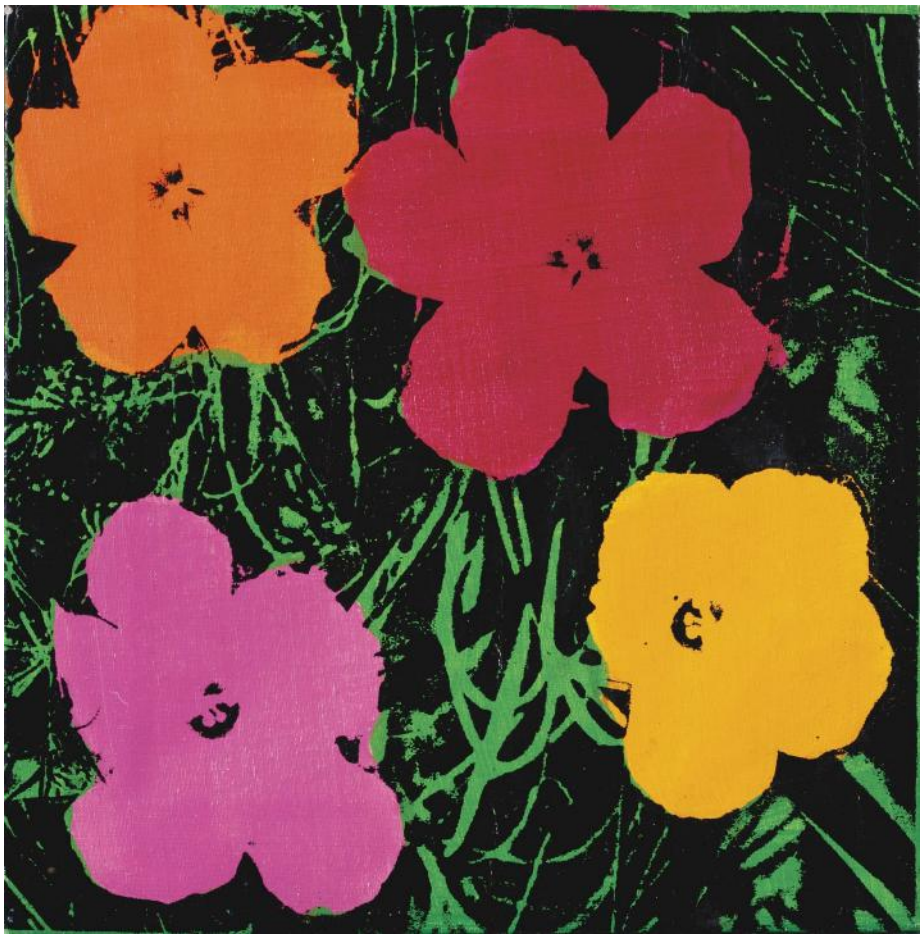

Fig.4. Elaine Sturtevant, *Warhol Flowers*, 1969. Synthetic polymer and silkscreen ink on canvas, 27.94 x 27.94 cm.

Although it is not difficult to recognise the reading of *Difference and Repetition* in her words, a valid question could be whether it's not more of a question of Derridean *différance*, and not simply difference and repetition. Is this way of working, consciously reproducing but with slight differences so that 'difference will be conveyed' in the infinite repetitions, more of a question of deferral? If one stops thinking of the "original" work as an original, as the '*primum interpretandum'* that grounds the later interpretation of the successive works as "copies", it is possible to understand both as texts, as interwoven texts in which one deconstructs the other, keeping both in dialogue. Between these successions of works, the absence of an origin generates meaning—those iterations, are the 'writings on writings.' In this sense, Vergani states that the consequence of these writings on writings is that there is no '*primum signatum'* either, so the original is no original but it can be considered only in terms of difference (Vergani 2000: 51).

This reading of Sturtevant's oeuvre does not invalidate her own reading of her work in Deleuzian terms, but it seems less forced. The fact that she purposely included a certain difference in her work suggests that she may not have completely grasped the strength and radicalism of Deleuze's work in its entirety, because the example that he gives of the perfect repetition conveying difference in full is Pierre Menard's *Quixote*, in which he reproduced Cervantes's *Quixote* word-by-word without copying it, but was infinitely better; in short, there was no need to make

imperfect reproductions. Moreover, the reproduction has to be perfect to convey the maximum of difference, because difference locates itself among displacements, between one repetition and the other, and by differences *in* repetitions themselves. In this sense, each repetition is an event:

> Borges, we know, excelled in recounting imaginary books. But he goes further when he considers a real book, such as *Don Quixote*, as though it were an imaginary book, itself reproduced by an imaginary author, Pierre Menard, who in turn he considers to be real. In this case, the most exact, the most strict repetition has as its correlate the maximum of difference (The text of Cervantes and that of Menard are verbally identical, but the second is almost infinitely richer…) (Deleuze 1968 [1994]: xxii)

Consequently, to consider her works in terms of difference between 'writings of writings', as a writing on other's artists works, in which there is no *primum signatum* and no *primum interpretatum*, in which the deferral between one and the other generate meaning in the form of an absence, and not necessarily as a readable mark seems appropriate.

Guthrie Lonergan's project *LONELY LOS ANGELES* is one of the earliest works that can be found in the artist and programmer's website, theageofmammals.com. Clicking on the link one can see screenshots of MapQuest 2004, the first one is from the busy centre of Los Angeles, below that there is an animated GIF of a small car, and below it sixteen maps of parts of the City of Los Angeles that either have a very low population density or are uninhabited. These maps are almost abstract, if

not completely abstract, as is the case with maps no.9 and no.12, which have no roads or geographical references. One map is completely grey and the other entirely green, with the exception of the scale graphic on the upper right hand corner.

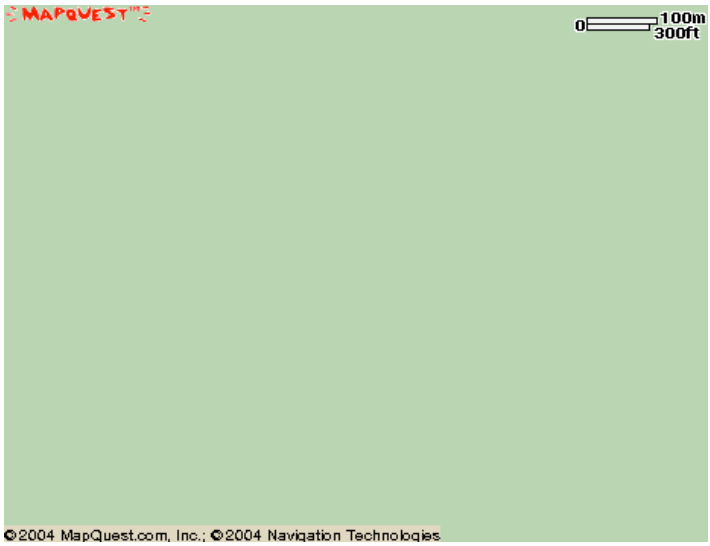

Fig. 5, 6. Gunthrie Lonergan, *LONENY LOS ANGELES*, 2005.

Available from: http://theageofmammals.com/blogmedia/lonelylosangeles/

All of the works, but especially these two maps, allude to Lewis Caroll's poem *The Hunting of the Snark* (1876), in which the character of the Captain employs a map of solely the sea, with no hint of land (Halter 2014: 245).

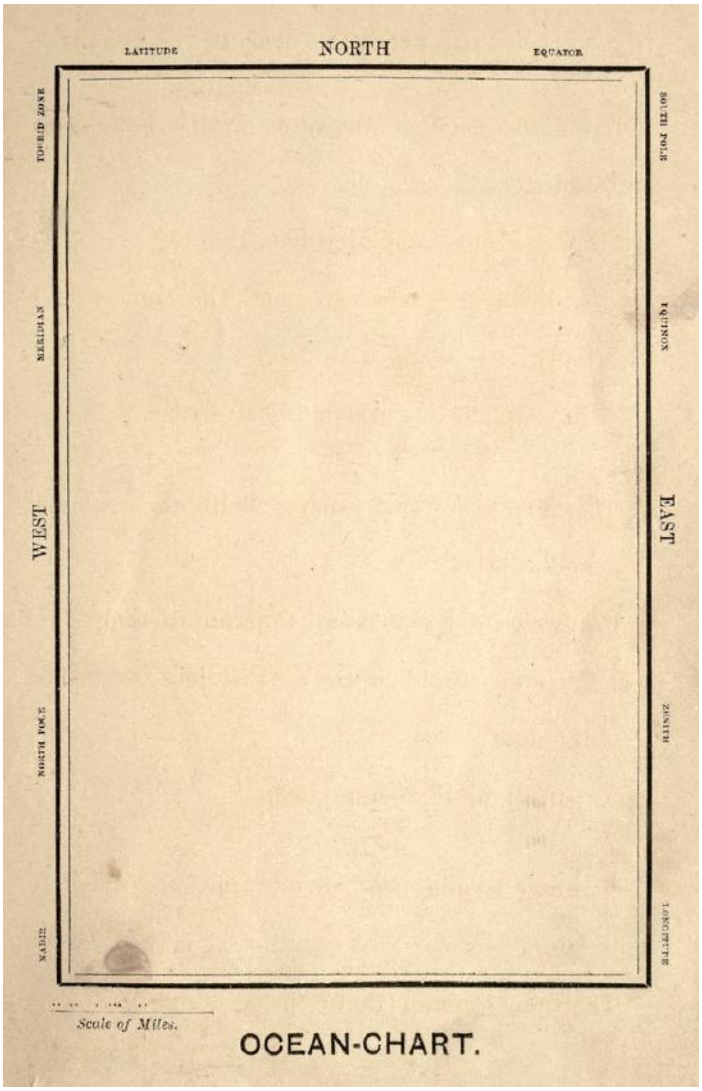

Fig.7. Henry Holiday, illustration for Lewis Carroll's poem *The Hunting of the Snark* (1876). Available from: http://publicdomainreview.org/2011/02/22/lewis-carroll-and-the-hunting-of-the-snark/

The first observation that comes to mind is that in the same way that language and meaning are produced by differential and oppositional relationships, these maps become just squares of colour, and are thus completely illegible without a frame of references, differences or contrasts within which to read them. There is something deeply absurd and ironic about a map of just the sea, or in this case of empty land. Would it therefore make any sense to consider *LONELY LOS ANGELES* in terms of representation? It would also be completely absurd to consider a green rectangle on a screen to be the representation of grass, or to consider that a supposedly precise part of Los Angeles is the *primum interpretatum* of the green square. More likely, a work like this one points towards the constant dialogues and constant loops between one and the other. Lonergan illustrates this point in his claim that he made the project before he had learned to drive, thus he was using MapQuest to navigate the city (ibid).

Finally, it is worth revisiting *Reenactments* (2007-2010) by Eva and Franco Mattes (a.k.a. 01010010101.org), the couple's re-make of canonical performances from the 1970's on Second Life, including Marina Abramovic and Ulay's piece *Imponderabilia.*[16] The original performance (1977) consisted of Abramovic and Ulay standing naked

[16] http://0100101110101101.org/reenactments/

http://0100101110101101.org/reenactment-of-marina-abramovic-and-ulays-imponderabilia/

one in front of the other inside the doorframe of the entrance to the museum on the opening evening, so that visitors wanting to enter the space would have to pass between them.

Fig.8. Marina Ambramovic & Ulay, *Imponderabilia*, 1977.

In the artists' words: 'Naked we stand opposite each other in the museum entrance. The public entering the museum has to turn sideways to move through the limited space between us. Everyone wanting to get past has to choose one of us' (Abramovic, Marina-Ulay 1977)[17]. At the time, the potentially shocking aspect of the performance was not only the choice of

[17] http://www.medienkunstnetz.de/works/imponderabilia/

which person to face, but also the possibility of physical contact with both.

What happens then in *Imponderabilia's* re-enactment on a virtual environment like Second Life? Eva and Franco Mattes' avatars replace Abramovic and Ulay and visitors wishing to take part in the performance need to connect at precise time. The evident comparison ends here, because it doesn't make sense to state what is evident: that the physical contact with the performers gets completely lost. Interaction and comments are mediated through the chat room. Participants range from stylish, sexy avatars to a kind of Hello Kitty character enactment (minute 2:24 on the artists' website video). The possibilities to have contact with Eva and Franco Mattes do not include the tactile dimension, but allow for the trespassing of "bodies" (minutes 1: 11; 2:36), as when one of the participants "trespasses" through Eva—a trespassing that is evidently not of matter, but simply of computer graphics. In this context, if it is possible to talk about a digital/virtual environment re-enactment of analog performances of the past, so to speak, it makes no sense to take the comparison further to complain about what gets lost, and celebrate what is possible to achieve that physics doesn't allow, on planet earth at least.

Fig. 9. Eva and Franco Mattes (a.k.a. 01010010101.org), *Reenactments,* 2007-2010. (Screenshot). Available from: http://0100101110101101.org/reenactment-of-marina-abramovic-and-ulays-imponderabilia/

It is more desirable to consider this type of event as a kind of ontological repetition in which the main conditions (the same concept, in Deleuze's terms) are to be kept constant but many others are completely different. In the case of the Mattes couple, this is not only the materiality of the performance, but also the ways in which the participants interact amongst themselves and with the performers—mainly through chat and not with the voice. As Pierre Lévy clearly explained, texts are already virtual, they are the virtualisation of memory (1995 [1997]: 27). They imply exiting the 'here and now' (9) of the oral transmission of memory, at the same time enabling its projection (the content of the text) to the future, to a possible future in which it can be read. Thus virtualisation in the digital—the departure from the here and now of the digitised object—

does not mean in any way “dematerialisation”, in the sense that things, texts, events and people become just zeroes and ones, or pixels on a screen, but a deterritorialisation: there is the possibility of accessing these texts, in this case a performance. It is unique in the first as well as in any other possible re-enactments, and independent of any fixed connection with a concrete place and precise moment, although it happens each time at a certain moment.

However, here again, there is the consideration of an origin, the point of departure would be the performance that physically took place in 1977, and Eva and Franco Mattes’ version on Second Life would be its deterritorialisation, its version; thus the link to the origin is still there.

Manovich named the fact that new media objects, as he calls them, have only ‘versions’ and no original, or negative, and no copies, ‘variability’, and defined it as one of the five principles that distinguish analog or modern media from digital technologies (2001). Of course Manovich was referring to the version of a certain file, like an image for example, which could be saved applying different filters, or by modifying colours, quality or dimensions. However, none of these ‘versions’ have the value of a negative from which copies are derived. This quite technical observation would also be an interesting way to understand repetition in this case. Again, it makes no sense to consider the re-enacted performance as the original that has been “copied” in a “virtual” version, but rather to think

of these re-enactments as versions, as a kind of variation, as repetitions in complex environments that differ from one another but in which difference does not imply hierarchisation.

Moreover, it can also be considered in terms of *différance,* as two texts that are related to each other through deferral, not only deferral of space and time, but also by the traces left behind. Discussing books and electronic texts, Katherine Hayles considers that ‘the ontology card is not worth playing. There is no Platonic reality of texts. There are only physical objects such as books and computers, foci of attention, and codes that entrain attention and organize material operations’ (2005: 97). As there is no possibility of encoding the whole materiality of a book in a digital version, she prefers to talk about ‘correspondences’ between books, texts and electronic texts. However, artistic objects, or events, which in the cases analysed above also include people, are not texts. Even if the performance has a certain script to follow, a kind of algorithm that states, more or less, that in the *Imponderabilia* performance a couple should be standing naked one in front of the other at the entrance of the gallery space or museum and people wanting to enter should pass between them, thus choosing who to face and entering in contact with the nude bodies, the general conditions would be completely unique each time. Actors, the gallery, the public, the weather conditions, everything would be different, and each event would be unique, precisely because it is an event.

This means that successive repetitions, virtual, online and digital repetitions can be considered in terms of *différance*, of a slippage, the deferral that generates a dialogue between texts, namely, between material and digital versions of the same performance, of the same concept, and in doing so generates meaning. It is not easy to leave the search for an origin aside, nor is it easy not to consider the origin of the other. However, it is worth making an effort because it offers the invaluable advantage of, possibly, being able to navigate our time with fewer dichotomies, and thus be able to embrace complexity.

2. Simulacra

The previous chapter argued that the concept of representation is misleading. The text instead followed a line of thinking that sought to understand the analytical intricacy required to navigate complex environments today: environments engaged in constant feedback loops between artificial and non-artificial entities, digital and analog technologies and domains.

This second chapter proposes considering the concept of simulacrum as a further exit strategy from representation and the corresponding dichotomies that originated in transcendent thought.

With this aim, and thus not following a strict chronological order, it seems necessary to first signal a departure from negative and critical conceptualisations of the simulacrum—which are obviously linked to the Platonic residue of representation—as famously developed by Jean Baudrillard.

In a second moment, the vision of the simulacrum as the only possible way to conceptualise reality without further Platonic dichotomies will be presented in Gilles Deleuze's thought. A complementary model, Charles Sanders Peirce's triadic semiotic model, will then be proposed, which

further avoids binary oppositions and can be useful to elicit thinking in more complex terms.

2.1 The Overcoming of Baudrillard's Conception of Simulacra

In *Symbolic Exchange and Death* (1976) Jean Baudrillard extensively analyses an ongoing process of reality's dematerialisation in capitalist societies, which he argues is due to the overabundance and dominium of signs over reality. Baudrillard explains different aspects of this process, notoriously defining three different orders of simulacra, which correspond to the three levels of the process of dematerialisation and ascendancy of signs over the world.

Baudrillard's defines the real as 'that of which it is possible to provide an equivalent reproduction' (Baudrillard 1976: 114). Therefore, in his thought, the real is a kind of original on which fallacious copies are produced and spread. Baudrillard argues further that, in our present condition, the concept that we need to define our relationship with the world is not the real, but the *hyperreal*. This condition has been enabled by the loss of the referent and the continuous circulation and arbitrariness of the sign, in which the correspondences between sign and referent, or to

put it another way, of words and world, is completely lost. The real then gets "trapped" in an infinite repetition of itself:

> The end of the spectacle brings with it the collapse of reality into hyperrealism, the meticulous reduplication of the real, preferably through another reproductive medium such as advertising or photography. Through reproduction from one medium into another the real becomes volatile […] but it also draws strength from its own destruction, becoming the real for its own sake, a fetishism of the lost object which is no longer the object of representation, but the ecstasy of denegation and its own ritual extermination: the hyperreal. (Baudrillard 1976: 116)

One of the first and most simple objections that come to mind in this respect is the impossibility, so far at least, of eradicating the material substrate of physicality in a radical sense (if one agrees that there is a material substrate, such as Baudrillard does). In more concrete words, and as already advanced by Tomas Maldonado (1992), even if one spends eighteen hours a day in a virtual reality environment, playing video games or watching TV immersed in advertising and photographic reproductions, as Baudrillard mentions in the quote above, one still cannot avoid basic physical and physiological necessities such sleeping, eating and so on. Despite the fact that Baudrillard's warning about the dematerialisation of reality may have been, and hopefully was, a metaphoric exploration of this idea, when understood in a literal sense, it generated a significant deal of confusion in theory and criticism on

digital media.[18]

The hyperreal is the consequence of simulacra. As noted above, Baudrillard defines three orders of simulacra. In first-order simulacrum there is a counterfeiting of an original. First-order simulacra are characteristic of the historical period that extends from the Renaissance up until the Industrial Revolution. The author identifies in this stage 'the end of the obligatory sign' and the successive 'reign of the emancipated sign' (85) wherein there is a passage from an order in which the proliferation of signs was limited and subject to strict rules and prohibitions—generally by religious institutions—to a stage in which signs are dominated by the law of demand. This proliferation of multiple signs according to the corresponding demand is not controlled by the law that obliged them anymore, but they are instead a counterfeit of the original obligatory sign. Baudrillard identifies a necessary and obligatory relation between the sign and the natural referent that it "should" and used to have. He exemplifies the stage of first-order simulacrum with the 'stucco angel', which he identifies as a symbol of baroque opulence and 'forgery'—of nature and the 'natural referent'… And this will get still more Platonic.

[18] To this confusion, that Maldonado had briefly discussed in some of the essays published in Italian under the title *Reale e virtuale* (Real and virtual), Katherine Hayles has dedicated a whole book, *How We Became Posthuman, published in 1999*. This topic will be further discussed throughout the text, but especially on Chapters 5 and 6.

Baudrillard compares the automaton and the robot to explain second-order simulacra: the automaton is a technical artifact that counterfeits humans 'by analogy' (88), and in which the link with the 'natural referent' is therefore preserved and evident. In the robot and the machine a relationship of (false) equivalence is established:

> The automaton is the *analogon* of man and remains responsive to him (even playing draughts with him!). The machine is the *equivalent* of man, appropriating him to itself as an equal in the unity of a functional process. This sums up the difference between first and second-order simulacra. (88)

The issue in second-order simulacra is no longer a problem of resemblance, but rather how all differences and similitudes have been absorbed to let way to 'the principle of operativity' (90): 'such is the machine, such is the entire system of industrial production' (89). According to this logic, all originals have thus been lost. Only pure series remain, which are copies that have the logic of serial production. In terms of the sign, it entails circulation—the reproduction of a sign without a referent.

Finally, Baudrillard defines the third-order simulacrum as the moment in which 'there are models from which all forms proceed according to modulated differences' (1976: 92). In this last form of simulacra, which coincides with hyperreality, there is no longer mechanical reproduction, but instead 'everything is conceived according with their very reproducibility, their diffraction from a generative core called a "model"'

(92). If first-order simulacra corresponded to a pre-industrial era, and second-order simulacra corresponded to mechanisation and industrial reproduction, third-order simulacra correspond to the era of binary code and cybernetics (94-96). Third-order simulacra correspond to the era of simulation, not only is there no ‘natural’ or ‘obliged’ referent for the sign, but it is a time of ‘generative models’ (97). Through codes, pure simulacra, pure signs can be generated. What is worse, they can definitively replace reality ‘according to modulated differences’.

This kind of understanding of simulacra has several problems, which are largely considered already overcome. However, it is still important to clarify Baudrillard’s conception of simulacra because Baudrillard is in part responsible for its negative acceptation, which was engendered by Plato, but the concept nonetheless had its followers. In the first place, Baudrillard’s conceptualisation of the simulacrum through the idea of the dominance of signs reveals a semiotic substrate that implies the axiom that there is a perfect correspondence between signs and the world. This idea will be better discussed and challenged in chapter 4 through Lévi-Strauss’ concept of *mana* and the floating signifier, which considers the fact that signs and the world do not completely fit, there is an evident overspill of the world over signs, and conversely, language can build worlds that do not have a material referent.

Secondly, this implied axiom leads to the supposition that there actually *is* a material substrate that is good, or at least better, as opposed to the 'dematerialised' hyperreal, which is quite negative.

2.2 Deleuze and the Simulacrum as the Actual Overcoming of Representation

In the context of this research, the simulacrum is understood as a conceptualisation used to project one's actions: there is no faith in matter anymore, so simulacra serve as models to better understand the world. Therefore, Deleuze's development of the idea of simulacrum as advanced (eight years earlier) in *Différence et répétition* (1968) has proven to be more coherent and useful than Baudrillard's model, and is congruous with the overcoming of representation. Deleuze eliminates the opposition between world and symbols, between an original or model and its reproduction. As he explains at the very beginning of the book, the world of representation was the world of identity—Plato's world—but modern thought was born amidst the loss of identities and the failure of representation. It is thus a world of simulacra; all identities are only simulated, 'produced as an optical "effect" by the more profound game of difference and repetition' (xix).

Examining how Plato had to 'surrender to representation' in order to liberate the relation between model and copy from the simulacrum, Deleuze makes evident how Plato abhorred the idea of simulacrum. The copy still maintains an internal spiritual and ontological relationship—and thus not one of pure resemblance—with the Idea through the model, because the model takes part of the essence of the Same. The simulacrum, on the other hand, is a phantom that has no link with the model, nor with the copy. In this sense, the copy has a direct relation with truth, while the simulacrum is, precisely, pure simulation with no relationship to being or truth whatsoever (265). This is also part of the reason why Plato despised poetry and art, and especially painting: because art, mimetic art, has two grades of separation with the Same—namely, with truth. In short, it is pure simulacrum.[19]

[19] Erick Havelock, 1963, has extensively and brilliantly explained the relationship between simulacrum, poetry and mimesis in Plato: 'This is precisely the turn given to the term as the argument of Book Ten unfolds itself. True, poetry to be banned is at first qualified as "poetry in so far as it is mimetic", but this qualification then appears to be dropped. Plato as he says himself has now sharpened his vision of what poetry really is. He has transcended the critique of Book Three, which confined itself to dram as its target. Now, not only the dramatist, but Homer and Hesiod come into question. Nor is the issue any longer confined to protecting the moral character. The danger is one of crippling the intellect. Why is this? The answer, he replies, will require a complete and exhaustive definition of what *mimesis* really amounts to. This answer depends on whether we accept the Platonic doctrine, established in the intervening books, that absolute knowledge, or true science if we so choose to call it, is of the Forms and of the Forms alone, and that applied science or skilled technique depends on copying the Forms in artefacts. The painter and the poet achieve neither. Poetry is not so much non-functional as anti-functional. It totally lacks the precise knowledge that a craftsman for example can apply to his trade, still less can it employ the precise aims and goals which side the skilled educator in his training of the intellect, For this training depends on the skill of calculation and measurement; the illusions of sensible experience are critically corrected by the controlling reason. Poetry *per contra* indulges in constant illusionism, confusion and irrationality. This is what *mimesis* ultimately is, shadow-show of phantoms, like those images seen in the darkness of the wall of the cave.

Instead, for Deleuze, the modern world is one of simulacra (xix), a world in which all identities have been lost. It makes no sense to think in terms of representation, models or copies. It is instead necessary to embrace simulacra. Unlike Baudrillard, Deleuze refrains from expressing any kind of positive or negative judgement in relation to this situation. For him, representation simply does not suffice any more to understand and explain the current state of complexity. Clearly in this conception there is no connection to any supposed material, or idealistic foundation. The simulacrum and the symbol are one and the same thing, the simulacrum is a sign that has interiorised 'the conditions of its own repetition' (66-67):

> Everything has become simulacrum, for by simulacrum we should not understand a simple imitation but rather the act by which the very idea of a model or privileged position is challenged and overturned. The simulacrum is the instance which includes a difference within itself, such as (at least) two divergent series on which it plays, all resemblance abolished so that one can no longer point to the existence of an original and a copy. (69)

The simulacrum, thus expressed, is the only possibility of setting up the conditions of 'real experience', thus conceiving of the simulacrum in this way helps us to understand, navigate, and actively inhabit complex

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[…] But is now obvious that mimesis has become the word par excellence for the over-all linguistic medium of the poet and his peculiar power through the use of this medium (meter and imagery are included in the attack) to render account of reality. For Plato, reality is rational, scientific and logical, or is nothing' (24).

environments that can result, as it will be further argued, in complex subjectivities.

It is important to underscore that the simulacrum is not understood in this sense as an uncritical and passive accomplice to industrial serialisation, or even code-based simulation—as was Baudrillard's argument—but on the contrary, thus considered, it can be a tool to avoid this trap. The simulacrum is to be thought in terms of difference and repetition and not of representation. Every simulacrum is differential and carries difference in itself.

2.3 Peirce's Triadic Model as a Complementary Exit Strategy

An interesting and complementary model to overcome dualistic thought and steer the discussion towards the terrain of simulacra can be found in Charles S. Peirce's triadic model in the field of semiotics. In the previous chapter, it was mentioned that Derrida's critique of Ferdinand de Saussure's dyadic theory of the sign through his introduction of the concept of *différance* pointed at avoiding, among other issues, binary thought. Derrida finds in the opposition of signifier and signified another way of conceiving the world in terms of pairs of opposites—of binary

oppositions. Examining a triadic model like Peirce's[20] and placing it in relation to simulacra can also contribute to the 'deconstruction' of this fallacy.

Peirce's triadic model is important within the context of this research because, for him, any mode of thinking and cognition depends on its use of signs. Thus, thought and objects are signs in themselves. Peirce considers both the mental image of a table as well as the table itself to be signs, depending on the position each of these terms occupies in turn in the process of infinite semiosis.

It is then important to explain how Peirce defines semiosis and signs:

> By semiosis I mean an action, an influence, which is, or involves, a cooperation of *three* subjects, such as a sign, its object and an interpretant, this tri-relative influence not being in any way resolvable into actions between pairs (1931: 5.484).

As Umberto Eco explains, when Peirce talks about 'subjects', these are not necessarily human. The process of semiosis does not imply any communicative intention (1976: 15), and the object can be, but is not necessarily, an object, because Peirce defines the object as anything that can be thought.

[20] A hint at this process can be provided by the fact that Peirce's model had not had the success (in Europe) that Saussure's had, in spite of the fact that an influential theorist like Umberto Eco did so much to explain his oeuvre. In this regard, see Eco 1968, 1975 [1976], 1983.

A sign is then 'something which stands to[21] somebody for something in some respect or capacity' (1931: 2.228), it denotes a certain object, and the understanding of this something that 'stands for' is mediated and only possible through the third element, the interpretant; the interpretant is the effect of a sign, the signification or interpretation of a certain sign. Although Eco does not deny that in order to imply some kind of interpretation through the interpretant there can be a certain 'psychological event in the mind of a possible interpreter', he states that it is also possible to think about semiosis processes 'in a non-anthropomorphic way' (Eco 1976: 15). The process of infinite semiosis is produced when the interpretant becomes a sign in itself with its own object and interpretant, a chain that can be indefinitely repeated (2.303).

Therefore, one of the main advantages of this model when compared with Saussure's is that 'it does not demand, as part of a sign's definition, the qualities of being intentionally emitted and artificially produced' (15-16).[22] The model introduces several issues that hold great interest for the present work. First of all, it does not differentiate between human and non-human production of sense—although, as a semiotic theory, it does consider sense, unlike information theory (Shannon-Weaver 1948; Eco

[21] Even though Peirce uses the word 'representation', and also 'representamen' to name the part of the sign that holds a relation of determination with its object, he does never use the word 'representation' in his definition of the sign. The sign is not "representing" its object, but it 'stands for' it.

[22] In the context of this research, semiosis should imply a theory of communication, and therefore of intentionality. To deepen this topic please see Eco 1976, and other authors quoted by him.

1968, 1975 [1976]; Volli 2000). Furthermore, Peirce does not distinguish between material and non-material signs. In this theory there is no preponderance of material or conceptual hierarchies regarding thoughts and signs—virtuality and materiality in this sense are at the same level and potentially interwoven together. Moreover, for Peirce a subject (this time in the sense of human being) can also work as a sign, as well as thought:

> Now the representative function of a sign lies neither in its material quality nor in its pure demonstrative application; because it is something which the sign is, not in itself or in a real relation to its object; but which it is *to a thought*, while both of the characters just defined belong to the sign independently of its addressing to any thought. And yet if I take all the things which have certain qualities and physically connect them with another series of things, each to each, they become fit to be signs. (5.287)

Furthermore, not every part of a sign 'signifies' according to Peirce. The sign has a necessary relation with its object but not every part of the sign is equally significant in the semiosis process. In this sense, and unlike Saussure's model, this conception of the sign and of the process of signification already contemplates the idea of overspill, of *surabondance* of signification of objects over the signs that stand for them, but also of the signs over their objects: there are parts of the sign that do not have a correspondence in the object. In this model there is no illusion of a perfect correspondence between signs and their objects, which is another

reason why it proves to be especially useful in this context.[23]

Finally, in his famous 'Letter to Lady Welby' (1902) Peirce defines the three categories, or 'modes of being', which he calls 'cenopythagorean categories', that classify and give meaning to every phenomena and object of thought:

> Firstness is the mode of being of that which is such as it is, positively and without reference to anything else.
> Secondness is the mode of being of that which is such as it is, with respect to a second but regardless of any third.
> Thirdness is the mode of being of that which is such as it is, in bringing a second and third into relation to each other. (8.328)

Peirce exemplifies firstness with feelings, appearances or impressions (and not with experience). Secondness can be exemplified by action, by 'one thing acting upon another'. Finally, when law or reason comes in, there is thirdness: thirdness implies mediation, it is a third element that puts the first two into relation. The fact that Peirce explains thirdness in terms of thought (when law or reason come in, there is thirdness) underlines the fact that he considered thought as a kind of sign, and therefore not in terms of representation. Thirdness indicates a triadic relationship: 'thirdness is the triadic relation existing between a sign, its object, and the interpreting thought, itself a sign, considered as constituting the mode of being a sign. A sign mediates between the

[23] As it was already advanced, this topic will be fully developed on chapter 4.

interpretant sign and its object' (8.329). Through avoiding a dyadic identification between an essence and its expression or a materiality and its meaning, this triadic relationship proposes that the generation of meaning necessarily emerges from a relationship of thirdness: of three terms interacting in a limitless chain, the infinite semiosis which shows another path to think of significant processes that avoid the trap of representation. Consequently, it is possible to use this model to further think about complex environments in a way that actually accounts for this complexity without dividing each instance into virtual/material, digital/analog or simulacrum/original.

In the triadic relationship between the elements that comprise the semiotic process, from a phenomenological point of view, Peirce defines the ways in which the sign denotes its object as icon, index or symbol: the icon by a quality of similitude, the index by real connection to its object, and the symbol by a convention or rule for its interpretant. Considering, for example, digital environments that have a similitude with non-digital realities in the sense of an iconic relationship precisely avoids misunderstanding it as a representation. Ultimately, this research intends to think of the ways in which the feedback loops between humans and machines generate sense and new subjectivities, and this model is coherent with a complex semiosis process in which its terms can alternately be human, non-human, material and virtual: if comprehension of sense has been, so far at least, exclusively human, this model allows to

better account for the complexities in its production.

2.4 Images, Screens, Icons & Simulacra

A useful view, as already developed elsewhere (Galati and Bianchi 2014), is considering the (digital device) screen in terms of icon and simulacra, and not as a simple image. Peirce's definition of the sign and its triadic relationship has already been explained, thus how can the concept of simulacrum—considered as defined above—be of use to better understand images in general and digitised images in particular? The key point is the continuity between the world and the world of simulacra, and in a second stage, the consideration of the digitised object or image as ontological repetition, as extensively developed in the previous chapter.

There is continuity between images, the digital and the world. This comprises the 'univocity of being' (Deleuze 1968: 303) from which any dualistic separation between virtual and real, images and the world, images and digital images is definitely removed.

The confusion of the screen with an image can have its origin—in the case of computers, tablets and smart phones—first in the desktop metaphor of different operating systems and then in the progressive

elimination of interfaces thanks to touch-screen technology. The screen is not just an image. It displays images, usually through an interface, and these interfaces can, like the Renaissance paintings described by Leon Battista Alberti, be considered 'windows to other worlds' (1431).[24] In this sense, Peirce's semiotic theory can be of use to clear the path to understanding how interfaces and operating systems can work as icons or symbols in relationship to the signs, specifically, the referents and concepts that they loosely allude to.

Computer, tablet and cell phone screens display an interface that the user interacts with to navigate the device. This interface is part of an operating system that conveys a certain metaphor, namely, the desktop metaphor that makes it more user-friendly. As the operating systems were updated, and eventually improved, the will of "illusionism" began to grow. For instance, while previous versions were more 'modernist", according to Manovich, the Mac OS8 that launched in 1997 included a colour display, the trash icon had some volume and the calculator buttons had a shadow. Although the display was still fairly synthetic, its design conveyed a clear intention to represent three-dimensional objects. In Peirce's terms, it could be said that there was a passage from a symbolic to an iconic representation in the interface. In the first versions of the operating systems—at least in Apple's—the relationship between the represented

[24] In his *Tratatto sulla pittura* (1431) Alberti codified the linear perspective that Filippo Brunelleschi had "invented" a few years before, calling the pictorial surface in which space was represented 'a window to another world'.

objects (dustbins, folders and buttons) and the referent maintained some salient traits, but were not necessarily similar. Therefore, the represented objects and referent kept a conventional, and thus symbolic, relationship. Later versions of the operating system significantly increased the realism of their interface by ascribing similar traits to the represented object so as to allow a direct recognition, thus maintaining an iconic relationship. It is only then that a desktop icon coincided with the semiotic one.

In this sense, considering the world in general and the digital at large, including the screen and digitised images in terms of different types of simulacra is coherent with the avoidance of representation and the conception of digitalisation processes in general and digitised/digital artworks in particular in terms of ontological repetition.

Peirce's model, on the other hand, cannot only be applied to digitised images, digital screens or other related events in terms of an iconic relationship that evades representation and its corresponding dichotomies and ontological hierarchies, but it more importantly introduces a triadic model. This model places 'human and non-human cognisers' (Hayles 2005: 212)—namely natural, artificial, analog and digital environments—in a process of infinite semiosis (which would be no stretch to describe as a feedback loop) in which any instance can work as sign, object or interpretant of the others without making any ontological hierarchisations. In this sense, Peirce's model proves to have been quite

ahead of its time, considering we are still embroiled in discussions and explanations of the importance of avoiding these hierarchisations today.

2.5 Art & Simulacra

Deleuze talks about art particularly in terms of simulacra, in this sense all art is simulacrum. In the same way that every digitisation process, digitised image or digitally created thing is also simulacrum—yet in the sense of repetition, not in the notion of simulacra having a degraded ontology. There are of course, differences in all these repetitions, but not hierarchical differences at the level of the ontological status.

> Perhaps the highest object of art is to bring into play simultaneously all these repetitions, with their differences in kind and rhythm, their respective displacements and disguises, their divergences and decentrings; to embed them in one another and to envelop one or the other in illusions the 'effect' of which varies in each case.
> Art does not imitate, above all because it repeats; it repeats all the repetitions, by virtue of an internal power (an imitation is a copy, but art is simulation, it reverses copies into simulacra). (Deleuze 1968 [1994]: 293)

The previous chapter mentioned how Deleuze exemplified the development of difference and repetition with Andy Warhol's oeuvre. Warhol's series of silkscreens were mechanically reproduced, and, as is well known, he purposely left behind any "mistakes" like paint stains,

displacements that took place in the work's reproduction process, which of course made every version unique.

Within this context, it is worthwhile to expand the analysis to include the work of Italian artist Gabriele Di Matteo (born in Torre del Greco, Naples, in 1957) who can be said to have dedicated (almost) his whole oeuvre to exploring the impossibility of the copy in art, particularly to how this might relate to the limits of painting.

Di Matteo started exploring the subject of copying and reproducing in the early Nineties. In fact, it was around this time that his interest shifted towards the mechanism of image reproduction rather than on images themselves (Verzotti 2002). In the early project *Biografie* (1991) at Galleria Fac-Simile in Milan he reproduced a series of covers from a collection of Spanish books form the Fifties on a large-scale canvases, each of which was dedicated to a relevant character in the history of universal culture. Each character was depicted on the cover in an illustrated portrait, significantly, the first portrayed was Johannes Gutenberg. Di Matteo first enlarged a photograph of the covers to the desired size (250 x 174 cm) through the scanachrome[25] technique, then painted on some of them while others were simply left as scanachromes. The operation performed in this project still remains within the terrain of

[25] Inkjet print on big dimension surfaces.

repurposing defined by Bolter and Grusin. In other words, the work functions as a translation from one medium into another and not its 'remediation.' Even if the reproduction is quite exact, the measures, technique and context vary considerably, obviously when translating a paper magazine to oil on canvas or scanachrome to canvas.

The project *Marcel Duchamp, a life in pictures: Illustrations by André Raffray* (1993-2002) adopts a similar spirit. In this case, Di Matteo realised two series of canvases and two series of cameos based on a book on the life of Marcel Duchamp for children illustrated by André Raffray (1977). The first version was realised in 1993 and based on the original French version, while the second was made in 2002 when the artist found the English version by chance. This work actually has three versions, because when he saw the English version, although the illustrations were the same, he noticed the slight differences in the colours of the different prints. Thus, Di Matteo decided to print the second book as a scanachrome and then painted on it—which technically made the second scanachrome version disappear under the painting.

The artist hadn't started strictly "reproducing" yet, but this series provides another clear example of repurposing. This was enough to make the illustrator, André Raffray, very angry. Raffray eventually understood and accepted the project, which was the point when Di Matteo started to

question the absolute impossibility of actually copying art. These reflections would get much more specific and practical very soon.

In the Nineties, the artist also started realising large-scale portraits of cultural and political figures that again transposed photographs found in journals to paintings.

This is the case of *Arafat* (1996), which consists of five portraits and one scanachrome of Yaser Arafat and *The Blind Man* (1998),[26] which comprises five portraits of writer Jorge Luis Borges. However, he realised each series slightly differently. In the first series *Arafat*, which is based on a photograph of the Palestinian leader, Di Matteo painted the five canvases one after the other, trying to repeat exactly the same gesture in each one. In doing so, not only were the portraits repeated, but also the movement, action and necessary performance required for their realisation. The gesture itself thus becomes some kind of abstraction of painting. The procedure changed slightly for *The Blind Man*. Each time that the portrait was repeated, Di Matteo tried to make it as identical as possible to the preceding work, making an effort to remember and repeat the exact gestures performed to paint it. What's key here is not only repetition, but the role that memory played in creating the work, encountering in this task the evidence that it is impossible to copy art,

[26] Collection Musée d'art moderne et contemporain, Geneva.

and especially to copy painting. Painting is an act, an event, which implies that it can only be unique.

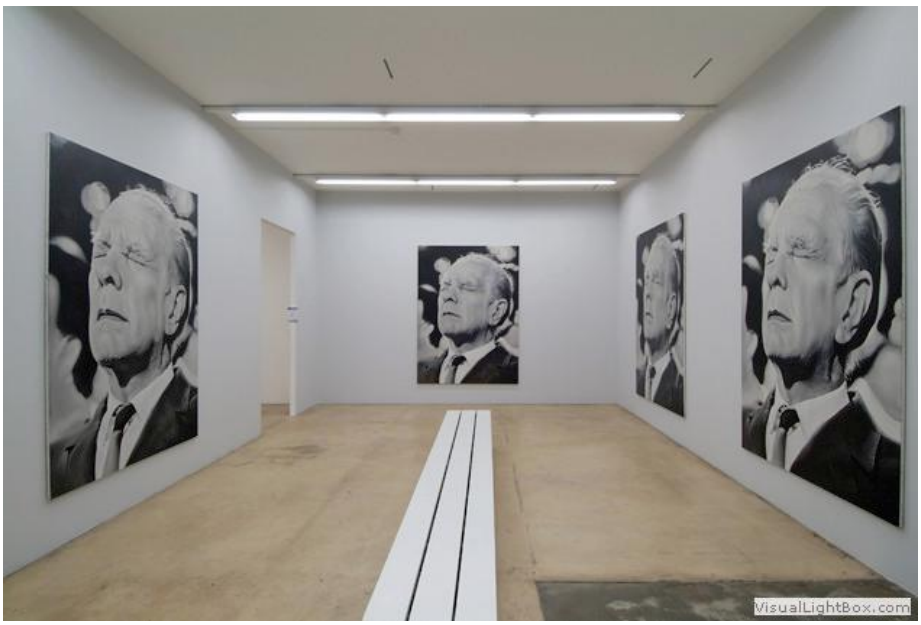


Fig. 10. Gabriele Di Matteo, *The Blind Man*, 1998. Installation view at Collection Musée d'art moderne et contemporain, Geneva.

Fig. 11. Gabriele Di Matteo, *Arafat*, 1996. Installation view.

Di Matteo could remember each gesture, but that gesture was produced in a certain moment in time—and that moment is impossible to repeat. No matter the level of perfection a certain "copy" can reach, it will always be unique. Even if the brief text explaining the work on the museum MAMCO's website[27] quotes the *Quixote* by Pierre Menard, and talks about the higher perfection of the copy, as was previously explained, talking about the copy in this context is to consider the *Quixote* by Cervantes as 'an original' of which copies can be drawn. Instead, as already explained, it would be more accurate to consider each one of these reproductions, whether they are paintings or scanachromes, as repetitions in which there is no identifiable first time, but only potentially infinite repetitions, and, the more perfect the repetition, the more difference it contains.

This was also the last time that Di Matteo painted one of his paintings himself; from then on, he began to collaborate with the school of the so-called Commercial Painters in Naples—named due to the fact that they can paint up to ten canvases a day using a technique that recalls industrial techniques of serialisation, automatisation and standardisation—who would execute all of his following projects under his direction.

[27] http://www.mamco.ch/artistes_fichiers/D/dimatteo.html

In 2009 he had the opportunity to realise two massive projects. The first one, *Jackson Pollock: Une vie, éléments et documents,* was based on the catalogue realised by the Centre Georges Pompidou for the artist's 1982 retrospective. The project consists of an artist book—which is almost indistinguishable from the original catalogue of the retrospective at first glance—a book and a series of paintings based on the photographs that illustrated Pollock's life in the original catalogue.

Fig.12. Gabriele Di Matteo, *Jackson Pollock. Une vie, éléments et documents*, 2009. Installation view at SpazioBorgogno, Milan.

Di Matteo completely ignored Pollock's paintings in this project and focused on the documentary aspects of the catalogue, again repurposing black and white photographs in black and white paintings, which maintained the same proportions, but obviously not the size. The whole set of paintings is projected as three editions, so Di Matteo translates a

mechanically reproducible medium like photography—which usually depends on limiting the editions to be able to reach a certain value in the market—in a non-reproducible medium like painting. He additionally introduces the criteria of the edition, clearly knowing that it doesn't make any sense because the series all have slight differences among them, to say the least, and have also been painted by different, more or less anonymous, painters. It's impossible not to feel Duchamp's influence in this case.

The second project, *China: Made in Italy*, also presents many different layers of possible readings. The project was conceived after Di Matteo started working with the group of Commercial Painters.

Fig.13. Gabriele Di Matteo, *China: Made in Italy*, 2009. Installation view at the Musée d'art moderne de la Ville de Paris.

The paintings made by the group would generally repeat such themes as landscapes, marinas and still life, which would be sold en masse as decoration. This school of commercial painters used to be very prolific up until the Eighties when Chinese painters displaced them by developing the same technique and offering their work for half the price. This phenomenon gave Di Matteo the idea to hire a team of these virtually unemployed painters to reproduce the most well-known paintings from famous contemporary Chinese artists like Ma Liuming, Zhang Xiaogang, Yang Shaobin and Zhou Tiehai, to name only a few. Such a gesture was a kind of ironic, and hopeless, payback operation. The works were reproduced in exactly the same format only in black and white, or more precisely, in different tonalities of grey. In this case, the series is unlimited and every work has the same price (5.000 euro), regardless of its size. The prices begin to rise when a certain work from the series is sold and then reproduced. The justification for this pricing schema is, according to the artist, 'due to the mental difficulty of reproducing' (Private conversation with the artist, April 2015). The whole project is evidently a kind of joke for the market. Di Matteo playfully subverts all of the "rules" that aim to assign a value to an artwork and eventually raise it: the uniqueness of the art work, its aura (which generates the rise of its value in the market), and the coefficient that helps calculate the value of a work according to its size. On top of this, the more an artwork is repeated, therefore losing its uniqueness and

value of scarcity, the more it costs. In fact, *China: Made in Italy* brings together two of Marcel Duchamp's central topics: painting as *cosa mentale*, as opposed to 'retinal painting', and the abandonment of craftsmanship, because in a certain sense painting is readymade in this project, as it was for Duchamp.[28] Furthermore, although the work is realised by human beings it is made with an industrial technique. The project thus performs a mechanisation of craftsmanship, and ultimately of human activity. The notion of repetition plays a central role in this project because the works Di Matteo decided to reproduce were made in an unlimited series, thus enacting a repetition without a real original, and of course without copies, as each repetition is a repetition of the impossibility of the copy.

In this sense, it can not only be said that Di Matteo's painting is in the order of simulacra, because all art is, but that as an artist he can be considered to be the simulacrum of the painter himself. He reproduced not only paintings, but the figure of the painter and his actions. Di Matteo detached the *cosa mentale*, abandoning craftsmanship and distributing it in the "painting machines" who work for him. What is this if not the most perfect Duchampian operation?

[28] These topics will be extensively developed in chapter 6.

2.6 Hypothesis: The Simulacrum as Aesthetic Limit

If it is accepted that everything is in the order of simulacra nowadays, but that this conceptualisation has become of particular interest since the advent of digital technologies, it is worth examining what the aesthetic possibilities of the simulacrum might be.

To better explain the slippage of the limit of aesthetic fruition in different historical contexts (Trias 1982), the threshold will be defined as the boundary between identitary apparatuses, or subjectivities, and otherness (Bianchi and Galati 2014). Thus it becomes a viable concept to think about extending the possibilities of contemplation in Western art and culture beyond certain thresholds as the gradual acceptance of otherness, usually theorised as philosophical concepts prevailing at a given time.

Eugenio Trias observed that in Greco-Roman art the category of the beautiful was completely conditioned by ideas of harmony, perfection and perfect measure. Anything that could be considered as conveying excess, whether formally or conceptually, would not be considered beautiful (1982: 19). Therefore, in this ‘constellation’—understood by Trias as a historic and aesthetic coherent ensemble (161)—the limit of the possibility of obtaining an aesthetic effect was conditioned by what could be called an Apollonian measure and perfection.

However, the idea of infinitude began to slowly erode the threshold of perfection as early as the Renaissance when it could already be detected as a kind of limited infinitude, if this oxymoron can be allowed, in linear perspective and the vanishing point. A work like the *La città ideale* (The Ideal City)[29] (1480-1490), which encapsulates all of the Renaissance ideals and can moreover be viewed as a reflexive work in which the Renaissance thinks of itself, is the perfect example: a contained, measured, perfect city conformed by perfect architecture, yet featuring a central vanishing point that can be followed through a potentially infinite space. The infinite is already there, contained but clearly present.

The infinite will, however, be fully accepted and exploited in art during the Baroque period (166). The Baroque exceeded the limits of the frame in both a literal and figurative sense of representation. Clear examples of this tendency are Pietro da Cortona's ceiling fresco at Palazzo Barberini in Rome, *Il trionfo della Divina Providenza* (1633-1639), in which all the representation that has clearly a view from below seems to explode and almost fall on the viewer: framed by a trompe-l'oeil monochrome cornice, at the centre the main topic of the Devine Providence is depicted on a view to the sky, and from this central representation to the angles different figures corresponding to the sub-topics of the work overlap apparently exceeding not only the fake architectural limits of the vault,

[29] The work is at the Galleria Nazionale delle Marche, in Urbino, it was attributed for a long time to Piero della Francesca, now is considered by the Galleria as a work by Luciano Laurana.

but from the whole ceiling. Such kind of excesses—of shapes, movement and space—would have been unthinkable only hundred and fifty years beforehand.

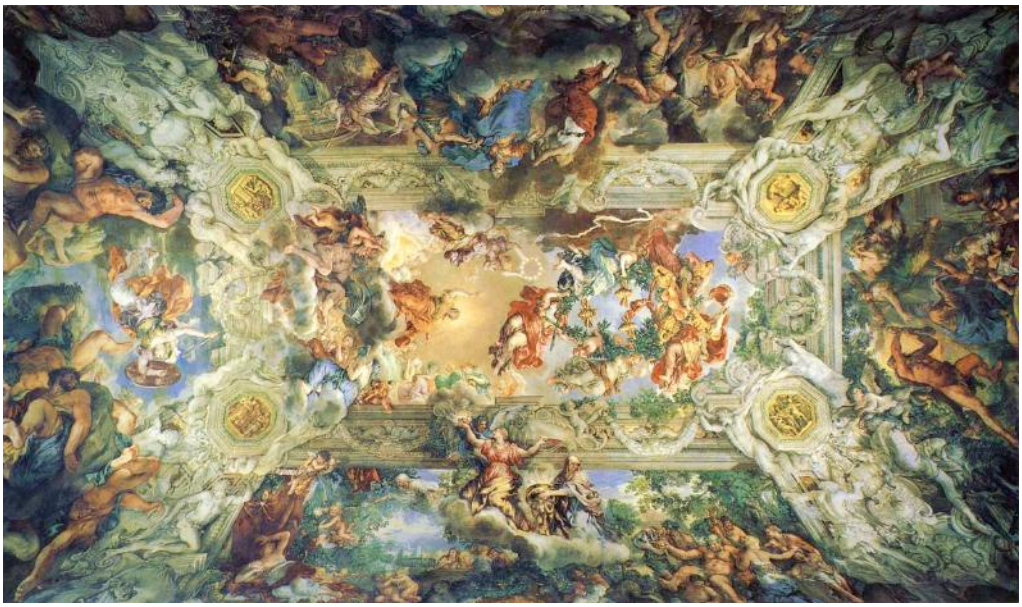


Fig.14. Pietro da Cortona, *Il trionfo della Divina Providenza*, 1633-1639. Palazzo Barberini, Roma.

In the terrain of sculpture it is impossible not to think of Gian Lorenzo Bernini and the *Ratto di Proserpina* (1621-1622) at Galleria Borghese, Rome. The figures' sensuous surfaces, caught in the precise moment of the action—not a second before nor after—take the form of an ascendant infinite spiral movement: the perfect ideal of Baroque.

Fig. 15. Gian Lorenzo Bernini, *Ratto di Proserpina*,1621-1622. Galleria Borghese, Roma.

The Baroque's focus on the infinite as a ruling concept eventually leads the way to Romanticism, which introduces the category of the sublime—a new aesthetic category and limit whose acceptance was facilitated by its forebear. The category of the sublime, as it is well know, implies the acceptance of natural forces that extend far beyond human power. As Immanuel Kant conceptualised it in the *Critique of Judgement* (1790), the possibility of fruition in the sublime is enabled by the relatively safe position of the subject. According to Kant, the limits of perfection and measure have been pushed further and the subject is able to feel aesthetic

pleasure at accepting her own limits before the unlimited forces of Nature, and in a last instance, the power of God. This is completely new compared to the first constellation. All the art considered as belonging to Romanticism conveys in one way or another an aesthetic effect derived from the sublime. In painting, the perfect and most canonical example is Caspar David Friedrich's painting *The Wanderer above the Mists* (1818), in which a lonely man contemplates from a safe rock a misty, terribly inhospitable landscape that looks like a tempest on the sea. Of course, it's a simplification to describe Romanticism only in terms of the sublime, as it was a complex movement that involved many other ideas and topoi, but for the aim of showing how the slippage of the threshold functions, this summary will suffice.[30]

There is still a third constellation in Trias' book that corresponds to the advent and diffusion of psychoanalytic theory: the theorisation by Sigmund Freud of the existence of an unconscious, and therefore, of a hidden cause that guides almost all of the subject's conscious life. A subsequent extension of the aesthetic limit and condition of possibility of the aesthetic effect corresponds to this moment, which is delineated as the concept of the uncanny (*das Unheimlich*). In his 1919 essay by the same name, Freud defines the uncanny as a feeling that could be placed somewhere between fear and disgust, but is nonetheless neither. It's a

[30] Eugenio Trias book, *Lo bello y lo siniestro* (1982) explores each constellation and passage from one to the other fully.

form of unsettledness that is produced when what is well known and familiar becomes threatening, more specifically, in the words of Friedrich Schelling ‘when something that should have remained hidden, comes to the light’ (quoted by Trias 1982: 17). Freud refers here to the effect produced by a thing, person or event that makes the subject remember, even if only metonymically and by very vague hints, some of what has been repressed during the Oedipus Complex. He then enumerates a list of “uncanny topics”, namely, topics that very often recreate the feeling of the uncanny in the subject that has contact with it/them. This is why Freud chose in his essay to use E.T.A. Hoffman’s short story *The Sandman* (*der Sandman*, 1816) to illustrate his theory because this short tale is the perfect compilation of most of these topoi: the amputation of one’s limbs, an amputee limb already separated from the body, not knowing whether a person is live or inanimate—in other words, if he or she is an automaton or a threatening doppelganger; and of course, there is the figure of the sandman himself: the evil character that throws sand in the eyes of children who don’t behave properly, which bears great resemblance to the metaphor of the castration threat during the Oedipus Complex.

In this context, Trias’ theory is that in contemporary art (contemporary in 1982) the uncanny is the limit and condition of the aesthetic effect: to be achieved the uncanny has to be embedded in the work in such a way that it can be perceived, but in which it is not completely unveiled (17). If it

were unveiled it would be unbearable, if it were completely hidden, the work would become dull. Given that he often presents super realist sculptures/installations of limbs, or parts of the body "emerging" from a wall, like *Untitled Leg* (1989-1990), most works by American sculptor Robert Gober would illustrate this theory. Kiki Smith's *Walking Puppet* (2008) provides another strong example of Trias' conception of the uncanny.

Fig. 16 Kiki Smith, *Walking Puppet* (2008). Installation, Major Henry Trippe House, Chamber Staircase, Brooklyn Museum.

In cinema, which is the field in which Trias finds the most accurate realisation and profitable effect of the uncanny, David Lynch's *Lost*

Highway (1997) is also a quite exhaustive compilation of uncanny topics: the evil sinister white-faced man, the double, and so on.

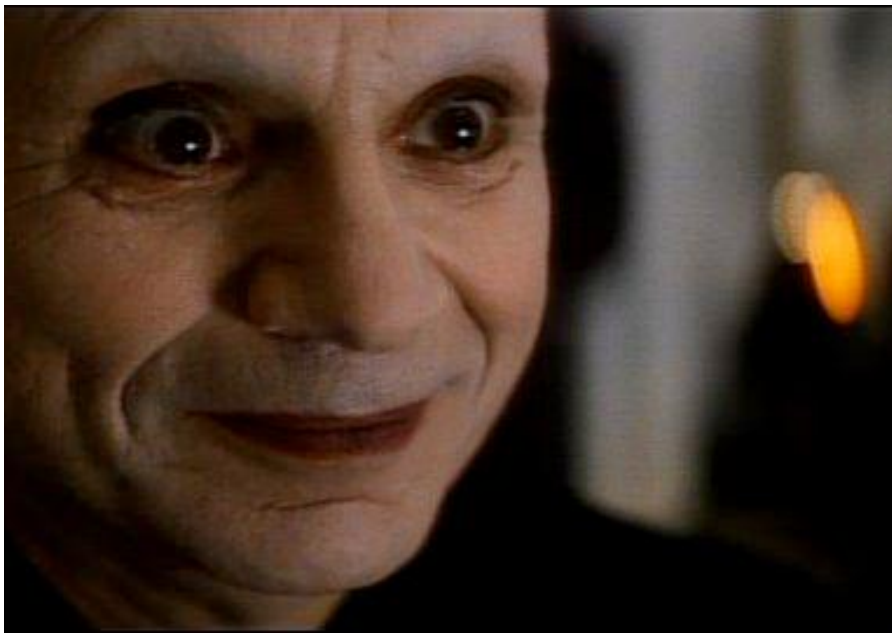


Fig. 17. David Lynch, *Lost Highway*, 1997.

Some years later Hal Foster published *The Return of the Real* (1996), a book that intended to review the state of the artistic field after 1960 while avoiding the canonical histories of art that narrate it in terms of "progress" or "evolution", and therefore considered different currents as a return of the (repressed) avant-garde, and not as an evolution from it. The pages that follow will focus on the fifth chapter, also entitled 'The Return of the Real'. Its analysis will be taken slightly out of context to try to consider the return of the real—which will be soon explained—and its

correlate in contemporary art, abject art, as a further extension of the aesthetic threshold, and therefore, not only of the possibilities of aesthetic effect but also of the inclusion of otherness; or to say it in another way, of the trespassing of the limits between inside/outside, me/other, subject/object.

The ‘real’ refers to Jacques Lacan’s conceptualisation of the three registers that comprehend psychic life: namely, the real, the imaginary and the symbolic. In the pre-Oedipal phase the ‘primordial real’ corresponds with the subject’s psychic life. After the Oedipal phase and thus of the irruption of language, the real becomes completely detached from the symbolic order. It can occasionally break into the symbolic order as trauma, thus it can be approached only by metonymy, most often through psychoanalysis. Therefore, the real is that which can’t be said. It is the register that is estranged from language because it cannot be symbolised. Conformed by that which cannot be named, nor described, the real cannot be accessed by the subject if not in the form of disguised glimpses (Johnston 2014).

According to Foster, there is a contingent of contemporary art that wants to make the real visible, at least insofar as this is possible. Foster’s text identifies certain contemporary artists who try to remove the veil that Trias discussed regarding the uncanny, and who aim at destroying the screen (*écran*) (142)—to update the vocabulary in Lacanian terms.

Following Julia Kristeva's definition of the category of the abject: that which is neither object nor subject (149) and is located within the body—because the abject is the real manifested in the body, like bodily secretions, fluids, and excrements, Foster goes on to say that the abject is that which one must get rid of to become an 'I', a subject (153). It is a phantasmal substance that is not strange to the subject, but on the contrary, is too intimate, and thus repulsive at the same time. One can easily see the similitude with the category and mechanism of the uncanny, only that here the acceptance of otherness, of the rejected, seems to be pushed beyond its limits. The object moves towards erasing the boundaries of the subject's body and presenting interior and exterior without further screens, or veils. While Foster's examination of the different currents in abject art is exhaustive, for the aims of this research it will suffice to observe that his text presents slight differences between case studies of male or female artists. While the work of female artists such as Kiki Smith usually addresses a stage of non-differentiation from the mother's body, and therefore include materials like human hair and bodily fluids, the works of male artists like Paul McCarthy and Mike Kelley often point to a regressive infantile stage.

Fig. 18. Kiki Smith, *Untitled (Bowed Woman)*, 1995.

Fig. 19. Mike Kelley, *Nostalgic depiction of the innocence of childhood*, 1990.

In Trias' terms, abject art can be considered as a further challenge to the limits of what can be considered aesthetic, of what can be considered to have an aesthetic effect, though it cannot be considered as its 'condition'.

The threshold, the limit between one's subjectivity and the acceptance of otherness has been extended again. It is, evidently, a part of contemporary art, however not all contemporary art can be said to be abject. The fact that most of the production that potentially falls within this category is already considered artistic proves the expansion of this aesthetic limit.

Departing from this point, I'd like to propose that the advent of the digital and the proliferation of simulacra, as defined above, prompt a further expansion of this aesthetic frontier. According to Deleuze, as outlined earlier in this text, every form of art can be considered simulacra. It's thus more accurate to say that the advent and proliferation of digital technologies forced the acknowledgement of reality, whether digital or analog, as simulacra. At the same time, it accelerated a certain kind of artistic production that actively plays with this concept and forces the acknowledgement of the ones that ignored it or neglected it so far. These kinds of artistic practices thus collaborate in the process of increasing the aforementioned awareness on the one hand, and posing further questions on the other. These questions mainly have to do with what has already been proposed in this research so far: how does it make sense to continue to separate digital and analog, or virtual and material realities? Or to put it in other way, can certain (artistic) simulacra place

actors in a feedback loop that erases the limits of digital and material? A further question connected with the general line of the thinking in this section would be: does the conscious exploitation of simulacra in certain artistic practices, most often developed within the limits of digital and analog, consist in a further extension of the aesthetic limits? And: Can there be an aesthetic effect in the use of simulacra as artistic apparatus?[31]

In this sense, it can be of interest to analyse and compare two projects that utilise the social network Instagram in very different ways: Richard Prince's *New Portraits* (2014) and Amalia Ulman's Instagram[32] performance *Excellences and Perfections* (April-September 2014). While Ulman uses (and fully profits from) the platform as the medium of her piece, Prince employs Instagram as a source of images. He then utilises the images gleaned from this sharing platform to perform a similar kind of operation of appropriation that he used in the Eighties (up to 1992), perhaps most famously with the *Cowboy* series, in which he photographed the male protagonist of the Marlboro ads. Although Prince has been considered the paradigmatic example of appropriation and simulacrum (Foster 1996), he finds a place between the work of Sturtevant and Ulman. Yet his recent works have neither attained

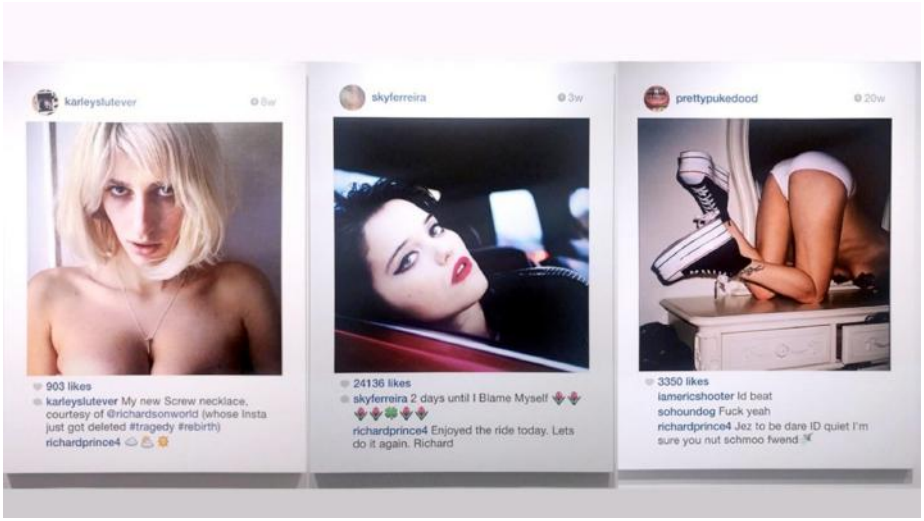
[31] The word apparatus is used here in the Foucauldian sense of *dispositive*. Although Agamben's elaboration on the concept of apparatus can be considered to be broader than Foucault's—given that Agamben considers to be an apparatus anything that is not a living being—, in this context I'd rather use Foucault's definition to stress the idea of the apparatus as a set of relationships and forces, rather than one that includes also objects, or things.

[32] https://instagram.com/amaliaulman/

Sturtevant's level of sophistication in the manipulation of medium,[33] nor Ulman's understanding of it. One could instead compare Prince's use of Instagram to using the computer as a writing machine. Following the previous observation, the manipulation that Prince performs on the social media platform still fosters—even if unintentionally—Baudrillard's conception of the simulacrum as the falsification, appropriation and reproduction of an original, "stronger" reality, immersing the viewer in this "lie" possibly with the altruistic aim of waking her up. Ulman's performance shows a thorough understanding of the possibilities of the chosen social network as medium, and she fully takes advantage of it.

For his recent project *New Portraits* (2014), Prince harvested photographs on his Instagram feed and ink jet printed them on canvases of 165 x 121 cm. He selected the photos from the feeds of celebrities, models, actors and singers—mostly female. The prints include likes and comments, many of which closed with Prince's own comments. Unlike the *Cowboy* series, in *New Portraits* Prince has almost exclusively focused on female images who are, for the most part, identifiable subjects.

[33] In an interview with Steven Lafreiniere on *Artforum* in 2003, Prince stated: 'I had limited technical skills regarding the camera. Actually I had no skills. I played the camera. I used a cheap commercial lab to blow up the pictures' (72).



Figs. 20, 21. Richard Prince, *New Portraits*, 2014.

This decision drew harsh criticism in an article published on Artnet from writer Paddy Johnson, who described the artist as a sexist troll who keeps the last word for himself (2014).[34] Perhaps Prince cannot tell the difference between appropriating an iconic archetype from corporate advertising and an image of an actual person. The result is clearly not the same: the Instagram project generates a pornographic effect that leaves the (female) subject of the appropriated image in a passive, voiceless situation. This is precisely the kind of critique that the group of female artists gathered in an online exhibition like *Body Anxiety* (2014-ongoing) attempted to examine and subvert; significantly, the home page opens with a quote by Ann Hirsch stating 'Whenever you put your body online, in some way you are in conversation with porn…' .[35]

Although not part of that exhibition, Amalia Ulman's *Excellences and Perfections* evidences the kind of mechanisms that allow a project like Prince's to exist, and fortunately to be harshly criticised.

Ulman had been active on Instagram since 2012, yet suddenly in April 2014, after posting a plate with the inscription "Part 1" and in a much smaller font in the left bottom angle "Excellences and Perfections", the account began to change.

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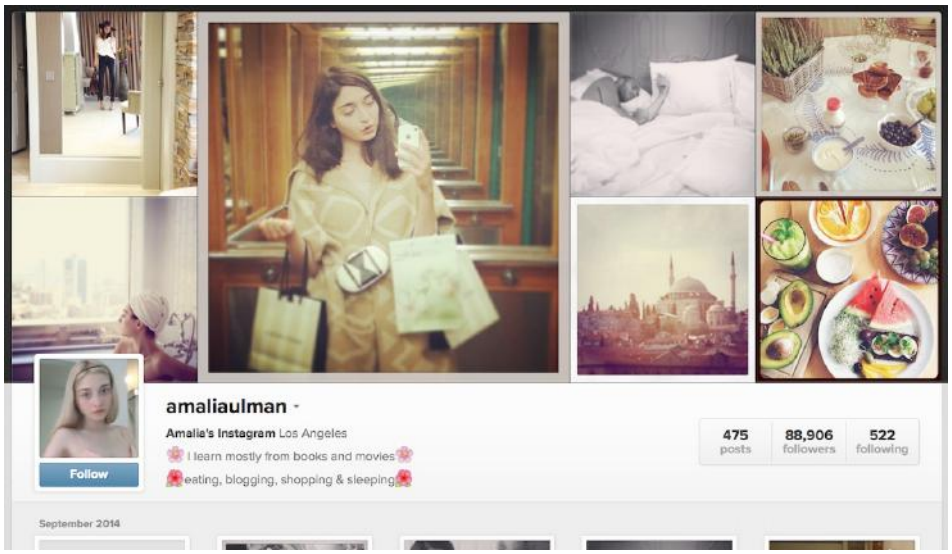
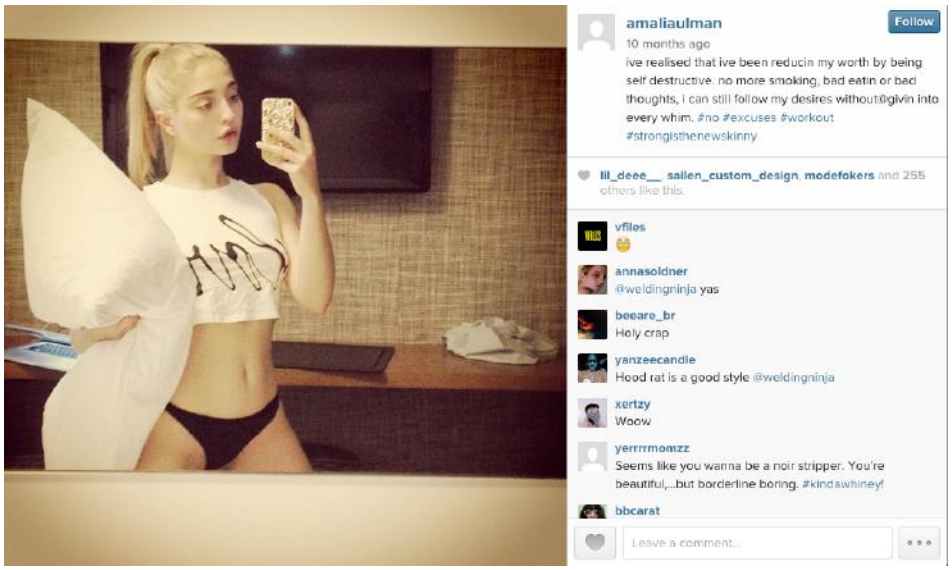
[34] The article was published on October 2014 under the title 'Richard Prince Sucks'. Although the poppy and polemic tone of the whole piece can be questionable, most of the critiques it contains are founded and well justified. https://news.artnet.com/art-world/richard-prince-sucks-136358

[35] http://bodyanxiety.com/gallery/landing/





Figs, 22, 23. Amalia Ulman, *Excellences and Perfections*, 2014. Instagram performance. Available from: https://www.instagram.com/amaliaulman

Through multiple uploaded photos, captions and hashtags, Ulman began to tell the story of a small town girl who emigrated to Los Angeles to be

a model. A while after, she breaks up with her boyfriend, runs out of money and eventually starts dating a rich older man. During the "relationship" she undergoes plastic surgery, including breast augmentation, nose correction and Botox sessions, all of which she fully documents.[36]

As Lucia Peters commented in her article about the work on *Bustle* (2014), Ulman's first images convey the naïve luminosity of an ingenuous girl who seems 'in love with life'. Yet things begin to get more sinister once she moves to Los Angeles, breaks up with her boyfriend and begins to insinuate the idea of surgery. Sexy selfies, in underwear, in bed, and the like—like the thousands and thousands of such images that can be found online taken by models, actresses, actors and anonymous teenagers—begin to proliferate. She also starts posting images of herself in fancy hotels and restaurants, and of the expensive shoes and clothes she is buying, allegedly with her new older boyfriend's money. These photographs still maintain a pinkish filter, until the point when she starts taking drugs and abusing alcohol. The photos then get darker, and remain so until she reaches her breaking point and goes to rehab. After overcoming her addiction, she decides to go back home with

[36] Ulman faked the breast operation during the performance, but she did undergo a non-invasive nose surgery and received actual botox applications.

her parents; and one of the last posts is of the kitchen she dreams of for her parents' house; now she is back living there.

There are many levels in this artistic simulacrum that are worth noticing. First of all, Ulman used her real account to perform the work, subtly taking on a new character without clearly announcing it, though offering a hint to the more observant. The project, thus far, cannot be found on her website, which maintains the possibility of "believing" the story for those who may encounter it, while also fully respecting the fact that the performance took place on Instagram. Unlike many performances in the history of Twentieth century and contemporary art, *Excellences and Perfections* doesn't need special documentation to be known by the ones who were not present, it is already there because its medium is its documentation.

There is an intertwinement between the artist and her character in *Excellences and Perfections*, which unfolds in things that Ulman actually did to her body—like undergoing real Botox sessions or learning to pole dance—and things that she faked, like the breast surgery. Though this can be compared to things that any actor or actress undergoes to prepare for a role—gaining and losing weight being among the most common avenues an actor pursues to take on the physical demeanour of their character—the difference here lies in the conscious use of what can be called a strategic use of simulacra. In a theatre, cinema or even in a

scheduled performance at a gallery or within any other artistic context, there is a tacit contract between the public and performers. In the theatre or in the cinema there is a fixed script and, in a performance, the results and involvement of the public range in their levels of spontaneity and unexpectedness. In the case of *Excellences and Perfections*, however, the artist purposefully played with the majority of the public's unawareness of the simulation, which was fostered by the aforementioned interweaving of the real and fake experiences that the artist underwent.

However, the limits between real and simulated experiences in this context may not be relevant. There are actually many people who undergo these kinds of experiences, constantly posting what they buy, where they go, what they eat—not to mention their bodies—in many different, more or less intimate situations. Does the fact that this was an invented character actually make a real difference then? This work exposes, among other things, just one of the ways in which analog reality builds upon the one constructed online, and vice versa. This process is in fact the continuity, the co-extensiveness between different planes of simulacra.

Undoubtedly there is an aesthetic effect in the unveiling, and understanding, of the (artistic) simulacrum—in the same way that there is an aesthetic effect in discovering that a Sturtevant is not a Warhol—but this does not destroy it as simulacrum, and does not make the analog, real

life, more real or less intertwined with the digital one. It is also clear now why, in this context, Richard Prince's use of Instagram does not only seem completely old-fashioned, but also sterile, to say the least. The aesthetic effect that one can find in Ulman's project, in which its potentially subversive capacity also resides, is completely lost in Prince's operation.

Nonetheless, it is not only a question of aesthetic possibilities but also of the acceptance of otherness. In this sense, the separation between subject (as observer, as actor, as artist) and object (the work, the topic, the digital apparatus, Instagram) are broken in Ulman's work. The limits between the subject and object are no longer clear. One builds upon the other, as well as the limits between artist, woman and character and the correlated images, comments, and responses. These elements have all already entered into a continuous feedback loop that results in a complex subjectivity, which some years ago Haraway (1991), Caronia (1996) and several other theorists named the cyborg. Today, this could be simply called the posthuman, a category that no longer distinguishes between analog and digital environments or human or non-human actors, but rather simultaneously inhabits both. In this sense, I disagree with Johanna Fateman when she asserts that

> A purposely bleak experiment in the merging of brand development and gender production, the project offers little hope for the progressive potential of social media. While most of her feminist post-Internet peers embrace at least a

> scrap of Donna Haraway's cyborg dream—the figure of the cyborg seems somehow implicit in Schrager's "fantasies, mutants, glitches, nightmares"—Ulman most clearly illustrates the pioneering theorist's grave caveat: "The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism." (2015: 221)

It is not faith in social media that the work elicits, or needs to elicit, but hopefully it directs attention towards the possibilities of exploiting the aesthetic, and thus the ethical and potentially subversive possibilities of any medium; in this case through a strategic use of simulacra that helps reveal and reflect upon the complexity of scenarios and environments that can no longer be detached from the complex subjectivities that assemble them, and that thus contribute towards assembling in turn.

3. Archive

As already advanced in the previous chapters, the present work will consider both memory and digitalisation processes not as forms of representation, but as forms of repetition in which difference is conveyed. In this sense, there is no “original” and “copy”, whether considering mental images, memories or digitised objects, but rather ‘ontological repetitions’, which ultimately can be considered as a question of *différance*.

At the same time, the consideration of an (artistic) object’s temporal dimension, and not just its spatial one, is fundamental to understand that the object only exists in its change, movement, action and metamorphosis. Therefore, the digitalisation process can be understood as an event. This text proposes that in order for memory, especially in its (digital) archival form, to be kept alive—that is to say that to be actualised (in the Deleuzian sense), both as a mental image and as part of the archive—it needs a subject, the viewer is part of this process and, in participating, actualises the event. Simultaneously this process does not only imply keeping events, memories and objects from the past in the archive, but it is a projection to the future. As it will be developed below, the archive creates the conditions of its own future possibilities of existence, and of reading.

3.1 Event & Memory

If it is still necessary to re-think the ways in which digitalisation processes are conceptualised in order not to fall back into old, false dichotomies such as virtual/real, material/dematerialised, and so on (Galati and Bianchi 2014), as proposed above, it is also of utmost importance to simultaneously re-think what the archive means today, and to determine its importance and current validity, if it has one. This text argues that it does.

To start from the beginning, it is worth examining Michel Foucault's definition and conceptualisation of the archive. In the *Archaeology of Knowledge* (1969 [2004]) Foucault proposes archaeology as a methodology for studying how certain discursive formations had the possibility of emerging at a certain time and in certain conditions, rather than others. To achieve this he deconstructs a number of ideas that are taken for granted in Western culture, including not only notions like tradition and influence, but also the concept of the book, text, work and science— every notion that is so embedded in culture at a certain historical moment that one can no longer detect it and takes it for granted. According to Foucault, such notions have become almost transparent. He claims:

> […] we must rid ourselves of a whole mass of notions, each of which, in its own way, diversifies the theme of continuity. They may not have a very rigorous conceptual structure, but they have a very precise function. Take the notion of tradition: it is intended to give a special temporal status to a group of phenomena that are both successive and identical (or at least similar); it makes it possible to rethink the dispersion of history in the form of the same; it allows a reduction of the difference proper to every beginning, in order to pursue without discontinuity the endless search for the origin; tradition enables us to isolate the new against a back-ground of permanence, and to transfer its merit to originality, to genius, to the decisions proper to individuals. (23)

To trace and put into practice the archaeological methodology, every one of these words needs a theory that can only be built by examining the field of statements (*énoncés*), written or spoken, taken as point of departure to build them. Foucault clearly distinguishes between the analysis of language and of discourses (*discours*), in which language is the set of rules with innumerous possible linguistic formulations, while statements are linguistic formulations that have effectively been realised. While the field of study of language tries to identify and set the rules for the proper construction of linguistic formulations, the study of the events of discourse explores why certain statements have emerged and not others (Foucault 1969 [2004]: 100, 101, 106, 156)

In this sense, the object of an archaeology, as advanced by Foucault, consists in the ‘description of the *archive*, that is to say, of the complex of rules that, within a certain culture, determines the emergence and

disappearance of statements' (*énoncés*) (Sorrentino 2005: xxii).[37] Foucault finds certain sequences of statements in which it is possible to identify particular modes of existence, and he focuses on the study of the possibilities of these modes of existence that he calls discursive formations (*formations discursives*). A discourse is an ensemble of statements that belong to the same system of discursive formation, for example, clinical, artistic or legal discourses. These discourses are considered as 'practices that actually and systematically build the objects of which they talk about' (Sorrentino 2005: xxiii).

This idea is fundamental to later understand how in describing and working on a certain object of study, one actually creates and modifies it. In a very different theoretical context, it can be related to the second wave in cybernetic theory, as described by Hayles (1999), and characterised by the concept of *reflexivity*: There is no possibility of observing a system without modifying it, and not avoiding the inclusion of the observer within it:

> The second wave of cybernetics grew out of attempts to incorporate reflexivity into the cybernetic paradigm at a fundamental level. The key issue was how systems are constituted as such, and the key problem was how to redefine homeostatic systems so that the observer can be taken into account. The second wave was initiated by, among others, Heinz von Foerster, the Austrian emigre who became coeditor of the Macy transcripts. This phase can be dated from 1960, when von Foerster wrote the first of the essays that were later collected in his influential book *Observing Systems.* 19

[37] I have translated all quotes from Sorrentino, Vicenzo, 2005, 'Le ricerche di Michel Foucault', introduction to Foucault, Michel, *Antologia*, Milano: Feltrinelli.

> As von Foerster's punning title recognizes, the observer of systems can himself be constituted as a system to be observed. Von Foerster called the models he presented in these essays "second-order cybernetics" because they extended cybernetic principles to the cyberneticians themselves. The second wave reached its mature phase with the publication of Humberto Maturana and Francisco Varela's *Autopoiesis and Cognition: The Realization of the Living'* (10).

Returning to Foucault, even more importantly, discourses not only build the object of the discourse, but also subjectivities: 'The speaking subjectivity, far from sovereignly dominating the enunciative field, derives from it the shape the subject assumes: it is the positivity of the discourse that constitutes the historical *a priori* within which both objects and subjects are constituted' (Sorrentino 2005: xxiii).[38] Foucault emphasises that it is not a question of downplaying the importance of the question of the subject, but it is only within a given discursive practice that subjectivities can emerge. In this sense, he insists, the idea of a 'subject-creator' is completely outside the context of an archaeology because the rules for the emergence of subjectivities, of certain ideas and certain discourses, are already embedded in this same discursive field. This makes the idea of a creation *ex-nihilo*, even of original ideas, impossible (Sorrentino 2005: xxiii). Moreover, the field of discursive practices is intertwined with and partly determined by non-discursive

[38] This point will also be fundamental to further explain and ground the theorisation of the emergence of a digital subject within the field.

practices, so in order to study discursive practices it is necessary to take into account, to confront them also with the non-discursive ones.

In this sense, it is fundamental to remember the historical dimension—all the practices, fields and theories that evolve in a certain moment and under certain conditions—thus Foucault insists on the importance of remembering the instantiation of all these events in a certain moment and time. It is precisely this development of discursive practices within history that restores discourse's conception as an event.

A statement is, in fact, an event, unique and unrepeatable:

> A statement exists outside any possibility of reappearing; and the relation that it possesses with what it states is not identical with a group of rules of use. It is a very special relation: and if in these conditions an identical formulation reappears, with the same words, substantially the same names—in fact, exactly the same sentence—it is not necessarily the same statement. (Foucault 1969 [2004]: 101-102)

This uniqueness, this unrepeatability of the statement, the statement as event is conceptually close to the process of actualisation as it will be explained in the following chapter: actualisation can only happen in monads, in subjects, and this process is never the same. The same event cannot be actualised in the same way in two different monads, nor is it going to be actualised similarly in the same one, two, or *n* different times. The introduction of the temporal dimension and of the unrepeatability of

the event has been fundamental in the proposed explanation of digitalisation processes, and it will also apply to the present argument about considering the archive as event: this passage will link this research's line of thought from digitalisation processes, through the archive as event, and then, via a discussion of the technological unconscious, it will arrive at the digital subject in chapter 5. In the *Archaeology of Knowledge*, Foucault explains how a statement distinguishes itself from any other linguistic formation by the fact that it is always linked to a definite subject that enunciates it (actualises it), this subject of the enunciation can be different from the author of the statement, or she can be the same, but for an *énoncé* to emerge as such it has to be linked to a determinate subjectivity:

> A statement also differs from any series of linguistic elements by virtue of the fact that it possesses a particular relation with a subject. […] We must not, in fact, reduce the subject of the statement to the first-person grammatical elements that are present within the sentence. (103)

To complete the framework within Foucault's theory, it is important to remember that the statement is always interpenetrated by a material dimension that, at least in part, constitutes it. Even if it is not evident at first glance, or even if it disappears after a while, this materiality is constitutive of the *énoncé*: 'the coordinates and the material status of the statement are part of its intrinsic characteristics' (113), therefore, time, space and embodiment cannot be erased from the conception of the

statement without it ceasing to be so.

In a kind of complementary, even if displaced,[39] conceptual continuity with Foucault's thought, it is possible to identify two key concepts in Deleuze's writings that will be useful to develop a theorisation of the archive as event: the first is the conceptualisation of Memory as a special kind of repetition and in which it is possible to find difference (1968), while the other comprises Deleuze's conceptualisation of the Event (1988).

As more deeply explained in previous chapters, according to the Deleuzian conception of repetition there is no 'first time' that is considered 'the Same' (294) that successively produces a series of 'copies' or repetitions, but rather repetition is what is already repeated, and will be repeated:

> Repetition no longer bears (hypothetically) upon a first time which escapes it, and in any case remains external to it: repetition bears upon repetitions, upon modes and types of repetition, in an imperative manner. The frontier or 'difference' is therefore singularly displaced: it is no longer between the first time and the others, between the repeated and the repetition, but between these types of repetition. It is repetition itself that is repeated. (295)

In this sense, memory cannot be considered as 'a first time' or a 'second time', but instead as a kind of repetition in itself. In fact, memory is one

[39] Displaced in the sense that they belong to different planes of immanence.

of the two aspects of time Deleuze identifies: Habitus comprises ‘the superficial repetition of the identical and instantaneous external elements’ (287) and Mnemosyne functions as an internal, deeper form of repetition. It is the one that bears the repetition of ‘the internal totalities of an always variable past’ (287), and between these two kinds of repetition, Difference can be found.

In this sense, we can understand the archive as an event that keeps a second type of repetition alive—perhaps even a digitised memory. Mnemosyne, is understood as a kind of repetition that avoids any residue of representation. To better understand this aspect, it is necessary to explain the second concept, the Event.

In *The Fold. Leibniz & the Baroque* (1988 [1993]) Deleuze defines the event as an inflection in the line or point: it is the curvature, the change in the plane, the fold itself that constitutes an event (Deleuze 1988 [1993]: 15). To be more precise, the event not only has to do with the formal but also with the temporal and the qualitative characteristics of the object—in fact, what is most interesting for the purpose of this section is the introduction of a temporal dimension in what has already been conceptualised as the process of digitalisation. In this understanding of the event as inflection, the separation between subject and object also disappears: the object becomes an event that can be actualised only by the subject.

A few pages further, Deleuze elaborates on a very interesting definition of the ‘technological object’, stating that this new object is no longer the product of industrial standardisation—a possible allusion to Baudrillard without naming him— or just ‘the object produced by and for the masses’: the new technological object is the one that ‘assumes a place in a continuum by variation’ (19). Variation, movement and time are the variables embedded in the new technological object as event. Furthermore, form, time and matter are put into relationship, thus breaking the binary opposition form-matter, by ‘temporal modulation that implies as much the beginnings of a continuous variation of matter as a continuous development of form’, while moulding amounted for an invariable setting up of form; modulation, conveying time, implies continuity in perpetual variation (19).

The archive as event is then not the cliché of the “virtual archive” as a website, mere database or “dematerialised museum”. It is, in fact, the possibility of a collective memory, which is both digital and material, because it is memory— Mnemosyne, repetition—but it is also event, which changes constantly in each actualisation and monad because it is ‘the Virtual, ideality par excellence’ (Deleuze 1988 [1993]: 15). The archive is the event that brings together subject and object, monads and the world, in an ever-changing.

It is now possible to see how Foucault's concepts of statement, discourse, discursive practices and archive are possibilities for the emergence of discursive practices, which are complementary and coherent with Deleuze's memory and event. These practices are inevitably embodied independent of the kind of environment in which they take place, in great part due to the fact that the separation between subject and object has been overcome.

However, it seems necessary to further explore the concepts within this framework, which can help build a consistent theory of the archive as event. What follows will thus introduce some of the concepts developed by Jacques Derrida in two brief, but dense, articles about this topic: 'Freud et la scène de l'écriture' in *L'écriture et la différence* (1967b), and more specifically *Mal d'archive* (1995)—in the English versions *Writing and Difference* (2005) and *Archive Fever: A Freudian Impression* (1996).

The main objective of 'Freud et la scène de l'écriture' is to understand what in Freud's psychoanalytic theory exceeds the 'logocentric closing' (Vergani 2000: 106)[40]. In doing so, Derrida proposes to understand the 'unconscious text' in Freud as a massive archive, an archive that preserves traces of traces, because the 'unconscious text is already interwoven of traces of traces' (1967b: 314). There is no original text, the

[40] All translations from Italian of quotes from Vergani are mine.

texts do not have an original nor an origin. Thus in the same way that it is impossible to trace an origin in the unconscious, ‘everything begins with reproduction’ because these texts are ‘constituted by archives that are *always already* transcriptions’ (314). Derrida also identifies the idea in Freud that there is no original, and no representation, but only repetitions, traces of traces, in the archive of the unconscious. Even if Freud talks about ‘a first time’, this first time also doesn’t have a presence: it is a trace, an archi-trace.

There are two contradictory tendencies regarding the archive in Freudian theory. The first considers the archive as a prosthetic, technological and external memory. In this sense, there is a metaphysical return to the origin or original, which would be kept in this external prosthetic memory. This is exactly what Derrida intends to avoid. The second tendency has its root in the concept of ‘original repetition’, which turns the archive into ‘the origin exposed to the outside’ (Vergani 2000: 109), it is thus ‘the non-origin that is original’ (Derrida 1967b: 303). This last conception indicates that the question of the archive is not only a question regarding memory and the past, but is more importantly about the future: The archive links past experiences and mourning with the possibilities of what is yet to come (110). Mourning in the sense that what is kept in the archive of the unconscious—which the subject would not be able to access if not by metonymic traces, through psychoanalysis or in the form of trauma—in the repressed Oedipus Complex, and thus

the mourning of the acceptance of castration, of the impossibility for the subject to blend with her object of desire, the father or the mother (Laplanche-Pontalis 1967). This intense love is the non-origin of a first time that will repeat in different, more or less neurotic forms through out the subject's entire life, but that is not a real first time, it is already a trace, an absence, a repetition. The past experiences, sometimes traumatic, will create the future ones. In this sense, the archive is alive, it is neither fixed nor determined and it allows for creation and unpredictability. Its repetitions are not controllable, because they are traces, they are pure *différance*.

Almost thirty years later, in *Archive Fever: A Freudian Impression,* Derrida offers a slightly more literal reflection on the topic of the archive. The publication is based on a conference that he gave at the Freud Museum in London in 1994, and the issue that Derrida actually addresses in *Archive Fever* is the implication of Freudian theory for the conceptualisation of a new archive—and also of Freud's Museum as an archive—of the unconscious as archive, and the archive fever (*mal d'archive*) in itself. The *mal d'archive* is described then as the (unconscious) double tendency, guided by the death drive inhabiting any subject in a greater or lesser measure to save, register, remember, keep everything—every trauma— in order to repeat it, in similar traumatic experiences, like unsuccessful relationships and the like. Somehow hidden in the desire to keep lies a second tendency towards erasing,

losing, forgetting, and destroying everything that was supposed to be kept safe. Thus, the *mal d'archive* menaces the archive from within, the same impulse to conserve is ultimately the drive that will try to knock down everything from within[41].

However, what is more interesting in the context of this research is that Derrida dedicates the first half of the conference to conceptualise the characteristics of the archive in detail. In the first place, he establishes that the only meaning of the word archive has to do with its 'domiciliation':

> As is the case for the Latin *archivum* or *archium* (a word that is used in the singular, as was the French *archive,* formerly employed as a masculine singular: *un archive),* the meaning of "archive," its only meaning, comes to it from the Greek *arkheion:* initially a house, a domicile, an address, the residence of the superior magistrates, the *archons,* those who commanded. (2)

So in this sense, the archive takes place in a clear location, in a home, in a certain address. This permanent address is what signs the passage from private to public: The possibility of finding the archive, of acceding to it, of knowing that it is in *that* place and not in another, of its becoming public, it could be said also *shared*.

[41] Freud names this double tendency reaction formation (in German: *Reaktionsbildung*). Typical of the obsessive neurotic, reaction formation is a defence mechanism, usually a certain behaviour, which the subject develops to mask a repressed desire that is considered as unacceptable by her (Laplanche-Pontalis 1967). The masking behaviour (in this case, to keep) will try to hide the unacceptable desire, typical of the death drive (to destroy), which will however find a weakness in the repressive barrier to enact the desire.

In the second place, Derrida stresses what he calls the 'power of consignation', not in the sense of depositing or consigning something, but in the sense of '*gathering together signs*':

> *Consignation* aims to coordinate a single corpus, in a system or a synchrony in which all the elements articulate the unity of an ideal configuration. In an archive, there should not be any absolute dissociation, any heterogeneity or *secret* which could separate *(secernere),* or partition, in an absolute manner. The archontic principle of the archive is also a principle of consignation, that is, of gathering together. (3)

Interestingly enough, this aspect of the archive implies that an archive should have a certain coherence, follow a certain taxonomy, as Foucault has also argued. Yet this suggested guideline to order and read the archive, is nonetheless not a call to complete it, as it should not dissociate (the user?) 'in an absolute manner', because the archive means also 'gathering together'. In this sense, and introducing what will be discussed in chapter 4 about spaces and places, the archive can be said to work as a place—an electronic space for 'gathering together'. The relative thematic looseness of the archive must also leave room for a great deal of creativity in both its creation and its actualisation.

Derrida questions the limit of this exteriorisation: if the archive, beginning with the print, is an externalisation of memory—a prosthetic memory in Freud's terms—where does it begin? The archive is never completely external, even if its exteriorisation is determinant: 'This is the question of the archive. There are undoubtedly no others' (8).

Furthermore, when and where does the external archive (as a prosthetic memory) begin? He later remarks: '*There is no archive without a place of consignation, without a technique of repetition, and without a certain exteriority. No archive without outside'* (11).

Most importantly, Derrida asks if the structure of the psychic apparatus, of the mind, of the unconscious as well as the conscious and its relationship with memory and the perceived events or things, such as Freud had studied it and described it with the metaphor of *der Wunderblock* (the Mystic Writing Pad) (Derrida 1967b, 1995), is different, better or worse represented, or influenced by the current techno-sciences of storage and reproduction (1995: 15).

In part, the answer is yes; not in the sense of a better or worse influence, but in the sense of a definitive change in what the archive produces. As a prosthesis of memory, the archive is not only the place of its storage of the past, but it is also a projection to the future, there is no doubt that the archive gives shape to its object of storage, with its different structures, its different techniques and technologies: 'The archivization produces as much as it records the event. This is also our political experience of the so-called news media' (17). Derrida remarks that it is not so much that the archive determines what is conserved, 'but rather the very institution of the archivable event' (18). Here again, it is possible to think about the archive as a construction of the future: one lives a present event

according to how it is archived, and its meaning, its ‘archivable meaning’ is also structured, modified and determined by the archive’s logic, characteristics and structures (18).

In a certain way, and of course with a very different vocabulary, Derrida already foresees what is going to be theorised as the advent of the posthuman:

> Neither of these hypotheses can be reduced to the other. Because if the upheavals in progress affected the very structures of the psychic apparatus, for example in their spatial architecture and in their economy of speed, in their processing of spacing and of temporalization, it would be a question no longer of simple continuous progress in representation, in the *representative* value of the model, but rather of an entirely different logic. (15)

In fact, this ‘entire different logic’ entails the changes that most of the books quoted in this research, as well as many others, try to account for, and to which the present work is trying to contribute: the idea that the feedback loops generated between and by subjects and technologies—the archive included—produce new kinds of subjectivities as well as subjectivities modify the direction of “progress” and research of these technologies.

Even more interestingly, Derrida conceived the archive, briefly addressing the possibilities of a digital archive, in terms of a prosthetic memory—nothing new of course—but also as event. In which moment is the archive then created? For Derrida it has a hypomnesic sense, it is not

just memory, an external and auxiliary memory, but it is creative: it implies reflection, comments on the margins and constant possibilities of modification—it works in fact as a notebook. Moreover, Freud's *Wunderbloc*k seems also valid in this case, which even if "erased" on the surface, leaves traces in deeper layers:

> I asked myself what is the moment proper to the archive, if there is such a thing, the instant of archivization strictly speaking, which is not, […], so-called live or spontaneous memory (mneme or anamnesis), but rather a certain hypomnesic and prosthetic experience of the technical substrate. Was it not at this very instant that, having written something or other on the screen, the letters remaining as if suspended and floating yet at the surface of a liquid element, I pushed a certain key to "save" a text undamaged, in a hard and lasting way, to protect marks from being erased, so as thus to ensure salvation and indemnity, to stock, to accumulate, and, in what is at once the same thing and something else, to make the sentence thus available for printing and for reprinting, for reproduction? (22)

Obviously the archive is not only conceived in the evident sense of "the web as an infinite archive", or even a library as an archive, but it is being conceptualised as a kind of apparatus that is being created and actualised every time one writes and presses "Save" on the computer. It is one's modest collaboration with the archive—one's private ways of avoiding destruction and oblivion, even for just a limited amount of time.

In this sense, the archive can only exist as an event, as a constant actualisation and modification, as a block of notes on which all can comment, contribute, alter and consult, but of which it is important not to

forget that it is continuously modifying our experience of it, and of its contents, as Derrida says, not only of its contents of events of the past, but also of the future. This is partly a risk, but also the only interest—of an archive as event, of an archive that is somehow alive.

3.2 Memory as Digitalisation, Archive as Event

If one tries to begin to explore more in detail the conditions of possibility of the (virtual) archive today, what would be the difference then between archive and database? It can be advanced that in the archive there is always a certain narrative, the archive tells some kind of story that follows a certain logic (or taxonomy)—even when this logic is not linear—that can be more or less evident, while the database doesn't: 'As a cultural form, the database represents the world as a list of items and it refuses to order this list' (Manovich 2001: 199). A narrative then, as described in chapter 2, can be considered as a simulacrum, so the archive can be a special kind of simulacrum that excludes, of course, any kind of representation, even when alluding to other previously well known cultural forms, such as the library, for instance.

In this sense, it is first important to understand that a spatial, non-linear conception of the archive is not only more suitable, but also not new.

Revising previous conceptual paradigms in this sense can prove useful to further developing a fruitful conceptualisation of the archive as event.

The predominance of a temporal, linear, chronological paradigm that coincides with the rise of history as a discipline in the Nineteenth century has been, and is being partially undermined by the resurrection of a spatial, simultaneous, non-linear paradigm foregrounded by digital logic. The antecedents of this paradigm in the history of art can be traced back to different models, such as certain cycles of frescoes in churches, especially in chapels, and other immersive spatial models, some of which were never realised, like the *Projet de Cénotaphe à Newton* by Etienne-Louis Boullée (1784).

> A sequential narrative turned out to be particularly incompatible with a spatial narrative which played a prominent role in European visual culture for centuries. From Giotto's fresco cycle at Capella degli Scrovegni in Padua to Courbet's *A Burial at Ornans*, artists presented a multitude of separate events within a single space, be it the fictional space of a painting or the physical space which can be taken by the viewer all in once. (Manovich 2001)

As Manovich shows, some works typically present different events within the same pictorial space, even if these occurrences were quite removed from one another chronologically. Sometimes each event has its own section of wall, for example in a chapel, in which all of the different events can be appreciated at once, and subsequently examined individually in greater detail. In some cases with a more immersive or

coherent narrative logic, one single event or narrative might take up the entire space of a single chapel. This logic was not completely erased, Manovich says, but for a long time it was relegated to productions of popular culture, for example, comics.

In this sense, a spatial and non-linear representation cannot be considered exactly in the same way as an immersive space in which the whole narrative is somehow embedded in the same space of its display. In one case, the different narratives and concepts expressed by the work are accessible simultaneously, but each depicted scene conserves an internal narrative logic, while the pretension of (virtual) immersion in a certain media entails the intention of 'diminishing critical distance to what is shown and increasing emotional involvement in what is happening […] The intention is to install an artificial world that renders the image space a totality or at least fills the observer's entire field of vision' (Grau 2003:13).

The Sistine Chapel is a perfect example of the first case: The walls and ceiling of the Chapel are covered by a set of frescoes in which diverse scenes from the Old and New Testaments can be simultaneously appreciated. Even if each scene has an internal logic and narrative, its distribution in the space gives the viewer the possibility of choosing the order and the way in which these different narratives will be followed. Each single fresco has a narrative, but the whole story can also be

appreciated simultaneously and with no privileged order. The Vatican website currently offers the possibility of a virtual visit to the Chapel. The site is a three-dimensional rendering of the physical space through which one can make a 360-degree tour around the Chapel, with the possibility of zooming in for close-ups and accessing angles and details that would actually be difficult for a visitor to approach in the physical space. Hence, the online accessible 3D navigable space of the Sistine Chapel becomes a virtual immersive space that remotely offers a non-linear set of images displayed in the physical space for a potential simultaneous reading and navigation.

A notable example of the second case, an architecture of immersive space, presented as a single coherent and continuous narrative embedded in this space, is the *Newton Cenotaph Project* by Etienne-Louis Boullée, currently at the Bibliothèque Nationale de Paris. The project for the tomb for the mathematician, physicist and astronomer Isaac Newton reproduces Copernicus' heliocentric system.

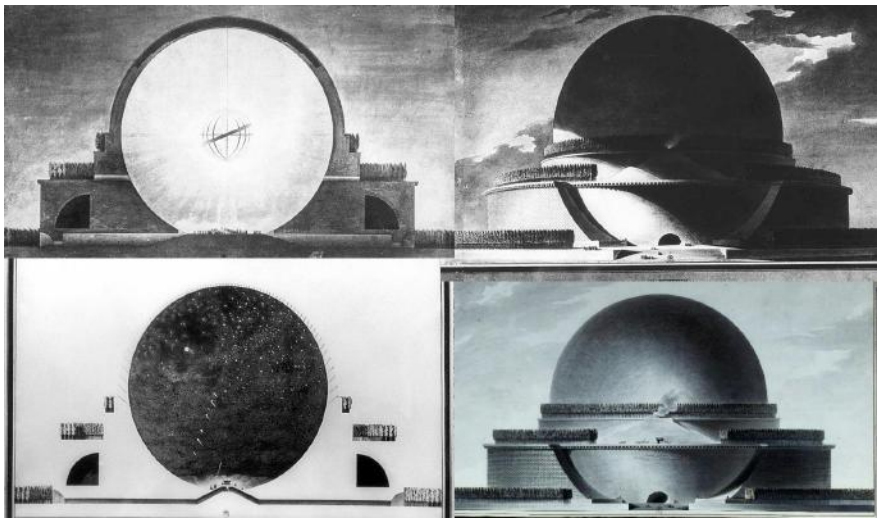


Fig. 24. Etienne-Louis Boullée, *Newton Cenotaph Project*, 1784. Bibliothèque Nationale de Paris.

The building would contain a sphere, symbolic of both the earth and the infinite, and Newton's tomb would be placed in its gravitational centre—simultaneously alluding to the solar system and the position of mankind in the centre of nature. Inside the Cenotaph, the effects of day and night would be recreated: the day comprised a luminous glare generated by an astrolabe that would irradiate the entire spherical volume from the centre; small perforations on the sphere's surface, simulated the night sky so that when the light penetrated, it would reproduce the effect of the stars in the firmament. A measured cosmos, an immersive space created in a geometrical fashion thanks to Newton's axioms, and in his honour.

In the new media landscape, the conception of represented space shifted from being a continuous and coherent set in which objects were

distributed within the canvas or fresco—such as perspectival representations of space since Renaissance[42]—to the representation of an aggregated and discontinuous virtual space of new media objects, which are presented as a collection of unrelated elements. This discontinuity of the Euclidean space is one of the characteristics of digital media, as will be further developed in the following chapter, and it implies a movement from the conception of a coherent, prospective and anthropocentric space, with a unique, fixed and privileged point of view to a fragmented, aggregated space with no privileged, dynamic, ever-changing points of view—as is the case, for instance, in virtual reality environments in which the point of view constantly changes along with the viewer. Therefore, in the spatial model, the privileged point of view of the traditional perspective is challenged by the possibility of several ever-changing points of view. The coherence of this space is not univocal: different semantic levels of action and understanding can be intertwined and overlapped.

In this sense, there are two models of archives that are worth revising because they seem both suitable conceptual models to understand the archive as simulacrum, and as event, considering digitalisation as a particular kind of memory, a hypomnesic memory, and its relation with a spatial and non-linear logic that is in no way representational.

[42] As Derrick De Kerckhove has shown, the development of the linear perspective corresponds to the 'alphabetic brainframe': it is the translation of a linear and temporal logic to space, and it implies a sequential reading (1992).

The first one is the *Theatro delle Memoria* (the Theatre of Memory) as theorised by the Italian philosopher Giulio Camillo in the book *L'Idea del theatro* (1554), who, according to Frances Yates, 'was one of the most famous men of the sixteenth century' (Yates 1966). Yates quotes Viglius Zuichemus, who in 1532, wrote in a letter to Erasmus that everyone was talking about a certain Giulio Camillo:

> They say that this man has constructed a certain Amphitheatre, a work of wonderful skill, into which whoever is admitted as spectator will be able to discourse on any subject no less fluently than Cicero. [...] It is said that this Architect has drawn up in certain places whatever about anything is found in Cicero. (Quoted in Yates 1966: 131)

Camillo dedicated most of his life to the planning and construction of a theatre that would allow the people going into it to access all knowledge about the universe. The 'idea of the Theatre' was fundamentally a structure of conceptual relationships rather than an actual building that Camillo understood as a spatial representation of chronology. In his system, scholars (the "users" of the theatre) become spectators. Above all, he conceived of the Theatre as the ideal of pedagogy: the ideas and memories it would trigger would be for the education of the spirit above all.

Camillo planned the Theatre organising it in seven sections that map the creation of the world. Seven pillars that are those of Solomon's House of Wisdom, symbolise eternity:

> The Theatre rises in seven grades or steps, which are divided by seven gangways representing the seven planets. The student of it is to be as it were a spectator before whom are placed the seven measures of the world '*in spettaculo*', or in a theatre. And since in ancient theatres the most distinguished persons sat in the lowest seats, so in this Theatre the greatest and most important things will be in the lowest place. (Camillo 1554 quoted in Yates 1966: 136)

He adapted the model of the real Vitruvian classical theatre to mnemonic purposes. The Theatre is thus a vision of the world and of the nature of things seen from above, from the stars themselves and even from the super-celestial founts of wisdom beyond them.

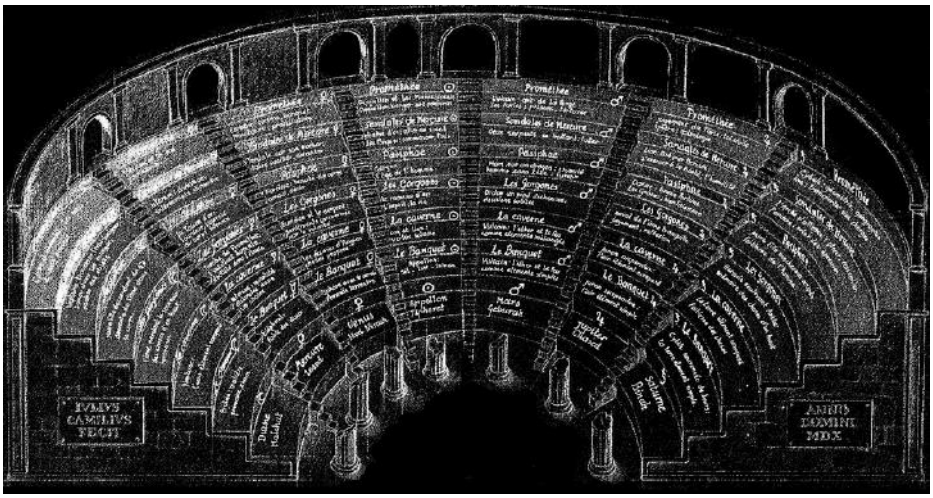


Fig. 25. Giulio Camillo, *Theatro della memoria*, 1554.

Yet this vision is deliberately cast within the framework of the classical art of memory, using the traditional mnemonic terminology. The theatre

is a system of memory places, though a ‘high and incomparable’ placing; it performs the office of a classical memory system for orators by ‘conserving for us the things, words, and arts which we confide to it’. Ancient orators confided the parts of the speeches they wished to remember to ‘frail places’, whereas Camillo ‘wishing to store up eternally the eternal nature of all things which can be expressed in speech’ assigns to them ‘eternal places’ (Yates 1966: 144).

At this point it is necessary to briefly interrupt the analysis on the *Theatre of Memory* and introduce some concepts regarding the sense that it is given in this context to the word “memory”. This research will follow Jean-Jacques Wunenburger line of reasoning in his book *Philosophie des images* (1997) regarding *mnesic images* (43). From the moment in which the subject is no longer in the presence of the perceived image, this image becomes a memory, recalled only in the subject’s mind: ‘the principle of conservation of present images remains the classical grounding of the theory of memory’ (43). This classical theory of memory includes the mnemonic techniques as explained by Yates, that used “loci”, or “places”, physical places in actual architectures, most often in monasteries, in which to “place” concepts that in this way were easier to remember through their spatialisation. However, Wunenburger still identifies other modalities in the presentification of the image-memory: The *senso-motorial memory* that is linked to habits, to the repetition of certain routines through which certain memories are fixed or

recalled (44). Then there is the *social memory*, which implies the identification of the past under the form of memory, and it entails a comparison between the individual's present situation and a certain situation in the past. It is the kind of memory active, for example, in the autobiographical practice, and it includes a selection of the relevant data with the correspondent attribution of an emotional charge (44-45). Finally, he identifies an *autistic memory*, which would consist in the pathological flow of memories in the autistic subject, which usually cannot identify a chronological logic, and which is often painfully and emotionally charged (45).

Still, the most interesting conceptualisation of the memory of images comes from phenomenology and Edmund Husserl for whom remembering is the elaboration of present images, of which only the referent is located in a past moment. In the conscious activity of memory, the image is as present as in perceptual activity, with the possibility of arriving to the point in which there is an overlapping of both: the perceptual image and the memory of an image of the past (46). In this process, an event, a fact or a certain point in a present experience is made to coincide with a memory, thus enriching it and giving it a new intensity in a 'retroactive dynamic' (47). This (seemingly paradoxical) conception of the timelessness of memory is complementary with the conception of the archive as a projection to the future, considering that the actualisation of each past memory occurs when it makes contact with a present

impression or perception. In this sense, digitalisation processes, which can be of images, but not exclusively, are also memories. They have a retroactive dynamic, in fact they enter feedback loops, with other kind of memories and materialities, with which they work in a similar fashion: reactivating points of contact, overlapping and permitting for new intensities to arise. Equally as important, this conceptualisation of memory is also compatible with my conception of the archive as event—as a living, creative, ever changing dimension of memory, which constantly moves back and forth between past, present and future.

Returning to Camillo and the Theatre of Memory, it can be said that the use of *loci* of classical mnemonic techniques was replaced in Camillo's theatre by 'eternal places', which are the figures located in each level of it. This theatre was based on the principles of the classical art of memory, but Camillo wanted to reproduce the order of eternal truth in this building; 'in it the universe will be remembered through organic association of all its parts with their underlying eternal order' (Yates 1966: 147). He thought that everything that the human mind could conceive, even if not necessarily in the field of physical perception, could be put together through serene mediation and then expressed 'maybe [...] by certain corporeal signs in such a way that the beholder may at once perceive with his eyes everything that is otherwise hidden in the depths of the human mind. And it is because of this corporeal looking that he calls it a theatre' (Yates 1966: 147).

Camillo's project is not a narrative model that conveys representation, but one in which the access to knowledge, memory and even more importantly, the triggering of ideas in the user can be accessed from different angles without the obligation of following a linear and unilateral path. Camillo's Theatre also implies the idea of spatialisation: The chronological and syntagmatic narrative logic of (art) history shifts in a simultaneous and paradigmatic spatial logic, in a similar fashion to computer logic as for instance described by Hayles, according to whom sequentiality is built and experimented by the user, but is not inherent to the computer logic:

> Sequence is constructed by accumulating a string of present moments as the user clicks on links, as if selecting beads to string for a necklace. In contrast to this sequence is the simultaneity of the computer program. Within the non-Cartesian space of computer memory, all addresses are equidistant (within near and far memory, respectively), so all lexias are equally quick to respond to the click of the mouse (making allowance for those that load slower because they contain more data, usually images). (Hayles 2005: 162)

In this sense, this model, and the one that follows, perfectly work as the place for 'coming together', but their possible readings retain the looseness that Derrida also talks about. They are precisely non-linear models, which are complementary with the idea of a living archive, an archive as event.

The second model, perhaps better-known, is Aby Warburg's *Mnemosyne Atlas* (1924-unfinished). In his conference 'Aby Warburg (1866-1929).

The Survival of an Idea', Mathias Bruhn talks about Warburg's *Mnemosyne Atlas*, observing that

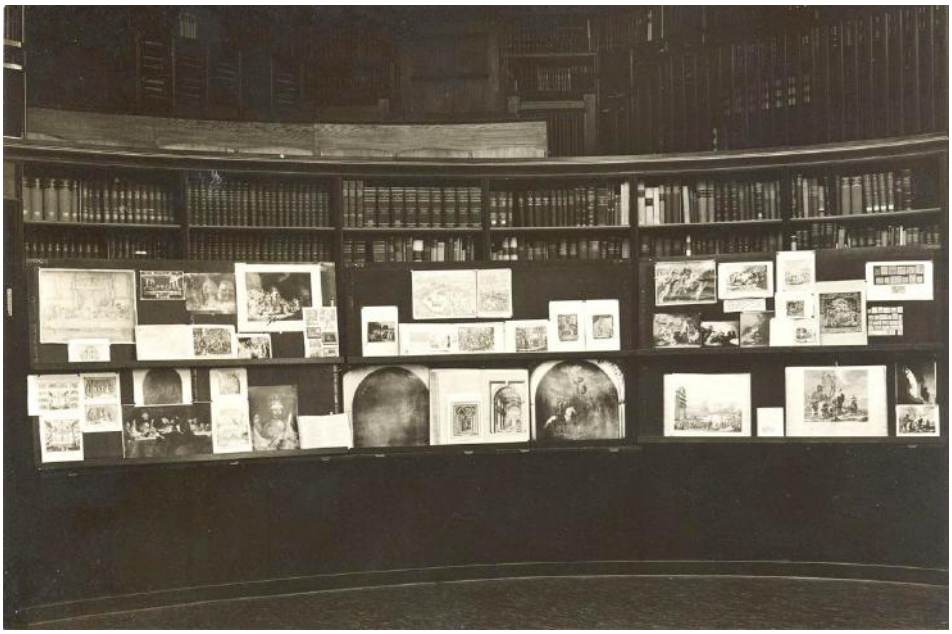
> Warburg was a technophile. He was interested in telecommunication, the press and traveling; all these new technologies enabled new forms of traveling, but also prolonged the old idea of migration that connected civilizations from the beginning. Technology, for example in the form of printing, was also the direct link between Dürer's engravings and the 28 telephones in his avant-garde library building. He had already written an article entitled 'Airship and submarine in medieval imagination' that suggested that former societies had anticipated what he called 'vehicles of thought' and imagination that we dispose of today. Images were their vehicles. (Bruhn n.d.)

Remarkably, in the same way Warburg interpreted some medieval images as predictive of the airplane and submarine, his whole library project, but especially his *Mnemosyne Atlas*, predicted somehow the logic of the hyperlink and of the Web.

The *Mnemosyne Atlas* is centred on images: a figurative atlas composed of more than two thousand plates or screens; each plate is formed by photomontages on wooden boards that bring reproductions of different works, especially from the Renaissance, as well as an archaeological repertoire and visual material from daily life, such as newspapers.

The project was born from Warburg's own non-linear thinking and thus from his need of presenting simultaneously—almost three-dimensionally

distributed in space—all kinds of relations and multiple forms of classification of images during his conferences and while writing and studying.



Figs. 26, 27. Aby Warburg, *Mnemosyne Atlas*, 1924-unfinished.

Thus, the *Mnemosyne Atlas* was aimed at creating relations and bringing memories in rapport with each other, not only in a linear, but also in a concomitant and transversal fashion. It was due to Warburg's need of combining (linking) heterogeneous elements and categories, and desire to access these elements simultaneously.

These models, as utopian as the projects might be considered, share incredible and almost predictive similarities with what today can be called virtual archives, where the possibility of accessing information has an analogous structure even if the materiality of the support is obviously different. Such archives are most notably found on the web, but are not exclusive to it.

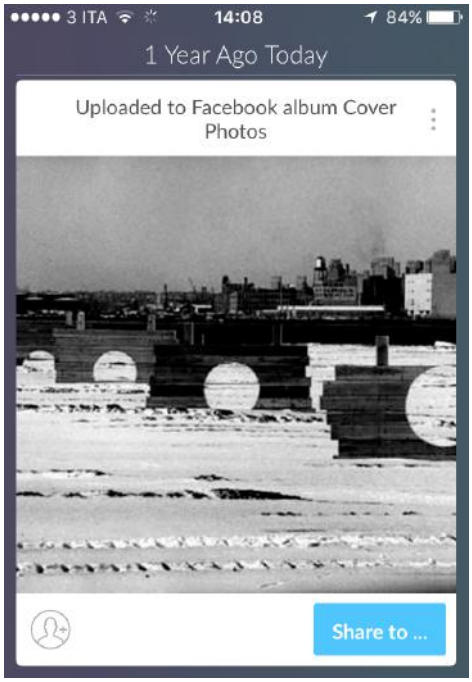
Considering more current examples of archives, both digital and not, may serve to show the relevance and interest of the aforementioned antique modes of archive, which nonetheless retain a certain currentness. These examples can be of use not to fall into the aforementioned 'Narcissus Narcosis Syndrome' (McLuhan1964: 41).

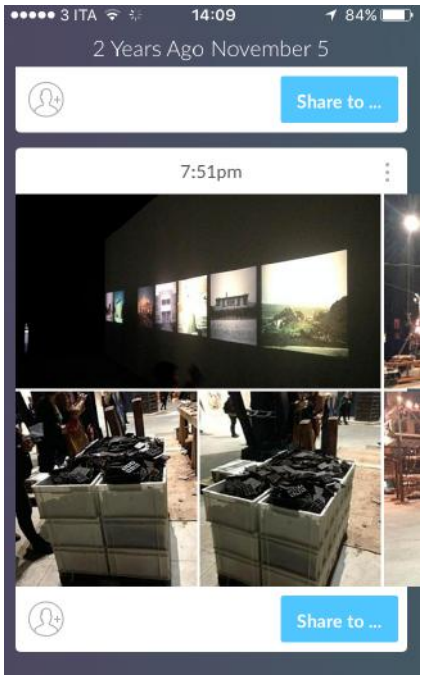
That is to say, it is important to be aware that the different kind of archives that we deal with on a daily basis—for example, many of applications and social media—are therefore not only keeping some memories (and not others) alive, but they also help to build what is yet to come in some way or another. In fact, leaving aside issues of privacy,

control and excessive exposure—which have been, and are exhaustively discussed and analysed extensively elsewhere—a more pertinent question emerges within the context of this research: What kinds of archives does one interact with today? What kind of subjectivities do they build? What kind of future will they construct, at least partially? Do they contribute to multiplicity, to complexity and the diversity of thoughts? Do they trigger creative associations, as their precedent models obviously did? Many of them certainly do, and of course some others do not, so it is worth analysing a few of them.

An iPhone application like Memoir (figs. 30, 31), for instance, gathers together information from all other apps allowed by the user, such as Instagram, Facebook, Twitter and the cell phone's own camera, to show her/him which are her/his memories from *n* years ago. Memoir thus features what the user had posted, or photographed that same day one, two, or *n* years ago, and then, scrolling down, around the present date, in different years. Even when certain photos have been erased from the camera, or from a certain related app, Memoir will feature them. It will also keep memories from an associated Facebook account even if the account has been closed. Therefore, it works as an archive of archives, in the sense that it gathers "memories" from other apps that can potentially also be considered as archives, while also allowing the "creation of memories" as one of its features, thus enabling the user to put memories (posted photos, phrases, links or videos) together as she desires. Even

when a certain photo or post wasn't considered interesting or worth keeping and remembering, the app will nonetheless present it there. Thus, in a certain sense, this operation functions similarly to an individual's memories: one is not always, or is rather seldom, able to forget or remember what one chooses.





Figs. 28, 29. Memoir App, mobile screenshots.

It seems valid to observe that, if following Foucault, the archive is considered as the set of rules that allows certain statements to emerge as opposed to others and to also determine how statements disappear, these apps are the set of rules that keep certain "memories" and not others,

because if not *the* archive, they are *one kind* of archive. In this respect, the analysis of the technological unconscious that will be formulated in the next chapter seems of utmost relevance. In the feedback loops established between what Manovich called 'the computer layer' and the 'cultural layer' (2001: 63), or between algorithmic logic and subjectivities, a further expansion occurs in the level of complexity of what was previously "managed", erased or remembered, in great part by human unconscious mechanisms.[43]

A more intricate and controversial example can be found, of course, in Facebook. Facebook does work as a kind of archive, even if a highly problematic one: problematic from different points of view, the most obvious being that of the construction of subjectivities. Because Facebook's algorithm is more arbitrary, from the user's point of view, than the one of the previous example, which follows the sequence of memories according to a quite strict chronological logic.

Considering it from the archival point of view, so to speak, and not strictly as a social network, Facebook keeps all the photographs archived in albums; however, what it chooses to keep visible in one's "Timeline" follows the logic of its algorithm, which is kept more or less secret to its users. One can guess that it has to do with the number of "likes", reposts, and so on, but actually, as a set of rules, they are not clear, nor, it could

[43] This is also why the next chapter will propose to talk about complex subjectivities and environments.

be said, “historically” justified, not to mention that it doesn’t offer the user the slightest chance to customise it[44]. The same is valid for Facebook’s newsfeed: algorithms that choose certain images and posts rather than others set the rules of the archive. This functions independently of any logic that contemplates the user’s will or interest. In this sense, Hito Steyerl observed that as smart phone cameras are low-quality there is an algorithm that corrects all the noise in the photos they take. What does it do precisely?

> Very simple. It scans all other pictures stored on the phone or on your social media networks and sifts through your contacts. It looks through the pictures you already made, or those that are networked to you and tries to match faces and shapes. In short: it creates the picture based on earlier pictures, on your/its memory. (Steyerl-Jordan 2014)[45]

This mechanism is not letting the user register what she might be seeing but instead recreates what it “assumes” she might like to see, as Steyerl puts it: ‘it is a mixture of conservatism and fabulation’, the real problem with this is that ‘it makes seeing unforeseen things more difficult’. This has two main consequences. The first addresses how the potential power for (new) knowledge that the technological unconscious might possess is limited, and at times even blocked, which will be explored in more depth

[44] What the user can do is to change the preferences settings to have a strictly chronological feed; however, the app will periodically insist to change to the news feed “selected” by the algorithm.

[45] http://dismagazine.com/disillusioned-2/62143/hito-steyerl-politics-of-post-representation/

in the following chapter. The second point, again, concerns limiting the power of the archive to project towards the future, not in the sense that the archive "conditions" the future—which it does in part—but in the sense that it opens possibilities to create as already theorised.

Going back to Facebook, its algorithm certainly works this way in part. What can be deduced from observation of the newsfeed, is that it tends to show information and posts about the contacts that the user interacts with most often. It tends to neither show anything new, nor fostering contact or knowledge about people with which the user does not already have some kind of fluent contact or interest. It also works in other questionable ways, such as the controversial case of the Facebook experiment that altered the algorithm to 689.000 users without their consent to research emotional contagion[46]. It also seems valid, if not urgent, to ask in this case what kind of archive Facebook is—moreover, what kind of future and archival object does this platform create? The hypomnesic function of the archive in this sense seems to be completely lost. Instead of functioning as a sort of notebook, in which subjects can record memories, but also re-work and create them, it doesn't seem too far-fetched to advance that a similar interaction with these kind of apparatuses, from the side of the producers as well as from the users, helps constitute and

[46] The experiment was part of research conducted with academics from Cornell and the University of California. The result was the paper "Experimental evidence of massive-scale emotional contagion through social networks" by Kramer, Guillory and Hancock. The full paper is available from: http://www.pnas.org/content/111/24/8788.full

project partial subjectivities that somehow get stacked in a loop that 'makes seeing unforeseen things more difficult', as Steyerl mentioned about digital images, but that is not of course limited to those, as we have already shown.

Nevertheless, the fact that other kinds of cultural productions working as archives exist, such as the *Future Library,* gives some hope. The *Future Library*[47] is a complex artistic project by Scottish artist Katie Paterson. Paterson worked together with the New Public Deichmanske Library on the project, Norway's largest library, for which she planted an entire forest near Oslo that will supply paper for the publication of a series of books in one hundred years. Each year, an internationally recognised writer will be commissioned to write a text for the library; in the meantime, the Deichmanske Library is responsible for keeping the texts until the date of publication in 2114. Margaret Atwood has written the first text; the second has been recently commissioned from David Mitchell; all of these texts, and the ones to follow in the coming years, will remain unknown and unpublished for a hundred years. A committee has been established, which will change every ten years, to be in charge of the nomination of the author each year, to maintain the forest, and to preserve the texts to come. Ironically enough, in a conversation with Margaret Atwood on *Artforum*, Paterson also used the word 'fabulation',

[47] http://www.katiepaterson.org/futurelibrary/

http://www.futurelibrary.no/

like Steyerl did when referring to the camera algorithm, but in this case it has a completely different resonance:

> *Future Library* is a speculative fiction. We have no idea if the forest is going to exist in one hundred years. What will be extinct? What will live there? The new Oslo Deichmanske Library is trying to project itself into the future and imagine what kind of institution it will be. Right now, we have trees growing and budding, the library room is being built—but the future is a fabulation. Its readers and writers don't exist yet. Then there's a point where I will die, of course. Somebody pointed out that Norway might not be a country by then. We really cannot predict. And Margaret has put it into my mind that maybe humanity won't even exist! (Peterson-Atwood 2014: 263)

In this case, the 'fabulation' is not conservative and limiting, but it implies a complete projection to the future. In fact, the *Future Library* is the archive projected to a time yet to come, if it comes, as Atwood doubts. The archive consciously and laboriously creates its own content, not simply as memory, but literally as an unpredictable, in part, fabulation and creation of this future, leaving in this process a sort of mysterious legacy; mysterious in the sense that it is unknown to contemporary subjects at the moment of its production, and probably even for most of the "archive keepers". At the same time, even if the artist has planned and implemented the conditions of the project's conservation, creation and survival in every detail, a high level of indeterminacy and unpredictability is not only tolerated, but is a constituent part of the work. The context in which the project will

continue to develop in the near and not-so-distant future is impossible to predict and control. In this sense, the *Future Library* works in a similar fashion as, for example, the *Theatre of Memory* and the *Atlas Mnemosyne*: it seeds and triggers some ideas, images and basic guidelines, but leaves the rest to be developed and created without controlling or limiting its infinite possibilities. This is the true sense of the word *virtual* for these archives, of infinite possibilities of creation and actualisation.

To conclude, the conception of the archive as proposed in the present chapter therefore conceives of it in terms of event. For the archive not to become a fossilised apparatus it must be conceived as a unique and unrepeatable event that is actualised by subjectivities in a different way, but which in turn not only structures the material—namely the memory that it is keeping, archiving, in the sense of a past memory—but also its own conditions of possibility in the future: it is an event projected to the time to come. And it is memory in the sense of hypomnesic memory: it works as a notebook, as the recording of thoughts, of knowledge, but not fixed, frozen thoughts or knowledge: it is re-created and revised each time. Because as the example of the *Theatre of Memory* intended to illustrate, the archive triggers and produces new possibilities with each actualisation in each individual subject. The archive has a certain coherence, it forecasts certain lines of reading, but these lines are never unique, absolute or closed. They work more like suggestions or excuses

to create—its non-linearity allows for creation and thus for uniqueness. In this sense, the archive, even when digital, is always instantiated and its materiality, even when not evident, is part of its structure. The archive is historical, its being an event that is precisely the dimension which instantiates it in a certain materiality and in a precise moment in time.

Therefore, in the aforementioned examples, it was not a question of one archive being "good" and the other "bad", but a question of which kind of future memories, and therefore subjectivities, these archive partially determine and what kinds of interaction and production they partially allow. Previously, McLuhan and the Narcissus Narcosis Syndrome was mentioned, the Syndrome implies the complete enthrallment with the medium: the impossibility of seeing its effect on individuals and the environment and social relationships at large in the moment in which a certain medium is pervasive and dominant. It is then worth remembering that, for McLuhan[48] (1964: 78), the only one capable of detecting these effects in advance, whether positive or negative, was the artist. This can help explain why a project like the *Future Library* opens so many questions about the archive while not necessarily answering them, rather than promoting a narcissistic feedback loop.

Finally, a conception of the archive as event can serve as a strategy to

[48] Also for Jack Burnham the role of the artist in current times would be that of preparing society for the rapid discoveries and changes regarding the moment of a 'post-biological logic for technological development' (Burnham 1968).

consciously—as far as it is possible—use, interact, build and, surely, be constructed, interpreted and used in our interaction, intertwining and actualisation of the different modalities of archives that can be encountered.

4. Technological Unconscious & Floating Signifier

The present chapter intends to delineate what has been identified as an unavoidable relationship to explain and understand a basic incongruity between language and the world, or more precisely in this context, between the digital and the physical—namely, the relationship between floating signifier and technological unconscious. As conceptualised by Peirce, there is a hard-core of the sign that does not signify, and at the same time, there is a non-symbolic dimension of the world that cannot be translated in language. Lévi-Strauss theorised that the floating signifier aims, precisely, to cover this flaw (1950). Therefore, the floating signifier appears as a suitable concept not only to better understand digitalisation, but also the relationship between art, technologies and the conformation of subjectivities. In this sense, the floating signifier is not simply a signifier able to be emptied with any meaning, but is becomes a “place” for the constitution of subjectivities. The role of technologies, in a very broad sense, and of art in this processes will be soon become apparent. If art has always had a preponderant role in the constitution of subjectivities, at the present moment the interplay between art, technology and subjects undoubtedly needs further analysis. In this context, the role of the floating signifier does not have to be related to art and artworks considered as simply empty signifiers to be filled with any

meaning (or desire) the subject wishes to project on it, but on the contrary, it offers the link (and possibly the key) to understand how the construction of subjectivities can unfold and change in and through technologies.

This is the reason why in the first place I propose to delineate the conceptualisation of a technological unconscious following its genealogy from Sigmund Freud (1925; 1930 [1962]), Walter Benjamin (1935), Jacques Lacan (1955 [1991]), Jacques Derrida (1967b), Franco Vaccari (1979), Vilém Flusser (1983), Rosalind Krauss (1993) to Antonio Caronia (2006), to suggest that there exists a stratus in technology and in the processes of interaction with it that is not accessible to human thought, but that it is however symbolically structured (Vaccari 1979). Because the structures of these inaccessible layers of technology and technological processes have been designed, programmed, modified, used by subjects who have distributed their cognition all along the systems (Hayles 1999; 2005), one of the most important features of the technological unconscious is its collective dimension (Vaccari 1979). Thus this collective dimension is not only embedded in the technological unconscious structure, but it plays an important role in the constitution of new subjectivities.

At this point, and to explain how the conformation of new subjectivities comes about, I compare, and ultimately assimilate, the technological

unconscious to Deleuze and Guattari's conceptualisation of the plane of immanence (1991) because both work as 'an abstract machine' (36), as a processor, so to speak, that works independently of the subject's will, or of the meanings that arise in it.

Then, how is this new subjectivity conformed? How does it unfold in the plane of immanence of the technological unconscious? It is necessary to think in terms of space, although not of an Euclidean space, but of an electronic one: The abstract machine of the technological unconscious works as the 'place' (Hillis 1999: 62-3) in which new subjectivities are constituted by their coming to a point of view (Deleuze 1988 [1993]). If to become a subject it is necessary to assume a point of view, in the non-space of electronic spaces the floating signifier has the specific task of creating a point of view for the constitution of a digital subject, of a subject who is embodied in the digital, as it will be developed in the following chapter.

4.1 The Floating Signifier

In his 'Introduction a l'oeuvre de Marcel Mauss' (1950) Claude Lévi-Strauss defined *mana* as the magical mystical substance that comprises magic, and which has 'an undetermined quantity of signification, in itself

void of meaning and thus apt to receive any meaning'. The term *mana* gave origin in semiotics to the concept of 'floating signifier' to talk about a signifier without any referent, an empty signifier that can potentially be filled with any meaning.

Jeffrey Mehlman clearly explains in his article 'The Floating Signifier: From Lévi-Strauss to Lacan' (1972) that the signifier is the structure of language itself while the signified is the known. The world 'means' (signifies) since the beginning, and humankind expects to 'know' it, this unfitness between the synchronic (the structure of the world) and the diachronic dimensions (what humankind can know about it) are covered by the floating signifier: the floating signifier has a semantic function, which is to overcome the overspill (*surabondance*, in the original in French) in signification between language and the world, allowing symbolic thought to operate within it. In modern Western culture this function has been taken over by science, yet in ancient tribal cultures, such as the ones Lévi-Strauss was studying, this was the mission of magic (Caronia 2006).

Therefore, the floating signifier also seems a suitable concept to explain the corresponding incongruity and overspill happening in digitalisation processes, and in the digital in general, which is also consistent with what has been exposed so far in order to overcome dichotomies like digital/material. First of all, the incongruity is obvious, as has been

explained above in terms of difference and repetition for any digitised element. Secondly, and increasingly more often, it is possible to find for the digital an ontology of its own in which no material referent is to be found and a particularly strong abundance of floating signifiers can be encountered—signifiers with no symbolic value that can be filled with a myriad of signifieds. One need merely think of the nearly infinite range of profiles and avatars that any individual can open at any time, which can be filled with any content. These are evidently working as empty signifiers able to be filled at any time with any signified. While profiles and avatars are possibly the most evident examples, they are not the only ones. Devices and apparatuses can also work in the same way.

As proposed in a previous work (Galati and Bianchi 2014), an example of this phenomenon is the screen working as a floating signifier: when the screen is (mistakenly) confused with an image, and not fully understood as a simulacrum as proposed in the second chapter, it works as a kind of (potentially dangerous) floating signifier, because it remains thus inscribed in the fiction that the screen can be whatever one wants. The screen thus becomes a TV, an audio set, a cinema, a museum, a map, a notebook, plus a “group of friends”, one’s personal diary; the screen is then asking us to fill it, to touch it, constantly, to load it with contents, meaning, and, ultimately, with desires. In fact, one of the most risky effects of a screen when working as a floating signifier is the illusion created by one’s desires that the screen is desiring us in turn, that it is

actually asking us interact with it, to answer messages, to post things, in summary, to give it our attention. Within the context of a different theoretical framework and dealing with two specific kind of apparatuses, robots and social media, Sherry Turkle (2011) was criticising a similar type of phenomena: the development of empathy towards robots, and a complete dependence of smart-phones and connectivity in general. These are shown by the author as palliatives for flaws or lacks that one is not willing, or able, to face and deal with. Flaws and lacks, voids, they could be called, that can be erased each time with the most suitable palliative, which is very often the desire to be desired. However, it can serve to be aware that these are often projected desires—some of the infinite meanings that can be given to a floating signifier and some of the infinite roles or needs it can cover—like the illusion emotional reciprocity with a robot. The danger though lies in the power it can have over us, because as stated above, *mana* is the magical substance of which magic is formed.

It is not by chance that art, since the origin of humankind, had a similar function to that of *mana*: magical, and then eventually religious. Especially because of this, I propose that neither devices, such as the screen, nor art, should be considered in this context as floating signifiers on which to project one's desires; but that art, on the contrary, has an ethical and thus potentially subversive power in the conformation of subjectivities, such as I exemplified with Amalia Ulman's *Excellences &*

Perfections in the second chapter, or with Katie Paterson's *Future Library* in the previous one.

Even if not literally talking about floating signifiers, Gilles Deleuze also treated the unfitness between language and the world in his book *La Logique du sense* (1969). To explain the creation of sense, Deleuze talks about series, about two series of cultural elements that combine and intersect producing meaning in the points of encounter. However, there is also an exceedence in the series that encounter, the series never completely fit. One series, the one corresponding to the signifier, always presents an excess over the other, but it is this same excess that permits the circulation, displacement and thus the generation of meaning among them, this very overspill is what generates sense (40). Deleuze exemplifies how series and the production of sense works with Lacan's comment on the short story by Edgar A. Poe 'The Purloined Letter' (1845) in which the signified series displaces in the signifier: the letter that cannot be found that was all the time in plain sight to everyone—but that occupies a different role, and thus is filled of different meaning, according with its change of position in the story and of the point of view of the different actors. Some lines ahead, Deleuze's example of Alice in the Sheep's shop (41) also illustrates how the series that combine are those of an empty space—thus the series that coincide with the floating

signifier, and those of continuous displacement— therefore the ones corresponding to the different signifieds. Alice looks to the empty shelf trying to "catch" the brilliant thing that is always on the move, always on another shelf. In this sense, meaning is produced in the overspill, or better, thanks to it—but it is also always "on the move", it is never fixed, nor static, it changes, and can be hardly be grasped.

4.2 The Technological Unconscious

With his article 'Civilization and its Discontents' (1930 [1962]), Sigmund Freud is possibly the first to write about technological innovations as prosthetic limbs that humankind has developed to operate in the world enlarging its powers. Freud suggested that every tool humankind has created since its origins has been meant to extend its powers over the world:

> […] Long ago he formed an ideal conception of omnipotence and omniscience which he embodied in his gods. To these gods he attributed everything that seemed unattainable to his wishes, or that was forbidden to him. One may say, therefore, that these gods were cultural ideals. To-day he has come very close to the attainment of this ideal, he has almost become god for himself. With every tool man is perfecting his own organs, whether motor or sensory, or is removing the limits to their functioning. […]
>
> Man has, as it were, become a kind of prosthetic God. When he puts on all his auxiliary organs he is truly magnificent; but those organs have not grown on to him and they still give him much

> trouble at times. […] Future ages will bring with them new and probably unimaginably great advances in this field of civilization and will increase likeness to God still more. ([1930] 1962: 37–39)

This quote, not only "foresees" how civilisation brought humankind's capabilities even closer to those of a god—which can be seen, for instance, in how digital technologies allow a phenomenon such as ubiquity through avatars and projections of the body—but also opened the path for the theorisation of a technological unconscious as follows.

In this regard, Walter Benjamin picks up Freud's assertion and observes that photography, enlarging the power of sight, has created a sort of 'optical unconscious' that permits one to see what the eye is not capable of. For instance, the human eye cannot perceive that when a horse is running, at a certain point, all of its body is suspended in the air. That moment can be captured and revealed to the human eye by the camera: the possibilities of human vision enlarged to almost-divine capabilities by the photographic device. But his analogy with Freud's theory does not end there. The optical unconscious is similar to the subject's unconscious because it evidences a nucleus—in this case in the capabilities of the eye—that is not accessible to the subject (Benjamin 1935). Freud's theorisation of the unconscious is the first step in the process of the crumbling away of the 'liberal humanist subject' (Hayles 1999), given that according to the theory of the unconscious the subject is guided in most of its actions by forces that it cannot account for; in the same way in

which the optical unconscious is that part of the sense of sight that cannot be accessed by the subject without the help of a machine. Benjamin's conceptualisation of the optical unconscious was the first in art history in which art made with machines is considered to develop, project and produce objects typical of a given technology engaged in a cybernetic cycle with a human agent, and of course it will be fundamental for further reflections on what could be called the aesthetical autonomy of certain technologies, as will be shown.

In this context, it is also pertinent to recall Derrida's analysis of the relationship between machines and psychic apparatuses, which was already noticed by Freud in a letter to Wilhelm Fliess (Derrida 1967: 335-337). Already then, Freud had the impression, when describing the representation of the psychic apparatus, of being faced with a machine that could work by itself, independently from the subject's intentions. Yet although the machine can work autonomously, it doesn't in any way have its own energy, which means that it is dead. Thus, what has an independent way of working is the psychic apparatus and not its representation, the machine, which are both synonyms of death for Derrida (335). The machine in this sense is pure representation—representation of thought—because a machine cannot, at least yet, ever work by itself; it always needs an external source of energy and input. As Derrida remarks, this is the first objection that Freud found in his comparison of the *Wunderblock* and the way in which the psychic

apparatus works: ‘There must come a point at which the analogy between an auxiliary apparatus of this kind and the organ which is its prototype will cease to apply. It is true, too, that once the writing has been erased, the Mystic Pad cannot “reproduce” it from within; it would be a mystic pad indeed if, like our memory, it could accomplish that’ (Freud 1925: 230). Thus Freud identified a part of psychic processes that worked in a similar way as the machine, but in no way assimilated the machine to human agency. At this point Derrida begins to go through the questions that Freud did not ask, even though his theorisation brought him to the limit of what can today be considered the only questions to ask. In the first place, if the machine is not, evidently, the psychic apparatus but only its representation, how has it increasingly begun to ‘resemble memory’ (Derrida 1967b: 337)? The second fundamental question is about metaphors—which defined ‘in this case the analogy between two apparatuses and the possibility of this representational relation’ (337)—and the necessity, that had evidently emerged, of creating an additional and representational prosthetic psychic apparatus, the machine, in order to ‘supplement its finitude’ (337). In Derrida’s terms prosthetic memory as a representation of the psychic apparatus is related to death, thus paradoxically—and here it is possible to detect an analogy with the *mal d’archive* as explained in the third chapter—the creation of a prosthetic memory that aims at avoiding the oblivion of death has its origin in death itself, namely, the machine and the representation of psychic processes

and memory.

Freud's ideas as outlined above and Benjamin's comparison between the optical unconscious and the subject's unconscious are crucial, and led Italian media theorist, mathematician and philosopher Antonio Caronia to talk about a 'digital unconscious' and to ask if, accordingly, digital technologies, more specifically the computer, could not reveal something, or everything, to humankind about how the unconscious works (Caronia 2006). As a matter of fact, it did: More recently John Johnston has convincingly demonstrated how cybernetic theory was fundamental for Jacques Lacan in his theorisation of the three registers of the I, namely, the symbolic, the imaginary and the real.

In *The Allure of the Machinic: Cybernetics, Artificial Life and the New AI* (2008), Johnston dedicates a whole chapter to explain the (little known) relevance of cybernetic theory and the universal Turing machine for Lacanian theory. He more specifically addresses how Lacan got to advance that the symbolic order worked as an universal Turing machine: Turing's thesis states that every task that can be expressed as an algorithm or any process that can be formally (mathematically) described has an equivalent in a Turing machine. Consequently, the universal Turing machine is a machine that can model how any Turing machine works, because it can perform very different tasks or calculus that can be performed by any of these machines; in short, this means that it is

programmable. As Johnston argues, this kind of machine is an abstract machine. It has a certain logical form that can work independently of any material instantiation (2008: 71).

What Lacan found interesting in cybernetic theory and, especially, in the universal Turing machine was that it enabled a new understanding of the autonomy of symbolic processes for which language was a kind of program that runs on the universal Turing machine of the unconscious, an unconscious that operated independently of the subject's will (Johnston 2008: 78). The unconscious, or more precisely the symbolic order, therefore works as a machine that follows certain logical operations, that are not controlled in any way by human decision: 'Lacan understood the symbolic function as a particular kind of computational assemblage that made human behaviour meaningful' (Johnston 2008: 67).

Thus, the basis for the theorisation of a technological unconscious were already laid in 1925 by Freud and 1955 by Lacan, respectively. Moreover, as it was shown, Derrida had already written in 1967 about the conceptualisation of the psychic apparatus as a machine in terms of a metaphor, a metaphor, but a metaphor nonetheless. Thus, in a certain way, all the confusion and subsequent discussion about the attribution of human agency to machines could have been avoided.

Katherine Hayles shows that, not only Lacan but also subsequently Deleuze and Guattari, conceived human cognition and psychology as intertwined with machinic processes (2005: 177). In this sense, Hayles brilliantly explains the line of thought through which Lacan, Deleuze and Guattari challenge human agency in the measure that a part of the unconscious works as a processing machine—a question that Lacan was very aware of, as Johnston shows when quoting Lacan's definition of the symbolic order: 'The symbolic world is the world of the machine. Then we have the question as to what, in this world, constitutes the being of the subject' (Lacan 1991 quoted in Johnston 2008: 72). Hayles' analogy for the acceptance of the inverse of this reasoning is less convincing: 'Finally, if desire and the agency springing from it [the unconscious] are essentially nothing more than the performance of binary code, then computers can have agency as fully authentic as humans' (Hayles 2005: 177). If it is true that with psychoanalytic theory the deconstruction and challenge of the subject as a 'humanist individual subject', as she defined it, begun at the end of the nineteenth century, with all the consequences that it had, among which the consideration of humans as intelligent machines, it is not possible to take for granted that applying this way of reasoning to machines will give as a result the investment of machines with agency and desire; said in other words, it is not, at least, an automatic result of reversing the line of thought resulting from Lacanian and Deleuzian theory. It is more likely, as also Hayles shows, the result

of anthropomorphising the machine, and of distributed cognition (of the programmer, for instance) all along the system—in this case, research on cellular automata and artificial life. In fact, what is most interesting in Hayles' theory in this book (*My Mother Was a Computer*) as well as in the previous *How we became posthuman* (1999) is the assertion that a metaphor used to explain a behaviour which is similar to human behaviour—such as explaining the emergence of strings of code as 'reproduction', for instance—has begun to be understood in a literal sense, that is to say, that a certain narrative became transparent to many of the actors in that context.

In her now canonical book *The Optical Unconscious* (1993), Rosalind Krauss used Benjamin's conceptualisation of the optical unconscious as explained above as a point of departure to then invest—to be consistent with psychoanalytical vocabulary—the word 'unconscious' with the Lacanian sense, ignoring, however, all of Lacan's theorisation on the relationship between the unconscious, the universal Turing machine and cybernetics. As in many others of her writings, Krauss searches to overcome Clement Greenberg's theorisation of modernism using the structuralist semiotic square and Lacanian theory to read it in terms of topography instead of narrative (Krauss 1993: 13). The optical unconscious is then in Krauss' view a kind of anti-vision. If opticality, understood as a sort of pure vision, is the conscious (or could she say the symptom?) of modernism, then the optical unconscious is the logic that

undermines the modernist logic from within, just as the unconscious does with the conscious mind:

> The optical unconscious will claim for itself this dimension of opacity, of repetition, of time. It will map onto the modernist logic only to cut across its grain, to undo it, to figure otherwise. [...] Lacan pictures the unconscious relation to reason, to the conscious mind, not as something different from consciousness, something outside it. He pictures it as inside consciousness, undermining it from within, fouling its logic, eroding its structure, even while appearing to leave the terms of that logic and that structure in place. (Krauss 1993: 24)

According to Krauss, the artists of the optical unconscious included Max Ernst and some other artists close to the Dada group, especially Marcel Duchamp. Clearly, Greenberg deeply despised all of these artists. In Krauss' theorisation, these artists' oeuvre and discourse worked as the optical unconscious—unconscious in the Freudian/Lacanian sense of the repressed—of modernism and its corresponding opticality 'eroding it from inside'. *Opticality* consists in the optical relationship established between the viewer and the work, a purely disembodied kind of vision that would become, according to Krauss, modernism's new medium, as it will be deeply explained in chapter 6. For example, the gesture of pointing in Max Ernst is the most 'readymade' of his motifs; it is repeated in several of Ernst's works as if it were a pre-fabricated motive, which Krauss argues with different examples (*Oedipus Rex*, *Répétitions*, *Loplop Presents*, *La Nature*, quoted on page 82).

Fig. 30. Max Ernst, *Loplop Presents*, 1930.

She then made this readymade topic coincide with the Lacanian automaton, the repressed that returns as repetition, to end up saying that, consequently, 'the hand is Ernst's *object a*' (82). The main problem with Krauss' position is that she forces Lacanian theory and talks about an unconscious as if 'Modernity' had one, thus presupposing the existence of an unconscious in Modernity as if it were a subject; and at the same time, she "analyses" artists through their artworks: If talking about certain repeated *topoi* in an artist's work as readymade undoubtedly makes sense, taking things further as to identify 'Ernst's *object a'* seems more far fetched, and especially useless.

Although not putting it in these terms, Vilém Flusser also theorised something comparable to Benjamin's optical unconscious at work in the

photographic apparatus. In his work of 1983, *Towards a Philosophy of Photography*, Flusser proposed that images were originally aimed to explain the world in the first place, that they were mediations between humans and the world that were supposed to make this relationship clearer and comprehensible. Instead, images 'turned into screens' (8) that never cast light on the world, but just obscured it, interposing themselves between us and the world, in the sense that instead of using images to navigate reality, humans now interact with the world through them.

In addition to this, the photographic image not only escapes the functionary's (or photographer's) intentions, but the photographic device makes photographers to become a function of the machine:

> The camera is programmed to produce photographs, and every photograph is a realization of one of the possibilities contained within the program of the camera. The number of such possibilities is large, but it is nevertheless finite: It is the sum of all those photographs that can be taken by a camera. Thus photographers attempt to find the possibilities not yet discovered within it. (Flusser 1983: 26)

This means that the machine always performs its own program, which is aimed at perpetuating and improving itself indefinitely: 'The camera's program provides for the realization of its capabilities and, in the process, for the use of society as a feedback mechanism for its progressive improvement' (Flusser 1983: 46). Therefore, not only do the photographer's intentions not count, but also, photographers and people taking snapshots, become a function of the camera, which eternally

performs its own program. This is the black box, the hard core of the photographic apparatus. Although written many years before, all this theorisation seems to predict the advent of some smart-phones' applications that include filters such as Instagram and similar. One can only ask what kind of agency a user has, or merit as a photographer, when looking at the results of the photographs taken and modified through such programs.

Even before Vilém Flusser and Rosalind Krauss, Italian photographer Franco Vaccari theorised a 'technological unconscious' in a series of essays first published in 1979. Although Vaccari explicitly quotes Lacanian theory, he doesn't state from which seminar or work he is quoting, but he may very likely be familiar with Lacan's article of 1955 'Psychoanalysis and cybernetics, or on the nature of language' (1991). He considers that this technological unconscious at work in the photographic apparatus is independent of the photographer's will, and at the same time, it is symbolically structured:

> The technological unconscious shouldn't be interpreted as a pure extension and enhancement of human capacities, but it is necessary to see in it the instrument of a capacity of autonomous action; everything happens as if the machine were a fragment of unconscious in action. The structure of the machine is analog to the structure of the unconscious, it doesn't have depth and it is ignorant of the flows that run through it. (Vaccari 1979: 5)[49]

[49] All translations from Italian of Vaccari are mine.

In this sense, the most interesting thing the machine does is not necessarily artistic, nor is it guided by the photographer's intentions. The most interesting part for Vaccari is what it does by itself, in which there is no intention, just action. In this way the technological unconscious becomes directly connected with the readymade, or better, with readymade images. The photographer would only choose images that are already there and put them into context, such as the conceptual artist does. This conception of the readymade is far from Krauss' association of the readymade as Lacanian automaton; instead, Vaccari uses Lacanian theory as a tool to further understand technology, or better, certain artistic productions, such as photographs produced by a certain technology.

Vaccari calls 'technological unconscious' what Flusser calls 'black box' or 'the program of the apparatus': what the machine can realise without the conscious intention of the user or photographer—for both the photographic apparatus performs an action, or a program, beyond the will of the 'functionary' or photographer. For Vaccari this happens in terms of the Lacanian unconscious, which is symbolically structured, and the most interesting results do not involve the intention of the photographer, nor follow her will. For Flusser, it happens in terms of a program, of an intentional perpetuation, an improvement of the will of the machine, and he is even more apocalyptic in the conception of the machine that is performing the fulfilment of the program of the camera using the photographer in order to improve and perpetuate itself.

Two important and fundamental moves make Vaccari's theoretical approach extremely valid and interesting. Vaccari considers the technological unconscious and its symbolic structure as something unlikely to be completely decoded by a human subject. Yet the key to decode the technological unconscious is nonetheless held collectively. The technological unconscious is not meant to be analysed as if belonging to a subject, but it can offer the key to uncover certain collective symbolic traces. It can be a way to access, at least in part, a collective imaginary:

> [...] the other [path to make meaning emerge from the photographic sign] is to interpret the photograph as a sign belonging to a language which is only in part reducible to man, a sign which is a symptom, a sign which works as a spy of something repressed that instead of being individual is collective. (Vaccari 1979: 14)

The second fundamental move that Vaccari does is from the subject, the photographer, to the device: He is not analysing "a subject", nor considering an artistic movement as if it were one; instead, he is focusing on the photographic apparatus advancing that it has 'an autonomous capacity of organisation of the image in shapes that are already symbolically structured, independently from the subject's action' (18). Thus the move is from Benjamin's optical unconscious with focus on the expansion of the subject's capabilities, to his technological unconscious with focus on the device's autonomous action. However, it is worth drawing attention to the assertion that in the technological unconscious

images are symbolically structured independently from any subject's intervention: it means that the symbolical dimension has been embedded in the device (unconscious) and that it is at work even without any further human agency. An interesting example in this regard is the aforementioned algorithm in smart phone cameras: the algorithm has evidently been created by a human programmer to improve the quality of the photographs performing certain tasks, which include snooping in the user's image library and social networks to figure out: a. what someone might look like, b. how the user would like someone to look, and modify the image accordingly (Steyerl-Jordan 2014). In this sense, the algorithm not only behaves independently of the user's will, but also, as already advanced, limits the power that the same technological unconscious may have to reveal events, things and images that could be unknown to the user until that point, at the same time that it may limit any creative power: the user is limited to see again and again who and what she already knows, and in the ways she already knows.

This observation is also fundamental to understand the relationship between the technological unconscious as it has been developed thus far: as the possibilities of the machine of revealing some (very small) part of the subject's unconscious (Benjamin 1935; Caronia 2006); as the machine which can reveal its own unconscious (Vaccari 1979; Flusser 1983) which is anyway symbolically structured and collectively built (Vaccari 1979)—and floating signifier.

4.3 Space, Place, Cyberspace & Electronic Space

This section considers that is it possible to relate the floating signifier with the technological unconscious as the dimension in which the conditions of possibility of a digital ethic and aesthetic reside. If, following Deleuze (1988 [1993]), it is accepted that the subject is constituted by the 'point of view' and that she is 'what remains in the point of view' (19-20)—and considering that in cyberspace there is no point of view because there is no space (Manovich 2001: 219)—the technological unconscious can be assimilated to a plane of immanence in which meaning unfolds through the floating signifier. The floating signifier is the site, the place that constitutes a different point of view for the subject to assume in the digital each time. The subject comes to the point of view, as Deleuze proposes, constituting herself as a subject who is embodied in the digital, as it will be explained soon.

Consequently, it is necessary to explain what space means in this context—moreover what is cyberspace, or as it will be rather called, electronic space.

In his book *Digital Sensations: Space, Identity, and Embodiment in Virtual Reality* (1999), Ken Hillis makes an interesting differentiation between space, place and landscape with the aim of investigating the possibilities of sight and embodiment in virtual environments and virtual reality.

For defining space, Hillis introduces the difference between the modern Western conception of communication as 'the transmission of messages across space' (62) and explains an older and ritual conception of communication linked to a place 'with its forms of language and habitual social interactions' (62). Analysing the conceptions of space in Aristotle, Euclid, Newton, Descartes and Einstein, Hillis defines absolute, relative and relational space:

> Absolut space suggests macro level or "big picture" realities. Experientially, relative space accords more closely with individual meaning, and relational space may suggest an ability to imagine a continuum or at least linkages between the meanings of absolute and relative space. Although VEs are based on Euclidean geometry and a Cartesian grid of absolute space (along with distance and motion) and objects are represented and relate to one another "therein". (73)

Hence, Hillis shows that whilst absolute space is often a concept apt to be formally described in the context of physics, mathematics and philosophy; relative and relational space have a more symbolic, ritualistic charge that can be assimilated to the definition of place: 'The place itself is a middle ground drawing together the disparate elements into

communication'; in this sense, place, or a ritual conception of space is 'a possibility that grounds the basis for coming together' (62-3). It is evident that in this case the conception of place coincides with the relational dimension, and with the meaning and intentionality actors share in that dimension.

However, whilst virtual reality and immersive digital environments imply a representation of absolute space, this research does not focus specifically on virtual environments, but on the digital as a whole—whether representational of absolute space or not. Thus in this context, the digital and its possibilities tend more to create a situation of place. The digital presents itself as the previously mentioned relational dimension, in which proximity is more often relational and symbolically charged than physical, and in which an idea of agora, or common ground, can be lived in representational as well as non- representational environments. It is now important to make clear that the concept of representation in this precise context—related to the representation of space—is used almost as a synonym for perspectival representation, that is to say, of the mathematical and conceptual methodology used to represent three-dimensional, absolute space, on a two-dimensional surface—whether canvas, paper or a computer screen.

Then what is cyberspace? The Oxford Dictionary defines it as 'the notional environment in which communication over computer networks

occurs', but, as it is well known, the term became popular thanks to William Gibson's short story 'Burning Chrome' (1982), and especially, shortly later, through his novel *Neuromancer* (1984), in which it is defined as follows:

> Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding. (Gibson 1984: 74)

It is interesting to note that Gibson, many years later, in the independent documentary *No Maps for These Territories* directed by Mark Neale said about the word that "…seemed evocative and essentially meaningless. It was suggestive of something, but had no real semantic meaning, even for me, as I saw it emerge on the page" (2000), it was thus, a floating signifier. Of course, Gibson means that he liked how the word sounded while not being sure what it meant, but as it will be argued soon, in this context cyberspace is closely related to the floating signifier. Anyway, Gibson's somehow blurry definition of cyberspace conveys the idea of 'representational data', but not necessarily of 'space', in the sense of three-dimensional, absolute space.

As Lev Manovich also shows, even if cyberspace may often entail the idea of representation, the truth is that 'there is no space in cyberspace'

(2001: 219). Even in a representational digital environment, there is neither continuity, nor the extensive property of something similar to space, but just a 'collection of separate objects' in a 'vacuum' produced by a computer graphics program for modelling a 3D environment (219).

Instead of exploring philosophical and/or mathematical notions of space the way Hillis proposed, Manovich explores the definitions of space in the history of art. The classical history of art that began with Heinrich Wölfflin, Alois Riegl and Erwin Panofsky at the beginning of the Twentieth century—continued by Ernst Gombrich at the Warburg Institute—considered that the object of study of art history was the study of evolution of style (Ginzburg 1966). As Manovich points out, the study in the evolution of representation of space also took place within this line of study.[50] For example, Panofsky related the systematic representation of space in the Renaissance to the development of scholastic and abstract thought. Even though we perceive representational virtual space as described by Panofsky—homogeneous and continuous—computer generated space is in fact more of an aggregate of objects sparse on a

[50] In this sense, many theorists, but especially Tomas Maldonado (1992), have pointed out how Western European culture chose, approximately in the Fourteenth century, to represent space and reality in general in a "realistic" way, for which a specific methodology like the linear perspective was developed—at first more or less intuitively, and subsequently codified by Filippo Brunelleschi and Leon Battista Alberti. This way of representing reality, and thus space, is often taken for granted and considered as a "natural choice". Because perspectival representation is at the basis of the main productions and forms of Western culture, among them photography, cinema, and especially new media, it has become transparent. However, it is not superfluous to remember that other cultures, and Western culture before the Renaissance, have chosen differently.

‘vacuum’. ‘What is missing from computer space is space in the sense of medium: the environment in which objects are embedded and the effect of these objects on each other’ (Manovich 2001: 220). The conception of space as a medium, not just as a void on which to display objects is fundamental, and according to Manovich, completely missing from mainstream computer graphics. However in this context, computer graphics has little relevance. The present dissertation proposes to replace the word ‘cyberspace’ with ‘electronic space’ because this expression better conveys the digital understood independently from issues of representation. Following Hillis’ definition outlined above, electronic space is a type of place. It is a kind of public arena in which proximity is often conceptual, or psychological, always mediated, and not necessarily, or even seldom, physical. There are digital places that are representational, like videogames, like Second Life, like virtual reality environments, and so on; there are also other, no less symbolically charged, places where interaction, forms of encounter and social dimensions evolve that cannot be recognised as representations of any “physical” reality. The latter form of digital place includes social networks, chats, many apps, and the like. These electronic spaces work in fact as places of agency and generation of sense, no less than a physical agora. In this sense, it will be proposed that the technological unconscious works as a plane of immanence in which meaning unfolds.

4.4 The Technological Unconscious as a Plane of Immanence

Deleuze and Guattari defined philosophy as ‘a constructivism’ that has two main qualitative aspects, which are simultaneously constitutive and complementary: the creation of concepts and the laying out of a plane of immanence (1991: 23). If concepts are ‘concrete assemblages, like configurations of a machine’, the plane of immanence is ‘an abstract machine’, thus concepts are the gears of the abstract machine (36). The authors consider that concepts are events, which in their vocabulary means that a subjectivity is needed for concepts to become events, to be actualised, whilst the plane is ‘the horizon of events’, and this is independent of any observer (36).

It is not difficult to find once more a point of coincidence with Jacques Lacan. As advanced above, for Lacan the symbolic register of the unconscious works like the Universal Turing Machine, independently of the subject’s will. Deleuze and Guattari considered machinic processes not only related to human subjectivity, agency and cognition, but also, as in this case, in the way the plane of immanence functions.

Now following the same line of reasoning, and considering the technological unconscious as a dimension that works independently of human agency although it is symbolically structured, it is not difficult to accept that the technological unconscious can be assimilated to a place of

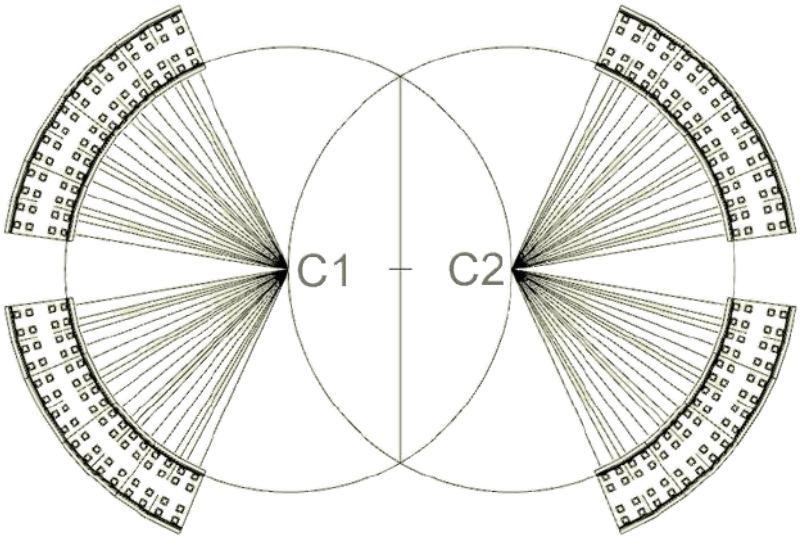
immanence. Deleuze and Guattari's words can make this link even clearer:

> The plane of immanence is not a concept that is or can be thought but rather the image of thought, the image thought gives itself of what it means to think, to make use of thought, to find one's bearing in thought. (37)

Therefore, if, as intuited by Antonio Caronia, the technological unconscious can help reveal something about how the unconscious part of the human mind works, the same can be said of the plane of immanence because it is 'the image thought gives itself of what it means to think'. In this sense, the plane of immanence/technological unconscious is, in Derrida's terms as developed above, a sort of representation of thought, a machinic process, in which anyway symbolic processes are embedded.

The technological unconscious is the plane of immanence, so what is the link between the technological unconscious as a plane of immanence and the floating signifier? Within the plane of immanence, the floating signifier constitutes a point of view. As Deleuze explains in *Le Pli: Leibniz and the Baroque* (1988 [1993]), the subject is constituted by the point of view, but this point is not exactly a point but a *place*, a position, a site (27), she who is a subject is the one that inhabits a point of view. The point of view is a point of view in a variation, in a change, in a metamorphosis—but it doesn't change *with* the subject. It is the subject

who has to come to the point of view. This is, according to Deleuze, the foundation of perspectivism, and more specifically of the baroque perspective. This perspectivism can be quite evident, for example, in Gian Lorenzo Bernini's *colonnata* at Piazza San Pietro in Vaticano (Figs. 33, 34): one can walk around, under and through the *colonnata* enjoying spaces and shadows, or the overlapping of the columns, but the truth is that Bernini conceived of two spots, which are clearly signalled on the piazza's pavement, standing on which the viewer has the "right" point of view from which all the rows of columns look aligned and it is possible to see just a single column in each row.



Figs. 31, 32. Gian Lorenzo Bernini, Piazza San Pietro, *Colonnata*,1656-1667.

In Baroque painting, ceiling decorations are further clear examples of the importance of the point of view. For example, in *The Glory of St. Ignatius* (1685), the Jesuit brother Andrea Pozzo, dedicated the paintings on the ceiling of the Church of Sant'Ignazio in Rome to an apotheosis to Saint Ignatius. To achieve a maximum impact on the viewer, who would be always at a great distance and watching from below, he built a grid with strings at an average eye-level, then projected it on the ceiling illuminating it with candles from below to calculate the deformation of the figures from this precise point of view. In this way, the correct or

privileged point of view was at the centre, and the effect decreased when moving to the borders.

In this regard, Deleuze praises Michel Serres' analysis of 'the consequences and presuppositions of the new theory of conic sections' (1988 [1993]: 21), so considering the previous examples his words become clearer:

> [...] in a world of infinity, or of variable curvature that has lost notion of a center, he [Serres] stresses the importance of setting point of view in the place of the missing center; of the new optical model of perception, and of geometry in perception, that casts aside tactile notions, contact and figure, in favor of an "architecture of vision"; of the status of the object, which now exists only through its metamorphoses or in the declension of its profiles; of perspectivism as a truth of relativity (and not a relativity of what is true). (Deleuze 1988 [1993]: 21)

Another clear example in this respect is the anamorphosis: in anamorphoses the drawing is distorted and it can only be appreciated in its full figurative coherence from one point of view, or with the help of a mirror. Anamorphoses, and Baroque art in general, exemplify the necessity for the subject to come to the point of view in order to actualise the object, and at the same time to become a subject by beholding truth. Hans Holbein's famous painting *The Ambassadors* (1553) is a perfect example of anamorphosis At the bottom, centre of the perfect portrait of the two ambassadors a strange and almost uncanny figure is depicted. It is unrecognisable and at first glance looks like a big stain. Still, when the viewer comes to the right point of view, the stain reconfigures itself into

a perfect skull, the most recognisable iconographic trait of the *vanitas*, the symbol of human finitude.

Fig. 33. Hans Holbein the Younger, *The Ambassadors*, 1533. Oil on oak, 207 x 209.5 cm. National Gallery, London

Fig.34. Hans Holbein the Younger, *The Ambassadors*, 1533. Detail, anamorphosis.

However, this perspectivism must not be confused with a representational perspectivism. As is now clear, Deleuze doesn't address the representation of space, but rather the possibilities to constitute subjectivities by assuming a point of view, and eventually attaining truth.

Within the non-space of electronic space, and the deeper realm of the technological unconscious, the digital subject is constituted by coming to the point of view built by the floating signifier. The subject needs a point of view to act and interact in electronic space as a subject. However, in electronic space there is no space, there are only some virtual *places*. It is thus the function of the floating signifier to constitute this point of view, which is different each time, and comprises many different points of view at the same time, like the shining object in the Sheep's shop. This means is that the electronic space can be representational or not, but in any case, the subject must assume a point of view in it, and this is the role of the myriad of floating signifiers that she can found and inhabit in the digital. This is also how meaning is generated and circulates in the technological unconscious/plane of immanence: through the feedback loops between (digital) subjects and complex environments; thus, this process is twofold because new subjectivities are generated in turn.

For example, a first person shooter video game run on Oculus Rift will changes the point of view along with the user in order to achieve a higher

level of realism and immersion (Bolter and Grusin 2000). This is the main difference and advantage in the race to achieve further realism and immersion that new media in general, and especially virtual reality environments, have compared to a fresco or painting: the tromp-l'oeil effect is lost as soon as the viewer moves away from the "correct" point of view, so instead of looking for the "correct" point of view in which the scene will come together for her, the (perspectival) point of view changes with the user.

What happens then with non-realistic digital environments? In such prospectively non-representational environments there is also a point of view, the point of view constituted by the floating signifier, yet this is not the point of view of perspectivism (in the sense of a perfect configuration that can only be beheld from a precise locus). In the case of a social network, let's say Facebook to name the most famous and popular example, there is a proliferation of floating signifiers—of signifiers, that can be considered electronic spaces, to be filled with any content—that can generate different points of view. The most obvious floating signifier in this regard would be the user profile: filling a profile creates an electronic space (for the user), a point of view to inhabit from which to see the newsfeed, other users' wall, profiles, to send messages, in short, to inhabit this electronic space. Thus, this is one of the ways in which the floating signifier works to create a point of view for the digital subject.

There are many similar cases that vary slightly, yet this example suffices to illustrate the function of different social networks.

In this sense, an interesting case is the recently launched app and social network Periscope, which is linked to Twitter. Once the user has connected both accounts, Periscope offers the possibility to follow one's Twitter contacts, but it is not limited to them. Accessing the users' video camera on the smart phone, the app allows the user to live-broadcast whatever they wish. There is a feed of the users one follows, but also a worldwide feed of the users broadcasting at that precise moment, regardless of whether one follows them or not. This feature is perhaps due to the relative difficulty of live-broadcasting compared to tweeting—if for no other reason because, from a more technical point of view, the app exhausts the battery in a very brief period of time.[51] On the website, Periscope's tagline reads: 'Explore the world through someone else's eyes',[52] which sounds pretty much like 'the wire' in Kathryn Bigelow's

[51] When the app was launched, some journalists conjectured about its potential use in conflict zones, for example, Jonathan Albright speculated in an article on the *Huffington Post* (2015) about a "return of the scoop" for journalists: about being, maybe by chance, in the middle of an action or event that deserved to be live-broadcasted. However, so far, it cannot be said that a significant use of this sort has been detected. Some reasons can be hypothesised: the fast consuming of the battery, difficulty of broadcasting in extreme situations, the fact that the app is related to Twitter and Twitter, as well as other social media, is blocked in many countries—it is probably the sum of all of these reasons.

[52] https://www.periscope.tv/

1995 film *Strange Days*,[53] or it may even have been the idea behind the (as yet unsuccessful) Google Glass.

Figs. 35, 36. Periscope screenshots from a user's live broadcasting from Paris on November 15, 2015.

However, in Periscope things are a bit different, and simpler than Google Glass, and maybe its interest resides precisely in this. In Periscope the user assumes two points of view at the same time: her own in her own profile and the other users' broadcasts of what she chooses to see. It is a more complicated identification than a film director's point of view, or an amateur video posted on YouTube, because it is only possible to

[53] *Strange Days* was set in 1999. Lenny Nero is an ex-cop who deals with illegal recording of memories directly from the cerebral cortex through a device called 'the wire'. The wire not only records, but also reproduces the memories making the user actually see and feel the recorded memories without mediation. The wire would be, in Bolter and Grusin terms, the completely transparent medium.

watch Periscope videos when they're live.[54] One sees in real time what the other user is seeing because Periscope also includes a chat that allows viewers to interact with the user broadcasting. Users can potentially offer their opinions on how a video is being shot, or even ask the person who is broadcasting their video to change angle or focus on a certain detail. In other words, Periscope offers possibilities to adapt the shooting-users' point of view to the viewing-users'. This thus enables the intertwining of a multiplicity of points of view, some that have to do with perspectivism and sight, while others address the construction of an electronic space within the place of immanence of the technological unconscious. In this intertwining and interaction, the generation of meaning is produced, among other things, through the development of complex subjectivities. These subjectivities can alternately change, influence and create their own and other's points of view. This is one of the most interesting possibilities that the technological unconscious as a plane of immanence can produce: the development of new subjectivities through the interaction with a collective dimension. This text doesn't seek to uncritically praise an app like Periscope, but merely to advance the perspective that the app's logic can potentially open interesting pathways that other apps perhaps don't.

[54] At least, this was the case until the most recent update that was available while writing this thesis. As it is well known, new features for apps can be introduced rather quickly. However, Periscope seems interested in continuing to limit viewing to live videos.

Another device that bears mentioning is Microsoft HoloLens.[55] This technology consists of a headset—it is actually bulkier than just lenses—that mainly uses computer graphics to create what is usually known as augmented reality, or as Microsoft calls it on its website, 'mixed reality'. Unlike Google Glass, whose main function is to record, take photos and use limited augmented reality features (which are basically two-dimensional), the HoloLens (Fig. 39) intends to offer an augmented reality. Like every augmented reality, the HoloLens overlaps computer graphics on the lens with the user's perception of material reality. These computer graphics are not flat, or two-dimensional, but as the very name suggests, they are holograms,[56] which is to say, they are perceived as volumetric and occupying the three-dimensional space. The promotional video on its website suggests that this device will allow users to interact with both material reality and the holographic projection of different programs, including applications like Skype, or Minecraft, but also design software that enables projected three-dimensional modelling, and so on.

[55] https://www.microsoft.com/microsoft-hololens/en-us

[56] Some theorists, like Pier Luigi Capucci, maintain that this technology does not use holograms at all, but simply computer graphics and that therefore the use of the prefix "holo" is misleading (Capucci, April 2015, private conversation)

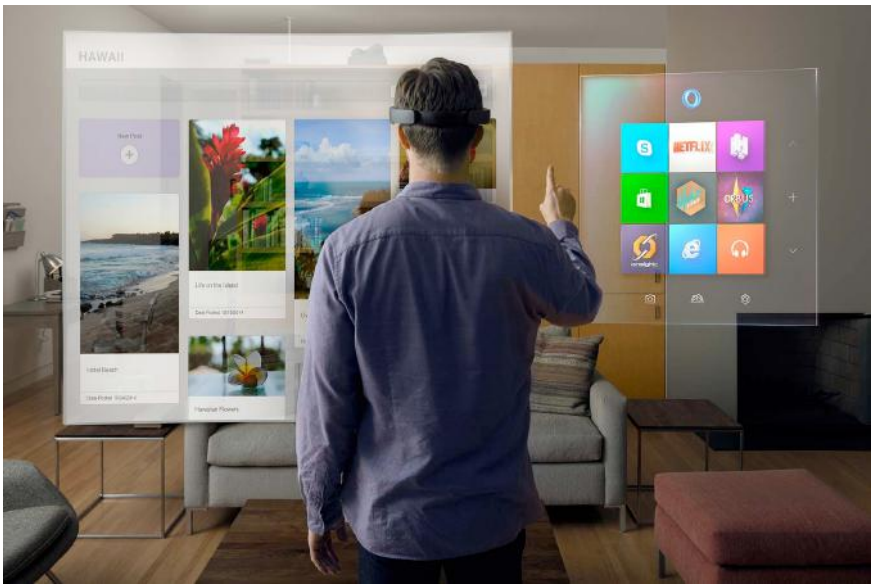


Fig. 37. Microsoft HoloLens, promotional photo. Available from: http://www.theverge.com/2015/1/21/7868251/microsoft-hololens-hologram-hands-on-experience

In this sense, the HoloLens works as an apparatus that, through the aforementioned technology, adds projected objects to the user's material reality. Even if the HoloLens does not create a complete immersive environment, it nonetheless has to follow the user's perspectival point of view in the same way that a virtual environment would, otherwise the "realistic effect" would be lost. An interesting point in this respect is that, as the projection of a non-representational application like Skype into the user's physical space suggests, a kind of overlapping between floating signifiers may occur, for example those generating a subjective point of view, and those generating a physical disposition in space that was not needed, or that couldn't happen before. It is as if this technology could

generate a physical referent, projected “objects” and virtual realities, which, like many Web 2.0 applications, neither have an antecedent or referent in the material environment, nor need one on the Internet. As previously explained, this is the case with different social media, thus it’s pertinent to discuss electronic space that conveys the idea of place, of a symbolically charged arena that doesn’t necessarily allude to a physical space.

If it comes to be effectively developed and massively commercialised, a technology like the HoloLens may foster a stronger perception of virtuality that corresponds to the third wave of cybernetics as conceptualised by Hayles (1999). Hayles identified three concepts each of which leads to one of the three stages in the development of cybernetic theory, the first one from 1945 to 1960 in which the central concept was *homeostasis*, the second from 1960 through 1980 corresponding to *reflexivity*, and the last one, from 1980 to the present day in which we are immersed in *virtuality*. Virtuality is, according to Hayles, ‘associated with computer simulations that put the body in a feedback loop with computer generated images’ (14). What this state of virtuality produces is the sensation that there is a world of information that functions in parallel with ours and that we can often somehow “enter” this world, and that at the same time, our “physical” world is interpenetrated by patterns of information, our bodies included, which is the case, for example, of DNA. The problem with this, more or less, fictional—fictional in the

sense of metaphorical—pervasive idea is the power that we give to information, privileging the idea of pure information over materiality and downplaying its necessary, unavoidable material instantiation. Going back to the HoloLens case, this virtuality and partially fictional perception of virtuality as defined by Hayles can be further complicated by the fact that this device not only creates the feeling that we can "enter", or at least interact with the parallel world of computer graphics that takes place "behind" the computer screen or simply in commonly held notions of cyberspace. Indeed, it creates exactly the opposite effect: the idea that objects that have up to this point exclusively inhabited cyberspace are now among us, occupying our very vital environment. This technology is still very new, and the fact that it is not even in a Beta stage makes speculations hazardous, yet the fact that research is being undertaken in this direction makes it pertinent to begin to reflect on it. It thus seems legitimate to ask what kind of subjectivities—of digital subjects as it will be defined in the next chapter—these kinds of interactions and apparatuses produce.

It is in fact this last question that the present text can contribute to answer: It has been shown how it is through the propagation of different points of view that meaning can be engendered and circulate in the technological unconscious/plane of immanence. Meaning is produced collectively and circulates in the actions and interactions between subjects and technological environments.

The different points of view, generated by the floating signifiers, actually happen to be ‘inhabited’ by subjects, who in coming to the point of view, by assuming a position are constituted as digital subjects. This process is not a metaphor, but a description, from the assumption of a certain point of view. In this case, the floating signifier is not being mistakenly considered as an image, or as some kind of mirage, the subject is not projecting in it any desires, but she is actually inhabiting it and occupying it. Its relevance consists in that by acknowledging this, the subject can, at least partially, be aware and decide which kind of subjectivity she is becoming. This choice thus implies effort and responsibility; in short, assuming a point of view is also assuming a certain ethical position. It now becomes apparent another way in which we are posthuman: we are conformed as subjects not only through feedback loops with technological environments, devices, programs but by the assumption of a point of view in a technological dimension that is both artificial and collective.

5. Embodiment in the Digital

In his *Hermeneutics of the Subject: Lectures at the Collège de France 1981-82* (2001a), Michel Foucault talks about the relationship between subject and truth, asking how a subject can access truth and what the modalities of this access are, if they even exist. Foucault chooses René Descartes as a point of departure for these lectures. According to Descartes, the subject can access truth because she is a thinking individual that possesses reason, which is the only condition to attain truth. Therefore, the subject can remain the same and does not change in the process of attaining truth. Foucault sustains that Descartes' proposal is an innovative one. In fact, in Occidental thought from Antiquity to the Middle Ages there was no guarantee that the subject could gain access to truth if she did not change, as access to truth implied a necessary transmutation of the subject. Ancient thought had a rigid conception of the object, which remained static and unchanged. The subject, however, was considered mobile and capable of shifting. With Descartes, and modernity, this dualism is overturned, and replaced by the one previously mentioned: a static subject and changing object (2001a: 3, 13, 16).

Consequently, this chapter addresses the following questions: if digitalisation processes in general are understood in terms of ontological repetition and even *différance* (as was advanced in the previous chapters), what happens to the

subject in this process? Is it possible to talk about a *digital subject*, or even more precisely *a subject who is embodied in the digital?*

5.1 The Subject as Embodied Process

As he stated in an interview from 1984, Michel Foucault's main topic of interest was that of the relationship between subject and truth (1994: 273-294). Foucault explains that even when he dedicated a lot of time and writing to problems related to the dynamics of knowledge and power, the issue of the relation between subject and truth was always his main focus and what he considered to be the base of his philosophical investigations. He resisted any definition of subject as a substance, or any *a priori* definition of the subject, because Foucault defines the subject as a form, and 'above all, this form is never identical to itself' (274). The subject considered as a form is a changing subject, a different subject in its different relationships with different apparatuses: different at school, in family relationships, when voting, paying taxes, or in its sexual life. This subject is never the same, not in the sense that one is true and the other is false or simulated, but rather that the subject's relationship with itself is always different depending on different contexts. Above all, this is a conception of an active subject.

This passage from the conception of a passive subject—such as in the case of Foucault's studies of mental illnesses and mental institutions (1954, 1961,

1963), or of criminals and the jail system (1975)—to an active subject relates to the practices of the *care of the self* (*souci de soi*), which the French philosopher developed in his late writings (1984). The care of the self is closely linked with the importance of knowing oneself in the first place to be able to attain truth, and not of just studying and knowing one's object of study. Nonetheless, despite the active, political position achieved through the practices of the care of the self, Foucault is always aware that these practices are also 'proposed, suggested, imposed by its culture, society and social group' to the subject (1994: 275).

This conception of the subject as active, as ever changing, almost as a process, is cardinal to the development of a subject who is embodied in the digital, which will be outlined in the pages that follow.

Katherine Hayles has discussed the end of the humanist liberal subject within a completely different theoretical framework, which is complementary to the aims of this research. She argues that a post-humanist subject has emerged, a subject that is not necessarily a cyborg,[57] although it can be. This subject lives in a constant feedback loop with other entities that are not necessarily human, such as computers, digital networks and electronic texts (1999). In this sense,

[57] Calleja and Schwager state that the word cyborg was first coined by Manfred E. Clynes and Nathan S. Kline in 1960 to refer to mechanically enhanced 'that could negotiate in extra-terrestrial environments' (Clines and Kline 1960: 27, quoted in Calleja and Schwager 2004), and that 'Clynes and Kline's cyborg theories are an extension of Wiener's work on cybernetics in the late 1940s' (2).

her case against the widespread idea that information can exist without any material instantiation, and, moreover, that subjectivity predominantly consists of information and is therefore immaterial, can be considered already over. In the book, Hayles acutely shows how this definition of information, along with its conceptual separation from a material base, is linked to capitalism and its corresponding definition of subjectivity: namely, a humanist liberal subject who fully owns his or her (but most often his) body and is perfectly conscious and in control of its boundaries and power (290). Consequently, the idea of owning and having complete control over one's own body as if it were a commodity or property is concomitant with capitalist logic.

In the more recent *My Mother Was a Computer* (2005), which advances that the post-human subject has been already widely theorised and accepted, Hayles focuses 'on different versions of the posthuman as they continue to evolve in conjunction with intelligent machines' (3). More specifically, the book seeks to redefine and adjust the definition of materiality, as some conceptualisations of the post-human may still carry opposing dualities that correspond to the liberal humanist tradition such as material-information, body-soul, and virtual-real (3).[58] Hayles identifies the intrinsic characteristic of an entity to 'count as a person' as agency: 'Agency enables the subject to make choices, express intentions, perform actions. Scratch the surface of a person, and you find an agent; find an agent, and you are well on your way toward constituting a subject' (172).

[58] All of which have already been discussed in the previous chapters.

She criticises how many authors attribute agency to machines through analogies like the following: if the human brain works like a machine and subjects are defined by agency, then machines are also able to possess agency. In fact, this line of reasoning, as explained in the previous chapter, does not fully explain the process. It is true that a similar logic can be detected in Deleuze and Guattari's (1980 [1987]) interpretation of cellular automata as the ideal model of the a-centered, non-hierarchical system of the rhizome, as this quote shows:

> Cellular automata appear as well in their description of schizoanalysis, which "treats the unconscious as an acentered system, in other words, as a machinic network of finite automata (a rhizome), and thus arrives at an entirely different state of the unconscious" (18). The implication is that the unconscious, like cellular automata, is mechanistic and rhizomatic. (Hayles 2005: 172)

Yet it is nonetheless inaccurate to understand Lacan's conceptualisation in this same sense (please see chapter 4). This discussion directly relates to the problematic of the technological unconscious as described above, and especially with Lacan's theorisation of symbolic order as a Universal Turing machine, which doesn't necessarily imply that the human brain works like a machine, and even less so that machines are capable of agency or desire (which Deleuze and Guattari contend, as Hayles illustrates). It simply means that one of the registers of the unconscious that regulates the I works independently of human will, as a program running on a machine.

However, what is perhaps more interesting in this context, despite Hayles' opinion, is Deleuze and Guattari's understanding of subjectivity as a process.

At the very beginning of *A Thousand Plateaus: Capitalism and Schizophrenia* they discuss what a book is:

> There is no difference between what a book talks about and how it is made. Therefore a book also has no object. As an assemblage, a book has only itself, in connection with other assemblages and in relation to other bodies without organs. We will never ask what a book means, as signified or signifier; we will not look for anything to understand in it. We will ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed, and with what bodies without organs it makes its own converge. (1980 [1987]: 4)

A book thus defined is a Body without Organs (BwO). The BwO is a conceptual construction the authors developed to emphasise the rhizomatic, non-hierarchical conception of things, as well as subjectivities that are conceived more as processes than as finished and closed entities, as the quote above shows. What matters about a certain Body without Organs is how it relates to others—how it communicates, how it changes. The BwO is not defined by its physical boundaries, nor by its materiality. In this sense, this conception of the BwO is also a conception of the subject as process, despite the fact that, as Hayles' mentions, the vocabulary to develop this conceptualisation is often quite 'esoteric' in Deleuze and Guattari.

At this point, nonetheless, it must be clarified that Hayles' definition of the digital subject does not coincide with the conception of the digital subject proposed in the context of this text: namely, that 'digital subjects are understood as autonomous creatures imbued with human-like motives, goals, and strategies' (5). In Hayles terms, digital subjects are any kind of digital

entity, like Sims' creatures, for instance. In contrast, what the text at hand aims to understand is what kind of subjectivity might arise from the cybernetic loop between a subject and any kind of digital reality. How does the subject change along with the change in the object, in successive repetitions, and according to the different points of view that she will have to come to inhabit? How can she be understood more specifically as a subject embodied in the digital?

When discussing emergence and the attribution of will and agency to digital creatures, Hayles opposes a continuous analog subjectivity, with a fragmented digital one, which is founded on the fragmentary ontology of digital technologies:

> In fact, emergence depends on such fragmentation, for it is only when the programs are broken into small pieces and recombined that unexpected adaptive behaviors can arise. To summarize: the analog subject implies a depth model of interiority, relations of resemblance between the interior and the surface that guarantee the meaning of what is deep inside, and the kind of mind/soul correspondence instantiated by and envisioned within the analog technologies of print culture. The digital subject implies an emergent complexity that is related through hierarchical coding levels to simple underlying rules, a dynamic of fragmentation and recombination that gives rise to emergent properties, and a disjunction between surface and interior that is instantiated by and envisioned within the digital technologies of computational culture. (203)

Nevertheless, in the same way that opposing materiality and information was a complex, and at the same time purely illusory act, it makes sense to also avoid the opposition between fragmented and continuous. The digital subject should instead be considered as a cybernetic cycle and thus as a process that is both

fragmented and continuous, analog and digital—in short, as a complex subjectivity.

In this context, the notion of writing and its constant deferral—Derrida's *différance* explained in the first chapter—can also be of interest to further understand complex environments and subjectivities. These subjectivities and environments do not separate analog and digital, nor material and immaterial, but, in the same sense of writing and text outlined by Derrida, conceive of subjectivity in terms of a net: as a fabric or tissue of constant references and dialogues that neither allow the search for an origin, nor a presence (Derrida 1967a [1978]; 1967b; Sini 2011; Fusaro n/d). Writing is not the transcription of the voice, of the *phonè* that finds in the voice the transparent medium of an absolute presence: that of a certain Concept. In this sense, writing is no longer a double of a double, but it becomes 'the significant of the significant' in which *langue* and writing are one and the same thing and neither is the representation of the other (Fusaro n/d). Derrida sought to deconstruct the predominant logocentric paradigm. Within the context of this research, his efforts can help deconstruct the conception of the digital as representation, as developed in the first chapter, as well as the dialectic oppositions between analog and digital, fragmented and continuous, and subject and object. Precisely, Derrida's conception of the writer is especially pertinent regarding the relationship between subject and object. The French theorist considers the writer/poet to be the master, substance and topic of her own book. The book is thus shaped and conformed by the writer's mind, yet the writer is simultaneously modified, and

somehow also generated by her own book (Derrida 1967a [1978]; 1967b; Fusaro n/d). Thinking about digital subjects as complex subjectivities that inhabit and navigate complex environments—not only in terms of constant deferral, but also avoiding the fallacy that the digital is a surrogate and/or projection of the analog, material "original"—can help better understand the complexity of these new dimensions and subjectivities.

In this sense, the digital subject contains a multiplicity that it projects in different environments, which is a part of this new complex subjectivity—at once analog and continuous—that can only be partially controlled by the subject. This is one of the reasons why, as Baym and boyd (2012) suggest in relation to social media, we must increase our awareness of how the complex subjectivities that inhabit complex environments function[59] and strive to

[59] There are some points of contact between what is defined here as complex environments and what the authors called 'collapsed contexts' (Baym-boyd 2012). According to their conception, collapsed contexts imply the collapsing of relationships and social dynamics developed on social media environments and in face-to-face relationships. The notion of a collapsed context holds a somewhat negative connotation. Baym-boyd propose to approach the problematics that arise from this collapsing strategically: 'navigating collapsed contexts requires a wide variety of strategies. While some people seek to engage in strategic facework and minimize visibility, others seek to publicize themselves in ways that may complicate their relationship to different members of their audience. Vivienne and Burgess show how the process of creating private stories for online public consumption can crystallize self-understandings as people negotiate their positions relative to publics both intimate (e.g. family, friends, and co-workers) and unknown. In constructing these identities they must consider how they will be received by their intimate publics and also how the public telling of their stories might affect their loved ones, as with one person who chose to use photographs of flowers rather than relatives in order to protect family members from possible future stigma. Vivienne and Burgess show that private information is not the same as privacy, nor is public the same as publicity. The experience of making a story public in a persistent, searchable form made people more aware of the public value of the private and the potential of such sharing to create and impact unknown publics, changing how they understood the nature of ''private''. These processes are not static, but ongoing. Vivienne and Burgess parse apart the different phases of digital storytelling, showing that public and private are continuously reconfigured over time from the earliest stages of contemplating telling one's story to managing that story's visibility long after it has

develop strategies to inhabit and navigate them. One way to better understand these new complex situations can be a broader conceptualisation of embodiment in the digital as follows.

5.2 Embodiment in the Digital

As advanced in the previous chapter, the conceptualisation of the floating signifier, overspill and the technological unconscious can help to overcome the fiction of a correspondence between language and the world. This explains not only digitalisation processes per se, but also the emergence of a digital subject and enables a new way of thinking embodiment and subjectivities in the digital. Consequently, the emergence of a digital subject comes along with the emergence of new media, which demands the constitution of a point of view. The subject is constituted by the 'point of view' and by its coming and inhabiting the point of view (Deleuze 1988). Thus, the technological unconscious is the plane of immanence in which meaning unfolds through the

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first been shared. […] As people communicate publically through social media, they become more aware of themselves relative to visible and imagined audiences and more aware of the larger publics to which they belong and which they seek to create. They negotiate collapsed contexts, continuously shifting power dynamics, and an open-ended time frame. Through discussing the personal, mundane, and everyday, people negotiate a sense of public place and help new publics—both wanted and unwanted—to coalesce. Socially mediated publicness may be a source of support and empowerment while simultaneously posing conflict and risk (324-325).The idea of complex environments includes, but far exceeds, the context of social media and social dynamics.

floating signifier, which is the site that each time hosts a different point of view for the constitution of a digital subject.

5.2.1 Virtual/Actual Possible/Real

To better explain this process, one must understand the dynamics of the four states of being: namely, the virtual, real, actual and possible. Deleuze explains these states in his book on Leibniz (1988 [1993]), in which he defines the virtual in opposition to the actual (and not to the real), while the real is opposed to the possible.[60] In this sense, the real is the image of the possible that is realised:

> But the coupling of the virtual-actual does not resolve the problem. There exists a second, very different coupling of the possible-real. For example, God chooses one word among an infinity of possible worlds: the other worlds also have their actuality in monads that are conveying them. Adam who does not sin or Sextus who does not rape Lucretia. Therefore there exists an actual that remains possible, and that is not forcibly real. The actual does not constitute the real: it must itself be realized, and the problem of the world's realization is added to that of its actualization. God is “existentifying,” but the Existentifying is, on the one hand, Actualizing and, on the other, Realizing. (1988 [1993]: 104)

In this respect, the main issue is that actualisation can only happen in the monads, the world can only be actualised ‘in the soul’, that is to say, in the

[60] However, Deleuze had also analysed the relationship between real and virtual many years before in *Différence et répétition* (1967).

subject, and each subject expresses this actualisation through its respective point of view. Yet realisation can only happen in the body, or in matter (1988 [1993]: 104): both aspects, realisation in the body and actualisation in monads, are exceptionally useful to understand actualisation as a phenomenon, or event, and realisation as the possibility of embodiment in the digital.

A compelling aspect of this position is how it offers the subject a field of infinite creative potentialities, rather than considering the virtual as non-realised possibilities. The virtual implies creation because it is always problematic:

> The virtual is not opposed to the real but actual. Contrary to the possible, static and already constituted, the virtual is like a problematic complex, and requires a process of transformation: actualization. Actualization is creation, an invention of a form from a dynamic configuration of forces and purposes. (Lévy 1995: 7)

As opposed to the realisation of the possible, which is static and already defined—because everything that can be realised in the possible is already contained within it as a potentiality without the slightest chance of change or unpredictability—the virtual needs to be actualised. Since this actualisation can only happen in the subject, it will be different every time. Each actualisation will contain an element of creation because each subject will actualise the same virtuality differently. In short, actualisation is an event (7). According to Lévy's analysis, a text is the virtualisation of memory, thus it will be actualised differently each time it is read, even if by the same person. The possible different interpretations—and even its different translations and printings—

imply different sorts of creation that can neither be repeated, nor be the same each time. Instead, a text that is saved as a file in the computer is a potentiality and is only realised when the file is opened and the characters appear on the computer screen (or on paper if it is printed). However, all the characteristics of a text are already contained and saved as code in the database, which simply appears without changes—the only difference being that it is now readable on the screen or on the page. These are clear examples that best illustrate the distinctions between the different modes of being, which are a legacy of Scholastic philosophy.

Having explained this, one of the main questions that arises is: what are the possibilities of actualising the virtual in the digital? Or, in other words, what possibilities does the digital offer to actualise those virtualities emerging among the events unfolding in complex environments? The answer can only be found in the digital embodied subject.

It must be said that most often (Haraway 1991, Caronia 1996; 2006; Hayles 1999; Calleja-Schwager 2004,) the stress and focus has been on what kind of human subjectivity arises from the feedback loops between analog and digital environments. While this focus was an aspect of the first part of this text, the second half of this chapter attempts to understand the digital subject as a subject embodied in the digital. This conceptualisation, as it will soon be further explained, has the advantage of definitively eliminating the idea that human interaction within digital

and artificial environments is disembodied. Instead, I propose to think of this novel entity as a new kind of embodiment, which, among other things, eliminates the separations between subject and object.

In this sense, it is useful to remember Francisco Varela, Evan Thompson and Eleanor Rosch's notion of *enaction as embodied cognition* (1991), which argues that embodied cognition proposes a completely different conception of the relationship between brain, body and world from that of computation. Thus, with the concept of *enaction* the authors build on a theoretical framework that emphasises the fact that the ways in which a certain organism, or cognitive agent, experience the world are fully determined by the feedback loops between the environment, the organism's sensorimotor system and its physiology (1991: 35, 165-7). This move somehow reintroduces the phenomenological perspective, especially that of Maurice Merleau-Ponty (1945), and the idea that cognitive agents construct their image and perception of the world through their activities and interactions with it as situated living bodies. The concept of enaction is more than relevant in this context because it not only implies that the world can be known and perceived by the neural activity of the cognitive agent, but more importantly through the organism's activities and interactions with the environment through its body. Enaction therefore implies, as its name allows us to intuit, not a passive, receptive idea of cognition, but an active and fully embodied one.

It is now clear how the conception of *enaction* and of situated living bodies can help to develop the theorisation of the digital subject as a subject embodied in the digital: it is obviously not the point that our bodies somehow reconstitute themselves in electronic space—because we know that this can't yet happen—but precisely that we interact and live the digital not only with our neuronal networks, but also with our entire body. In this sense, Francesco Alinovi's article 'Orgasmo simulato' (Simulated orgasm) (2015), brilliantly analyses the relationship between sex, eroticism and video games from different points of view, including from a physiological perspective. It is clear from this analysis how the simple identification that one can project on a character in cinema, or in a book, does not suffice to explain what happens in the digital. The digital not only refers to the possibilities of interactivity, but also to the adoption of a point of view that by definition implies a further intertwining of the cognitive agent with other cognitive agents in both digital and analog environments, as well as a concrete neurophysiological effect upon the subject. Moreover, through the constitution of the aforementioned point of view, the subject actually comes to inhabit a place in the digital, thus becoming a situated living body: a cognitive, embodied agent in relation to others.

5.2.2 The Point of View

Deleuze defines the point of view as ‘not exactly a point but a place, a position, a site, a “linear focus” [*foyer linéaire*], a line emanating from lines. To the degree that it represents variation or inflection, it can be called point of view’ (1988 [1993]: 19-20). The point of view is thus the place that can only be inhabited by a soul, by a subject. Nonetheless, this subject in no way pre-exists the point of view, but it becomes a subject when it comes to inhabit the point of view, thus the point of view constitutes it as subject. To become a certain kind of subject necessitates transformation, movement and process because variation exists only in the point of view:

> A needed relation exists between variation and point of view: not simply because of the variety of points of view (though, as we shall observe, such a variety does exist), but in the first place because every point of view is a point of view on variation. (20)

Furthermore, it is never the point of view that varies, but it is *through* the point of view that a subject can apprehend variation: by changing and adopting the point of view, the subject is constituted as a subject, and the same time it can apprehend variation and change. In this sense, one can also easily recall Foucault’s observation regarding the pre-Cartesian subject: a subject that needed to change with its object to attain truth and

to be able to know: a dynamic, changing subject. This observation will be expanded upon in the pages that follow.

The aforementioned references have clarified how the floating signifier can constitute a different point of view for the constitution of the subject each time. Being constituted and embodied in the digital, in the technological unconscious, therefore does not produce an individual, unified and static subject, but rather a subject in variation. It is a subject that can be understood as a process, or even better, as an event.

5.3 Complex Subjectivities Embodied in the Digital

Michel Foucault's writing about the relationship between subject and truth provides a suitable model to advance the conversation about the digital subject.

Foucault dedicated his *Hermeneutics of the Subject: Lectures at the Collège de France 1981-82* (2001a) to exploring the modalities and possibilities of the subject's access to truth. In the first place, he offers a definition of philosophy in order to distinguish it from spirituality. Philosophy is the discipline that intends to find the limits and possibilities of the subject's access to truth, while attempting to allow this access through study. On the contrary, spirituality does not take this

access for granted. To attain truth, the subject must deserve it. It must change and elevate itself in order to earn this access. Thus there is no access to truth without a radical transformation of the subject (15). It is therefore evident how modern philosophy conceives of a static subject, while spirituality considers the truth as something permanent while the subject constantly changes in order to hopefully reach said truth.

Foucault believes that the modern age of the history of truth begins when the subject can have access to truth trough the sole power of knowledge, through study and without having to change in any way. He writes:

> I think the modern age of the history of truth begins when knowledge itself and knowledge alone gives access to the truth. That is to say, it is when the philosopher (or the scientist, or simply someone who seeks the truth) can recognize the truth and have access to it in himself and solely through his activity of knowing, without anything else being demanded of him and without him having to change or alter his being as subject. […]
>
> If we define spirituality as being the form of practices which postulate that, such as he is, the subject is not capable of the truth, but that, such as it is, the truth can transfigure and save the subject, then we can say that the modern age of the relations between the subject and truth begin when it is postulated that, such as he is, the subject is capable of truth, but that, such as it is, the truth cannot save the subject. (17-19)

Foucault identifies the breaking point with the previous paradigm in Descartes and the loss of the dimension of the care of the self. The idea of “knowing oneself” was at the base of the care of the self in Greek,

Roman-Greek and Christian cultures, therefore Foucault inquires how this dimension was lost. How did the relevance of the care of the self lose its importance on the path of the access to truth? Foucault finds the answer in Descartes and the Cartesian moment, which is synonymous with the birth of Modern thought, and that eliminates the care of the self as a means to access truth. Knowledge, from then on, is the only means that warrants this access, and most importantly, there is no need for the subject to change in order to attain it (16). The pre-Cartesian subject is also the active and changing subject that Foucault refers to when giving his definition of the subject as a form that is never the same, which reconfigures itself in its interaction with different apparatuses and instances. Again, this active characteristic is attained through the practices of the care of the self as quoted above.

Remembering and reconsidering the characteristics of the active, pre-Cartesian subject can help build a theoretical framework that explains the construction of the digital subject.

In the same way that the pre-Cartesian subject had to change to attain truth, thus changing with the object/world, the digital subject comes to varied points of view, which constitutes her as a subject in the digital:

> Such is the basis of perspectivism, which does not mean a dependence in respect to a pre-given or defined subject: to the contrary, a subject will be what comes to the point of view, or rather what remains (*demeure*) in the point of view. That is why the transformation of the object refers to a

> correlative transformation of the subject [...]. (Deleuze 1988 [1993]: 19-20)

Remarkably, this perspectivism does not imply relativism. It doesn't imply a variation of truth related to the subject's will or belief, but rather on the contrary is 'the condition in which the truth of a variation appears to the subject' (20).

There is always variation in the assumption of an ever-changing point of view that has already been identified in the floating signifier. At the same time, the virtual/digitalised world and the object can only be actualised in monads, in the subject. She changes in the same movement because 'if the status of the object is profoundly changed, so also is that of the subject' (19). Therefore if a digitised world exists it is because there was a deep change in the object/world, which necessarily implies a change in the subject, that is the digital subject: it is a subject that assuming a point of view, occupies the place built for her in the collective dimension of the technological unconscious by the floating signifier, and through this process constitutes itself as a new subjectivity. In doing so, the subject actualises this world—generating meaning and in the process changing with it—becoming a digital subject, a subject who is embodied in the digital. This conceptualisation has the advantage of definitively eliminating the idea that human interaction within digital and artificial environments is disembodied, as well as weakening an anthropocentric perspective. Instead, as I've explained above, this text proposes

considering this entity as a new kind of embodiment that simultaneously inhabits and conforms these complex environments. If the posthumanist subject implies an overcoming of the boundaries of the liberal humanist subject, it is not only because these limits have been trespassed by the machinic and digital networks, but because they have been also trespassed by other subjectivities, which are part of the technological unconscious.

In this sense, it's worth remembering the collective dimension of the technological unconscious: thinking about the technological unconscious as a plane of immanence as the place for the emergence of a complex subjectivity in collective terms allows us to consider the digital subject not only as a cyborg, as a subject in constant feedback loops with the machinic, but also as a distributed, multiple and complex subjectivity that is symbolically structured amidst a collective dimension. The digital subject thus fosters a shared and collective unconscious structure that partly constructs its subjectivity, but to which she also contributes to determining. Hayles asserts that technology goes in certain directions and not others, in part, because of the collective imaginary featured in literature—which could be extended to cartoons, films and other cultural manifestations (1999: 21). When Hayles delineates these formats as an anticipatory imaginary of technology, she is in part saying that certain ideas "are in the air", which is partly what the imaginary is. Another way of putting it would be to say that all of these ideas and developments

follow the desires, or more accurately the programs, of a collective technological unconscious.

The iPhone's robotic assistant Siri provides a concrete, if a bit pedestrian, example of how this works: [61] when the user launches Siri, she or he (depending the user's preference and the availability for each language) will ask her what she needs. From that point, Siri will "learn" about the user and from her. For example, if the user asks "Call my sister" Siri will then ask, "Who's your sister"? After knowing the name, Siri will look it up in the address book and call her. From then on, every time the user asks for her sister, Siri will call that name in the address book. Siri learns from the users' accents and expressions, yet she can also fake emotions like jealousy.[62] Thus, Siri perfects itself as it interacts with a variety of people with different accents in the different languages it is available in—potentially being able to eventually awaken feelings of sympathy,

[61] On Apple's website (2015), the brief text defining Siri urges iPhone users to: 'talk to Siri as you would to a friend and it can help you get things done—like sending messages, placing calls, and making dinner reservations. You can ask Siri to show you the Orion constellation or to flip a coin. Siri works hands-free, so you can ask it to show you the best route home and what your ETA is while driving. It works with HomeKit to let your voice be the remote control for connected products in your home. And it's tuned in to the world, working with Wikipedia, Yelp, Rotten Tomatoes, Shazam, and other online services to get you even more answers. The more you use Siri, the more you'll realize how great it is. And just how much it can do for you'. http://www.apple.com/ios/siri/

[62] My mother language is Spanish, yet I live in Italy where I study, teach and write in English every day in addition to speaking Italian. When I got my iPhone three years ago, I tried to use Siri in all three languages. Ironically, Spanish Siri couldn't understand my Argentine accent and Italian Siri was not available at the time. British Siri seemed to understand me better than American Siri. I made some effort with Spanish Siri and chose a male voice. Once, when he called the number I asked him to, I said "Thank you, handsome", to which he answered "I am sure you say that to all your devices".

and perhaps even empathy. So while Siri obtains information and improves its performance through interaction with human cognisers, human cognisers may also develop feelings of empathy with Siri.[63] In this sense, Siri's performance and the ways it affects humans entwine through complex feedback loops that are undoubtedly multiple and collective, rather than a relationship between a singular subject and an individual-computer.

Of course, this "learning" from the users happens in all "low-level" artificial intelligences, but the process is also active the other way around: in entering the feedback loop with the computer and its different programs, the user learns and performs the algorithm implied in them (Manovich 2001). The logic of the 'computer layer', as Manovich calls it, interpenetrates the logic of the 'cultural layer', and both are partly unconscious, and collective. The fact that today one cannot conceive of a smart phone without the copy-paste function—which was an irritating flaw of the first iPhone—is a perfect example. Being able to copy-paste is now part of our collective capabilities and necessities, and it was a feature that not so many years ago was not possible, despite the fact that it was more or less consciously desired.

[63] In *Alone Together: Why We Expect More from Technology and Less from Each Other* (2011), Sherry Turkle has deeply, and at time apocalyptically, analysed the current human tendency to fill certain personal and emotional lacks with technology (whether through social networks, chat rooms, or robots). Turkle maintains that we've developed feelings for robots that should be addressed to people, and that we nurture these relationships instead of facing fears and flaws in order to be able to maintain satisfactory human relations with other humans, or without the mediation of digital networks.

At this point, thinking about the subject as process—as an event, an active and ever changing subject—becomes pertinent. It's obviously impossible to conceive of subjectivities in terms of the boundaries of the body or to view the brain as a simple information processor. The digital subject not only helps understand the implications and characteristics of this kind of subjectivity, but it also reveals its immersion in a collective dimension of the technological unconscious—which contributes to the formation of a complex subjectivity as much as the feedback loops with the machinic.

Two different projects help to illustrate this point: *The Exceptional and the Every Day: 144 Hours in Kyiv* and *Camera Restricta*. *The Exceptional and the Every Day: 144 Hours in Kyiv* (2014) is an artistic project undertaken by Lev Manovich in collaboration with Jay Chow, Alise Tifentale and Mehrdad Yazdani. As the artist's website[64] explains, the project

> is the first […] to analyze the use of Instagram during a social upheaval. Using computational and data visualization techniques, we explore 13,208 Instagram images shared by 6,165 people in the central area of Kyiv during 2014 Ukrainian revolution (February 17 - February 22, 2014).

Without using hierarchal categorisation, or any form of ordering that is not strictly geographic, the project aims to assemble all of the photos that

[64] http://manovich.net/index.php/exhibitions/hours-in-kiev

http://www.the-everyday.net/

Instagram users in the area posted during those dates as a means of showing how common, every day life mixes with extraordinary and dramatic events like war.

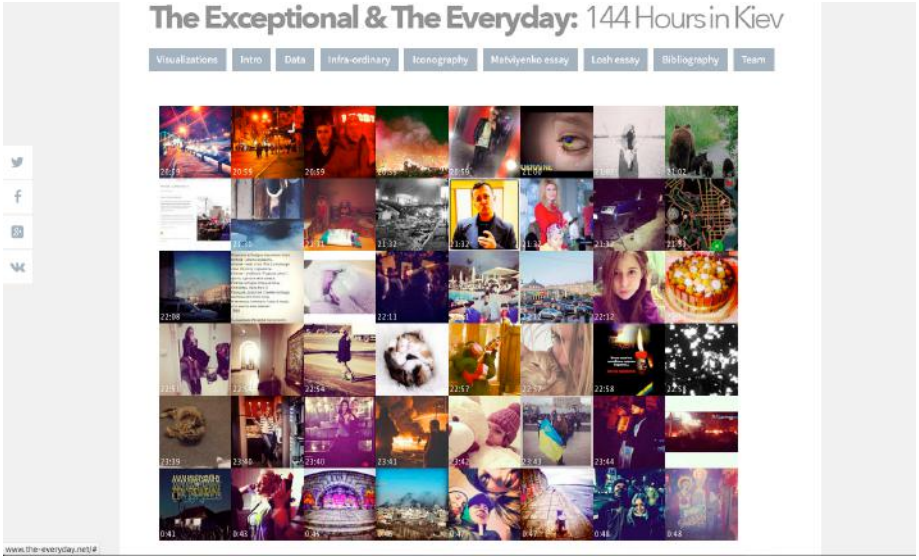

Fig. 38. Lev Manovich, Jay Chow, Alise Tifentale, and Mehrdad Yazdani, *The Exceptional and the Every Day: 144 Hours in Kyiv*, 2014. (Screenshot). Available from: http://www.the-everyday.net/.

The artists not only analysed images but also metadata like tags, time and geo-location in order to build a chart. Their intention was to show war from the perspective of ordinary people who had to carry on with their daily routines while coping with its incursion into their lives. As Manovich explained, this is a new angle that doesn't normally emerge from professional reportage for print or television, which usually focuses on the most exceptional and salient events. The project's perspective isn't necessarily "truer" than a professional one, yet it deftly illustrates how

the technological unconscious emerges as a collective dimension (which is largely inaccessible to the individual subject). Instagram is often used uncritically with little reflection on how the platform operates—an aspect that Flusser could have certainly commented upon at length, and not positively. Yet applying the appropriate methodological analysis and adopting a clearly defined point of view may also show certain information that users didn't necessarily intend to display, nor were even aware that they were even displaying. In this sense, the application's technological unconscious worked with its own logic—like grouping and displaying certain photos in a certain location and making them available for other unknown users in remote locations—while Manovich and his team assumed a point of view in the plane of immanence that made meaning emerge.

A second, more critical and sarcastic example, is Danish interaction designer Phillip Schmitt's *Camera Restricta*. Not strictly an artistic project, this camera obstructs a user from taking photos of a place, monument or building that its algorithm determines has already been photographed too many times. In other words, *Camera Restricta* forbids clichés. Its tagline on the designer's website states: 'A disobedient tool for taking unique photographs'. Schmitt elaborates on how it functions:

> Camera Restricta is a speculative design of a new kind of camera. It locates itself via GPS and searches online for photos that have been geo-tagged nearby. If the camera decides that too many photos have been taken at your

> location, it retracts the shutter and blocks the viewfinder. You can't take any more pictures here.[65]

Therefore, the Camera Restricta wouldn't let a user standing in front of the Eiffel Tower take the same photo that millions of tourists have already taken. The apparatus thus forces the user to find new points of view.

Fig.39. Phillip Schmitt, *Camera Restricta. A disobedient tool for taking unique photographs*, 2015.

Of course the success of such a device is yet to be seen:[66] why would someone buy a camera that doesn't allow her to take the photos she

[65] http://philippschmitt.com/projects/camera-restricta

wants where and when she decides? Why wouldn't someone be able to take as many photos of the Eiffel Tower as she wants? Or a photo of their cappuccino or their feet extended in front of the sea, for that matter? All kidding aside, this compelling idea potentially holds great subversive power: in this case, the machine's technological unconscious can help fight against stereotypes by pushing the user to find new points of view. In doing so, *Camera Restricta* makes the user aware when she falls into a repetitive cliché[67]. In doing so, the camera forces the viewer to occupy new floating signifiers to empty with new meaning. It propels the viewer outside of known, stereotyped comfort zones and towards a possible encounter with the unknown. Of course, this doesn't guarantee that the user will necessarily find something interesting or relevant, but the design offers the possibility of opening new, as yet explored territories. At the same time, this kind of apparatus illustrates how easily we adopt

[66] As a matter of fact, the camera hasn't seemed to be very successful so far: http://www.repubblica.it/tecnologia/prodotti/2015/09/17/news/la_fotocamera_che_si_rifiuta_di_scattare_foto_banali-122914628/?ref=HRERO-1

[67] In this sense, an artistic/technological project like SuperCut (supercut.org) is somehow an antecedent even if a less "subversive" and interactive one. The SuperCut was developed in just twenty-four hours by Andy Baio and Michael Bell-Smith on May 2011 as part of Rhizome's Seven on Seven program. On the website, the programmers define SuperCuts as follows: '"Supercuts" are obsessive-compulsive montages of video clips, meticulously isolating every instance of a single item, usually clichés, phrases, and other tropes. […]Supercut.org is a site dedicated to documenting the cultural phenomenon in a clean, browsable index that anyone can contribute to'. Thus the website is collectively constructed, and even if it was not necessarily the initial aim of the project, it brings forward many clichés from audiovisual media, especially cinema and TV series. People contribute their supercuts and identify certain tropes that have been repeated so many times as to be completely emptied of meaning, and thus, become cliché. One hilarious example is a trope entitled "Zoom and Enhance" (http://supercut.org/video/88/), that reveals the much-abused motif in a film or television series, during which a character identifies a key event, face or hint in a piece footage or photo, and makes the person managing it to "zoom" in, and then "enhance" the section with the discovery.

simple views, thus making a collectively unconscious banal tendency evident to the user so she can avoid them in favour of exploring different possibilities and assuming new points of view. This example illustrates how the assumption of a point of view in the technological unconscious' plane of immanence can generate new meaning while the subject changes, or can change, through its interaction with the apparatus and other cognitive agents. The Camera Restricta does not adhere to a classical definition of interactivity, yet it is precisely the collective dimension of this apparatus' technological unconscious—which is in part constructed through the millions of geo-located photographs circulating online—that determines whether or not a user will be permitted to take a certain shot.

The process of digitalisation of the subject necessarily implies the conception of a subject embodied in the digital, rather than a fiction in which the subject becomes a "discrete" or "virtual creature". The digital subject is neither completely fragmented, nor a projection of an original, material self, but instead finds the possibility of inhabiting the digital though the assumption of a point of view. This assumption of the point of view is embodied because, as a cognitive agent, the digital subject engages in feedback loops with complex environments—both digital and analogue. The explanation of this process has been grounded both on the concepts of enaction and embodied cognition put forth by Maturana, Rosch and Thompson, as well as Derrida's concept of writing and

deferral, which has the radical force of avoiding both representation and of making evident how the subject modifies the environments which she helps construct—and is modified and constructed by these environments in turn. This is also part of the mutation the subject undergoes in order to reach the point of view in the plane of immanence, the collective dimension of which has already been outlined at length. This process of mutation marks a definitive erasure of the division between subject and object—because both have been dissolved in feedback loops that engage digital and non-digital environments and complex, collectively-structured embodied subjectivities.

6. Medium

In her book *How We Became Posthuman* (1999), Katherine Hayles analysed the process through which the conception of the liberal humanist subject led the way to the posthuman subject, a subject who lives in complete intertwining with the digital. However, this process was not innocuous. As mentioned several times in the previous chapters, it made the (imaginary) perception that information could do without material instantiation pervasive within many fields of knowledge, a process that Hayles claims originated in the Macy Conferences and the evolution of cybernetic theory. This research identified an analogous process within the artistic realm: when Clement Greenberg delineated the concepts of *opticality* and *colour field* as the main characteristics that "defined" modernist painting, he conceived of these in a purely disembodied subject (Krauss 1993). In this context, this chapter proposes considering that the actual overcoming of modernism comes along with the advent of the posthuman—tracing its origin to Marcel Duchamp and his "invention" of the readymade, and not with postmodernism—the theoretical consistency of which, at least within the artistic field, this research questions. In doing so, this text intends to unify the main concepts and theories of the artistic field with those of cybernetics, to bring together 'Turing land' and 'Duchamp land'.

The posthuman was initially defined along with Hayles as the trespassing of the limits of the humanist liberal subject. However, in the fourth and fifth chapters complementary theorisations were proposed to further elaborate on this definition. In this sense, the relationship between technological unconscious, floating signifier and complex subjectivities is pertinent to expand the notion of the posthuman.

In order to examine the whole process, it is necessary at this point to understand the different acceptations of the concept of medium within the context of modernist and postmodernist theory.

6.1 The Medium in Modernism and Postmodernism

The critical debate on the passage from modernism to postmodernism takes completely different points of reference, depending on whether its object is the visual arts, architecture, philosophy or literature. Within the context of visual art, the concept of *medium* is the common thread that goes through the debate. The idea of ‘medium specificity’ is also at the centre of the debate, beginning with Clement Greenberg’s writings, which were subsequently strongly criticised by Rosalind Krauss and Thierry De Duve.

In ‘Avant-Garde and Kitsch’ (1939) Greenberg states that, not finding inspiration in the external world, the artist has to turn to abstraction. The content of the work dissolves into form, so that it cannot be reduced to anything that is not within its limits (6). To find aesthetic validity, and not be arbitrary, art must focus on its medium, on its ‘processes and disciplines’ (6), which Greenberg identifies with its material support: namely, flatness and the delimitation of flatness.

According to Krauss, Greenberg thought modernism would lie in the attempt of the various kinds of art to seek out and show the constitutive elements, or languages, intrinsic to them. In modernist theory each art should reach the highest level of “pureness” and use only its intrinsic traits, like bi-dimensionality and colour in the case of painting. This is why, for Greenberg, abstraction would become a synonym of painting itself (Krauss 1999c: 156). Greenberg rarely talked about “medium”, but in a collection of essays published in 1961 entitled *Art and Culture*, he writes about the ideal relationship between form and content in the work of art or literature, stating that the genesis of abstraction has its origin in the complete melting of form into content in such a way that the work of art (or literature) cannot be reduced in any way to anything other than itself (Greenberg 1961: 5-6). In one of the few times that he explicitly uses the word “medium”, Greenberg clearly identifies it with the materiality of the work. When talking about the art of the Middle Ages,

he states that as the subject of the artwork was determined in advance by the commissioners, 'the artist was free to focus on his medium' (16).

In this way, the modernist position—of which Greenberg is the paradigmatic case insofar as art critique is concerned—identified matter with medium. Its pureness was related with its famous 'intrinsic properties', namely, flatness and colour:

> By now it has been established, it would be seen, that the irreducible essence of pictorial art consists in but two constitutive conventions or norms: flatness and delimitation of flatness; and the observance of these merely two norms is enough to create an object which can be experienced as a picture: thus, a stretched or tacked-up canvas already exists as a picture- though not necessarily as a successful one. (Greenberg 1961: 40)

In *The Transfiguration of the Commonplace* (1981) Arthur Danto aimed to develop a philosophy of art that could explain the ontological difference between a common object and an artwork. In short, he was looking for a definition for "art". As is well known, his endeavour had little success. Yet through this attempt Danto became one of the first theorists to deconstruct[68] Greenberg's position when analysing mimetic representation and the 'theory of transparency' (Danto 1981: 229), even if he never names Greenberg, or modernism. The theory of transparency supposes a complete identification of the artwork with its content, understanding its material support as completely invisible or

[68] Here I borrow and decontextualise Derrida's term.

‘transparent’ as long as meaning concerns. When developing his critique, Danto clarified the difference between matter and medium:

> The medium, towards which the theory of transparency took such a straitlaced posture as to pretend it didn’t exist, cannot ever be eliminated. There will always be a rest of matter which cannot be evaporated in pure content. Even so, one has to make the difference between medium and matter. (1981: 229)

For Danto it was clear that a work’s materiality always emerged and in some way influenced the content of a work. Danto called the opposite issue, on which Rosalind Krauss would deeply elaborate later, ‘the theory of opacity’:

> In the contemporary art world there is a tendency as reductionist as it was the theory of transparency. We could call it the theory of opacity […] It is the theory that the artwork is only the matter of what it is made.
> The issue of the content of an artwork cannot be logically rejected, even if it doesn’t have any, given that the medium cannot be identified with matter. (Danto 1981: 229)

Not quoting Greenberg directly, it is evident that the theory of opacity coincides with the modernist position on the ‘intrinsic possibilities of painting’. Without further elaborating on this claim, mainly because it was not a central concern of his writing, Danto provides a definition of medium that extends beyond its identification with mere materiality.

A few years later, Thierry de Duve dedicated his book *Pictorial Nominalism: On Marcel Duchamp’s Passage from Painting to the*

Readymade (1984) to Marcel Duchamp's abandonment of painting. De Duve's contends that Duchamp invented the readymade and abandoned painting during the same years that avant-garde artists working in Paris turned towards abstraction or the abandonment of figuration (around 1912). De Duve maintains that Marcel Duchamp's abandonment of the pictorial practice, the birth of abstraction in painting, Duchamp's 'invention of the ready-made' and the process of industrialisation are events that are fundamentally intertwined. He proposes reading these events in relation to each other—he does not see them as separated events like Greenberg does; from this de Duve derives another account of the 'birth of abstraction' and of the very idea of art discovering its 'intrinsic languages', which is the central idea of modernism.

> Greenberg thought that this deconstruction had a limit and modern painters got rid of the 'expandable conventions' of painting to show an irreducible reminder consisting of its 'essential conventions'. (de Duve 1984: 156)

Moreover, the ready-made must be considered in light of Duchamp's pictorial practice. In spite of its three-dimensionality, the readymade is not a continuation of sculpture, but rather painting. Therefore, it should be analysed within the context of the pictorial tradition (de Duve 1996: 150). De Duve proposes considering this pictorial practice as 'pictorial nominalism', which would imply the passage from an ontological to an epistemological conception of painting: from the conception of 'painting as being' to the conception

‘painting as knowing’ (1984: 156).

Duchamp “invented” the readymade through the re-contextualisation of everyday, industrially produced objects like the bike wheel or the urinal. Yet, as de Duve illustrates in *Kant after Duchamp* (1996), the artist also conceived of painting as a form of readymade—or more precisely, of ‘art as choosing’ (161-162). In the Symposium Art as Assemblage in 1961 (quoted in de Duve 1996: 163), Duchamp explained that painting was essentially the process of choosing between different tubes of paint: the painter assembles her palette. Even if she mixes to create shades of different colours, the tube of paint was nonetheless ‘readymade’. Thus, the impossibility of the artist creating something ex nihilo, from scratch, was evident for Duchamp. Working with everyday objects rather than readymade colours was a natural evolution of the artist’s concept, and for Duchamp, comprised the cornerstone of an artistic practice rooted in selection rather than manual production (162).

A link to industrialisation—which was almost unbearable to an artist like Picasso (Krauss 1998) or to a critic like Greenberg—was thus irrelevant for Duchamp. In considering ‘art as choosing’ and not in making with his own hands, his artistic ability remained untouched. It didn’t matter to him whether he selected from handmade objects or industrially fabricated ones.

Ironically, de Duve also shows how Greenberg’s extreme conception of painting as flatness—an exaggeration of the intrinsic properties of painting—actually defined painting as exactly what he hated most: the readymade.

According to Greenberg's definition of painting, one could state that a blank canvas, such as one that could be bought in an artistic supply shop, was already a picture. De Duve writes:

> He found himself fetishizing the formal characteristics of painting and the very unpainted canvas.
> Since these formal characteristics no longer depend on craft, they had to take refuge in the empirical conventions of easel paintings, in the very fact of being flat and delimited pieces of canvas stretched on a frame. […]
> In taking things to this level of absurdity, Greenberg's arguments show the impasse to which an ontological conception of the specificity of painting must lead. Concerned to show that 'modernist painting' only deconstructs the historical conventions of painting one by one, in order to better anchor it to the irreducible being, his arguments end up localizing this being on the formal and technical qualities of an unpainted canvas, a readymade bought in a supply store! (de Duve 1984: 156)

De Duve's book attempts to revert what he calls 'the central aporia of postmodernism': namely, only being able 'to conceive of what is called "postmodern" through the historicist and avant-garde categories of modernism' (1984: xxi). This is why postmodernism doesn't have to be another modernist rupture. He claims, 'it is not the end to pictorial originality, but the arrival of another conception of it, a new kind of aesthetic questioning' (1984: xxi). De Duve proposes reading postmodernism and this new kind of aesthetic questioning through nominalism: a practice he claimed Duchamp and industrialisation introduced. Thus, he proposes interpreting Duchamp's oeuvre, especially the invention of the readymade, in a nominalist key.

Nominalism is ‘the doctrine that only individual or disparate things exist and that our classifications of them are only contingent and changeable inventions’ (xxi). This means that what is often considered to be ‘a picture or a painting is not given by an essential nature’ (xii). Things taken for granted as essential to the practice of painting (such as bi-dimensionality) were only ways to name or conceive of painting’s possibilities: ‘[Duchamp] liked the *cosa mentale* of painting, but he knew that the mental must be incarnated in the visible if is not to run the risk of becoming literary or philosophic and thereby cease to be painting’ (de Duve 1984: 44). The difference between retinal and conceptual was not the same for Duchamp and Joseph Kosuth: for the former, it was not so much that abstract painting was retinal, but rather that the idea of it was—it was a kind of painting placed under a certain idea of art (de Duve 1984: 45). Therefore, the passage from conceiving painting as being (modernist position), to painting as knowing (Duchamp’s invention of the readymade) implies the passage from an *ontological* to an *epistemological* conception of the pictorial practice.

Many points that Frederic Jameson makes in his critique of postmodernism entitled *Postmodernism or the Cultural Logic of Late Capitalism* (1991) coincide with De Duve’s writing on the ‘central aporia of postmodernism”. For instance, Jameson illustrates that Jean-François Lyotard’s version of postmodernist theory uses the category of “narrative” to explain itself (i.e. the end of narratives). Both Jameson and

de Duve contend that postmodernism continues to use the historicist categories of modernism to develop its own theory, thus it contains mimesis in its own title—replicating another theory, most often modernism itself.

> A historical reading of postmodernism, rather than a stylistic one, would not consider postmodernism to be a style to choose among many others, but instead ‘as the cultural dominant of the logic of late capitalism’, which can allow ‘a genuinely dialectical attempt to think our present of time in History’ (Jameson 1991: 44-45).

To avoid the danger of homogenisation by this periodising hypothesis, Jameson proposed, following Raymond Williams, understanding Postmodernism ‘as a cultural dominant: a conception which allows for the presence and coexistence of a range of very different, yet subordinate, features’ (Jameson 1991: 5). This cultural dominant is what in fact defines postmodernism, and makes it a feature of modernism, and not an independent paradigm:

> I am very far from feeling that all cultural production today is “postmodern” in the broad sense I will be conferring on this term. The postmodern is, however, the force field in which very different kinds of cultural impulses—what Raymond Williams has usefully termed “residual” and “emergent” forms of cultural production—must make their way. If we do not achieve some general sense of a cultural dominant, then we fall back into a view of present history as sheer heterogeneity, random difference, a coexistence of a host of distinct forces whose effectivity is undecidable. (Jameson 1991: 5)

In addition to the ‘death of the author’ and its erasure of the high-modernist notion of personal “style”,[69] the postmodern also introduced pastiche—which entails the (indiscriminate) re-utilisation of styles from the past or from other artists and their decontextualisation in space and time. Unlike parody, which consciously presents an exaggeration of a certain style for comic and ironic effect, pastiche empties the overlapped and mixed styles evacuating them of their original significance or meaning.

According to Jameson, pastiche is mainly caused by the disappearance of the subject. This elimination of style is blank irony, which is like parody but without an aim: it is ‘pure laughter’.

> The disappearance of the individual subject, along with its formal consequence, the increasing unavailability of the personal style, engender the well-nigh universal practice today of what may be called pastiche. This concept, […] is to be sharply distinguished from the more readily received idea of parody. (Jameson 1991: 15)

Without the possibility of imitating ‘personal styles’—because there are no personalities, or feelings, or authors to imitate—parody disappears and pastiche comes in. Pastiche is parody emptied of its linguistic possibilities, of ‘ulterior motives’. After digging in the past, it resuscitates dead historical styles as cultural zombies. ‘This situation evidently determines what the architecture historians call “historicism,”

[69] Individual style was a predominant element of the study of art history since Wölfflin.

namely, the random cannibalization of all the styles of the past, the play of random stylistic allusion, and in general what Henri Lefebvre has called the increasing primacy of the "neo"' (Jameson 1991: 15).

Pastiche, the historicist vein of postmodernism, can be clearly appreciated in architecture (and the appetite for architecture). But, as Jameson mentions, this desire to consume is not directed towards quality spaces of architecture itself, but it is in fact an appetite for photography: for what can be called mediated architecture. Buildings are projected to exist, and to be consumed as an image rather than habitable spaces, in exactly the same way that 'the deepest subject of all video art, and of all postmodernism itself, is precisely reproductive technology itself' (Jameson 1991: 96). This consideration of postmodernism still acknowledges the historical vector, whilst, as it will be shown, other theorisations will tend to eliminate it.

More recently Rosalind Krauss (1999a) expanded the definition of "medium", criticising Greenberg's position (as usual) and theorising the possibilities of its 'reinvention'. When Greenberg identified the specific traits of painting as the mere physical characteristics of its support—namely, bi-dimensionality and colour—he emptied the term medium of any of its aesthetic possibilities, erasing the concept of medium itself (16). This implosion caused what Krauss calls the 'post-medium condition', a status generated by the implosion of the term medium that,

contrary to Greenberg's intentions, blurred any demarcation of specificity. As a result, artistic practice came to be identified as 'art in general': art is not painting, sculpture or video anymore, but simply art that operates with the resources that the artist finds significant or instrumental for her practice at any given time. Moreover, Krauss identifies a semantic shift that replaces the term medium with media—both in terms of mass media and also the plural of medium as a collective noun: precisely, the post-medium condition.

How did this shift come about? How was medium reinvented? And how did it continue to reinvent itself over and over again? The medium does not simply coincide with the material support or technique, but it also involves the conventions with which a particular genre operates, articulates or works on that support:

> For in order to sustain artistic practice, a medium must be a supporting structure, generative of a set of conventions, some of which, in assuming the medium itself as their subject, will be wholly 'specific' to it, thus producing an experience of their own necessity. (Krauss 1999a: 26)

In the sixties, *opticality* became a medium of its own. It was in a certain way, Greenberg's own re-invention of the medium, even though, as it will be shown, the operation doesn't fully coincide with the process of re-invention of the medium as Krauss describes it. Yet it certainly helped Greenberg escape his own cage: that is to say, the complete identification of the medium with materiality. Greenberg thought that he had isolated

the essence of painting in bi-dimensionality, the delimitation of flatness. However, he would shift his analysis from the field of the real, vertical pictorial surface to define opticality as the vector that connects the vertical pictorial surface with the viewer—thus defining opticality as a phenomenological relationship, and not as a certain materiality:

> "Opticality" was thus an entirely abstract, schematized version of the link that traditional perspective had formerly established between viewer and object, but one that now transcends the real parameter of measurable, physical space to express the purely projective powers of a pre-objective level of sight: "vision itself". (Krauss 1999a: 29)

The most relevant aspect of this definition for the context of this research is how Greenberg conceives of opticality not only as a new medium in itself, but also as a completely disembodied conception of vision: it was a purely optical phenomenological relationship with vision (18-19). This disembodied conception of vision is also out of time, it is 'virtual' in the sense that it is 'out of the here and now' (Lévy 1995: 9-11), outside of the physical coordinates of place. It seems paradoxical and ironic that Greenberg's first conception of medium identified it with the strictly physical characteristics of the support, whilst this second is completely 'virtual', as defined by Lévy: completely disembodied and almost transcendental, as is the exit from the 'here and now'.

It seems relevant here to mention Katherine Hayles' definition of 'materiality', which she outlines in her book *My Mother Was a Computer*. As already extensively explained, Hayles has argued, both in this book and previous texts,

against the idea of disembodiment in the context of new media at large, and more specifically regarding texts and electronic texts. In this sense, her definition shows interesting coincidences with Krauss' definition of medium (italics are mine):

> The following definition provides a way to think about texts as embodied entities without falling into the chaos of infinite difference: *The materiality of an embodied text is the interaction of its physical characteristics with its signifying strategies*.
> Centered in the artifact, this notion of materiality extends beyond the individual object, for its physical characteristics are the result of the social, cultural, and technological processes that brought it into being. (103)

The above quote illustrates the impossibility of any medium being disembodied (even if not talking about "medium"), plus the collective dimension that adds meaning to it—a dimension that Krauss implies when she talks about the 'set of conventions', but does not particularly emphasise (which proves to be particularly pertinent in this context).

6.2 Art at Large

Before delving deeper into the crucial conceptualisation of opticality as a disembodied kind of vision and its consequences, it is important to further analyse the reinvention of the medium. In this sense, it is worth remembering that Krauss is inspired by Walter Benjamin and his

conception of the redemptive characteristics of the obsolescence of the medium: The medium is redeemed in its aesthetic possibilities once it has become obsolete, once its interest as a commodity of mass consumption has been definitely lost (1999a: 41).

Therefore, for Krauss the reinvention of the medium, as an ensemble of conditions derived from the material conditions of a given technical support, consists in developing a form of expression from these conditions that can be at the same time 'projective and mnemonic' (58). In short, it means that once a medium has become obsolete the artist can recontextualise and re-signify it to make its utopian and real aesthetic possibilities emerge. Putting it in more banal words, it is the idea of vintage.[70]

According to this line of reasoning, put forth by Krauss but followed more recently by many other theorists like Domenico Quaranta (2010), the current time is that of the post-medium condition. After the interpretation of the medium as a mere material support, and then as opticality, the medium is cancelled through the evacuation of all its aesthetic significance. According to Krauss, this is what defines the post-medium condition: the medium has been 'exploded' to return to the

[70] A certain commodity becomes old-fashioned in the period immediately after it becomes obsolete, but some time later its aesthetic possibilities arise, freed as it is of its interest as object of consumption, and so it becomes vintage.

‘complex technological instruments of advertising, of communication and of information’ (Krauss 1999b: 16). In short, there are no longer any medium-specificities, no “painters” or “sculptors”, but only “artists”. The medium has been exploded, and therefore art is art in general.

Two main factors have determined the beginning of the post-medium condition: conceptual art (beginning of course with Duchamp) and video art. Conceptual art implodes the idea of an aesthetic medium and turns everything into a readymade that collapses the difference between the aesthetic and the commoditised or/and industrialised. The constitutive heterogeneity of video art, on the other hand, avoids any reduction to an essence or unifying core (Krauss 1999a), which means that the notions of authorship and a unified materiality are not defining characteristics of video art.

However, it would be more accurate to say that if there is anything that can be called post-medium condition, it owes its existence to Marcel Duchamp’s invention of the readymade and the conception of art as a process of selection (de Duve 1996:162). Thierry de Duve’s writing features a subtle yet significant difference in its conception of post-mediality when compared to Krauss. Duchamp’s invention of the readymade was about painting before it was about art in general. It legitimated the fact that ‘you can now be an artist without being either a

painter, or a sculptor, or a composer, or a writer, or an architect—an artist at large' (154).

Moreover, it had the effect of making everyone involved talk about art, to reflect upon art when seeing it, and to make painting about painting. In short, it made art, and its public, become reflexive. It is the effect that de Duve calls passing from 'the specific to the generic':

> Five years, later, at the New York Independents, Duchamp put his abandonment of painting on the record. *Fountain* spoke of art, or prompted people to speak of art in connection with it. We have passed from the specific to the generic, and this passage is a switch of names. Exit the painter, entre the artist, the artist in general. His name was Richard Mutt, that is, anybody, since anybody could be an artist at the Independents, even a manufacturer of bathroom fixtures whose corporate name was The J.L Mott Iron Works. (1996: 194)

On top of this, the readymade made 'art as choosing' pervasive. How else can the widespread and popularity that the contemporary conception of the role of the curator has? What does the curator do if not choose readymades and create a bigger artwork: an exhibition. As Nicolas Bourriaud asked, what is the curator if not a DJ of readymades (2001)? Not everyone has to agree with this job description of the curator, but this is how the role is primarily theorised, described and taught at the moment.

In Krauss' estimation, the post-medium condition coincides in a certain way with postmodernism. There are no longer personal styles, but the

personal reinvention of the medium through its own obsolescence, which at its time becomes a personal style. A reason for this is Krauss' commitment to fighting the element of "anything goes" that she detected in the art of the sixties and Seventies. The introduction of postmodernist theory in her writing was a means to both order and limit this tendency, which she obviously linked more to pastiche in contemporary art (Papaetros and Rose 2014).[71] This theorisation also falls into what de Duve calls a 'central aporia of Postmodernism', and postmodernism avails itself of the categories and values of the modern, becoming just one of its features.

The following section will argue that considering the readymade as medium can provide a means to overcome this flaw, which has been pointed out many times.

6.3 'Marcel, no more painting, go get a job'[72], or The Readymade as Medium.

[71] Krauss' early writing, as a student of Clement Greenberg was primarily formalist and subsequently phenomenological before the turn described above.

[72] Duchamp referred to J.J. Sweeney in a 1956 interview that he told this to himself when returning to Paris in 1912 (Duchamp 1975 [2005]; also quoted in de Duve 1984, 1996).

Is there another way out of the 'central aporia of postmodernism' (de Duve 1984: xxi), apart from de Duve's reading of painting as a nominalist practice? Considering the readymade as medium offers another possibility. As 20th century art history has illustrated, the readymade has proven to be a medium in itself. If one replaces 'electronic texts' with 'artworks' in Hayles' definition of materiality—a term that the previous section established as a near synonym of Krauss' definition of medium—the definition will apply equally as well to the readymade: 'The materiality of an artwork [embodied text] is the interaction of its physical characteristics with its signifying strategies'. If there is something in which the readymade excels, it is in its signifying strategies. In fact, the readymade as a medium in itself in part explains Clement Greenberg's visceral refusal of Duchamp and Duchampian art because it implies a fully embodied conception of artistic practice. Therefore, it is the perfect opposite of Greenberg's completely disembodied conception of art, namely opticality as a medium.

In this sense, de Duve already showed how the readymade was Duchamp's substitution of painting. The readymade was Duchamp's way out of painting without stopping being an artist altogether.[73]

[73] And painting was already readymade for him, since it is just choosing the readymade colours and displaying these colours on a readymade canvas both bought in a supply store (de Duve 1996: 161-163).

The readymade functions as a medium for all art at large, including curatorial practice. Every time an artist is just an artist, and not a "painter" or a "sculptor", she works with the medium of the readymade. The readymade not only substituted painting, the bi-dimensionality of the canvas, but it became a "blank medium" that could be emptied of any necessary materiality. The readymade could thus be described as the floating signifier of media. This is what Krauss and others call the 'post-medium condition', however this research would rather call it "the readymade as medium": an empty medium able to be filled with whatever materiality is necessary at a given time. It is the "counter-medium" of opticality, a fully embodied, material, even sensuous medium—at least it was for Duchamp.

The readymade was not simply a "new" medium, but it is also the link between art in general and industrialisation. As de Duve advances, the readymade is 'the central complex source of the conceptual problems of the pictorial practice'—certainly another excuse for Greenberg to refuse Duchamp, and all that he (artistically) implied. For Duchamp, among other artists, industrialisation had made painting as an art and craft impossible and impracticable because of photography and the industrially produced tube of paint. Some artists chose to "fight the battle" against industrialisation by turning to abstraction and becoming what could be called "mechanical modernists" like Malevich and Mondrian, while artists like Seurat created purely "retinal" painting. Duchamp chose the

radical path, and as can be expected, he did so with a touch of humour. He reinvented the medium of painting by doing two things: firstly, transforming “painting” in the act of “choosing”, and secondly, instead of choosing among industrially produced canvases and colours, he chose a completely finished manufactured object. i.e. the *Bicycle Wheel* (1913) and *Fountain* (1917). This was Duchamp’s way of keeping painting alive. He knew that the only way to do so was to illuminate the causes of its death, which—as a practice linked to craft—was industrialisation. The readymade as a medium was Duchamp’s way of painting with an industrial object, the cause of its very impossibility (de Duve 1984: 155).

Another key point in the readymade as medium is its the definitive rupture with taste. Since the readymade is painting without any craftsman virtuosity, and it is a way of thinking about painting without painting, any judgement of taste becomes superfluous. When curator James Johnson Sweeney asked Duchamp how he escaped from the judgment of ‘good taste’, Duchamp simply replied, ‘through the use of mechanic techniques. A mechanical design does not imply a kind of taste’ (1955 [2005]: 157). What all the avant-gardes perform, but the invention of the readymade decisively proves this point, is the definitive rupture between the categories of the good, true and beautiful. From then on, art could be good and true, but not necessarily beautiful—it’s even better not to be

beautiful. Contemporary art becomes “suspicious” and borders on kitsch if it is “too pretty”. Prettiness is allowed in design and everyday objects, especially if they are industrially produced, but not so easily in art.[74] This unthinkable rupture in taste has been fully achieved by the readymade as medium, it changed the conditions of (industrial) production, and thus, the conventions of taste.

If industrialisation is ‘the central complex source of the conceptual problems of the pictorial practice’, then the readymade can be another tool for thinking about the *virtual* and the *technological* in relation to the *visual* and *aesthetic* dimensions. In the same move, the readymade overturned the *virtual* (the *cosa mentale* of painting against its materiality and the modernist conception of the medium) and the *technological* (industrial production against craftmanship) and their relationship with aesthetics—that is to say, with the category of the beautiful. In this sense, the readymade can be considered an *embodied-conceptual medium*. The conceptual dimension is there, and it is indispensable, but it always has a material instantiation, which is course of industrial production: it is readymade, the aesthetic dimension then is given by the artist’s choice.

[74] I am in debt to Gabriel Kameniecki for some of the ideas expressed in this paragraph on beauty, art and taste—especially on the relationship between “accepted” beauty and design, which we discussed on the phone (aprox. on October 2006) while I was writing the text for a show I curated at the Museo de Arte Moderno de Rosario, Argentina, entitled *Belleza manifiesta* (Manifest Beauty) that took place from May through June 2007.

This is the reason why the readymade as medium is the link that can help put modernism and the posthuman in a cybernetic loop, as will be explained in the following section.

6.4 Modern, Postmodern & Posthuman

6.4.1 Why Not Postmodernism

'Qu'est-ce qu'on appelle la postmodernité? Je ne suis pas au courant.'

(Michel Foucault, interview with G. Raulet, 1983)

From the previous section it is not difficult to deduce how as a category and historical moment of (art) criticism postmodernism is a continuation of modernism—the very category, movement and historical moment that it tries to 'deconstruct'. Not that one want to fall into the same trap of Krauss and some other theorists of the "October group" that was criticised in the fourth chapter, namely that of analysing a period or a movement as if it were a subject. For example, even though Hal Foster claims at the beginning of *Prosthetic Gods* (2004) that

> For the most part, my methodological ambition is to set modernist works and psychoanalytic notions to resonate with one another—not to impose theory on art, but to see how one might implicate the other. Thus Gauguin is queried in relation to the dynamics of the dream, Picasso vis-à-vis the structure of the primal scene, Loos in relation to the formation of the anal character, Ernst vis-à-vis the complications of schizophrenic representation, and so on, but the psychoanalytic notions are tested in these encounters as well. As we know, psychobiographical accounts and symbolic readings can be reductive—often they obscure rather than elucidate the complex mediations that obtain between an art object and an art subject (artist or viewer)—yet neither kind of interpretation is on offer here. I do not read my artists by the book of Freud; rather, I focus on points of connection, conscious and not, between modernism and psychoanalysis—on common interests in origin stories and heroic fictions, in moments of regression and reaction, in imbrications of enigma and desire, in relays between traumatic events and psychological defenses (fetishistic and apotropaic representations appear frequently in this book) (xxii)

he does in fact "analyse" in the psychoanalytic sense artistic movements and artists discussed along the book; as when he states:

> This reaction against shit and smell, dirt and disorder, is also at work in art: to defy its order is literally to mess with it. "Anal eroticism," Freud writes elsewhere, "finds a narcissistic application in the production of defiance," a formula that might be adapted for avant-garde defiance too, given all the anti-aesthetic gestures, from Dada to "abject art" in the 1990s, that have invoked dirt and shit. Of course Picasso does not push his avant-garde defiance to the point of utter desublimation; in his primitive scene he flees this point— he hates the dirt and the smell projected there. Thus, however taken he may be by the potency of this disorder, he reacts against it fiercely; he is desperate for distinction, eager for mastery—to the point of an aggressivity, even a sadism, that he also projects onto the primitive ("they were against everything . . . I too am against everything"). Again the question arises: how is this ambivalence registered pictorially? (33-34)

Yet in a certain way, postmodernist theory, especially written by the aforementioned authors, sounds a bit like a teenager rebelling against the father: most concepts and texts put forth the exact opposite of the corresponding concepts in modernism without truly being able to exit its logic[75]. Jameson is perhaps an exception. Although he is considered to be one of "the" theoreticians of the postmodern, he nonetheless doesn't seem quite convinced about it either. Instead, he tends to criticise it from within, as is evident from the first quote on page n. 8 of this chapter.

It is not so much that postmodernism "doesn't exist", but it hasn't offered the most suitable framework to give an account of the overcoming of modernism or of the current state of affairs. In short, postmodernism doesn't have sufficient explicative power, at least not within the artistic and media theory fields.

The way in which Hal Foster writes about postmodernism as a 'postmodernism of resistance' (1998: xiii) seems a bit naïve and superficial when he states that postmodernism '(…) seeks to question rather than exploit cultural codes, to explore rather than conceal social and political affiliations' (xiii) without mentioning in the least how—it seems like he could hope for a performative power of language. *The Anti-Aesthetic: Essays on Postmodern Culture* is a compilation of articles

[75] It has already been brilliantly summarised by de Duve: to 'have only been able to conceive of what is called "postmodern" through the historicist and avant-garde categories of modernism' (1984: xxi).

by numerous authors addressing diverse disciplines (edited by Hal Foster), but in most cases the impression is the same: it seems that it was necessary to fight, to overcome modernism and it was still not very clear how. The fact that the book is from 1998 makes all this worse, because Hayles published *How We Became Posthuman* only a year later, presenting the real key; and, as it was already explained, the theoretical tools were already available.

The recent publication *Retracing the Expanded Field: Encounters between Art and Architecture* (Papapetros-Rose 2014) offers conclusions regarding the postmodern that are worth mentioning here. It is the result of a conference and a seminar on art and architecture organised by the Department of Art and Archaeology and the School of Architecture of Princeton University in April 2007 that also includes responses by artists, theorists and architects. The conference aimed to discuss the developments and current validity of Rosalind Krauss' canonical article 'Sculpture in the Expanded Field' (1979), in which Krauss introduced the term "postmodernism" to talk about what was at the time the current state of affairs in the artistic field. The book comprises transcriptions of a round table that discussed the expanded field *then* (chapter one), in which Rosalind Krauss took part; the second chapter is a collection of papers from the Seminar Table followed by discussion; and the third chapter is the transcription of the roundtable on the expanded field *now*. These three chapters completed the section dedicated to the discussions that

took part on 2007. The fourth chapter consists of a collection of documents that includes not only the original article as published in *October 8* (Spring 1979), but also many unpublished images belonging to the October archive. Finally, the fifth chapter includes responses from twenty theorists, artists and architects. It is significant that this same article was also reproduced as an essay on postmodern culture in the aforementioned book *The Anti-Aesthetic* (35-47). The discussion in the second chapter on Seminar Table makes clear that, from a theoretical point of view, Krauss moved from the formalist to phenomenological approach, and finally, to a structuralist point of view through using the Klein group to analyse the expansion, and structure, of the sculptural field. The Klein group was defined in Krauss' original article as a diagram used in the field of mathematics, and referred to as the Piaget group, among some other designations, 'when used by structuralists involved in mapping operations within the human sciences. By means of this logical expansion a set of binaries is transformed into a quaternary field which both mirrors the original opposition and at the same time opens it' (1979: 37)

In the previous round table, Krauss stated that she was writing against a certain 'anything goes' tendency in contemporary art for which the euphemism was 'pluralism'. In doing so, she almost shyly introduced the concept of "postmodernism" to explain the end of medium specificity. However, as Hal Foster suggests in his brief but dense contribution

entitled ‘Diagram as Closure’ (87) closure would be the ‘ability of the diagram to arrest time and to suspend history […]’ (87). This arrest of time is a flaw of postmodernist theory that Jameson tried to counterbalance through his insistence on the importance of time and History and Raymond William’s conception of the ‘cultural dominant’, as defined several pages prior :

> Postmodernism not as a style to choose among many others, but ‘as the cultural dominant of the logic of late capitalism’ which can allow ‘a genuinely dialectical attempt to think our present of time in History’ (Jameson 1991: 44-45).

As a matter of fact, two dimensions were neglected in Krauss’ article at the time and that recurrently appear throughout this book: time and the body. In the Expanded Field *Now* roundtable (third chapter), Stan Allen introduces the temporal element by proposing to talk about the term *notation,* and to compare it with other terms already introduced in the discussions, such as *mapping* and *diagram*. From the responses yet another way of introducing temporality in the expanded field could be drawn: not (only) through the body and movement—which could open a discussion on the theatrical dimension (199)—but through the digital dimension, as suggested by Sarah Oppenheimer (220). In fact, Oppenheimer and Matthew Ritchie are the only contributors who addressed the issue of the digital and computarisation of culture. In his response, Ritchie has a point when he states that if there is no human

activity so far that cannot be mediated except for computational space, it is evident that the field also has to be expanded in this sense (235).

Eve Meltzer's response in the last chapter summarises and analyses several of the issues discussed throughout the book, which were also mentioned before: namely, Krauss's escape from historicism and embrace of structuralism—and how this move left the body, the sensory and the material out of the diagram. For Meltzer, what matters thirty years later is recovering a new conception of art that considers 'a more expansive model of the human subject' (186).

It is also worth remembering that if 'Sculpture in the Expanded Field' introduced the notion of postmodernism in order to frame, and limit, the pervasive 'anything goes' tendency in the artistic field at the time, it nonetheless attempted to do so using modernist categories and methodology—which Julia Robinson referred to in her response as 'the default toolbox' of modernism (192).[76] Considering that the publication of the articles and books mentioned above span over three decades,[77] this discussion among this group—comprising some of the most influential minds in the artistic field—seems not to have moved forward in any way, with the exception of some of the younger critics and the artists, as the different contributions commented above show.

[76] As has previously been illustrated, Thierry de Duve observed many this tendency many years beforehand.

[77] The texts mentioned above were published in 1979, 1998 and 2014.

Postmodernism could not explain the overcoming of the humanist liberal subject, not only because it used the theoretical tools, concepts, and ideas of modernism, but also because it simply wasn't the framework with which to see the whole picture. The pertinent paradigm is not merely "the end of all narratives", style and the collapsing of high culture and mass culture. It is rather a completely different paradigm, the first characteristics of which are the overcoming of the limits of the subject's body, both symbolically and physically. This overcoming relates to the society of control and the society of information—with late capitalist technologies, and feedback loops between humans and technological apparatuses. It's not only related to the individual's body, but it also implies the overlapping and intertwining of different materialities and subjectivities, that of the physical reality and that of the virtual, electronic spaces, and places.

6.4.2 How Art Became Posthuman

This research advances that the true overcoming of the modernist paradigm happens in the posthuman, a paradigm in which the 'humanist liberal subject' becomes a digital subject, a cyborg, a posthuman subject. This deconstruction of the subject began long ago, likely with Freud's theory of the unconscious, according to which the subject is no longer the

owner and master of herself because she is guided by a hidden motor: by concealed drives of which she would never become fully aware.

As it was suggested in the previous chapters, the conception of psychic activity as intertwined with certain machinic processes was not alien to Freud himself—nor to several of his "followers and critics", like Lacan, Deleuze and Guattari. In this sense, the theorisation of a technological unconscious related to floating signifiers in and through which new subjectivities and meaning are generated can be considered as a further expansion of the aforementioned deconstruction of the humanist liberal subject, and thus of the conception of the posthuman itself.

That a theorist so fully immersed in Freudian and especially Lacanian theory such as Krauss had completely ignored Lacan's conceptualisation of the symbolic register as a universal Turing machine and his article about 'Psychoanalysis and Cybernetics' (1991) is striking, to say the least. Whatever her motives were, it would have a decisive influence on the theorisation of postmodernism in art without even considering what has been called, since around 1999, the posthuman. Such an analysis certainly would have been possible given that theoretical outlines were already within reach. Furthermore, this omission gave way to the rift between 'Turing land' and 'Duchamp land' (Manovich 1996)—between the mainstream artistic field that mainly develops in galleries, museums and the art market, and cybernetic art (which includes telematic art, net.art and new media art at large), which mainly develops in the

academic context, universities, specialised institutions; and that, even if cybernetic art arrives relatively early to the museum in some cases, it is seldom properly exhibited, not to mention conserved.

An interesting example turns up when considering the work of artist Damiano Colacito (1973). Since the mid-Nineties, Colacito has used video games, especially first person shooter games, to explore issues of three-dimensional representation in Western art—in particular the evolution of the representation of the perspectival space. In the vast majority of his production, Colacito cracks into the video game library to attain the vectorial structure and the texture mapping of certain objects that he considers relevant, both within the game's narrative and on the level of representation. He then builds the object in 1:1 scale, conserving the proportions but approximating the measurements, given that within the space of the video game there are no measures, everything is constructed in a proportional relationship among the objects and the "space". The objects are built in wood (most often by the artist himself) and then recovered with texture mapping printed in Scotchprint. In *Wolfenstein's HALFTRACK* (2005), for instance, Colacito built the halftrack one finds in the video game *Return to Wolfenstein Castle* (2001), which is set during World War II. The artist reproduces exactly how the artifact was seen on the screen on wood—thus slightly pixelated and having facets and angles instead of real curves.

Although his work is well known among new media curators and has been

featured in several exhibitions on game art, Colacito maintains that his work is closer to painting than to sculpture—and even farther from game art (private conversation, October 2007). Despite being an avid player, and the fact that he knows that a player would recognise any of the objects that he chose to "materialise", he in fact deals with the history of representation and perspective. Colacito observed that the evolution of three-dimensional representation on flat surfaces in Western art was almost replicated by the (much shorter) history of representation of space in videogames, thus he chooses, among other things, to comment upon this throughout his oeuvre.

Fig. 40. Damiano Colacito, *Wolfenstein's HALFTRACK HANOMAG SDKFz 251*, 2005. Iron, wood, polystyrene, resin, Scotchprint 3M, 530 x 225 x h 173 cm.

Critically, curators and art theorists tend to only consider his source material, namely video games, and not the core issues that his works discuss.[78] Similarities with the lectures of the readymade are not difficult to detect now: basically, the same tendency to read the work and the readymade in terms of its materiality, and not as art at large and in continuity, or in rupture, with a larger tradition—including that of new media theory. In Colacito's case, videogames are the raw material with which he develops a broader investigation about issues of representation in Western art and visual culture, videogames included. In Duchamp's case, the readymade becomes his medium for making art altogether, painting included—it is not just an industrial object giving birth to conceptual art, it doesn't just convey the *cosa mentale*, but it deals with artistic practice at large.

A suitable explanation of this sort of critical blind spot was suggested by Magda Bijvoet in her book *Art as Inquiry* (1996), in which she analyses the first encounters between art and technology in the Sixties, and the *9 Evenings* event as a fundamental part in the process: *9 Evenings* was a nine day event in 1966 featuring pieces realised by artists collaborating with technologists/engineers, among them Robert Rauschenberg and John Cage. When explaining the diametrical difference between the critiques made of the *9 Evenings* event received[79], she asserts that critiques coming from writers with a

[78] It doesn't seem to matter whether these are mainstream or specialised arts professionals.

[79] From that event on, E.A.T., founded by Robert Rauschenberg and Billy Klüver, dedicated to pairing the efforts in producing artistic experiments between artists and technologists: 'The

technological background, or who methodologically applied Systems Theory as Jack Burnham did, could fully appreciate the relevance of the experiment because it's main interest was exactly that of being completely experimental:

> Few if any had the prescience to appreciate the events for what they were: man-made systems with a completely different set of values from those found in structured dramatics or the one-night kinetic spectacular. [...] This suggests that systems-oriented art—dropping the term "sculpture"—will deal less with artifacts contrived from their formal value, and increasingly with men enmeshed with and within purposeful responsive systems.
> Such a change should gradually diminish the distinction between biological and nonbiological systems, i.e. man and the system as similarly functioning but organizationally separate entities. (Quoted in Bijvoet 1997: n/d)

Critiques by mainstream art critics with a classical art historical background, like Brian O'Doherty,[80] focused more on technical problems and lack of continuity of the event:

> The evenings received, on the whole, an appalling press, based mainly on the justifiable irritation of interminable delays, technical failures of the most basic sort, and long, dead spaces between, and sometimes in the middle of pieces. Yet, as such irritation faded away, one is left with startlingly

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objectives of the *9 Evenings* will be continued by Experiments in Art and Technology, Inc. This foundation will further the creative interaction between industry, engineers and artists. 9 Evenings is an experiment in the true sense of the word: its results are open for the future' (n/d). In the catalogue, Rauschenberg wrote: 'Working with engineers is inspiring. I could not do what I want to do without them. It is no longer possible to bypass the whole area of technology. We have no assurance, for example, that buildings will have walls for much longer. I can foresee art schools giving courses in electronics and vacuum mouldings. We can't afford to wait. We must force a relationship with technology in order to continue and we must move quickly. The most positive thing I can say is that technology does not lead us back into history, but advances us into the unknown' (quoted by Bijvoet: n/d).

[80] Brian O'Doherty, also known as Patrick Ireland, is an artist, critic and academic, most famously the author of *Inside the White Cube: The Ideology of the Gallery Space* (1976).

> persistent residual images, and strong hints of an alternative theater that has been lagging in its post-Happenings penumbra between art and theater. (Quoted in Bijvoet 1997: n/d)

Bijvoet's hypothesis is that while the result of the collaborations, the "works" were focused in a process, precisely in the process of experimenting with art, science and technology—and not in a finished object—critics with traditional art historical or art theoretical formation may not have had the theoretical tools to conceptualise that kind of event (n/d). Instead, they considered only the final result, as Lucy Lippard asserted (quoted in Bijvoet: n/d), and could not garner the conceptual tools necessary to build a new aesthetic theory as Burnham tried to do, which could grasp the entire importance of these collaborations. By 1975 the greater part of the mainstream art world, Rauschenberg included, had lost interest in the collaborations between art and technology, and both paths (almost) definitively, and with very few exceptions, split.

6.5 Under (Re)Construction

How can these apparently irreconcilable "lands" come together again then? Theorists like Christiane Paul, Oliver Grau, Peter Weibel, and many others actively discuss and work to establish greater continuity between "traditional"

art history and media art histories.[81] Although a lot has been achieved, it is hardly possible to say that both lands have come together[82]. The reasons for the difficulty of this confluence are varied, and identifying them certainly does not warrant that the problem will be solved practically. This text intends to contribute to this discussion by identifying a conceptual chasm, as it could be called, that should have kept both histories in continuity, and instead allowed them to split. By reconstructing the cybernetic loop between the conceptual toolkit of both 'lands' I intend to at least bring them back together theoretically.

I want to proposed that this chasm was generated by Greenberg's conception of *opticality* as disembodied vision, which is completely coherent with the definition of information as independent of a material substrate—and possibly had an influence on the aesthetic conception of modernist art that began to separate it from more processual aesthetics, such as the ones developed at E.A.T. and other kinds of incipient new media art. The chasm has a name: it is the readymade as medium.

In any event, one key element of this conception of opticality is that it is the exact opposite of Duchamp's conception of vision. For Duchamp, vision is only

[81] The whole Media Art History project is devoted to this aim. Please see http://www.mediaarthistory.org/

[82] The recent publication *Mass Effect. Art and the Internet in the Twenty-First Century* (2015) reports the somehow harsh discussion on Artforum (September 2012/January 2013) between Claire Bishop, Lauren Cornell and Brian Droitcour about Bishop's article "Digital Divide: Contemporary Art and New Media", regarding which both contenders address this same subject. However, each of them defend their position from the point of view of mainstream art, in Bishop's case, and from the point of view of digital art, in Cornell's and Doitcuour's case, each one making their point, but without being able, once again, to bring both points of view together, that is to say, without being able to consider the artistic field as one.

carnal: ‘The optic chiasm that Duchamp suggests, however, is unthinkable apart from a vision that is carnal through and through. *Con*, as they say, *celui qui voit*’ (Krauss 1993: 114). It is possible to identify here one of the causes of Greenberg’s refusal of Duchamp in the embrace of industrialisation, in clearing the way to the expansion of what is called today conceptual art, and the rejection of craft and materiality: The aseptic conception of art conveyed in modernist theory, and especially in Greenberg’s opticality, as opposed to Duchamp’s erotic, almost voluptuous conception of the gaze as always embodied and filled with concrete physical desire.

The second fundamental issue is how this disembodied conception of vision—of opticality as medium—coincides with the definition of information as completely disembodied.[83] Information was thus understood as a pattern, as a mathematical function, that, as Hayles masterfully demonstrates, gave rise to a long-running conception of information as “something” that is completely independent from any material instantiation, which has hopefully been overcome by now. It is striking how both examples remained unnoticed and disconnected, despite the fact that they took place during relatively the same time period. Hayles contends that information came to be defined as a pattern

[83] The definition I refer to was used within the context of the Macy Conferences and identified and extensively explained by Katherine Hayles, as quoted in the introduction to the present work.

because in post-war/Cold War America a conception of information more in line with the conception of the 'liberal humanist subject' was needed.[84]

Greenberg's motivations for promoting American art, and the shift of contemporary art's centre from Paris to New York post-war have been extensively discussed in other works (see Stonor Saunders 1999; Battaglia 2008). Both processes can be easily read as part of the same one: the re-location and re-balance of power after World War II took place both within the context of scientific/technological expansion—and in relation to the development of cybernetic theory—as well as in the art world and other structures of production of sense. America gained a position of leading power in both realms, following the virtual destruction of Europe after two massive wars.

Disembodiment was a key factor in both cybernetic theory and the theory of modern art, which allowed an aseptic conception of subjectivity in its relation to technology and machines (in the case of cybernetic theory) and in the subject's relation with the artwork and its materiality (in the case of modernism). Although both positions may seem completely antagonistic—as one deals with the relationship between individuals and machines, while the other proposes a complete rejection of industrialisation and mechanisation within the context of art and artistic production—both are engaged in the same feedback loop that brings together the mainstream art world and cybernetics—

[84] In this choice, Hayles explains, Donald McKay's definition of information which contemplated also the meaning conveyed in a message, and its effects on the receiver, was disregarded,

what I've repeatedly referred to as Turing land and Duchamp land. As it has already been shown, the missing link in this hypothesis is the conceptualisation of the readymade as medium. The readymade as medium, as a technological, industrial, serialised, embodied medium is the link between modernism and the posthuman. The readymade is the blank medium, a kind of floating signifier, which, as shown in the fourth chapter, has relevant implications in the conformation of (new) subjectivities. It provides the missing bond in the chain that allows avoiding a forced theorisation of postmodernism, at least in art theory, and makes evident the fact that the real overcoming of modernism happens in the posthuman.

It wasn't only Greenberg in the Sixties who rejected the readymade, it also found resistance among artists at the time of its invention and diffusion. Rosalind Krauss likely didn't have the tools to properly evaluate the importance of the developments in cybernetics, as Bijvoet noted about other authors. Krauss was probably a modernist herself and couldn't accept (or wasn't interested in doing so) technique and the readymade as the missing links to overcome it. However, in the *Picasso Papers* (1998) she identifies another key point of the chasm: analysing Picasso's incursion into the practice of pastiche from 1916 until approximately 1924, Krauss shows how Picasso feared the process of mechanisation that was penetrating art through photography. His fear

was related to the rejection of ‘readymade images’ and abstract art. Even if cubism tried to break with the conventions of representation, it managed to always remain anchored to “reality”[85]—both of which implied serialisation and the lost of craft in the pictorial practice. The following quote makes clear, firstly, Krauss’ point about Picasso’s fear of the penetration of industrialisation in the craftsmanship of the pictorial practice, which the artist considered intrinsic and fundamental to it. Secondly, it offers another example of Krauss’s use of psychoanalytic theory to “analyse” artists through their works, which this research has already criticised and rejected:

> For Picasso's line now imbibes the robotic character of a mark made in the course of tracing, a line that is so slavishly indebted to the model lying below it that it has lost any connection to the draftsman's own distinctive hand. It is such an experience of the mechanical that will, on the one hand, mark the "second-degree" condition of pastiche, the fact that the artist's relation to the image is always mediated by another proper name, another author. On the other hand, the mechanical will penetrate the "cultural" network of interartistic associations to descend to the industrial base of production exploited by Duchamp in the early teens and insistently disseminated by Picabia's illustrations of Haviland as a desk lamp or the American girl as a spark plug: the ground at which the automation of drawing takes the form of the motley "dumb" outlines of the mechanical draftsman's rendering of the industrial object—the line as invariant, the line as intended for mass production. It is Picasso's line itself, then, that ties the knot linking the manufactured object and the pastiched image, revealing them both as simply two orders of readymade.

[85] Krauss shows how even in the most abstract Cubist works, both Braque and Picasso always included an identifiable element, such as a nail, to keep the composition and the reading of the work anchored in reality and to not enter the definition of “strictly abstract art” (1998).

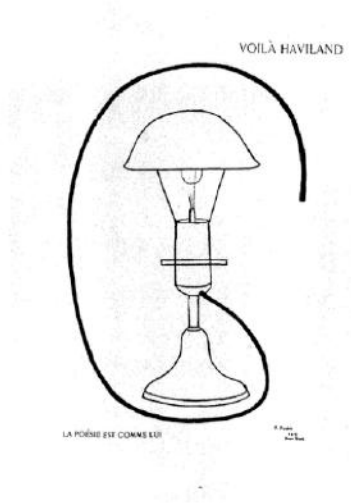

Fig. 41. Francis Picabia, *Voilà Haviland*, 1915.

Further, it is in the meshes of this knot that we recognize the operations of *reaction formation*[86]. Picasso's supposed classicism, so clean, so pure, so effortlessly productive, is the underside of mechanization nastily taking command. Thus, from the depths of this dialectical relation, in which opposites are inextricably bound as the two faces of the same reality, the very signature of Picasso's virtuosity is branded by the mark of art's deskilling. For that feature of his calligraphic magic—his capacity to spin out intricate anatomical contours without lifting his pencil from the page—carries the mechanical production of the contour, in the form of tracing, as a kind of disease with which it has already been infected. Not only is it there in the modality of the line itself, so mockingly resistant to the shifts and swells of traditional drawing's attempts to make contour responsive to volume. But it also seems to control the very form Picasso's "neoclassical" style will go on to take, as the bloated, disarticulated quality of a figure's hands and fingers, for example, or the staring, abbreviated set of its eyes appears to have its roots in this brutally summary quality of a drawing made as if by tracing. (1998: 142, 151)

[86] Italics are mine.

The irony is that when Picasso introduced the piece of chair in his collage-painting *Still Life with Chair Caning* (1912), for example, in order not to represent, but to present the actual chair, he was actually introducing the readymade in his own work.

Although the readymade was perceived early on as the link between art and industrialisation—which became the canonical, almost cliché interpretation of its function within modernism and avant-gardes—its reading focused exclusively on industrialisation as opposed to craft (de Duve 1984, Krauss 1998, Foster 2004). This analytical approach ignores[87] its reading as embodied vision and technology, which is in fundamental continuity with what would have been called the first collaborations between art, science and technology—and later new media art. Moreover, it is coherent what this text arrived to conceptualise as embodiment in the digital: the floating signifier in the digital is also a kind of medium, an empty medium like the readymade, and what it allows is for an embodied subject to see, operate, navigate, generate sense in complex environments. Once again, Duchamp connects art, technology, and embodied subjects in a feedback loop that may have been too ahead of his time. Although Duchamp was obviously not talking of embodiment in digital environments, or nothing of this sort, his invention and use of the readymade as medium, and his oeuvre in general

[87] In *The Optical Unconscious* Krauss underlines that vision was embodied to Duchamp, but does not relate embodied vision to the readymade.

can be considered to have set the bases for its future development: he was, concretely, intuiting the conformation of new kinds of subjectivities, and, I dare say, he was already one of them.

For example, in the series of notes that Duchamp wrote for a conference entitled *A propos of myself* at the City Art Museum in Saint Louis, Missouri in 1964, there is the explanation that was to be developed on an image of *La Mariée*, one of the series of studies he did for the work famously known as the *Grand Verre* (1915-1923), whose original title is *La Mariée mise à nu par ses célibataires, meme* (T*he Bride Stripped Bare by Her Bachelors, Even).*

It consists of a few paragraphs in which Duchamp explains how he had abandoned painting and decided to undertake ‘an adventure’ that would not keep any (stylistic) link with any of the pre-existing schools or movements at the time (1964 [2005]: 192). But most interestingly, when referring to the title of the work, *The Bride*, Duchamp makes clear that the work has nothing to do with the realistic representation of a bride, but with his own idea of it, which was ‘expressed by the overlapping of mechanical elements and visceral forms’ (192).

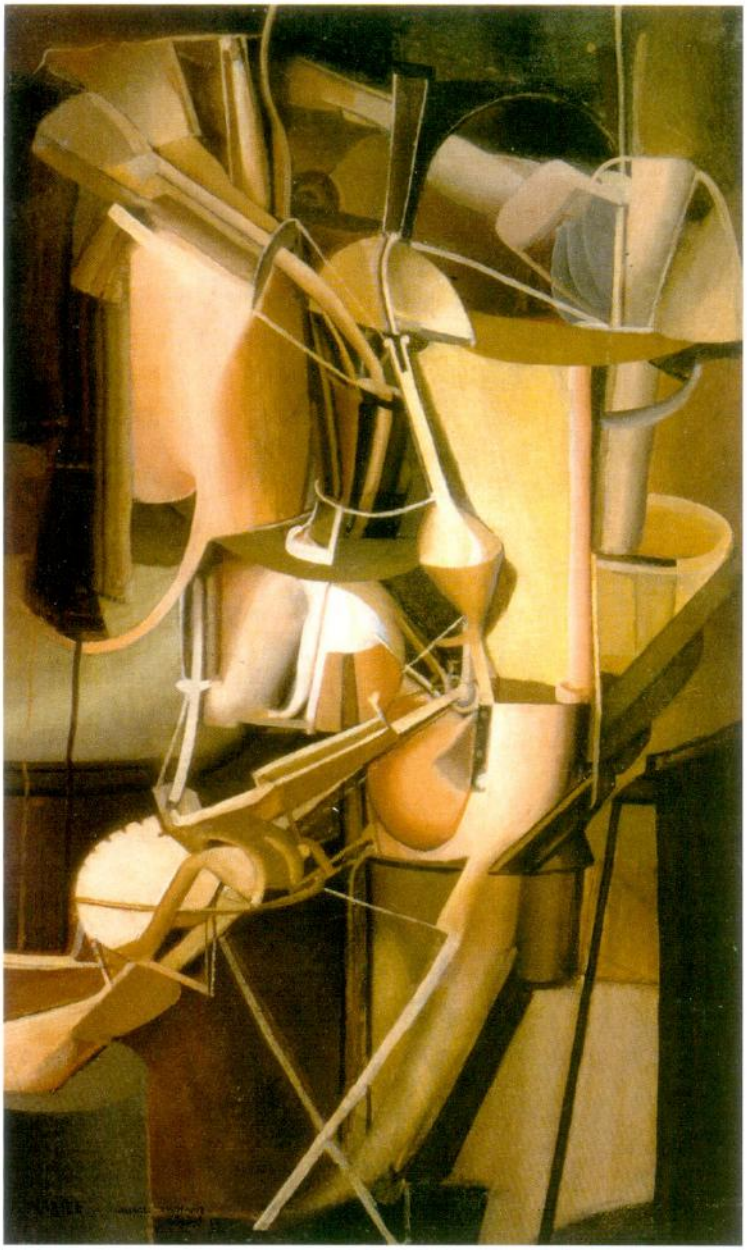

Fig. 42. Marcel Duchamp, *The Bride* (Preparatory study for the *Grand Verre*), 1912.

It is not difficult to identify here, and in the whole work of the *Grand Verre* as a consequence, a conception of a proto-cyborg. One could single

out as the trope of the 19th century, and up to this moment, the automaton: a completely mechanical humanoid. *The Bride* (1912) can be considered one of the first times, if not the first in the artistic domain, in which the mixing of human and mechanical elements are conceived to conform a single entity, namely, a female bride, a cyborg bride.

To put the whole analysis in the context of the rest of the research, and why not, of more recent times, it seems pertinent to recall Richard Prince's and Amalia Ulman's case studies, as proposed in the second chapter. The comparison of the use of a social network like Instagram by both artists shows, among other things, how Prince can be considered as an exponent of the previous paradigm and corresponding subjectivities, namely, that of the humanist liberal subject, while Ulman's work is a stunning example of what inhabiting the posthuman actually means. While Prince's use of Instagram seems to locate him both as a sort of victim (of the technology) and victimiser (through it), Ulman's work is paradigmatic precisely to unveil these kind of mechanisms.

In *Excellences & Perfections* Ulman blurs the limits between herself, the artist and the character she invented evidencing the ways in which new subjectivities emerge in the intertwinement between subjects and complex environments. Specifically, it exposes how by using a floating signifier to assume a point of view, in this case an Instagram profile, the

artist was able to operate in the technological unconscious/plane of immanence, in this case of social networks, generating at the same time sense—through a relevant artistic piece, but not only—and unveiling, at least partially, some of its mechanisms. In this sense, the piece underscores not only more evident aspects of the interaction with and through social media like personal overexposure, but specifically how physical reality collapses with the digital one—what I called complex environments—conforming in the process complex subjectivities; and how the separation between subjects and objects is no longer clear, and most importantly, it is not relevant anymore.

Moreover her work—which could be representative of other works of the sort—definitely makes evident the blind spot in art critique and theory that the present chapter describes: Through *Excellence & Perfections* recently Ulman got wide attention not only from the press but also from curators. The work was featured, among other shows, at the Whitechapel Gallery in the exhibition *Electronic Superhighway* (2016-1966) curated by Omar Kholeif with Emily Butler, and Séamus McCormack. However, to say “the work” is misleading because what was exhibited was a selection of just two of the Instagram posts from the project that were printed and hanged on the wall like any other photography. The problem with this decontextualisation and (mis)understanding of the work as a sort of derivate from the original project reminds of a similar confusion that took place almost twenty years ago at Documenta X (1997), when

curator Catherine David dedicated a whole space within the exhibition called *Hybrid Workspace* to include works by pioneers of net.art, cyberfeminsm and tactical media (Deseriis and Marano 2008: 65). The issue at that time was that to prevent people from surfing or checking emails on the computers that displayed the showcased pieces, all the works were running on the computer hard drives but were not actually online. The question this curatorial decision arises is obvious: what sense does it make to have a section dedicated to this kind of art if its very specificity, namely to be online and accessible to everyone, is going to be eliminated? Then, returning to Ulman's project, a very similar question comes to the mind: *Excellences & Perfections* is (or was) an Instagram performance that lasted four months. Decontextualising just two images—instead of finding a way for the public to access Instagram within the exhibition space, virtual or physical—makes the work look like another banal reflection about "the selfie phenomenon", at best; as also Kerstin Stakemeier remarked in her review of the show for Artforum:

> This is clearly the case with the curators' presentation of Amalia Ulman's *Excellences & Perfections*, 2014. While the original work staged a carefully preproduced trail of Instagram posts that seemed to document the downfall and resurgence of a young female artist over the span of several months, visitors to the show see only two large-scale, painterly reproductions of Instagram posts, each showing the artist taking an exaggerated selfie. In this format, her work appears less a critique of the sexed mechanisms of online social exposure than a narcissistic repetition of them. (2016: 250)

Nonetheless, this confusion is in continuity not only with the one at Documenta X, but also with the critical blind spot that Bijvoet identified at the time of *9 Evenings*[88]. Interestingly enough, Ulman's work is the trigger of the confusion at the same time that it offers an explanation for it. If a part of the problem was, as Bijovet pointed out, that critics with a traditional art historical education didn't have the tools to understand process-based artworks and only looked for a finished art object, I'd like to propose Ulman's case to cast light on yet another key point that has to do with a change of paradigm in the conformation of subjectivities: it has been outlined above how her work already implies a kind of subjectivity that can be called posthuman, whilst Prince seems to be part and dealing with the logic of the previous paradigm (that of the humanist liberal subject), a paradigm in which appropriation art was still pertinent. However, when he tried to deal with a medium that works with and is part of logic and mechanisms of the posthuman he seemed to have remained trapped in the old logic, and he obviously doesn't understand how it works, nor what it does. Therefore, an explanation that complements Bijvoet's can be that the problem doesn't have to do only with traditional or less traditional art historical formation but also with subjectivities—and to be clear, this is in no way related to issues of age, or generations (i.e. millennials, digital natives, etc.), but with the

[88] As explained above in 6.4.2

construction of subjectivities that this text intended to describe. If the artists and artworks analysed above can be considered to be respectively corresponding to the modern and posthuman paradigms, accordingly, it is possible to consider that the blind spot in critique also has to do with the misalignment in the transitions and overlappings in the passage from one to the other: there are artworks and artists that are not only addressing topics related to the posthuman, but most importantly who are obviously complex subjects themselves, and operate within this paradigm and logic which is evidently embedded in what they do; however, some of the critics, curators, theorists dealing with them are, like Prince, still tied up to the old one and cannot fully grasp the reach of their work.

These misalignments, it can be hypothesised, are due to the fact that even when the overcoming of modernism with the posthuman can be acknowledged in an (art) theoretical context, subjects may not be automatically aware of it. Here, McLuhan's statement of 1969 still resonates with some currentness: 'In the midst of the electronic age of software, of instant information movement, we still believe we're living in the mechanical age of hardware' (5).

In conclusion, the posthuman implies the breaking of the limits of the 'liberal humanist subject', and the constitution of new subjectivities of which Amalia Ulman is a paradigmatic case. It is also the

conceptualisation and enactment of a digital subject, a subject embodied in the digital as well as in material environments; a complex subjectivity who is also intertwined in the collective dimension of the technological unconscious. The acceptance and condition of embodiment was already inherent to the readymade, which was proposed as one of the tools to reconstruct the cybernetic loop between concepts of traditional modernist critical theory and that of cybernetics. This reconstruction implies, at the same time, a definitive and clear rupture with modernist discourse, as well as the acceptance of the emergence new kinds of subjectivities and otherness, both of which can open the path for a true continuity and coherence within art historical discourse, critique and practice.

Conclusions

To conclude, how can the meeting between Duchamp and Turing be summarised? How do all of the previously explained theoretical frameworks and hypotheses contribute to bringing these two “lands” together?

In the first place, it was necessary to revise how digitalisation is understood and to bypass dichotomist conceptions of the different materialities we interact with and enact into. This undertaking proves essential to understanding our current state of affairs in relation to complex environments—both within the artistic field and in culture more broadly. It is impossible to continue to consider digitalisation in terms of representation, whether in terms of an original or as a surrogate of a “more real reality”. To come to this understanding, it is necessary to understand digitalisation in terms of repetition—namely, that among these repetitions difference can be found. It is the diversity conveyed among the similar, and even the identical. In this sense, it doesn’t matter whether the image of a certain digitised artistic object or space has a material referent in our material environment. It doesn’t make a difference because digitalisation shouldn’t be conceived in hierarchical terms, but rather according to the notion that everything is repetition—even material environments. This is the reason why it is more accurate to

talk about simulacra, and why, as has been extensively explained, Deleuze proposes to read everything in terms of simulacra, because there is no reason to ascribe a higher ontological level to something that can be touched as opposed to something that cannot be touched, seen or smelled. Everything according to this line of critical inquiry is understood in terms of ontological repetition. There is no first time, or second time, in which something is repeated. The first time is already a repetition.

Furthermore, conceiving of these processes in terms of *différance*, of constant deferral has been useful to further build and ground the conception of complex environments. The illusion of an origin, and of an original, the presence/absence dichotomy, grounded and gave the individual humanist subject the security and stability of knowing that there actually was an origin (Hayles 1999: 285). In this new model, which can be already called posthumanist, this idea is taken over by the assertion and the instability of an absence, of the certainty that an origin is not possible, or better, that it doesn't exist. This new model, which is based on the idea of a constant deferral, of a slippage of meaning that cannot be grasped, as Hayles shows, has substituted the certainty of a presence (the origin) in the (un)certainty of an absence (the lack of origin) (285). As Sini also suggested, Derrida was well aware that a complete escape from metaphysics was not possible (2011). However, he did believe a deconstruction of logocentrism was attainable, as well as of the predominance of the signifier, that is to say, of presence. In this

sense, this model offers a coherent and useful means to understand new dynamics—namely the intertwining of digital and non-digital environments—because it understands each significant process as a net, as a web in constant creation and mutation. Hence, an artwork as Lonegran's *LONELY LOS ANGELES* can be better comprehended in these terms. It explains a way of navigating the spaces and places of contemporaneity that could not be understood without deferring to a dichotomist conception: an artwork that arose from the need of the artist to "drive" around the city before learning to drive. This also happens, for example, when one searches for an unknown address on Google Street View before visiting the place or decides to visit a digital rendering of a museum or any other site. Derrida's conception of *différance* as constant deferral highlights the importance of the body. However, it does so without intending to establish any kind of hierarchisation. His interest in writing—particularly his refusal to understand writing as mere transcription of the voice—seeks to overcome the prevalence of the voice, of the signified over the signifier, of the concept over the body. This line of thinking thus returns writing to its place in the body. Considering the intertwining of complex environments in terms of *différance* therefore allows one to understand the complexity of navigating digital and analog environments while avoiding the trap of dematerialisation and disembodiment. Moreover, as the text in this context is understood as an event that undergoes constant re-writing, the

origin of which is not an origin but an absence (Vergani 2000: 50), the writer (the author of the text) is also constructed, written and modified by the text. Therefore, it is not possible to separate subject and object anymore, they are both engaged in the event: this notion provides yet another means to conceive, frame and understand both complex environments, and embodied subjects.

Peirce's triadic model proposes a complementary approach to the concept of simulacra, which also avoids connotations of positive or negative value. As previously mentioned, the fact that Peirce considers any signification process in triadic rather than dyadic terms is one of its points of interest. According to his conception, signification processes are generated by the relationships among three terms. Peirce contends that not every element in a sign "signifies", both world and signs have an exceed one another. In the (potentially) infinite semiosis, his model places material, non-material, human and non-human elements into relationship without establishing any kind of hierarchical or ontological differences. All of the aforementioned elements can work as signs, objects or interpretants in turn. An object is not necessarily material for Peirce. It is instead anything that can be thought. Moreover, signs do not imply representation. This model therefore contemplates the production of sense both by human or non-human actors, because, although the production of sense is by definition contemplated in a semiotic process, sense does not necessarily involve communication (for Peirce). This

element of Peirce's thinking provides another way of thinking of the production of sense in complex terms. A concrete example of the applicability of these concepts was proposed when thinking about screens in terms of simulacra and of the evolution of the interface from symbolic to iconic.

Within this context, a set of questions has been formulated regarding simulacra specifically, including their potential power to further subvert some of these issues. The question of whether it makes sense to separate digital and analog, or virtual and material realities, can be restated as follows: Can certain (artistic) simulacra put actors in a feedback loop that erases the limits of digital and material? A further question connected with the general line of thinking would be: Does the conscious exploiting of simulacra in certain artistic practices, most often developed within the limits of digital and analog offer a further extension of the aesthetic limits? And finally: can there be an aesthetic effect in the use of simulacra as an artistic apparatus?

Therefore, it has been proposed to consider simulacra as a new aesthetic, and thus ethical, limit in contemporaneity. Also understood as historical paradigms or *epistemes*[89] (Foucault 1966), the aesthetic limit has

[89] In *The Order of Things*, Foucault defined the episteme as follows: 'I am not concerned, therefore, to describe the progress of knowledge towards an objectivity in which today's science can finally be recognized; what I am attempting to bring to light is the epistemological field, the *episteme* in which knowledge, envisaged apart from all criteria having reference to its rational value or to its objective forms, grounds its positivity and thereby manifests a history which is not that of its growing perfection, but

expanded the acceptance of otherness in that which can be considered capable of aesthetic fruition: from perfect and measured beauty, to the slow inclusion of the idea of the infinite, and subsequently the sublime and the uncanny as limits and conditions of aesthetic fruition. Following Kristeva's and Foster's theorisations of the abject and of abject art from the Eighties there was a further acceptance of what could be considered as falling under the label of aesthetic and artistic including abject art implied presenting the viewer something that she would normally consider repugnant and intolerable, the Real in itself. Daniël Ploeger's project *Abject Digital Performance: Engaging the politics of electronic waste* (2015) offers compelling, updated research on this topic.[90] Ploeger studies how the aesthetics of contemporary digital technologies are obsessively clean and "shiny". There is a complete rejection of any kind

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rather that of its conditions of possibility; in this account, what should appear are those configurations within the *space* of knowledge which have given rise to the diverse forms of empirical science. Such an enterprise is not so much a history, in the traditional meaning of that word, as an "archaeology"' (1966 [1970]: xxiv).

[90] Ploeger's artwork is inscribed in the extremely pertinent research project "Bodies of Planned Obsolescence: Digital performance and the global politics of electronic waste", a project that brings forward a crucial aspect of technology that is not often discussed in academic contexts, and even less in commercial or industrial ones: 'The United Kingdom is one of Europe's main producers of electronic waste (e-waste). Despite strict EU regulations and control programmes, a substantial part of British e-waste is exported to developing countries, where it is often recycled through environmentally harmful methods or dumped in unprotected areas, causing severe environmental damage accompanied by a range of socio-cultural problems. Foregrounding the problematics around e-waste through cultural practices and in academic discourse is a matter of urgency at the present moment. In addition to the adverse impact of e-waste outside Europe, it has in recent years become clear that European countries will now also increasingly need to engage with this problem on their own territory; developing countries are gradually introducing restrictions on imports of used electronics, whilst the persistence of the manufacturing logic of planned obsolescence causes the stream of waste to increase steadily at a yearly rate of 5-10%'. [Available from http://www.e-waste-performance.net/project-outline.html.]

of waste, the dirty is not recognised and the abject side of technology is meticulously hidden. In parallel with Kristeva's definition of the bodily abject, he defines the technologically abject as all the traces that technology leaves 'outside the post-industrial cultural paradigm' (2015). In this sense, his work and project e-waste.performence.net tries to bring to light not only the planned obsolescence of electronics, but also the fact that on the other side of this obsessive cleanness entire fields of detritus are being systematically dropped and hidden from the Western world through the exportation of electronic waste to countries like China and Nigeria. Ploeger's performance *Bodies of Planned Obsolescence* consists in the artist inserting a piece of detritus found in one of these electronic dumps in Nigeria in his own body with a piercing expert. The action incorporates the electronically abject into the artist's own body, a kind of return to electronic motherhood stage of the pre-subject. It is a dirty cyborg, or as Ploeger calls it a 'waste cyborg' (2015). This kind of work clearly illustrates another level of accepting otherness within the abject limit itself, this time considering digital technologies and a further expansion of threshold, as well as the political and ethical dimension of the fact that Western countries hide their practice of relegating abject e-waste to emerging countries behind the shiny aesthetic of digital technology.

However, there is even a further limit in the presented hypothesis, that of simulacra: in current times of digital connectivity and complex

environments, the new threshold and aesthetic limit resides in the conscious use of simulacra as strategy. It is a strategy that not only searches for an aesthetic effect, or an extension of what can cause an aesthetic effect, but also includes in its framework another way of erasing the (at this point illusory) separation between subject and object, as was exemplified with Amalia Ulman's Instagram project. In this sense, the use of artistic simulacrum allows for an overlapping and interweaving of both digital and non-digital simulacra. If the strategy is revealed or uncovered, it can promote a further acknowledgment on complex subjectivities and environments—in brief, on the posthuman. The slippage of the threshold as an aesthetic limit correlates to that of the possibility of conceptualising and accepting the posthuman: the overcoming of the boundaries of the humanist liberal subject in the posthuman coincides with a further expansion of the threshold of the aesthetic limit to include the simulacrum, which is its proper aesthetic and ethical category.

At this point, it became evident that this research must also think about the archive. Although the topic of the archive in digital theory became almost a cliché, my text intended to present it in wider perspective while avoiding the conceptual separation of digital and non-digital archives. In this sense, Foucault's definition of the archive, which clearly had nothing to do with digital theory was especially relevant: the archive is not a place in which to keep things as records, but is for him the object of an

archaeology as a methodology. In this sense, and as already extensively explained, the archive is a set of rules that at a certain historical moment, allows certain statements (*enoncés)* to arise, and not others. Why is this theorisation of the archive so relevant in this context? Because it not only considers that the archive can only have certain characteristics at a certain time, and is thus not transcendental but deeply anchored to a here and now, but also because discursive practices are considered as practices that construct the objects that they talk about, subjectivities included. These fundamental characteristics result in the fact that one is not more relevant than the other: the discursive practices that set the rules that make the archive possible at a certain time are not transcendent, but historically bound. As such, they are unique and unrepeatable—they are events. Moreover, it is worth remembering that these discursive practices are always linked to a particular subjectivity, and thus are always linked to a materiality, that is to say, embodied. Even though Foucault was evidently not thinking of digitalisation processes when he wrote the *Archaeology of Knowledge* in 1969 this research considers that the continuity of all this theorisation is not only valid but also fundamental to the consideration of any kind of archive.

In close relationship with the aforementioned theories, it was necessary to further define other central concepts, for which Deleuze's theorisations were fundamental: his consideration of memory as a repetition rather than representation and the notion that an event can only be actualised in

the subject. The coherence of his thinking with the aforementioned concepts is evident: they all foreground the importance of the subject in all these processes and underscore their intertwining in the construction of subjectivities.

However, following Derrida, it is also necessary to understand that the archive, whether digital or not, is not only a question of memory and conservation, but also a projection to the future. Similar to what the unconscious produces in the subject, the archive builds its very conditions of possibility, as well as its reading and interpretation. The archive is not only an exteriorisation of memory—and in this sense, every archive is virtual if one follows Pierre Lévy—but it is a memory in constant re-writing: a *Wunderblock*, a mystic pad, re-written constantly but conserving the traces of what has been previously saved. In doing so, it modifies not only what is going to be read, but also how it will be read in the future. The archive is thus not only a prosthetic memory, but it is memory in the hypomnesic sense. It is a notebook—something that implies creation, dynamism and dialogue—not just a fossilised storage. Derrida understood that every time one presses "save" on the computer one creates one's own private archive. It is one's way of avoiding oblivion, of escaping the *mal d'archive*, and also one's own modest contribution to the creation of what is yet to come.

This analysis does not remain speculation. Its interest today is that digital technologies have fostered a proliferation of archives, of apparatuses that work as archives, and it is thus of utmost importance to understand what kind of archives we deal with on a daily basis because they contribute to the construction of subjectivities, and of the future. In this sense, as some of the case studies have shown, it is necessary to be aware of the fact that some contemporary apparatuses working as archives may partially, or completely, block its creative power—Facebook's algorithm provides a clear example. However, others may be more conducive to creativity and for stimulating experimentation, and thus potentially create new knowledge. A truly interesting example in this sense is the website Open Culture,[91] which works as an exclusively online archive of very different, an often curious, cultural productions. Its content includes films, video, photography, pop and classical music. It is also an archive of archives, because it often links to databases of digitised books, films or art and documents collections—all of them strictly legal and copyright free.[92] The archive has a certain curatorial profile that searches for not very well known—because difficult to access—works, documents, texts, letters, photographs related or authored by famous artists, writers, cinema directors, musicians and other protagonists of culture to feature on the

[91] http://www.openculture.com

[92] For example, under the section "Essentials" the main film, audio books, digitised paper books, language lessons, educational courses of all types and philosophy books can be accessed and downloaded for free.

homepage daily. It is also a permanent archive of all the above-mentioned materials. As it is evident, any curatorial profile implies a certain choice, a certain underlying reading or taxonomy, and this is unavoidable. However, the curated section on Open Culture evidently proposes a new angle to access a famous author's works, and by extension the possibility of going through the more "traditional" archive. The conditions of its own reading are thus also renewed.

The relevance of the intertwining and constant feedback loops between digital and non-digital environments and subjects, and their central role in the constitution of subjectivities and apparatuses has been clearly explained by this point. However, it was necessary to explain and advance the existence of a technological unconscious that works as a plane of immanence in which sense is produced by both human and non-human entities. In this process, my research has identified the role of the floating signifier as being of great relevance. The technological unconscious comprises a partially inaccessible, unknown dimension in terms of how technological apparatuses work. Although independent of the subject's intention, the technological unconscious is nonetheless symbolically structured, which doesn't mean that machines have the capacity of symbolisation, but rather that some of the symbolical human capacities that built and programmed them have been distributed within their structure (Vaccari 1979; Hayles 1999). Moreover, the technological unconscious is also collectively structured. It constitutes a collective

dimension, in which there is the possibility for a collective imaginary to emerge. The reason for this is simple: the structuring, construction and use of machines involved in feedback loops with human agents is never one-to-one, the collective and collaborative dimension of their formation leaves sediments and traces.

Caronia theorised an overabundance of floating signifiers thanks to the proliferation of technological apparatuses in the contemporary world, specifically since the massive distribution of digital technologies (2006). What are these floating signifiers? The semiotic definition has already been abundantly explained as the empty signifier. This notion can be filled with any signified, with any content, which usually serves to cover the unfitness—or exceedence—between signs and the world. More concretely in this context, they have been identified in the proliferation of new signifiers in the digital that don't necessarily have a correspondence, or referent, in the "material" world. Examples are abundant, but it can be advanced that any profile in any social network can be considered as a floating signifier.

Nonetheless, this research has proposed to bring this analysis further and advance that the floating signifier constitutes the point of view for the constitution of the subject. What this means is that what constitutes the subject is its coming to the point of view, its inhabiting the point of view, as Deleuze proposes (1988 [1993]). In the Baroque and perspectivism

this is quite clear and concrete: there is a particular point of view that offers the proper perspective to contemplate a certain composition, like the *colonnata* in Piazza San Pietro, or in anamorphoses. From any other point of view the composition would be deformed. In this sense, Deleuze is clear: there is not relativism, it is not that truth changes with the different points of view, but it is the subject that has to come to the point of view to contemplate truth. And in coming to the point of view, in inhabiting the point of view and in making it its dwelling, the subject is constituted as subject: the subject needs to change, to move, to take a different position to be, precisely, constituted as subject. This is the relevance and power of this conception. Deleuze talks about the constitution of subjectivities through the assumption of a point of view. In electronic spaces, in which there is no actual space in the sense of a three-dimensional Euclidean space, the floating signifier constitutes the point of view for the constitution of a (digital) subject. This means that the subject has to assume a point of view, but that this point of view is always different and ever changing—it is not "the correct" point of view of anamorphoses and the Baroque. The technological unconscious was then assimilated to a plane of immanence because they are both not concepts, but as Deleuze and Guattari defined it, 'the image of thought'. It is the abstract machine in which meaning can potentially be generated. Concepts arise, but they do not arise alone. This is why it is fundamental, not only for the theorisation of complex subjectivities (of a digital

embodied subject), but also to better understand how meaning unfolds in the actions and interactions between complex subjectivities and complex environments, between humans and machines, in the interaction of agents and machinic processes.

Considering the information summarised above, a complex subjectivity has been defined as a digital subject who is embodied in the digital. The subject is constituted by her point of view, to which she can come through the process of change. This constitution is coherent with the conception of the subject as process, a subject that changes and needs to change in order to come to the point of view—an essential process in becoming a subject. This neither implies that machines have agency, nor that they can somehow understand sense. The digital subject is not some kind of digital agent. On the contrary, the constitution of a complex subjectivity results from the necessary change that the subject undergoes to come to the point of view. The subject chooses a position to inhabit as the point of view constituted by the floating signifier. This point of view is not fixed, but can always be different. The Camera Restricta case study was clear in this sense: its technological unconscious is constituted, at least as far as we know, by the millions of photographs that are taken in all the possible places that the apparatus can detect through its algorithm. Within this plane of immanence, each user can come to the floating signifier, which will be different each time, and assume a point of view from which to act in the plane of immanence. Recognising that the photo

that she would have liked to take might be a cliché, she comes to know something about this unconscious, which is collective, and can choose to offer something new to it to generate new meanings and make them circulate. In doing this, she is/becomes a complex subjectivity, a digital subject embodied in the digital. This is one of the ways in which this works concretely.

This is what embodiment in the digital also means: not that the subject has been digitised and downloaded to a hard disk,[93] but that assuming a point of view in the digital means assuming it also with the body. It has consequences in the body, and at the same time the body operates and has consequences in the digital. As it has been shown, digitalisation processes, the virtual archive included (and any virtuality for that matter) need to be actualised in the monads, in the body. This is what being posthuman also means.

This research began by introducing a fundamental separation between the mainstream art world and the new media art world. Both of these realms include their corresponding theories and theoretical developments and

[93] 'Writing nearly four decades after Turing, Hans Moravec proposed that human identity is essentially an informational pattern rather than an embodied enaction. The proposition can be demonstrated, he suggested, by downloading human consciousness into a computer, and he imagined a scenario designed to show that this was in principle possible. The Moravec test, if I may call it that, is the logical successor to the Turing test. Whereas the Turing test was designed to show that machines can perform the thinking previously considered to be an exclusive capacity of the human mind, the Moravec test was designed to show that machines can become the repository of human consciousness-that machines can, for all practical purposes, become human beings. You are the cyborg, and the cyborg is you' (Hayles 1999: xii).

critiques, yet this separation was not "originary" and instead came about at a certain point. One of the primary hypotheses advanced here deals with two diametrically opposed conceptualisations of the medium: completely disembodied in Clement Greenberg and completely embodied in Marcel Duchamp. This relates to another primary aim of this text, my contention that the readymade must be reconsidered as a medium because it offers a key element that can enable reconstructing the broken feedback loop between theories of cybernetics (specifically new media art) and mainstream, classical art theories. Moreover, these hypotheses are closely related with another one, which comes almost as its logical conclusion: the actual overcoming of modernism does not come about with postmodernism, but with the posthuman, with a conception of posthumanism that accepts the contradictions of the production of sense as a process shared by humans and machines in their interactions. The production of sense is always fully embodied, whether it unfolds in the digital, the non-digital or both.

To be able to understand the continuity between modernism and the posthuman it was necessary to tackle a range of topics in the first five chapters that aimed to explain, often from different angles, the specificities of what is called posthuman in this context.[94] Putting these

[94] Personally, I would have preferred a label for what has been explained that wouldn't also include the prefix "post", a prefix that implies the idea of something that has been overcome but that it is not yet at the level of developing its own name: given the considerations and developed critique here on the postmodern, this would have been avoided if possible, but it is not of course within the possibilities of this research to

theories back into contact with the art theories of modernism and postmodernism gestures towards the points of fracture in order to find continuity—mainly in the readymade as medium—that will hopefully allow reconstructing the loop between them. The final chapter brings this dialogue back to a here and now, to the actualisation of all the previous theorisation.

The analysis of the different acceptations of the term medium showed, following Krauss in this sense, how Greenberg first identified medium exclusively with the material characteristics of the work—the theory of opacity, in Danto's words. He then took, possibly unintentionally, the exact opposite posture and considered opticality as a completely disembodied phenomenological relationship, a kind of vision between the viewer and the work. It has been shown how, on one hand this was a completely antagonistic conception of vision comparing to Duchamp's, for whom vision is always and above everything embodied and, as carnal vision, full of desire. On the other hand, Greenberg's aseptic conception of disembodied vision was profoundly coherent with the equally aseptic conception of disembodied information that was being put forth within the development of cybernetics during approximately the same time at the Macy Conferences. Nonetheless, the issue was that within the artistic field, Marcel Duchamp and his readymades introduced the machinic,

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decide that, only to try to contribute to the discussion with some ideas and points of view.

industrial, mechanical dimension—and even a proto-idea of what we now call the cyborg. Furthermore, Duchamp's fully embodied conception of the medium and of vision took place many years before the Macy Conferences.[95]

Therefore, it can be said that the conception of what has been extensively defined as the posthuman was already present in Duchamp's artistic practice. Of course this doesn't mean that the posthuman is to be considered only in artistic terms. Nor does this mean that Duchamp developed theories of the posthuman, yet elements of the posthuman were nonetheless present in his work and thought. As Hayles puts forward regarding science fiction literature, influence of course goes both ways: technological and scientific developments enter the imaginary and crystallise in many works, but also futurist ideas conveyed in some artworks somehow arrive at influencing the paths of a number of researches. Hayles claims:

> I have selected literary texts that were clearly influenced by the development of cybernetics. Nevertheless, I want to resist the idea that influence flows from science into literature. The cross-currents are considerably more complex than a one-way model of influence would allow. In the *Neuromancer* trilogy, for example, William Gibson's vision of cyberspace had a considerable effect on the development of three-dimensional virtual reality imaging software (1999: 21).[96]

[95] As already mentioned, the date that de Duve gives for the invention of the readymade is 1912, the Macy Conferences took place between 1943 and 1954, so thirty-one years before, if one is to consider the date of the first conference.

[96] It is interesting also to remember McLuhan's consideration on the role of the artist: 'because inherent in the artist's creative inspiration is the process of subliminally

However, one cannot place all of the blame on Greenberg. If it is true that he deeply rejected Duchamp's practice and by extension everything that the artist's work and interests gravitated towards—namely embodied vision and, furthermore, the mechanisation, serialisation and automatisation of the artistic practice—he was for sure not the only one. As it has been shown, there were many among the artists, but also, among the theorists who followed, most notably among them, Greenberg's student and fierce critic, Rosalind Krauss. It is not that Krauss despised Duchamp and conceptual art, or art in general, but most likely the fact that she completely disregarded available links between art theory, particularly modernist theory, and cybernetics and the posthuman. Krauss was not alone in this regard, as the rest of the mainstream art theorists dealing with these topics also ignored these potential theoretical links. There are two main bonds emphasised in this dissertation: the first is Duchamp's artistic practice—particularly considering the readymade as an embodied medium—and the second is Lacan's direct theorisation of the imaginary register as a universal Turing machine, as well as his explicit reference to cybernetics in the title and theorisation of his 1955 seminar. Although there were likely numerous reasons that cannot be exhausted here to account for why this link was theoretically overlooked,

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sniffing out environmental change. It's always been the artist who perceives the alterations in man caused by a new medium, who recognizes that the future is the present, and uses his work to prepare the ground for it' (1969).

the most salient possibilities have already been mentioned in this text: Firstly, Bijvoet's hypothesis that critics and theorists with a traditional art historical formation did not have the tools for understanding more process-oriented pieces partly explains the often-negative reception of collaborations between art and technology, as it was illustrated in the last chapter. However, it's nonetheless curious that a theorist as deeply immersed and interested in Lacanian theory as Rosalind Krauss did not pay any attention to his theorisation of the unconscious as a Universal Turing Machine and its relationship with cybernetics. Thus here the second and complementary reason I suggested in the sixth chapter can be recalled: As it was the case of Ulman and Prince, also in this case the impossibility to fully grasp the meaning and implication of works, artists and theories which are part of and address issues of the posthuman must be related to the aforementioned misalignment in the change of paradigm in the construction of subjectivities. Despite all the wonderful texts dedicated by Krauss to criticising Greenberg's work, and to the deconstruction of the modernist paradigm in general, she is still tied to and part of it. And this, of course, is valid not only for Krauss.

The unfortunate results of this oversight for art theory still reverberate in both lands. Whilst artists working in the new media art world often fall in love with technology and potentially disregard the aesthetic aspects of an artwork, it is also easy to detect a lack of consistency in the other direction. When artists and theorists with a traditional art historical

education intend to deal with Turing land concepts like information, systems and cybernetics the superficiality and imprecision is often appalling. Consider, for example, Boris Groys' article 'Entering the Flow: Museum between Archive and Gesamtkunstwerk' (2013). Many of the ideas exposed in his text could be debated, but one short paragraph will suffice to make a point about the lack of consistency in the work of many well-considered theorists regarding new media theory:

> In a world in which the goal of stopping the flow of time is taken over by the internet, the function of the museum becomes one of staging the flow—staging events that are synchronized with the lifetimes of the spectators. (n/d)

In the first part of the sentence, Groys refers to his argument that the Internet is taking over the role of the museum in documenting and registering artworks, as well as the creative process in general. However, stating that the role of the Internet is 'stopping the flow of time', which was previously the museum's role, is inaccurate to say the least. Groys' assertion reveals his lack of understanding of the true nature of the archive, whether virtual or material, be it the Internet, a museum, or a library. It implies thinking of the archive, firstly, as a fossilised apparatus that has the function of 'stopping the flow of time', when in fact is has the function not only to keep time alive, but also, it generates the creative power to interpret and build up the future. As has already been shown, this idea of the archive is not exactly new (Derrida 1967b, 1996).

Secondly, Groys insists on separating what happens on the Internet from what happens in the material space of the museum. Again, dichotomies like real/virtual, digital/material are conveyed in this division, this time suggesting that the digital is taking over the "old role" of decontextualising and archiving the works, and that the museum becomes an "alive" *Gesamtkunstwerk* because there are many events of which people can participate, making the museum part of their lives. I contend, on the other hand, that what actually happens is that one builds upon the other. There is no "taking over" of one realm over the other.

Moreover, Groys expresses the idea that the flow of time must be 'staged', and that to be 'staged' the archive, in this case, the museum, does it by 'staging events' in which spectators get involved: lectures, visits, conferences, readings, screenings, etc. Leaving aside potential opinions for and against staging events in museums, artistic objects (as well as the museum) are not actualised by live events. Therefore, one can assume that the rest are dead—but in the flow of time and creative possibilities that actualisation in the subject allows, the artwork and the museum are turned into events, whether they are performances or staged events, digitised or not. The idea that an event is merely the performance because it implies time, and that the museum is now updated because it becomes a stage for performance while the Internet 'stops the flow time' because it now works as an archive is puzzling. These assertions not only show limited knowledge of media and digital theory, but also of the main

theoretical frameworks that relate to them.[97]

More recently, while these conclusions were still being written, Domenico Quaranta presented a keynote on Post-Media, Post-Internet and Post-Digital art[98] at the Renewable Futures Conference in Riga (October 2015) in which he took care to make abundantly clear that the medium he was referring to was not medium in the sense of the artistic medium—and thus in the sense Greenberg, or Krauss or Danto referred to—but in the sense of media in communication or media art: a kind of art in which the storage and delivery vehicles are different. One cannot help but ask if making this kind of distinction, especially by a theorist that who addresses, and supports, Postmedia art, makes any sense today. Moreover, it leaves the door open to suggesting that making precisely

[97] This passage is also highly problematic: 'To borrow Marshall McLuhan's vocabulary, the medium of installation is a cool medium—unlike the internet, which is obviously a hot medium, because it requires users to be spatially separated and to concentrate their attention on a screen' (Groys 2013). It shows only a superficial knowledge of McLuhan's concepts. If one takes into account his definition of a hot medium as a high-definition medium, which gives a great deal of information to the user, and thus it requires only a low level of participation from her, whilst a cold medium is low in definition, it provides little information and thus requires more participation and involvement, precisely, to complete the missing information. Therefore, it seems hazardous to assert that a certain medium is definitively cold or hot. As it is well known, McLuhan defined the TV as a cold medium, but he was talking about TV in 1964, which was black and white, low definition. Anyway, the Internet as a medium, by definition, needs involvement, input, and interaction. It cannot be said to provide high-definition information, it can potentially provide a lot of information, but an active participation from the user is required, firstly to search for it, then to discern what among the information is valid or useful. Why would it be just a hot medium? And also, can it be defined as hot just 'because it requires users to be spatially separated and to concentrate their attention on a screen'? Without the user's intervention the screen does nothing.

[98] This dissertation's opinion on the "post" prefix has already been expressed, together with the choice of refereeing to every artistic practice that is not media specific as art in general, or art at large.

this kind of distinction not only allows one to suspect a superficial knowledge on what art at large is after Duchamp, but most importantly, that it is especially this kind of (forced) distinction that is one of the issues that continues to promote the separation between both lands.

In fact, this dissertation has proposed to consider the readymade as medium to be able to understand the continuity between art at large and new media art, as well as to show that the real overcoming of modernism is not postmodernism, but the posthuman.

As I demonstrated, the readymade conveyed both the possibility of detaching art production—in Duchamp's case specifically painting—from craftsmanship through industrialisation, namely through the presentation of an object produced by industrial means as an artwork. The inclusion of mechanisation in the artistic practice had the advantage of definitely excluding "good taste" from the equation for Duchamp. As Sturtevant said 'The grand contradiction is that giving up creativity made him a great creator' (quoted in Malcom 2015: 53). At the same time, mechanisation brought back, or kept, embodiment in the medium itself. The readymade as a fully embodied medium reconstructs by itself the feedback loop between an industrial and mechanised artistic practice that excludes taste and craftsmanship, whilst at the same time it includes the *cosa mentale*: namely, a strong conceptual dimension that is, nonetheless, always linked to a concrete materiality. This is why making a distinction between an artistic medium that can only be identified with the

materiality of an artwork and a communicational medium that implies the mediation of some electronic device, as well as the distinction between storage and delivery supports, not only doesn't make sense, but can be considered as one of the factors fostering the separation between the artistic field and that of the new media. In other words, art is art at large and the readymade as medium is a blank medium. It is a blank medium that can be emptied of whatever materiality might be necessary to an artist at anytime, because any medium can be considered as already readymade, as was painting for Duchamp, and it brings together both mechanical and non-mechanical materialities, plus, a conceptual dimension: the act of choosing among all the possibilities that an artist may consider necessary for her practice.

It is at this point that posthumanism's link to modernism and its definitive break with it becomes clear. To talk about the end of narratives, about the definitive erasing of styles, of the appropriation of the styles of the past has shown to be not enough.

In Duchamp, in fact, and more specifically in the readymade, one can find most of the elements that will later characterise new media art and art directly related with cybernetic theory: mechanisation, industrialisation, process-oriented works, concept-oriented works, the undermining of taste and the category of the beautiful and machinic elements intertwined with human ones, that is to say, overcoming of the boundaries of the body. If Duchamp's legacy, which is generally

identified with, but not limited to, the label of Conceptual and Post-Conceptual Art was absorbed by what was to become the mainstream art world, it was mainly due to the critique and theory surrounding it. A critique that could have perhaps built a link between both, had it not ignored the theorisation that the unconscious works as a Universal Turing Machine, as well as the importance of cybernetic theory.

The reconstruction of the feedback loop between both lands began with the theorisation of the posthuman proposed by Hayles (1999, 2005), whose works have already convincingly explained the impossibility of information of being disembodied, and the unavoidable need of a material base to sustain it.

This research aimed to contribute to this reconstruction. In the first five chapters, it presented, and in some cases updated, some concepts, analysis and theories that are part of the posthuman condition: simulacra, the archive, the technological unconscious, the floating signifier and embodiment in the digital. In doing so, I intended to make clear in each example the importance of definitely bypassing the dichotomist ontologies of material/virtual and embodied/disembodied, in order to accept that current environments and subjectivities are complex: they are the result of the interactions and intermediations (Hayles 1999) of, always embodied, machinic and human processes. From this basis, I was able to clearly propose and explain the continuity between Duchamp and the readymade as medium and new media art in the last chapter. This

example was proffered as a means to understand that the artistic field functions independently of the materiality of the chosen medium, because ever since Duchamp's art is art at large: This is how Duchamp meets Turing. Because this discourse, as Jameson proposed for postmodernism, needs a historical dimension, it is not a transcendental and un-anchored theory, but an embodied and historical one. The temporal dimension was introduced in this research through the understanding of digitalisation processes, and more generally of the archive as event, events that need to be actualised continuously, every time; and through bringing all these theories together to a concrete moment of art theory—which also needs to become art theory at large. This actualisation, and this theorisation of complex environments and posthuman subjectivities can be put into discussion and eventually overcome at any time—in a state of perpetual revision.

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Appendix 1: Published texts

MIMESIS / POSTUMANI

N. 11

Collana diretta da Alberto Abruzzese *e* Derrick de Kerckhove

Collana fondata da Antonio Caronia

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Processi di soggettivazione nell'era postumana a partire dal pensiero di Antonio Caronia

a cura di
Amos Bianchi e Giovanni Leghissa

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INDICE

DIRE E FARE L'ARTE

Gabriela Galati

SIGNIFICANTE FLUTTUANTE, INCONSCIO TECNOLOGICO E SOGGETTO DIGITALE

Questo testo si propone di delineare quello che è stato identificato come un rapporto ineludibile per un'assenza di idoneità di base tra il linguaggio e il mondo, o più precisamente, in questo contesto, tra il digitale e il "materiale": ovvero il rapporto tra significante fluttuante e inconscio tecnologico. Come concettualizzato da Charles S. Peirce,[1] vi è un nucleo duro del segno che non significa, e allo stesso tempo, c'è una dimensione non simbolica del mondo che, appunto, non può essere tradotta nel linguaggio. Il significante fluttuante mira a coprire questa assenza. Delineare quindi allo stesso tempo lo sviluppo della concettualizzazione di un inconscio tecnologico sembra un percorso valido per superare dicotomie inutili nello studio dei processi di digitalizzazione, per arrivare alla conclusione del testo con la teorizzazione dell'inconscio tecnologico come campo d'immanenza.

Nel suo saggio *Il disagio della civiltà*[2] Sigmund Freud è forse il primo a parlare di innovazioni tecnologiche come protesi che l'umanità ha sviluppato per operare nel mondo al fine di allargare i propri poteri. Freud teorizzò che ogni strumento creato dal genere umano fin dalle sue origini ha lo scopo di estenderne i poteri nel mondo. Così, si "prevede" come la civiltà abbia portato le capacità dell'uomo ancora più vicine a quelli di un dio – cosa che può essere vista, per esempio, nell'ubiquità degli avatar e delle proiezioni del corpo permessa dalle tecnologie digitali –, ma ha anche aperto il percorso per la teorizzazione di un inconscio tecnologico.

A questo proposito, Walter Benjamin riprende l'affermazione di Freud e osserva che la fotografia, allargando il potere della vista, ha creato una sorta di "inconscio ottico" che permette di vedere ciò che l'occhio non è

1 C. S. Peirce, *Collected Papers of Charles Sanders Peirce*, a cura di C. Hartshorne e P. Weiss, Harvard University Press, Cambridge (MA), pp. 5.287.

2 S. Freud, *Il disagio della civiltà* (1930), Bollati Boringhieri, Torino 2001, pp. 227-228.

in grado di percepire; l'occhio umano non può percepire, per esempio, che quando un cavallo sta correndo tutto il suo corpo è sospeso in aria in un certo momento. Quel momento può essere catturato e rivelato all'occhio umano dalla fotocamera: le possibilità di visione umana allargate a quelle di dio da parte del dispositivo fotografico. Ma l'analogia con la teoria di Freud non finisce qui: l'inconscio ottico è simile all'inconscio del soggetto perché evidenzia un nucleo, in questo caso nelle capacità dell'occhio, che non è accessibile al soggetto.[3] La teorizzazione dell'inconscio di Freud è il primo passo nel processo di sgretolamento del "soggetto umanista liberale",[4] dato che secondo la teoria dell'inconscio il soggetto è guidato nella maggior parte delle sue azioni da forze che non può controllare; allo stesso modo l'inconscio ottico è quella parte del senso della vista alla quale il soggetto non può accedere senza l'aiuto di una macchina. In aggiunta a questo, il confronto proposto da Benjamin tra l'inconscio ottico e l'inconscio del soggetto è cruciale, e ha condotto il teorico dei media, matematico e filosofo Antonio Caronia a parlare di un "inconscio digitale" e a chiedersi se, di conseguenza, le tecnologie digitali, in particolare il computer, non possano rivelare qualcosa, se non tutto, all'umanità su come funziona l'inconscio.[5]

Inoltre, più recentemente, John Johnston ha dimostrato in modo convincente come la teoria cibernetica sia stata fondamentale per Jacques Lacan nella sua teorizzazione dei tre registri del Io: il simbolico, l'immaginario e il reale. Nel suo libro *The Allure of the Machinic: Cybernetics, Artificial Life and the New AI*,[6] Johnston dedica un intero capitolo a spiegare la (non abbastanza conosciuta) rilevanza della teoria cibernetica e la macchina universale di Turing nella teoria lacaniana, e più specificamente come Lacan teorizzò il funzionamento dell'ordine simbolico come una macchina universale di Turing. La tesi di Turing afferma che ogni compito che può essere espresso come un algoritmo o qualsiasi processo che può essere formalmente (matematicamente) descritto ha un equivalente in una macchina di Turing. Di conseguenza, la macchina universale di Turing è una mac-

3 W. Benjamin, *L'opera d'arte nell'epoca della sua riproducibilità tecnica. Arte e società di massa* (1935), Einaudi, Torino 1998.

4 K. Hayles, *How We Became Posthuman. Virtual Bodies in Cybernetics, Literature and Informatics*, University of Chicago Press, Chicago 1999, p. 2 ssg [T.d.A].

5 A. Caronia, *L'inconscio della macchina ovvero: come catturare il significante fluttuante*, in A. Caronia, E. Livraghi, S. Pezzano (a cura di), *L'arte nell'era della producibilità digitale*, Mimesis, Sesto San Giovanni (MI) 2006. p. 4.

6 J. Johnston, *The Allure of the Machinic: Cybernetics, Artificial Life and the New AI,* MIT Press, Cambridge, 2008. [T.d.A].

china che può modellare il funzionamento di qualsiasi macchina di Turing, perché può svolgere compiti o eseguire calcoli molto diversi che possono essere eseguiti da ciascuna di queste macchine; in breve, ciò significa che è programmabile. Come sostiene Johnston, questo genere di macchina è una macchina astratta: consiste in una certa forma logica che può funzionare indipendentemente da qualsiasi *instantiation* materiale.[7]

Ciò che Lacan trovò interessante nella teoria cibernetica e, soprattutto, nella macchina universale di Turing è la possibilità di una nuova comprensione dell'autonomia dei processi simbolici, per cui il linguaggio è una sorta di programma che gira sulla macchina universale di Turing dell'inconscio, un inconscio che funziona indipendentemente dalla volontà del soggetto.[8] L'inconscio, o più precisamente l'ordine simbolico, funziona quindi come una macchina eseguendo certe operazioni, operazioni logiche, che non sono controllate in alcun modo dalla decisione umana: "Lacan comprese la funzione simbolica come un particolare tipo di assemblaggio computazionale che ha reso il comportamento umano significativo".[9]

Tuttavia, è anche interessante ricordare l'analisi di Derrida sul rapporto tra macchine e apparato psichico, che era già stato notato da Freud in una lettera a Wilhem Fliess.[10] Già allora, Freud aveva l'impressione, nel descrivere la rappresentazione dell'apparato psichico, di affrontare una macchina che potrebbe funzionare da sola, cioè indipendentemente dalle intenzioni del soggetto. Tuttavia, anche se in termini della sua logica e in quanto meccanismo la macchina può lavorare autonomamente, non ha in alcun modo un'energia propria; il che significa che è morta. Pertanto, ciò che ha un modo autonomo di lavorare è l'apparato psichico e non la sua rappresentazione, la macchina, visto che macchina e rappresentazione, nelle parole di Derrida, sono entrambe sinonimi di morte.[11] La macchina in questo senso è pura rappresentazione perché una macchina non può, almeno fino a oggi, mai lavorare da sola: essa necessita sempre di una fonte esterna di energia. E, come osserva Derrida, questa è la prima obiezione che Freud ha trovato nel confronto da lui sviluppato tra *Wunderblock,* "notes magico", e il modo in cui funziona l'apparato psichico: "L'analogia di un simile apparato di soccorso deve trovare un limite da qualche parte. II notes magico non può 'riprodurre' dall'interno lo scritto una volta cancellato; sarebbe davvero un notes magico se lo potesse fare come

7 Ivi, p. 71.
8 Ivi, p. 78.
9 Ivi, p. 67.
10 J. Derrida, *La scrittura e la differenza* (1967), Einaudi, Torino 1990, pp. 292-294.
11 Ivi, p. 293.

la nostra memoria".[12] A questo punto Derrida comincia a considerare le domande che Freud non ha posto. In primo luogo, se la macchina non è, evidentemente, l'apparato psichico, ma solo la sua rappresentazione, perché ha cominciato a somigliare sempre di più alla memoria?[13] La seconda questione fondamentale riguarda le metafore – definite come "l'analogia tra due apparati e la possibilità di quel rapporto rappresentativo"[14] – e la necessità, che era evidentemente emersa, di creare un apparato psichico protesico aggiuntivo e rappresentativo, la macchina, al fine di supplire la finitezza "della organizzazione psichica".[15]

Così le basi per la teorizzazione, da un lato, di un inconscio ottico, e più tardi di un inconscio tecnologico, erano già state stabilite nel 1925 da Freud e nel 1955 da Lacan. Inoltre, come è stato dimostrato, anche Derrida aveva già scritto nel 1967 circa la concettualizzazione dell'apparato psichico come macchina in termini di metafora: una metafora non necessaria, ma comunque una metafora. Così, in un certo modo, tutta la confusione e la successiva discussione su l'attribuzione di "*human agency*" alle macchine avrebbe potuto essere evitata, come dimostra Katherine Hayles.

Hayles illustra che non solo Lacan, ma anche in seguito Deleuze e Guattari, hanno concepito la cognizione umana e la psicologia come intrecciate con processi macchinici.[16] In questo senso, Hayles spiega brillantemente la linea di pensiero con cui Lacan, Deleuze e Guattari sfidano l'idea di *human agency* nella misura in cui una parte dell'inconscio lavora come un processore macchinico. Di questa questione Lacan era molto consapevole, come Johnston mostra citando la definizione di Lacan dell'ordine simbolico: "Il mondo simbolico è il mondo della macchina. Poi abbiamo il problema di ciò che, in questo mondo, costituisce l'essere del soggetto".[17] Quello che non è così convincente è la ipotesi di Hayles che, per una sorte di analogia inversa, propone che lo stesso modo di ragionare ma in senso opposto sia stato così facilmente accettato: "Infine,

12 S. Freud, *Nota sul notes magico* (1925), Bollati Boringhieri, Torino 2000, p. 65-66.
13 J. Derrida, *La scrittura e la differenza,* cit., p. 294.
14 Ibidem.
15 Ibidem.
16 K. Hayles, *My Mother Was a Computer* (2005), Mimesis, Sesto San Giovanni (MI) 2014.
17 J. Lacan, *Psychoanalysis and cybernetics, or on the nature of language*, 1955, citato in J. Johnston, *The Allure of the Machinic: Cybernetics, Artificial Life and the New AI*, cit., p. 72.

se il desiderio e l'autonomia di azione (*agency*) che scaturiscono da esso in fondo non sono nient'altro che esecuzione di codice binario, allora i computer possono avere una autonomia d'azione autentica quanto quella degli esseri umani. Attraverso queste reconfigurazioni Deleuze, Guattari e Lacan utilizzano gli automi per sfidare l'autonomia d'azione umana e nel processo configurano gli automi come agenti".[18] Se è vero che con la teoria psicoanalitica comincia la decostruzione e la sfida del soggetto come "soggetto individuale umanista" iniziata alla fine del XIX secolo, con tutte le conseguenze che essa ha avuto, tra cui la considerazione degli esseri umani come macchine intelligenti, non è possibile dare per scontato che l'applicazione di questo modo di ragionare sulle macchine dia come risultato l'attribuzione di *agency* e desiderio a esse. Detto in altre parole, attribuire alle macchine *agency* e desiderio non è un risultato automatico dell'inversione della linea di pensiero derivante dalla teoria lacaniana e deleuziana. L'affermazione sopracitata di Hayles implica piuttosto confondere la macchina con il programma; una differenza che, come dimostrato da Derrida, Freud aveva già ben chiara. È più probabile, come anche menziona Hayles, che l'attribuzione di *agency* alle macchine sia il risultato della antropomorfizzazione della macchina, e della cognizione distribuita (del programmatore, per esempio) lungo il sistema. In realtà, ciò che è più interessante nella teoria Hayles è l'affermazione che una metafora usata per spiegare un comportamento che è simile a quello di un umano – come spiegare l'emergere di stringhe di codice come la parola "riproduzione", per esempio – abbia iniziato a essere inteso in senso letterale, vale a dire, che una certa narrazione divenne trasparente per molti degli attori in questo contesto.

Nel suo libro *L'inconscio ottico*[19] Rosalind Krauss utilizzò la concettualizzazione di Benjamin sull'inconscio ottico come spiegato sopra come punto di partenza per poi dare alla parola "inconscio" il senso lacaniano, ignorando, tuttavia, tutte le teorizzazione di Lacan sul rapporto tra l'inconscio, la macchina universale di Turing e la cibernetica. Come in molti altri suoi scritti, Krauss cerca di superare la teorizzazione di Clement Greenberg sul Modernismo utilizzando il quadrato semiotico strutturalista e la teoria lacaniana per cercare di leggerla in termini topografici anziché narrativi.[20] L'inconscio ottico è quindi, secondo Krauss, una specie di anti-visione. Se l'*opticality*, intesa come una sorta di visione pura, è la coscienza (o si

18 K. Hayles, *My Mother Was a Computer*, cit., p. 254.
19 R. Krauss, *L'inconscio ottico* (1993), Bruno Mondadori, Milano, 2008.
20 Ivi, p. 13.

potrebbe dire il sintomo?) del Modernismo, allora l'inconscio ottico è la logica che mina la logica modernista dall'interno, proprio come l'inconscio fa con la mente cosciente:

> L'inconscio ottico richiamerà per sé questa dimensione di opacità, di ripetizione, di tempo. Mapperà la logica modernista solo per tagliare attraverso la sua densità, per annullarla, per configurarla altrimenti. [...] Lacan si raffigura la relazione inconscia della ragione con la mente cosciente, non come qualcosa di diverso dalla coscienza, qualcosa al di fuori di essa. Se la immagina come dentro la coscienza, minandola dall'interno, ingannando la sua logica, erodendo la sua struttura, pur apparendo di lasciare i termini di tale logica e di tale struttura al suo posto.[21]

Gli artisti dell'inconscio ottico erano, secondo Krauss, Max Ernst, alcuni altri artisti vicini al gruppo Dada, e soprattutto Marcel Duchamp. Quindi, nella teorizzazione di Krauss, l'opera e il discorso di questi artisti funzionavano come l'inconscio ottico – inconscio nel senso freudiano/lacaniano del rimosso – del Modernismo e la sua corrispondente *opticality* "che lo erode dall'interno". L'*opticality* consiste nel rapporto ottico stabilito tra lo spettatore e l'opera, è un tipo di visione puramente disincarnata che sarebbe diventata, secondo Krauss, il nuovo medium del Modernismo. Ad esempio, il gesto di segnalare operato da Max Ernst è il più *readymade* dei suoi topoi. Ernst lo ripete in diverse sue opere come se fosse un motivo prefabbricato, e Krauss lo analizza con molti esempi. In seguito, Krauss mette in rapporto questo gesto *readymade* col rimosso che ritorna come ripetizione, per finire dicendo che, di conseguenza, la mano che segnala è l'*oggetto a* di Ernst.[22]

Il problema principale con la posizione di Krauss è che forza la teoria lacaniana e presuppone l'esistenza di un inconscio nella Modernità come se si trattasse di un soggetto; e, allo stesso tempo, "analizza" gli artisti attraverso le loro opere d'arte: parlare di certi topoi ripetuti nell'opera di un artista come dei *readymade* ha indubbiamente senso, forzare le cose ulteriormente per identificare l'oggetto a di Ernst sembra sì forzato, ma soprattutto inutile .

In termini differenti anche Vilém Flusser aveva teorizzato qualcosa di paragonabile all'inconscio ottico di Benjamin in funzione nell'apparato

21 Ivi, p. 24.
22 Ivi, p. 82.

fotografico. Nella sua opera *Per una filosofia della fotografia*,[23] Flusser propone in primo luogo che in origine le immagini mirassero a spiegare il mondo, che erano mediazioni tra l'uomo e il mondo che avrebbero dovuto rendere questo rapporto più chiaro e comprensibile. Tuttavia, invece di utilizzare le immagini per navigare la realtà, gli esseri umani ora interagiscono con il mondo attraverso esse. Di conseguenza, le immagini "diventano schermi"[24] che non gettano mai luce sul mondo, ma lo oscurano, e s'interpongono tra gli uomini ed esso.

In aggiunta a ciò, l'immagine fotografica non solo sfugge le intenzioni del fotografo, ma il dispositivo fotografico rende il fotografo una funzione della macchina: "L'apparecchio fotografico è programmato per generare fotografie, e ogni fotografia realizza una delle possibilità contenute nel programma dell'apparecchio. Il numero di queste possibilità è elevato, ma comunque finito: è il numero di tutte quelle fotografie che possono essere scattate da un apparecchio".[25]

Ciò significa che la macchina esegue sempre il proprio programma, che mira a perpetuare e migliorare indefinitamente: "Il programma dell'apparecchio prevede di realizzare le proprie possibilità e di utilizzare la società come *feedback* per il proprio progressivo miglioramento".[26] Pertanto, non solo le intenzioni del fotografo non contano, ma anche i fotografi, scattando le loro immagini, diventano una funzione della macchina fotografica, che svolge in eterno il proprio programma. Questa è la scatola nera, il nucleo duro dell'apparecchio fotografico. Anche prima di Vilém Flusser e Rosalind Krauss, in una serie di saggi pubblicati per la prima volta nel 1979, il fotografo Franco Vaccari teorizzò un "inconscio tecnologico". Anche se Vaccari cita esplicitamente la teoria lacaniana, non precisa quale opera stia citando, ma molto probabilmente conosceva l'articolo di Lacan del 1955.[27] Vaccari ritiene che c'è un inconscio tecnologico all'opera nell'apparato fotografico il quale è indipendente dalla volontà del fotografo, e che, allo stesso tempo, esso è simbolicamente strutturato: "L'inconscio tecnologico non deve essere interpretato come pura estensione e potenziamento di facoltà umane, ma bisogna vedere nello strumento una

23 V. Flusser, *Per una filosofia della fotografia* (1983), Bruno Mondadori, Milano 2006, pp. 6-8.
24 Ivi, p. 6.
25 Ivi, p. 28-29.
26 Ivi, 58.
27 J. Lacan, *Psychoanalysis and cybernetics, or on the nature of language*, 1955, citato in J. Johnston, *The Allure of the Machinic: Cybernetics, Artificial Life and the New AI*, cit.

capacità di azione autonoma; tutto avviene come se la macchina fosse un frammento di inconscio in attività. La struttura della macchina è analoga alla struttura dell'inconscio, non ha profondità ed è estranea ai flussi che l'attraversano".[28]

In questo senso, la cosa più interessante che fa la macchina non è necessariamente artistica, e non è guidata dalle intenzioni del fotografo. La parte più interessante per Vaccari è ciò che la macchina fa da sé, in cui non vi è alcuna intenzione umana, ma solo azione. In questo modo l'inconscio tecnologico diventa direttamente collegato con il *readymade*, o meglio, con le immagini *readymade*. Il fotografo solo sceglie le immagini, che sono già lì, e le mette in un contesto, come fa l'artista concettuale. Al contrario di Krauss, Vaccari usa la teoria lacaniana come strumento per capire meglio la tecnologia, o meglio, certe produzioni artistiche come le fotografie in quanto prodotte da una certa tecnologia.

Vaccari chiama "inconscio tecnologico" quello che Flusser chiama "scatola nera" e "il programma del dispositivo": quello che la macchina può realizzare senza l'intenzione consapevole del fotografo; di conseguenza, per entrambi l'apparato fotografico esegue un'azione o un programma, al di là della volontà del fotografo. Per Vaccari questo accade in termini di inconscio lacaniano, che è simbolicamente strutturato; per Flusser, succede in termini di un programma, di una perpetuazione intenzionale, un miglioramento della volontà della macchina. In questo senso, Flusser è ancora più apocalittico nella concezione della macchina che sta eseguendo la realizzazione del programma della fotocamera utilizzando il fotografo per migliorare e perpetuare se stessa.

Inoltre, Vaccari fa due mosse importanti e fondamentali che rendono l'inconscio tecnologico uno strumento teorico e un approccio estremamente valido e interessante. La prima prende in considerazione l'inconscio tecnologico e la sua struttura simbolica come qualcosa che, anche se non completamente decodificato da un soggetto umano, ha comunque una chiave di decodifica che è collettiva. L'inconscio tecnologico non è destinato a essere analizzato come appartenente a un soggetto ma può dare la chiave per scoprire alcune, ma non tutte, le tracce simboliche collettive. Esso quindi può essere un modo di accesso, almeno parziale, a un immaginario collettivo: "l'altra [strada per fare emergere il significato del segno fotografico] è quella di interpretare le foto come segno appartenente a un linguaggio solo in parte riducibile all'uomo, un segno che è sintomo, un

28 F. Vaccari, *Fotografia e inconscio tecnologico,* Einaudi, Torino 1979, p. 5.

segno che funziona da spia di un rimosso che invece di essere individuale è collettivo".[29]

La seconda mossa fondamentale che Vaccari fa è il movimento dal soggetto, il fotografo, al dispositivo. Egli non sta analizzando un soggetto, o prendendo in considerazione un movimento artistico come se si trattasse di un soggetto; ma si concentra invece sull'apparato fotografico teorizzando che ha "una capacità autonoma di organizzazione dell'immagine in forme che sono già simbolicamente strutturate, indipendentemente dall'azione del soggetto".[30] Così si passa dall'inconscio ottico di Benjamin con particolare attenzione all'espansione delle capacità del soggetto, al suo inconscio tecnologico con particolare attenzione all'azione autonoma del dispositivo. Tuttavia, è opportuno portare all'attenzione l'affermazione che nell'inconscio tecnologico le immagini sono simbolicamente strutturate indipendentemente dall'intervento di qualsiasi soggetto: significa che la dimensione simbolica è stata incorporata nel dispositivo (inconscio) e che essa è al lavoro anche senza un ulteriore intervento umano. Un esempio interessante a questo proposito è l'algoritmo nelle camere sugli smartphone: l'algoritmo è stato evidentemente creato da un programmatore umano per migliorare la qualità delle fotografie e svolgere alcune operazioni, che includono sbirciare nella libreria di immagini dell'utente e sulle reti sociali per "capire": a. l'aspetto di alcuni soggetti, b. come l'utente vorrebbe che apparissero alcuni soggetti (considerando, ad esempio, le foto "likate" di questi soggetti), e modificare l'immagine di conseguenza.[31] In questo senso, l'algoritmo si comporta non solo indipendentemente dalla volontà dell'utente, ma anche limitando la potenza che lo stesso inconscio tecnologico possa avere di rivelare eventi, cose, immagini che potrebbero essere sconosciute per l'utente fino a quel punto, e quindi limitando anche qualsiasi potere creativo.

Questa osservazione è fondamentale per capire il rapporto tra significante fluttuante e inconscio tecnologico – com'è stato sviluppato finora, e quindi: come possibilità della macchina di svelare alcune parti dell'incon-

29 Ivi, p. 14.
30 Ivi, p. 18.
31 H. Steyerl, *Politics of Postrepresentation*, DYS Magazine, 2014, http://dismagazine.com/disillusioned-2/62143/hito-steyerl-politics-of-post-representation/ [internet] (consultato il 30 ottobre 2014).

scio del soggetto,[32] come macchina che può rivelare il proprio inconscio,[33] che è comunque simbolicamente strutturato e collettivamente costruito.[34]

Nella sua *Introduction à l'oeuvre de Marcel Mauss*[35] Lévi-Strauss definì con il termine *mana* la sostanza magica mistica da cui si forma la magia, e che ha "una quantità indeterminata di significazione, di per sé privo di senso e in tal modo atto a ricevere qualsiasi significato". Il termine mana ha dato origine in semiotica al concetto di "significante fluttuante" per parlare di un significante senza referente, un significante vuoto che può potenzialmente essere riempito con qualsiasi significato.

Jeffrey Mehlman spiega chiaramente[36] che il significante è la struttura del linguaggio stesso, mentre il significato è quello che è conosciuto. Il mondo "significa" fin dall'inizio, e l'umanità spera di "sapere" e conoscere, e questa inidoneità tra la dimensione sincronica (struttura del mondo), e quella diacronica (quello che l'umanità può conoscere del mondo) è coperta dal significante fluttuante: questo ha una funzione semantica, quella di superare la sovrabbondanza di significazione tra il linguaggio e il mondo permettendo al pensiero simbolico di operare in esso. Nella cultura occidentale moderna questa funzione è stata ripresa dalla scienza; mentre in antiche culture tribali, come quelle che Lévi-Strauss stava studiando, questa è stata la missione della magia.[37]

Pertanto, il significante fluttuante sembra un concetto adatto anche a spiegare la corrispondente sovrabbondanza nei processi di digitalizzazione, da una parte, e nel regno digitale in generale, coerente con quanto esposto finora come ulteriore strumento per superare dicotomie quali digitali / materiale. È possibile riscontrare nel digitale un'ontologia propria in cui non si trova nessun referente materiale, in cui può essere rilevata un'abbondanza di significanti fluttuanti, significanti senza alcun valore simbolico che possono essere riempiti con una miriade di significati: basti pensare a social network e la quasi infinità di profili e avatar che ogni individuo

32 W. Benjamin, *L'opera d'arte nell'epoca della sua riproducibilità tecnica*, cit.; A. Caronia, *L'inconscio della macchina ovvero: come catturare il significante fluttuante*, cit.

33 F. Vaccari, *Fotografia e inconscio tecnologico,* cit.; V. Flusser, *Per una filosofia della fotografia,* cit.

34 F. Vaccari, *Fotografia e inconscio tecnologico*, cit.

35 C. Lévi-Strauss, *Introduzione all'opera di Marcel Mauss* (1950), in *Teoria generale della magia e altri saggi* , Torino, Einaudi 1965, pp. XLVII-XLVIII.

36 J. Mehlman, *The "Floating Signifier": From Lévi-Strauss to Lacan*, in "Yale French Studies", 48, 1972, pp. 10-37.

37 A. Caronia, *L'inconscio della macchina ovvero: come catturare il significante fluttuante,* cit.

può aprire in qualsiasi momento, che può essere riempita con qualsiasi contenuto. Tuttavia, profili e avatar sono forse gli esempi più evidenti, ma non sono certo gli unici; anche dispositivi, apparecchi e schermi possono funzionare nello stesso modo.[38]

È possibile quindi mettere in relazione il significante fluttuante con l'inconscio tecnologico come la dimensione in cui le condizioni di possibilità di un'etica /estetica digitale risiedono? Il presente lavoro ipotizza la nascita di un soggetto digitale con l'emergere dei nuovi media, un soggetto incarnato (*embodied*) nel digitale. In questo senso, se si accetta seguendo Deleuze che il soggetto è costituito dal "punto di vista" e dalla costruzione della sua dimora[39] e considerando che nel cyberspazio non esiste un punto di vista, perché non c'è un vero spazio,[40] allora l'inconscio tecnologico può essere assimilato a un campo di immanenza in cui il senso circola attraverso il significante fluttuante: il significante fluttuante è il sito, il luogo, che costituisce ogni volta un diverso punto di vista per la configurazione del soggetto digitale.

Di conseguenza è necessario spiegare quello che il termine spazio significa in questo contesto, e ciò che cosa è il cyberspazio, o come verrà chiamato, lo spazio elettronico. Nel suo libro *Digital Sensations. Space, Identity, and Embodiment in Virtual Reality*,[41] scritto con l'obiettivo di indagare le possibilità dello sguardo e dell'embodiement in ambienti e realtà virtuale, Ken Hillis introduce un'interessante differenziazione tra spazio, luogo e paesaggio. Per definire lo spazio, Hillis introduce la differenza tra la concezione occidentale moderna di comunicazione come "la trasmissione di messaggi attraverso lo spazio"[42] e spiega una concezione di comunicazione più vecchia e rituale legata a "un posto con le sue forme di linguaggio e interazioni sociali abituali".[43] Analizzando le concezioni di spazio in Aristotele, Euclide, Newton, Cartesio, e Einstein, Hillis definisce lo spazio assoluto, relativo e relazionale:

38 Vedi G. Galati-A. Bianchi, *A screen is a screen is a screen: A screen is not an image*, in AA.VV., *Techno-Ecologies II. Acoustic Space #12*, RIXC, Riga 2014, pp. 236-242.

39 G. Deleuze, *La piega. Leibniz e il Barocco* (1988), Einaudi, Torino 2004, p. 32.

40 L. Manovich, *Il linguaggio dei nuovi media* (2001), Edizioni Olivares, Milano 2002, p. 220.

41 K. Hillis, *Digital Sensations. Space, Identity, and Embodiment in Virtual Reality*, University of Minnesota, Minneapolis 1999.

42 Ivi, p. 62. [T.d.A.]

43 *Ibidem*.

> Lo spazio assoluto suggerisce una realtà a livello macro o in termini di quadro generale (*big picture*). A livello esperienziale, lo spazio relativo è più strettamente legato al significato individuale, e lo spazio relazionale può suggerire una capacità di immaginare un continuum o almeno collegamenti tra i significati di spazio assoluto e relativo. Tuttavia i VE sono basati sulla geometria euclidea e su una griglia cartesiana di spazio assoluto (insieme con la distanza e il movimento) e gli oggetti vengono rappresentati e in relazione tra loro "là dentro".[44]

Quindi Hillis dimostra che mentre lo spazio assoluto è spesso un concetto atto a essere formalmente descritto nel contesto della fisica, matematica e filosofia, lo spazio relativo e relazionale hanno una carica più simbolica e rituale che può essere assimilata alla definizione di luogo ("*place*"): "Il luogo stesso è una base comune che riunisce i diversi elementi nella comunicazione";[45] in questo senso, un luogo, o una concezione rituale dello spazio è "una possibilità che stabilisce il terreno comune (*common ground*) per stare insieme".[46] È evidente che in questo caso la concezione di luogo coincide con la dimensione relazionale, e con il senso e l'intenzionalità che gli attori condividono in quella dimensione.

Tuttavia, mentre la realtà virtuale e gli ambienti immersivi digitali implicano una rappresentazione dello spazio assoluto, questo lavoro non sta considerando esclusivamente ambienti virtuali ma il digitale nel suo complesso, sia rappresentativo di uno spazio assoluto o no. Quindi in questo contesto, il digitale e le sue possibilità tendono sempre a creare una dimensione di luogo, il digitale si presenta in termini della dimensione relazionale precedentemente menzionata, in cui la prossimità è più spesso relazionale, e simbolicamente carica, che fisica, e in cui un'idea di agorà, o di terreno comune può essere vissuta in ambienti sia rappresentativi che non-rappresentativi. Ora è importante precisare che il concetto di rappresentazione in questo contesto preciso e in rapporto allo spazio è utilizzato come sinonimo di rappresentazione prospettica, vale a dire, del metodo matematico e concettuale utilizzato per rappresentare lo spazio assoluto e tridimensionale su una superficie bidimensionale, che può essere quella della tela o della carta, ma anche dello schermo del computer.

Allora cos'è il cyberspazio? L'Oxford Dictionary lo definisce come "l'ambiente teorico in cui si verifica la comunicazione su reti di computer"; tuttavia, come è ben noto, il termine è diventato popolare grazie al racconto

44 Ivi, p. 73.
45 *Ibidem*.
46 *Ibidem*.

di William Gibson *Burning Chrome*,[47] e soprattutto, poco più tardi , attraverso il suo romanzo *Neuromante*, in cui è definito come segue:

> Cyberspazio. Un'allucinazione vissuta consensualmente ogni giorno da miliardi di operatori legali, in ogni nazione, da parte dei bambini viene insegnato concetti matematici ... Una rappresentazione grafica di dati ricavati dai banchi di ogni computer del sistema umano. Impensabile complessità. Linee di luce allineate nel non-spazio della mente, ammassi e costellazioni di dati. Come le luci della città, che si allontanano.[48]

È interessante notare che Gibson, diversi anni più tardi, in un documentario indipendente sul suo lavoro disse che "[la parola cyberspazio] sembrava suggestiva e sostanzialmente priva di significato. Era suggestiva, ma non aveva nessun vero significato semantico, neanche per me, così come l'ho vista emergere mentre la stavo scrivendo sulla pagina".[49] Essa è stata dunque un significante fluttuante. Naturalmente, Gibson intende che ciò che gli piaceva era come suonava la parola non essendo sicuro di cosa significasse; tuttavia, come si sosterrà a breve, il cyberspazio è strettamente legato al significante fluttuante. A ogni modo, in qualche maniera la fumosa definizione di Gibson del cyberspazio dà l'idea di "*representational data*", ma non necessariamente di "spazio", nel senso di spazio tridimensionale, assoluto. Come dimostra Manovich, anche se il cyberspazio può spesso comportare l'idea di rappresentazione, la verità è che "non c'è spazio nel cyberspazio".[50] Anche in un ambiente digitale rappresentativo, non c'è né la continuità, né la estensività di qualcosa di simile allo spazio, ma solo un "insieme di oggetti separati" in un "vuoto" prodotto da un programma di computer grafica per la modellazione di un ambiente 3D.[51]

Invece di esplorare nozioni filosofiche e/o matematiche di spazio nel modo proposto da Hillis, Manovich esplora le definizioni di spazio nella storia dell'arte. La storia classica dell'arte iniziata con Heinrich Wölfflin, Alois Riegl e Erwin Panofsky all'inizio del XX secolo, e continuata da Ernst Gombrich al Warburg Institute, ha ritenuto che l'oggetto di studio della storia dell'arte sia lo studio dell'evoluzione dello stile;[52] all'interno di questo studio, come sottolinea Manovich, si sviluppa anche lo studio della "evoluzione" della rappresentazione dello spazio. In questo senso,

47 W. Gibson, *La notte che bruciammo Chrome* (1982), Mondadori, Milano 1999.
48 W. Gibson, *Neuromante* (1984), Casa Editrice Nord, Milano 1986/2000, p. 52.
49 M. Neale, *No Maps for These Territories,* Docurama, New York 2000.
50 L. Manovich, *Il linguaggio dei nuovi media* (2001), cit., p. 219.
51 *Ibidem*.
52 C. Ginzburg, *Miti, emblemi, spie*, Einaudi, Torino 1986.

Panofsky mette in rapporto la rappresentazione sistematica dello spazio nel Rinascimento con lo sviluppo del pensiero scolastico e astratto. Anche se noi percepiamo lo spazio virtuale rappresentativo come descritto da Panofsky – omogeneo e continuo – lo spazio generato al computer è in realtà un aggregato di oggetti sparsi in un "vuoto": "Ciò che manca dallo spazio del computer è lo spazio nel senso di medium: l'ambiente in cui gli oggetti sono distribuiti e l'effetto reciproco di questi oggetti".[53] Il presente lavoro si propone di sostituire la parola "cyberspazio" con "spazio elettronico", perché veicola meglio la comprensione del digitale indipendentemente dalle questioni della rappresentazione. Di conseguenza, lo spazio elettronico è una sorta di luogo, di spazio pubblico in cui la prossimità è spesso concettuale, o psicologica, sempre mediata, e non necessariamente, anzi di rado, fisica. Ci sono luoghi digitali che sono rappresentativi, come i videogiochi, come l'agonizzante Second Life, come gli ambienti di realtà virtuale; ci sono altri, non meno simbolicamente carichi, dove interazione, incontro, dimensioni sociali si evolvono, e tuttavia non possono essere riconosciuti come rappresentazioni di qualsiasi realtà "fisica". Tra questi, si possono trovare, naturalmente, tutti i social network, chat, molte applicazioni, e simili. Questi spazi elettronici funzionano infatti come luoghi di agency e di generazione di senso nella stessa misura di una agorà fisica. In questo senso, si propone che l'inconscio tecnologico funziona come un piano d'immanenza in cui il significato è generato e diffuso.

Deleuze e Guattari hanno definito la filosofia come "un costruttivismo" che ha due principali aspetti qualitativi, contemporaneamente costitutivi e complementari: il primo è la creazione di concetti; il secondo, è la disposizione di un piano di immanenza.[54] Se i concetti sono "concatenamenti concreti in quanto configurazioni di una macchina", il piano di immanenza è "la macchina astratta", di cui quindi i concetti sono gli ingranaggi.[55] Gli autori ritengono che i concetti siano eventi, il che significa che una soggettività è necessaria per attualizzarli, mentre il piano è "l'orizzonte degli eventi", e questo è indipendente da qualsiasi osservatore.

Non è difficile trovare ancora una volta un punto di coincidenza con Lacan. Per Lacan il registro simbolico dell'inconscio funziona come una macchina universale di Turing, indipendentemente dalla volontà del soggetto. Deleuze e Guattari considerano i processi macchinici non solo legati alla soggettività umana, all'agency e alla cognizione, ma anche, come in

53 L. Manovich, *Il linguaggio dei nuovi media*, cit., p. 219.
54 G. Deleuze, F. Guattari, *Che cos'è la filosofia* (1991), Einaudi, Torino 2002, p. 25.
55 Ivi, p. 26.

questo caso, al modo in cui funziona il piano d'immanenza. Seguendo la stessa linea di ragionamento, e considerando l'inconscio tecnologico come una dimensione che funziona in maniera indipendente dell'agire umano, anche se è simbolicamente strutturata, non è difficile accettare che l'inconscio tecnologico possa essere assimilato a un piano di immanenza. Le loro parole possono rendere ancora più chiaro questo nesso: "Il piano di immanenza non è un concetto, né pensato né pensabile, ma l'immagine del pensiero, l'immagine che esso si dà di cosa significhi pensare, usare il pensiero, orientarsi nel pensiero…".[56] Pertanto se, come intuito da Caronia, l'inconscio tecnologico può aiutare a rivelare qualcosa su come funziona la parte inconscia della mente umana, lo stesso si può dire del piano di immanenza, perché esso è "l'immagine che il pensiero da a se stesso di ciò che significa pensare".

Se l'inconscio tecnologico è il piano di immanenza, qual è quindi il legame tra l'inconscio tecnologico come piano di immanenza e il significante fluttuante? Nel piano d'immanenza, il significante fluttuante ha il ruolo di costruire un punto di vista. Come spiega Deleuze[57], il soggetto è costituito dal punto di vista, ma questo punto non è esattamente un punto ma un luogo, una posizione, un sito.[58] Il soggetto abita un punto di vista.

Il punto di vista è un punto di vista in una variazione, in un cambiamento, in una metamorfosi, ma non cambia con il soggetto: è il soggetto che deve venire al punto di vista. Questo è il fondamento del prospettivismo, e più in particolare della prospettiva barocca. Questo prospettivismo può essere molto evidente, ad esempio, nella Colonnata di Gian Lorenzo Bernini in Piazza San Pietro in Vaticano in cui il Bernini concepì due punti, che sono chiaramente segnalati sulla pavimentazione della piazza, da cui lo spettatore ha il punto di vista "giusto" per cui tutte le file di colonne sembrano allineate ed è possibile vedere solo una singola colonna in ogni fila. Nella pittura barocca, le decorazioni dei soffitti sono ulteriori esempi dell'importanza del punto di vista. Con questi esempi in mente, le parole di Deleuze diventano più chiare:

> [...] In un mondo infinito, o della curvatura variabile, che ha perduto ogni centro, l'importanza di sostituire il punto di vista al centro mancante; il nuovo modello ottico della percezione, e della geometria nella percezione, che rifiuta le nozioni tattili - contatto e figura – optando invece per una "architettura della visione"; lo statuto dell'oggetto, che esiste soltanto attraverso le sue metamor-

56 Ivi, p. 27.
57 G. Deleuze, *La piega. Leibniz e il Barocco*, cit.
58 Ivi, p. 31-33.

> fosi o nella declinazione dei suoi profili; il prospettivismo come verità della relatività (e non relatività del vero).[59]

Tuttavia, queste affermazioni non devono essere confuse con un prospettivismo rappresentativo, in quanto è chiaro ora che Deleuze non parla della rappresentazione dello spazio, ma della possibilità di costituzione della soggettività attraverso l'assunzione di un punto di vista. È in questo senso che, nel non-spazio dello spazio elettronico e più specificamente dell'inconscio tecnologico, il punto di vista deve essere costruito dal significante fluttuante per la costituzione di un soggetto (digitale). Il soggetto ha bisogno di un punto di vista per agire e interagire nello spazio elettronico come soggetto: ma nello spazio elettronico non c'è spazio, ci sono solo alcuni luoghi virtuali. È quindi funzione del significante fluttuante la costruzione di questo punto di vista, di volta in volta diverso.

Nel caso dei videogiochi first-person-shooter eseguiti, ad esempio, su un set OculusRift al fine di raggiungere un livello più elevato di realismo e di immersione è il punto di vista che cambia con l'utente.[60]

Che cosa succede allora con gli ambienti digitali non-realistici, vale a dire quelli che non presentano uno spazio prospetticamente rappresentato? In questi ambienti vi è anche un punto di vista, naturalmente, il punto di vista costituito dal significante fluttuante, anche se questo punto di vista non è il punto di vista del prospettivismo, nel senso di una configurazione perfetta che può essere contemplata solo da un punto preciso. Nel caso di una rete sociale c'è una proliferazione di significanti fluttuanti che possono generare diversi punti di vista – di significanti, cioè, che potrebbero essere spazi elettronici, da riempire con qualsiasi contenuto. Il più ovvio è il profilo utente: riempire un profilo è la creazione di uno spazio elettronico (per l'utente), un punto di vista da abitare come la sua "dimora" da cui vedere il feed, la bacheca di altri utenti, i profili, inviare messaggi, insomma, di abitare questo spazio elettronico. Così questo è uno dei modi in cui il significante fluttuante funziona creando il punto di vista per il soggetto digitale.

Un altro interessante dispositivo, diverso in questo senso, è HoloLens di Microsoft. Questa tecnologia consiste in occhiali che utilizza principalmente la computer graphics per creare quello che viene solitamente conosciuto come realtà aumentata, o come Microsoft lo chiama nel suo sito web, "mixed reality". Gli HoloLens sono una realtà aumentata che sovrappone grafica digitale costituita da ologrammi alla percezione dell'utente

59 Ivi, p. 34-35.

60 J. Bolter-R. Grusin, *Remediation. Competizione e integrazione tra media vecchi e nuovi* (1999), Guerini e Associati, Milano 2003.

della realtà materiale. In questo senso, gli HoloLens funzionano come un apparato che attraverso la tecnologia summenzionata aggiunge oggetti proiettati alla realtà materiale dell'utente; il che significa che, anche se non è la creazione di un ambiente coinvolgente completo, deve comunque seguire il punto di vista prospettico dell'utente nello stesso modo in cui un ambiente virtuale potrebbe farlo, pena la perdita dell'"effetto realistico". Un punto interessante a questo proposito è che, così come la proiezione di un'applicazione non-rappresentativa come Skype sullo spazio fisico dell'utente suggerisce, potrebbe accadere una sorta di sovrapposizione tra significanti fluttuanti: tra quelli che generano un punto di vista soggettivo, e quelli che generano una disposizione fisica nello spazio, che non era necessaria, o che non poteva accadere prima. È come se questa tecnologia potesse generare un referente, quasi fisico, o meglio proiettato, per "oggetti", realtà virtuali, che, come molte applicazioni Web 2.0, non hanno un antecedente, o un referente nell'ambiente materiale, e che su Internet non ne hanno il bisogno.

Quello che una tecnologia come gli HoloLens può produrre, se arriva a essere effettivamente sviluppata e commercializzata in maniera massiccia, è favorire una percezione più forte della virtualità corrispondente alla terza ondata della cibernetica come concettualizzato da Hayles.[61] Hayles identificò tre concetti che corrispondono ciascuno ai tre stadi nello sviluppo della teoria cibernetica: il primo dal 1945 a 1960 in cui il concetto centrale era l'omeostasi, il secondo dal 1960 al 1980 corrispondente alla riflessività, e l'ultimo, dal 1980 fino a oggi, in cui siamo immersi nella virtualità. La virtualità è, secondo Hayles, "associata con simulazioni che mettono il corpo in un feedback loop con immagini generate al computer".[62] Quello che questo stato di virtualità produce è la sensazione che ci sia un mondo di informazioni in funzionamento in parallelo con il nostro e che possiamo spesso in qualche modo "entrare" in questo mondo, e che allo stesso tempo, il nostro mondo fisico è permeato da pattern di informazioni, i nostri corpi inclusi, come è il caso, per esempio, del DNA.

Tornando al caso HoloLens, questa virtualità e questa percezione parzialmente fittizia della virtualità come definita da Hayles possono essere ulteriormente complicate dal fatto che il dispositivo sta creando la sensazione non solo che possiamo "entrare", o almeno interagire con il mondo parallelo che si trova "dietro" lo schermo del computer, o semplicemente nella nostra idea, più o meno condivisa del cyberspazio; ma crea l'effetto opposto: l'idea che gli oggetti che abitavano fino a questo punto esclusi-

61 K. Hayles, *How We Became Posthuman*, cit.
62 Ivi, p. 14.

vamente il cyberspazio sono ora tra di noi, occupando il nostro stesso ambiente vitale. Poiché questa tecnologia è ancora molto nuova, fare speculazioni può essere rischioso. Tuttavia il fatto che evidentemente le ricerche stiano andando in quella direzione rende pertinente cominciare a riflettere su di essa.

Sembra quindi legittimo chiedersi che tipo di soggettività, di soggetto digitale, stanno generando questo tipo di interazioni, di dispositivi. È attraverso la generazione di questi diversi punti di vista che il senso può essere generato, può circolare, nell'inconscio tecnologico/piano d'immanenza, che, è importante non dimenticare, funziona indipendentemente dalla volontà del soggetto, proprio come la dimensione simbolica dell'inconscio lacaniano. In questo caso, il significante fluttuante non deve essere erroneamente considerato come immagine, o come una sorta di miraggio. Il soggetto non sta proiettando in esso alcun desiderio, ma egli effettivamente vi abita, occupandolo, perché solo un soggetto può fare del punto di vista la sua dimora.

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Laruelle: Against the Digital

by Alexander R. Galloway
The University of Minnesota Press, Minneapolis, London, 2014
280 pp., illus. 10 b/w. Trade, $62.50; paper, $27.50
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Alexander Galloway's *Laruelle: Against the Digital* is the first in-depth study in English language of the work of French philosopher François Laruelle. The book is divided in two parts: in the first, Galloway explains the main concepts of Laruelle thought and his relation with the digital, locating him as a philosopher of immanence; whilst the second part approaches a methodology to withdraw from the "standard model". Though the title may be misleading and make the reader believe that the book will address subjects related to new media, software and computers, it does not, as Galloway briefly explains in the introduction, and then develops further at the end of the book.

Galloway takes as a point of departure Laruelle's methodology to escape the standard method and embrace immanence-which, according to Laruelle, other philosophers of difference like Gilles Deleuze and Alain Badiou haven't attained. In this sense, according to Laruelle, the best response to philosophy is to cease doing it (p. xvii), Laruelle's main aim is to think philosophy unphilosophically. In the first place, to do non-philosophy means for Laruelle to "abstain from the philosophical decision", that is to say, to reject the idea that anything in the world can be subject of philosophical reflection, "non-philosophy declines to reflect on things" (p.xxiv). In doing this, one is able to enter the terrain of "science" in which the theoretical validity is given by the possibility of elaborating axioms. In turn, this allows to take philosophy as the "raw material" of non-philosophy, namely, to do non-philosophy is to use philosophy as the object of study of non-philosophy. After clearly explaining that digitality is the basic distinction, not so much between zeros and ones but between one and two, Galloway advances his own goals: to demonstrate that digitality and philosophy are the same because they are both are based on "distinction", and therefore that in withdrawing from philosophy Laurelle was also withdrawing from the digital (p. xviii-xix). In opposition to the digital, the analogue means to bring heterogeneous elements together as one. In this context, in Galloway's insight digitality is not in any way related to computers or new media, but is considered as a strictly theoretical concept.

Galloway pedagogically exposes all these principles in the introduction, which he will of course deepen all along the book whilst at the same time building on his own principles, and explaining at the very end of the book the usefulness of the whole operation for

the understanding and for analyzing digital media. In Chapter I, "The One Divides in Two", Galloway explains multiplicity, univocity, and immanence, beginning with Deleuze, but eventually discussing other philosophers that couldn't escape transcendence; and then advances his own first three theses. Chapter II is dedicated to "The Standard Model" and in putting into relation immanence, transcendence, the difference, the multiple, integration, analogicity, distinction and digitality. Chapter III is dedicated to "The Digital", and Chapter V to "Computers", both are among the most interesting in the book thanks to detailed and acute analysis Galloway does of Deleuze's philosophy, but exactly because of it, these are also the chapters in which it is possibly most evident that Laruelle's theoretical building doesn't add much to what Deleuze already did.

In fact, the main problem the book has is not so much Galloway's, but Laruelle's: his neologisms and conceptual operations often sound as a solipsistic exercise. Though certain concepts like "cloning" or the "prevent" are undoubtedly attractive, one cannot avoid asking about their theoretical relevance and consistency; and one has often the impression that Laruelle, when not inventing new words, is using the concepts of philosophy to do non-philosophy.

Having said this, the book is not only exhaustive in explaining Laruelle's theoretical construction on philosophy, but it is also extremely clear in the analysis of other philosophers, mainly Deleuze and Badiou. Galloway concludes his work by giving a synthetic and lucid summary of the whole book presenting his fourteen Theses based on the previous analysis of Laruelle's oeuvre, persuasively arguing on the importance of his own philosophical development for further thinking on digital media theory.

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Retracing the Expanded Field: Encounters between Art and Architecture

by Spyros Papapetros and Julian Rose, Editors
The MIT Press, Cambridge, London, 2014
272 pp., illus. 105 b/w.
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Retracing the Expanded Field: Encounters between Art and Architecture is the result of a conference and a seminar on art and architecture organized by the Department of Art and Archeology and the School of Architecture of Princeton University in April 2007 that includes also responses by artists, theorists, and architects. The conference aimed at discussing the developments and current validity of the canonical and uberinfluential article from 1979 by Rosalind Krauss “Sculpture in the Expanded Field”. The book is then composed by the transcriptions of a round table that discussed the expanded field *then* (chapter one), of which Rosalind Krauss took part; the second chapter is a collection of papers from the Seminar Table followed also by discussion, and the third chapter is the transcription of the roundtable on the expanded field *now.* These three chapters would complete the section dedicated to the discussions that took part on 2007. The fourth chapter consists in a remarkable collection of documents that includes not only the original article as published on *October 8* on the spring in 1979, but also many unpublished images belonging to the October archive. Finally, the fifth chapter is composed by responses from 20 theorists, artists, and architects.

The book is outstanding not only for the precision of the visual documentation presented–almost every mentioned artwork has a corresponding image–but also for the level of the theoretical discussion from which very relevant ideas and questions, not only conclusions, arise. However, one should not expect an absolute praise of the 1979 article and its author: in fact, many papers and comments are deeply critical of different aspects, often regarding Krauss’s methodology but also of the different topics and artists that she left aside, or completely ignored.

The first round table, “The Expanded Field *Then*”, as its name evidences, focused on the historical moment in which the article was written, as well as the reception that it

had at the time of publication. In this discussion, questions and critiques move around the notion of modern sculpture and monument, about the Duchampian tradition and the importance of the object within the tradition of sculpture, which was completely set aside in “Sculpture in the Expanded Field”.

The second chapter focuses on the Seminar Table; in this section the transcripts of discussions are very brief and contributions are presented in the form of papers. The discussion makes clear that, from a theoretical point of view, Krauss was moving from a formalist, then to a phenomenological approach, and finally to a structuralist one with the use of the Klein group for analyzing the expansion, and structure, of the sculptural field. In the previous round table, she stated that she was writing against an “anything goes” tendency in contemporary art for which the euphemism was “pluralism”, in doing so, she—almost shyly—introduced the concept of “postmodernism” to explain the end of medium specificity. However, as Hal Foster compellingly suggests in his brief but dense contribution entitled “Diagram as Closure” (p.87) closure would be given by the analysis focused on a permanent structure that leaves aside the historical, and also political, dimension in the expanded field: the “closure” would be the “ability of the diagram to arrest time and to suspend history […]” (p. 87).

As a matter of fact, there are two dimensions that Krauss’s article ignored at the time and that are recurrently mentioned all along the book: time and the body. For instance, in the Expanded Field *Now* roundtable (third chapter), Stan Allen introduces the temporal element by proposing to talk about the term *notation* and to compare it with other terms already introduced in the discussions such as *mapping* and *diagram*.

Another recurrent subject is, of course, architecture. At the beginning of the roundtable, George Baker asks (p. 94): “Why are architects interested in this essay? And why is this conference happening in an architectural school?” In fact, while reading the book one notices that several of the contributors try, may be a little too hard, to underline the relevance and influence of the article within the field of architecture. For many of the contributors, the relationship is not so clear; the fact that the Klein group delineated by Krauss includes the terms architecture and not-architecture doesn’t make it necessarily an article relevant to architects and architecture theorists. The most consistent answer to Baker’s questions would be Allen’s on page 98 when he states that its usefulness for architecture was that of amplifying the perception of its limits from the construction of buildings to the construction of site.

Finally, the responses are to be found on the fifth chapter. This section has a few recurrent concepts of its own, the first of

which being “context”. Probably responding to some analysis in the previous chapters that ignored the (political) relevance of the move out of the gallery/museum for artists like Robert Smithson or Robert Morris, responses by Mary Miss, Emily Eliza Scott, Josiah McElheny, and Michael Meredith bring the search of a new context for artworks at the time back in the discussion.

Eve Meltzer’s response brilliantly summarizes and analyzes several of the issues discussed all along the book and mentioned before: Krauss’s escape from historicism and embracement of structuralism, and yet how this move left the body, the sensory, the material out of the diagram, and how, 30 years later, what matters is to recover a new conception of art that considers “a more expansive model of the human subject” (p. 186).

It is also worth remembering that if “Sculpture in the Expanded Field” introduced the notion of post-modernism to try to frame, and limit, the pervasive “anything goes” in the artistic field at the time, it tempted to do so still using modernist categories, and methodology, “the default toolbox” of modernism as Julia Robinson called it in her acute response (p. 192), an observation already advanced by Thierry De Duve in *Pictorial Nominalism: On Marcel Duchamp’s Passage from Painting to the Readymade* (1991)—albeit, not regarding this article.

From the responses yet another way of introducing temporality in the expanded field could be drawn: Not (only) through the body and movement—which could open a discussion on the theatrical dimension (p.199)—but through the digital dimension, as suggested by Sarah Oppenheimer (p.220). As a matter of fact, Oppenheimer and Matthew Ritchie are the only contributors who addressed the issue of the digital and computerization of culture. In his response, Ritchie has a point when he states that if so far there is no human activity that cannot be mediated but the computational space, it is evident that the field has to be expanded also in this sense (p.235).

The book is absolutely worth, or may be even necessary, reading for everyone interested in “the field”. It keeps the conversation open to go on expanding the field in so many new directions. It proves that if Krauss’s 1979 article had the impact it had/s was for very good reasons, not only for how much it made the whole discipline reflect then, but because it continues to do so today. And the most recent contributions to the critique of the expanded field featured in this book also demonstrate that there are many theorists and practitioners willing and capable of carrying on with that task.

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TECHNO-ECOLOGIES 2
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TECHNO-ECOLOGIES 2
Media Art Histories

A screen is a Screen is a Screen: a Screen is not an Image

Gabriela Galati and Amos Bianchi

Abstract

In his book *Différence et répétition* (1968), Gilles Deleuze elaborates an essential concept for the theory of the image: the simulacrum. The plane of the simulacra is characterised by the co-extensiveness of images, which are individuated by their own difference, and not by their placement in an ontological hierarchy, platonic at its origin; and that has as its poles true and false, being and not-being, fair or unfair.

In current times, the concept of simulacrum seems to be one of the most efficient tools to overcome a further dichotomy: a dichotomy - old and based on past ontologies -, between virtual and real, and therefore, between virtual images and real images.

Firstly, the present work intends to apply the notion of simulacrum to the study of digitally-based images to make evident their belonging to the same plane of any other kind of images, namely the material ones.

Secondly, the notion of simulacrum is applied to the screen, to make evident how it has been mistakenly included in the plane of the images. Historically, the consequence of this mistake has been inauthentic experiences, and the triggering of processes of desubjectification.

After verifying the mentioned hypotheses and removing the screen from a potential ontology of the image, the screen is then correctly relocated in a semiotic and mediologic horizon. In this context, C.S. Peirce's notions of icon and symbol, and Bolter-Grusin's polarities of hypermediation and transparency are applied to demonstrate how the evolution of the screen in the last thirty years has culminated in a strong mannerist phase in the recent past, especially since the touch-screen technology has lead to a blurring of the limits between screen and interface. However, it is relevant to notice that in more recent releases of contemporary interfaces a return to a symbolic and hypermediated regime can be observed.

As a conclusion, the main aim of this article is to restore, in the light of the notion of simulacrum, a clear and fair relation between image and screen, so that from both of them an authentic and subjectifying experience can be drawn.

Premise

The main assumption of this paper is that the image, whatever is the concept describing this polysemic word, can be outlined in terms of apparatus, as Michel Foucault defined it during the Seventies:

> What I'm trying to pick out with this term is, firstly, a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions–in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements.
>
> (Foucault 2001, 299)

At its time, while the main interest of Foucault was moving from the apparatus and the biopolitics to the process of subjectivation and sexuality, these different poles (or better: these

different approaches) were just two different ways to reach the constitution of the subject in the Western world.

In a subsequent text by Italian philosopher Giorgio Agamben, What is an Apparatus?, we find:

> "What defines the apparatuses that we have to deal with in the current phase of capitalism is that they no longer act as much through the production of a subject, as through the processes of what can be called desubjectivation."
>
> (Agamben 2006, 20)

The text is dense and meandering and does not fully explore this idea. The theory is clearly aligned with the Foucauldian notion that modern capitalism is cultivated by the proliferation of apparatuses that create subjects on the premise that 'At the root of each apparatus lies an all-too-human desire for happiness. The capture and subjectivation of this desire in a separate sphere constitutes the specific power of the apparatus' (Agamben 2006, 17). In addition, the subject plays a kind of game with respect to the power of these apparatuses (which suggests some sort of freedom), and the aforementioned quote seems to expose a different state in which capitalism reaches a new phase, namely, the present phase characterised by new technologies, verging on a generational change (perhaps more anthropological than social) in Western humanity itself. What does this change in the de-subjectivity of the subject mean? The newness of the contemporary is in the way in which apparatuses dismantle the subject: but in which way? The examples taken from Agamben (the viewer as an individual reduced to an audience, the video surveillance created for Big Brother that effectively renders any person a potential terrorist) represent the new landscape of communication technologies without any specific argument.

If, with Agamben, we split the world into two main macro-categories: living beings and apparatuses, it follows that images are, for sure, members of the realm of apparatuses. And if new technologies are affecting the subject up to the limit of the desubjectivation, a further analysis about digital images seems to be appropriate.

Italian philosopher Pier Aldo Rovatti, well-rooted in the Foucauldian field, stated:

> "Freedom means: the practice to go out of ourselves, the alteration of our condition of subjects stuck in the identitary apparatuses; the enlargement of the horizons of habit, but also a certain kind of surplus of the self; the assumption of a risk of exposure, without safety net."
>
> (Rovatti 2008, 222)

The aim of this paper is to clarify some ambiguities about the status of the contemporary digital image, in order to give an answer to the question: which mistakes can be avoided by a correct comprehension of the digital image, in order to give the subject an actual opportunity of subjectivation through it?

Definition of Simulacrum

In the context of this work, we retain Gilles Deleuze's definition of simulacrum, as first advanced in 1968 in his book *Difference et Répétition* the most pertinent. In the aforementioned work Deleuze eliminates the opposition between world and symbols, between an original or

model and its reproduction. In this sense, his position is far more radical than that of Jean Baudrillard, just to give an example; his is a position for which 'modern thought is born of the failure of representation, of the loss of identities, and of the discovery of all the forces that act under the representation of the identical. The modern world is one of simulacra' (Deleuze1968, xix). Clearly, there is no anchorage to any supposed material foundation, the simulacrum and the symbol are one and the same thing, the simulacrum is a sign that has interiorised 'the conditions of its own repetition' (Deleuze1968, 66-67). In Deleuze's words:

> Everything has become simulacrum, for by simulacrum we should not understand a simple imitation but rather the act by which the very idea of a model or privileged position is challenged and overturned. The simulacrum is the instance which includes a difference within itself, such as (at least) two divergent series on which it plays, all resemblance abolished so that one can no longer point to the existence of an original and a copy. It is in this direction that we must look for the conditions, not of possible experience, but of real experience (selection, repetition, etc.). It is here that we find the lived reality of a sub-representative domain. If it is true that representation has identity as its element and similarity as its unit of measure, then pure presence such as it appears in the simulacrum has the 'disparate' as its unit of measure- in other words, always a difference of difference as its immediate element.
>
> (Deleuze 1968, 69)

In Deleuze there is no supposition that something called "reality" actually exists, in this sense, his position is radically anti-ontological. His position has also the advantage of avoiding the duality real-virtual, or in the case of our interest, real-digital, and real-image; there is no implied moral judgement, as there is in Baudrillard, of the simulacra. Everything that exists, if it exists, is repetition, and difference is to be found in this repetition, and not in an original and its copies. Especially regarding art, and images in general, Deleuze states: 'Art does not imitate, above all because it repeats; it repeats all the repetitions, by virtue of an internal power (an imitation is a copy, but art is simulation, it reverses copies into simulacra)' (Deleuze 1968, 293).

Simulacrum and Digital Images

How can the concept of simulacrum –always as defined above– be of use to better understand images in general and digitised images in particular? The key point is the continuity between the world and the world of simulacra, and in a second stage, the consideration of the digitised object or image as *ontological repetition*. In this context, considering representation – i.e. images as representations of an "original" or "model", that is, the world, in which its being is distributed among "the copies", or representations, in more or less "fixed shares" implies an analogy of being that obscures the fact that the only possibility of avoiding dualities and reaching an 'univocity of being', a 'realised Ontology', as Deleuze calls it, is repetition (Deleuze 1968, 303).

In continuity with this idea, what happens in digitalisation processes is not a "de-materialisation", or a passage from a "real" to a "virtual" realm, but a change in the ontological status (not level) of the object. The digitised image is translated into an 'image-text', an 'info-pixel' (Foster 1996: 109), its materiality, its support changes, but it is still not a representation, and even less an event of de-materialisation, the relationship between images, digital images and the material, or analogue, world is of repetition, and it is in this repetition in which difference is embedded: 'We propose to think difference in itself independently of the forms of represen-

tation which reduce it to the Same, and the relation of different to different independently of those forms which make them pass through the negative' (Deleuze 1968 [1994]: xix). Thus digital images are simulacra in the same way as anything in the world is, that is the 'univocity of being' from which any dualistic separation between virtual and real, images and the world, images and digital images is definitely removed.

Screen and image

If the notion of simulacrum allows one to erase the distinction between 'actual' and digital images, and deletes any kind of hierarchy among them, some other definitions deserve to be clarified.

Following the Merriam-Webster dictionary, a monitor is a 'cathode-ray tube used for display (as of television pictures or computer information)'; extending this definition, we could include also LCD, OLED and other such hardware into this category. While a screen is something deeply different: a screen is a portion of space-time out of the common space-time continuum we live in. This definition does not reach to a hierarchical structure between screens and the 'real' world: it defines simply a portion of being whose sense is not continually linked to the environment surrounding it. A billboard, a monitor, even books are screens.

Furthermore, a clear differentiation between image and screen is almost impossible, for image is an ambiguous and polysemic word, covering different phenomena from mental projections, phantoms, to paintings. A single long and complex book is not enough to embrace all the meanings the word image has assumed during its history and declinations in some languages (see Wunenburger 2001).

It follows that a way to understand correctly the contemporary digital image is to leave the traditional theories of images, and approach the field with the tools provided by media theories. In this sense, the notion of media and remediation seem to be the most appropriate. In the glossary at the end of their book, Bolter and Grusin define remediation as follows:

> Defined by Paul Levenson as the "anthropotropic" process by which new media technologies improve upon or remedy prior technologies. We define the term differently, using it to mean the formal logic by which new media refashion prior media forms. Along with immediacy and hypermediacy, remediation is one of the three traits of our genealogy of new media.
>
> (Bolter, Grusin 2000, 273)

And, in the same glossary:

> *hypermediacy* a style of visual representation whose goal is to remind the viewer of the medium. One of the two strategies of remediation; the other is (transparent) immediacy.
>
> (Bolter, Grusin 2000, 272)

> *Immediacy* (or transparent immediacy) a style of visual representation whose goal is to make the viewer forget the presence of the medium (canvas, photographic film, cinema, and so on) and believe that he is in the presence of the objects of representation. One of the two strategies of remediation; the other is hypermediacy.
>
> (Bolter, Grusin 2000, 272-273)

New media are still and always remediating old media (of course, the adjective new is historical and contingent). Remediation works by two strategies: emphasizing the medium (hypermediacy) or concealing it (immediacy). The two strategies are always present in all the processes of remediation, but usually one prevails over the other one.

Bolter and Grusin state what happens when a process of remediation of 'traditional images' is ongoing:

> Since the electronic version justifies itself by granting access to the older media, it wants to be transparent. The digital medium wants to erase itself, so that the viewer stands in the same relationship to the content as she would if she were confronting the original medium. Ideally, there should be no difference between the experience of seeing a painting in person and on the computer screen, but this is never so. The computer always intervenes and makes its presence felt in some way, perhaps because the viewer must click on a button or slide a bar to view a whole picture or perhaps because the digital image appears grainy or with untrue colors. Transparency, however, remains the goal.
>
> (Bolter, Grusin 2000, 45-46)

If we assume that the notion of simulacrum replaces the one of representation, the above mentioned definitions can be read in a new way in order to avoid the fallacies derived from the overlapping of different epistemologies about this theme.

The image of the Sixtine Chapel in our monitor is not the 'actual' Sixtine Chapel, of course; but, at the same time, it is neither its bad copy. It is the effect of a process of remediation, affected by a strong transparency; and it is a screen as much as the 'actual' Sixtine Chapel in Rome is. The experience we can have of the two Chapels is different, but at the beginning of the digital era, the best is yet to come – as demonstrated by clips of sport competitions shot with high frame rate cameras, that are revealing stunning details that the human eye could never catch.

The screen is not an image and is not a monitor. The distinction between screen and monitor allows one to recover the complex sense of virtuality intrinsic to the screen, which would not be either reduced to a lighting hardware nor experienced as image anymore. The removal of the word image would be the definite overcoming of old ontologies, based on a hierarchy of beings grounded 2,500 years ago in Western culture that has hampered any profitable discourse about contemporary effects of media.

The screen is not an image, nor a monitor, it is a simulacrum. There is discontinuity in the space-time dimensions between the material world and the world configured "behind" the screen, but there are not ontological hierarchies that make that world less or more "real" than the material one. The codification of linear perspective in the fifteenth century by Leone Battista Alberti allowed one to conceptualise the painting as a "window to another world"; the screen presents itself today in the same way: the screen does not only present remediations, or repetitions, of the Sistine Chapel, but of any other cultural object possible. The point is that these are repetitions, not representations, or copies, and that, as discussed above, is the world of simulacra.

The Screen as icon

The aforementioned confusion of the screen with an image can have its origin in different operating systems and their desktop metaphor firstly, and then in the progressive elimination of the

interfaces thanks to touch-screen technology. If the screen is not an image, it displays images, usually through their interface. In this sense Charles S. Peirce semiotic theory can be of use to clear out how interfaces and operating systems can work as icons or symbols in relationship to the signs, namely, the referents they are alluding to.

Peirce's definition of the sign is based in a triadic relationship between a sign, an interpretant and its object: ' I define a sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its interpretant, that the later is thereby mediately determined by the former' (EP2, 478). In this triadic relationship, from a phenomenological point of view, the ways in which the sign is denoting its object are defined by Peirce as icon, index or symbol –the icon by a quality of similitude, the index by real connection to its object, and the symbol by a convention or rule for its interpretant.

Once we have cleared out of the way the confusion between the screen as image and the screen as simulacrum, and so the screen is understood as a simulacrum that displays images, it is possible then to analyse what happens within the screen in Peirce's semiotic terms. What the screen displays, with what one usually interacts is an interface, in the case of computers, tablets, cell phones, this interface is part of an operating system that conveys a certain metaphor, namely, the desktop metaphor that makes it more user friendly. As the operating systems were updated, and eventually improved, the will of "illusionism" begun to grow. In the Mac OS8 launched in 1997, for instance, apart from the inclusion of colour, the dustbin already had some volume, and the buttons on the calculator, had a shadow. It was still pretty synthetic, so to speak, but there was already the intention to represent three-dimensional objects. In C.S. Peirce's semiotic terms, it could be said that there was a passage from a symbolic to an iconic representation in the interface: whilst in the first versions of the operating systems – at least in Apple's – the relationship of the represented objects (dustbins, folders, buttons) with the referent maintained some salient traits but were not necessarily similar, and therefore maintained a conventional and thus symbolic relationship; in the later versions the realism was significantly increased by conveying similar traits to the represented object so as to allow a direct recognition, and thus maintaining an iconic relationship. It is only then that a desktop icon coincided with the semiotic one.

In continuity with what was said above, we can advance that everything that happened to the screen is analogous of what has been verified in the history of the image in the passage from medieval art to mannerism, as already advanced by Henri Focillon in his *Vie des formes* (1934): each evolution process in the history of forms goes through a synthetic phase, followed by a classic phase, to end with a baroque phase, to finally start the process all over again.

The Screen as Floating Signifier

In his "Introduction a l"oeuvre de Marcel Mauss" (1950) Claude Lévi-Strauss defined with the term *mana* the magical mystical substance of which the magic is formed, and which has "an undetermined quantity of signification, in itself void of meaning and thus apt to receive any meaning".

As it is well known, the term mana gave origin in semiotics to the concept of "floating signifier" to talk about a signifier without any referent, an empty signifier that can potentially be filled with any meaning. We want to propose that when the screen is (mistakenly) confused with "an image" it works as a floating signifier because is thus inscribed in the fiction that the screen can be whatever one wants. The screen thus becomes a TV, an audio set, a cinema, a museum, a map, a notebook, plus a "group of friends", one's personal diary; the screen is asking

us to fill it, to touch it, constantly, to fill it with contents, meaning, and ultimately with desires. In fact, one of the most dangerous effects of a screen when working as a floating signifier is the illusion created *by our desire* that the screen is *desiring us in turn*, that it is actually *asking us* to fill it, to answer messages, to post things, in summary, to give it our attention. However, that is a projected desire; it is one of the infinite meanings we can give to a floating signifier; the danger lies in the power it can have over us, because as Levi-Strauss stated, the *mana* is the magical substance of which magic is formed.

Conclusion

Screens require new epistemologies, no longer rooted in a conceptual background where notions of image and representation are still linked. Removing screens from a platonic ontology of images, and inserting it into the plane of immanence of simulacra seems to be the proper approach for exploring the virtuality within them.

Virilio wrote: "Alpine hotels show off their fine vistas on the screen, while proponents of land art are preparing to equip their works with multiple Web cameras. You can also travel vicariously: you can tour America, visit Hong Kong, and even view an Antarctic station in its polar darkness ..." (Virilio 2006, 17). When this sentence does not threaten us anymore, that will be the moment of the definite coming of new, contemporary, appropriate ontologies and epistemologies of new media.

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Real Virtuality: About the Destruction and Multiplication of World

by Ulrich Gehmann and Martin Reiche, Editors Transcript-Verlag, Bielefeld, 2014 467 pp., illus, b/w. Paper, €44,99 ISBN: 978-3-8376-2608-7. *Reviewed by Gabriela Galati Plymouth University* *Real Virtuality* is an anthology edited by Ulrich Gehmann and Martin Reiche. Divided in five chapters, it features articles by 21 authors and several by the editors themselves. The main problem that this book has is the complete conceptual confusion of the editors, who were supposed to define a line of research for it around the concept of "real virtuality", but completely fail to do so because their research and writing does not reach a minimum academic level: not conceptually, nor methodologically. In addition to this, the book, and especially the editors' introduction and articles, have not been revised by a professional English copy editor, which makes many passages difficult to read and to understand, and includes grammatical mistakes evident even for a non-native English speaker. In the "Introduction", Gehmann and Reiche advance more or less explicitly that the anthology addresses an always-increasing virtualization of the world, at the same time that virtual worlds are becoming more real. They oppose a "material", "real" reality, to a "virtual" one; however, they don't clearly define which definition and theoretical framework they are using for "virtual" until page 121, and after five articles. The editors state that the process of virtualization is especially strong in current times, but that it hasn't started today. The "virtualization of the real" would have begun approximately in the Renaissance: They mention the gardens of Bomarzo and Villa d'Este as examples of the first attempts to create "real virtual spaces"—even though humankind has been creating other (virtual) worlds since Lascaux. At this point one also realizes that the authors are using indistinctly "space" and "world", and also "virtual" as a synonymous of "artificial"—for instance, on page 32, illustrating his article "The Frame Context", Gehmann includes a photograph of two mannequins in a shopping mall window with the caption "Virtual individuals in a real community"; thus apparently, for the editors, mannequins, as well as any artistic and architectonic production are not part of reality. Accordingly, the editors never define the acceptation of "world" they are using either in the title of the book, in the Introduction nor in their articles—"The Frame Context" by Gehmann, "The World as Grid" by Gehman-Reiche, "The Destruction of Space by Augmentation" by Reiche, and "Explorable Space" by Reiche-Gehmann)—so it is never clear if they understand it in the context of a narrative theory, in an Aristotelian sense, or what do they refer to with the word "world". The same problem comes about with their use of the word "space", and they seem to

understand that “a space” implies “a world”, as for instance on page 11: “Moreover, since these understandings of space embody a *pre*-understanding, they are often used implicitly, without addressing them as what they are: prejudices in literal terms (pre-conceptions), implicit but nevertheless basic assumptions about what ‘space’ and hence, ‘world’ is (or should become), at least in the characteristics constituting what is seen as describing its *relevant* parts.” The lack of clarity in defining a theoretical framework and a proper methodology resulted in a thesis proposed for the whole anthology on page 9 that is difficult to decipher both for the use of language, and for the conceptual chaos: “To recur to Lefebvre’s saying, our thesis is that all the productions of space examined in this anthology can be comprehended in their social and life world-implications only if the respective understanding of spatiality underlying them is considered. An understanding formulated in different disciplines and hence, perspectives, technical as well as academic and artistic ones. Since the respective conception of the spatial inevitability influences the diverse models (so our thesis) which led to the respective world, and to the attempts to shape realities to be examined here.” The analysis of all the inconsistencies could go on; however, it wouldn’t make any sense to move forward with this review had not been the case, oddly enough, that the great majority of the articles included in it are well written, are relevant research in their field, and some of them really stand out: On chapter 1, entitled “The Beginnings”, Sabine Wilke's article "The Scientific Image in the Anthropocene. Nature, Painting, Diagrams and Maps in Alexander von Humboldt's *Cosmos* and Beyond" brilliantly analyzes how aesthetic strategies in Humboldt's narrative aimed at opening the reader to the understanding of nature, and how visualization actively produced, at the same time that shaped knowledge. On chapter 2, "The Unfoldings", Irus Braverman's article "Good Night, Zoo. A Children's Guide to Humanimal Spaces" examines the descriptions and the appropriations of space in a children's bedtime story about the zoo through what could be called a posthuman theoretical framework—i.e. Donna Haraway feminist metaphor of the cyborg—to address the blurring of the human-nonhuman dimensions, in the use of space as well as language, and finally of the boundaries of subjectivity itself.

Katerina Diamantaki's "The Ambiguous Construction of Place and Space" on chapter 3, "Virtualization Gains Momentum", is definitely one of the most compelling in the book. The author addresses how digitalization changes the perception and redefinitions of space and place, as well as the changes it implies for social relationships and identities. Without falling into Manichean perspectives, she concludes that some social spaces are given in physical spaces, other in the virtual ones, but this fact does not make necessarily ones more real than the others. Another remarkable article in the book is Panagiotis D. Ritsos’ “Mixed Reality. A Paradigm for Perceiving Synthetic Spaces”, which opens chapter 4, “Facets of Acceleration in Hybrid Spaces”. The article presents excellent philological research on the development of Augmented reality (AR), Augmented Virtuality (AV) and Mixed Reality (MR)

proposing that the idea of space in the virtual world functions as an extension of the physical space: not as a virtual representation of it, but as symbolic environment, as an extension of social and individual experiences and ideas. In “Beyond the Visible Autonomy”, on chapter 5, Erhan Öze proposes to think *Autonomy* as a crucial concept for Internet users to preserve and control their “private virtual spaces” on a terrain, the Internet, in which control and violation of privacy is becoming common ground. To conclude, this anthology is almost a mystery: at least 20 articles that pose questions and arrive to interesting to conclusions around topics such as space, art, technology, digitalization, photography, representation, augmented reality, virtual environments, subjectivity, autonomy, and others, gathered together in a book that presents the above mentioned problems; it is difficult not to wonder how this group of authors ended up contributing their work to such a publication.

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Contents

The Threshold. An Iconological Analysis

Amos Bianchi and Gabriela Galati

The aim of this paper is to demonstrate that the threshold has been linked to the status of representation and of language since the dawn of humankind, or better, since the moment in which the homo sapiens started visualizing her/his thoughts covering the walls of the Lascaux caves with pictures. Nonetheless, the urgency of an inquiry on the threshold in contemporary times has a different point of departure; namely, contemporary science fiction, and, more specifically, the novel *Burning Chrome*, written by a young Canadian writer, William Gibson, and published in 1981. The term matrix is used in this text for the very first time, according to the writer, the matrix designates the abstract representation of the connections among data sets. The term matrix itself has been very successful (the Wachowski Brothers' trilogy is the mainstream evidence of it), and it has also evolved later in a concept as powerful as the first one: the cyberspace. As sharply noticed by Antonio Caronia, "Gibson's new technological dropouts wind in this 'visualization of the whole field of electric forms' (counter to McLuhan), the new heroes or anti-heroes, neo-romantic (or 'neuromantics', as they have been defined by another sci-fi writer, Norman Spinrad), without neither project, nor future" (Caronia 26). In a subsequent passage, Caronia observes again:

> "The cyberspace is deeply rooted in a kind of magic belief in the profane [...], in the existence of a world beyond the screen of the monitor: maybe in analogy with video, but perhaps according to the old fascination coming from the mirror, too. [...] So that, behind the artificial universes, the themes of holiness, reminiscences of transcendence, demiurgic functions reappear" (Caronia 26-27).

Matrix, cyperspace, neoromanticism, other worlds, holiness, transcendence are all terms related to different disciplines that this paper would like to unify on the same plane of immanence characterized by the threshold; a plane of immanence that radically faces the status of language and representation ab origine in order to give a partial answer to a set of questions: what is the element that opens to this other time-space? What is it that allows the transition from immanence to transcendence? The main question this work poses is if the threshold is a linguistic

or an ontological problem; in other words, the problem is if language allows the existence of otherness, or if otherness exists before, or independently of language. In this way, the conceptualization of the threshold allows an original reading of the relationship between immanence and transcendence.

The Threshold and the Sublime

The first step backwards in this genealogic discourse about the threshold is to focus on some aesthetic themes developed in the period immediately before the Enlightenment. During the 18th century a new concept fiercely emerges in the aesthetic scene, a concept that would be a milestone for the following times: the sublime. In spite of the fact that the sublime was already present in previous poetics (the Lucretian reference on the spectacle offered by a sinking boat, for instance), Edmund Burke develops the concept in depth in the essay *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful* (1757); and then Immanuel Kant considers it as a necessary step for the development on his text devoted to aesthetic issues, the *Critique of Judgment* (1790). As an antecedent of the understanding of the notion of the sublime that Romanticism would later completely fulfill, in the 18th Century all the basic features of this concept can already be recognized.

The reflection on the effect of the image upon the *I* substitutes the discourse about the truth of the image, based on mimesis. The ontological reflection on the status of the image changes. The platonic quest for pure aesthetic forms ends, even in the form of the neo-platonic quest that was born already polluted by the sense of the original sin of Christianity. Facing an idea of beauty that interrogates, perceives and theorizes the harmony among sensible forms, a new sentiment arises, the sublime, that disposes the failure of the platonic asceticism towards the pure forms and confines otherness to the absolute-other. This new sentiment is focused on pathos, in opposition to logos that was previously dominating the aesthetic scene, and that is now bankrupt. In a certain way, two different movements are intersecting each other: on the one hand, the passage from transcendence to the absolute-other; on the other hand, the passage from logos to pathos. As an intersection between these movements, the sentiment of the sublime assumes a both perceptive and poetic form. In its perceptive dimension, the sublime is codified as delightful horror, as Burke stated. In its poetic function, the sublime becomes a territory for the production of limitless representations, attesting the presence of an absolute-other whose traces could be perceived via pathos, and no more via logos. The Infinite, among the other concepts, breaks into the field of representation.

Which function is then assumed by a kind of image that, in the field of the sublime, loses any possibility to represent the existent? Two determinant apparatuses emerge under these circumstances, apparatuses that at first appear distinct, but which are deeply connected in a further analysis. On the one hand, the image recovers a pure phenomenological function: the image just represents itself, it is a pure factual sensible among other sensibles. On the other hand, this image that has lost all connection with transcendence and faces the absolute-other allows the possibility to envisage the light of nihilism: if there is anything beyond the image, it would go back to the dynamics of platonic or neo-platonic logos; but what is found behind this kind of image is just pure nothing. This approach to the status of the image was developed in Germany around 250 years ago, and it had a very long and influential tail in current deconstructionism, as Wunenburger (1997) keenly points out. Among all its consequences, the most interesting in the context of this discourse is the Deleuzian position.

The Dionysian Machine

In the *The Logic of Sense* ([1969] 1990), Deleuze deploys his army against the Platonic concept of image based upon the relationship original/copy by establishing the notion of simulacrum as main concept (a simulacrum that was terribly overthrown within the platonic foundation).[1] There is always, no doubt, a resemblance between resonating series, but this is not the problem. The problem is rather in the status and the position of this resemblance. Let us consider the two formulas: 'only that which resembles differs' and 'only differences can resemble each other.' There are two distinct readings of the world: one invites us to think difference from the standpoint of a previous similitude or identity, whereas the other invites us to think similitude and even identity as the product of a deep disparity. The first reading precisely defines the world of copies or representations; it posits the world as icon. The second, contrary to the first, defines the world of simulacra; it posits itself as phantasm: "[...] So 'to reverse Platonism' means to make the simulacra rise and to affirm their rights among icons and copies." (Deleuze 261-262) And moreover: "Resemblance subsists, but it is produced as the external effect of the simulacrum, inasmuch as it is built upon divergent series and makes them resonate. Identity subsists, but it is produced as the law which complicates all the series and makes them all return to each one in the course of the forced movement." (Deleuze 263).

[1] Deleuze already addresses these problems in *Différence et répétition* published the previous year, [1968 (1994); *Difference and Repetition*; London: The Athlone Press], but for the aims of the present work, we choose *The Logic of Sense* as reference.

Identity, the same and the similar dissolve each other in this new notion of simulacrum that would allow the coexistence of any kind of images on the same plane of immanence. The Platonic hierarchical order is rejected: original and copy, model and representation are excluded from the founding status of the image. A feasible Platonic stairway to the true being cannot be built up anymore.

This new way to order images, or better, to dis-order images, has a common ground with the phenomenological and nihilistic vision of the image explained above. Deleuze himself follows this path when he says:

"Simulation is the phantasm itself, that is, the effect of the functioning of the simulacrum as machinery, a Dionysian machine. It involves the false as power, Pseudos, in the sense in which Nietzsche speaks of the highest power of the false. By rising to the surface, the simulacrum makes the Same and the Similar, the model and the copy, fall under the power of the false (phantasm)." (Deleuze 263)

The path of Dionysus in opposition to Apollo, of the chaosmotic antagonism to order, of power against intellect emerges clearly in these passages. However, it follows then that even a platonic metaphysics is not as adequate to the understanding of the image as the simulacrum. Deleuze needs another strong conceptual step in order to insert the simulacrum into a new metaphysics. After having defined the simulacrum as a Dionysian machine, Deleuze puts on stage the notion of sign:

"That the Same and the Similar does not mean that they are appearances or illusions. Simulation designates the power of producing an effect. But this is not intended only in a causal sense, since causality would remain completely hypothetical and indeterminate without the intervention of other meanings. It is intended rather in the sense of a 'sign' issued from a process of signalization; it is in the sense of a 'costume', or rather a mask, expressing a process of disguising, where, behind each mask, there is yet another [...]" (Deleuze 263)

It follows that the Dionysian machine of the simulacrum can operate on a different territory that is outlined by Deleuze, here faithfully following Nietzsche, in the eternal return, "for it is in the eternal return that the reversal of the icons or the subversion of the world of representation is decided" (Deleuze 263). The existence of simulacra can be displayed just on the chaotic plane of the eternal return, the existence of this Dionysian machine that definitely has left the safe path traced by the order and the logos to embrace other dimensions: the power, or, as outlined in the previous chapter, the pathos. At the end: a non-logic of bodies instead of a logic of intellects.

Yet a step further must be taken, as something still remains unexpressed. Why the crisis of the image? Why the crisis of the platonic status of the image? There is an answer to these questions: The notion of image in the 18th century faces a deep crisis, since the ground upon which some theories of the image were built was

perilous and fragile, a ground that was isomorphic to the relationship between transcendence and immanence, instable if considered from the point of view of reason. Christ is the figure to be investigated in order to understand this instability.

Christology as a Basis for the Western Image

In the construction of Western theory of the image, it is necessary to consider side by side the Christian and platonic paradigms. The Christian paradigm was developed both in Greek and Latin languages during the period from the death of Christ till the second Council of Nicea (787), which established the basic canon of the image in the Christian world, then to become the Catholic world.[2] In order to understand the conceptual evolution of the notion of image, it is necessary to face the lexical issue in which the Christian approach was rooted. The word image is directly derived from the Latin word imago, which originally designed the mask of wax that, in the pagan rite, was put upon the face of the corpse reproducing its features. The imago was not just the representation of an absence: the imago was the dead corpse, not just its representation; it was a living object, as Debray states: "a hyperbody, active, public and thinking." (Debray 31)

In this Latin background – ambiguous regarding the relationship presence – absence, and, consequently, identity and copy–, the Christological issue arises. In which sense is Christ God? Or better, where and how to place the corporeity, the physicality of Christ ("Verbum caro factum est, et habitavit in nobis, et vidimus gloriam eius", as it says in the prologue to the *Gospel of John*) compared to the absolute transcendence of God? Which is the sense of Incarnation? The term used by John in the Greek translation of the Gospel contains the root –th, that according to the Greek etymology has a strong sense of perception of the body.[3] John himself uses again a perilous lexicon when he affirms that the logos became sarx, meaning flesh. Two centuries and a half of theological debate about Christ resulted in the spreading out not only of a lot of heresies, but also in a canon, still valid, finally codified during the first Council of Nicea (325) that established the issue of the relationship between God and Christ – and it can be said, based on the concept of image.

However, the Christological issue is not just a matter of theology. The debate around Christ involves, in this moment, the notion of the world itself, and its value

[2] Orthodox Christianity and Lutheran Christianity will follow, starting from the two schisms of the 11th and 16th centuries, they followed different paths that cannot be compared to the Catholic approach to images. In the context of this work, the Catholic canon is the one taken into account, because of its pivotal influence on the general Western theory of images.

[3] The same root is present, for instance, in the word *theatron*, from which derives theater: the place of vision.

of being. If salvation resides in transcendence, but, at the same time, the plan of salvation resides in immanence: which is the economy of Salvation to be improved in the immanent world? The answer to the Christological issue is derived from the answer to the issue about Salvation, and vice versa. On the one hand, a sense of opacity and obscurity is perceived, perfectly synthesized in the statement by Paul: "Videmus nunc per speculum in aenigmate, tunc videbimus optime"; on the other hand, a rationalization of the relationship between immanence and transcendence is required.

In this context, the image establishes a double bind with these issues. The relationship between the incarnation of Christ and the Father, between the outer world and the inner world is read in the light of the concept of image, and, at the same time, the image acquires an ontological status determined by the relationship above. As Debray states, "theology of images is just a consequent Christology." (Debray 109)

Within the theology of the image, in order to solve these issues, the platonic paradigm – filtered by neo-Platonism and reinterpreted from the Christian point of view – is affirmed. The result of this process is a notion of image based on a prototype, on the dichotomy original/copy, according to the criteria of resemblance, whatever they are. In the horos, a dogmatic decision at the second Council of Nicea, held to face the contingent issue of iconoclasm that blew up in the Greek Christianity some decades before the Council, it is stated that the devotion given to the icon goes to the prototype; otherwise, the Incarnation itself would be denied.

The second Council of Nicea seems to fix a solid canon about the image. But history itself demonstrated how provisional this solution was: the orthodox schism of the 11th century would reach for a status of the image whose ontological value is higher, to begin with the liturgy, where the icon has the same ontological-objectual value of the Holy Bible; the Lutheran schism of the 16th century would deny any hypothesis of resemblance between image and prototype, as a result, the physical image as instrument for the rite was removed.

In order to complete this overview on the relationship between immanence, transcendence and image, and before introducing the theme of the threshold in the context of this discourse, one more step backward is needed. In the present work, the term image often has been used with a double sense: the concept of image and the concrete, manufactured image; the term image is somehow polysemic itself. Here a new question arises: why do manufactured images exist? The Platonic condemnation of the image would have never happened if the Greek world had not been rich with depicted or sculpted images, both bidimensional and tridimensional. In the Jewish-Christian world the problem of idolatry, from the well-known episode of the golden calf, is a recurring theme. The new question

here, to which the next chapter tries to give a provisional answer, is the following: why does homo sapiens, unique among the living beings, fabricate images?

Caves

Possibly, the first threshold was to be found outside of the image, or, to be more accurate, outside of the space of representation, namely, in the Palaeolithic paintings of animals at the Lascaux caves in Dordogne, France. Where the desire of creating other worlds, of opening parallel spaces comes from is difficult to say, but it has obviously accompanied humankind from its origins. And it also preceded language, so the identification of a threshold which is beyond representation is related to a non linguistic element that has nonetheless a close relationship with what is called "imagination", as Vilèm Flusser explains:

"Images are significant surfaces. Images signify – mainly – something 'out there' in space and time that they have to make comprehensible to us as abstractions (as reductions of the four dimensions of space and time to the two surface dimensions). This specific ability to abstract surfaces out of space and time and to project them back into space and time is what is known as 'imagination'. It is the precondition for the production and decoding of images. In other words: the ability to encode phenomena into two-dimensional symbols and to read these symbols." (Flusser 8)

At the same time, this encoding of images presupposes the belief that there is someone "out there" to decode them, hence, it encompasses the assumption of the existence of someone or something "other" (Flusser 9). If the imaginary was born from the possibility of abstracting a four-dimensional world in the two-dimensional surface of the image, as Flusser proposes, the first record of a projection, or representation, of the imaginary are again the Lascaux caves.

What has this projection of the imaginary served for? Or in other words, why projecting the imaginary? The imaginary opened up the chance of projecting the desired, of "materializing" other worlds, other possibilities. This desire is obviously at the base of most representational artistic forms, from the immersive pictorial spaces of the Renaissance, such as the Sistine Chapel, to cinema, or virtual reality. All of these media hoped to immerse the viewer in a different reality, stimulating, for different reasons and with different aims, his/her emotions.

However, as Mitchell states in his book *Iconology: image, text, ideology* (1986), material images and the imaginary should be considered as having equal ontological status, or as belonging to "the same category": "Wittgenstein's way of attacking mental imagery is not, however, the direct strategy of denying the existence of such images. He freely concedes that we may have mental images associated with thought or speech, insisting only that these images should not be

thought of as private, metaphysical, immaterial entities any more than real images are." (Mitchell 15)

Language is also another means of representation which constantly creates a parallel world, whether fictional or not, it is always in the place of something "other". Before the outset of (verbal) language, and more specifically, with the invention of linear writing, the circularity and the repetition of time and space invested images with magical power. This power came from the fact that "images mediate between men and the world" (Flusser 9); in the circular world of magic, there was an analogy between the level of reality and the "other" space represented, and one could act by analogy over the other. In a certain sense, the conception of the represented space as a "window" to another world by far precedes the invention of perspective and the limits of the frame. In this sense, the limits of the representation were a first, "outer" threshold: the first boundary between the physical/mental space and the projected/desired space of the image/magical world.

With the invention of linear writing approximately during the second millennium BC, the circular, magical world of images unfolds in the linear and chronological logic of history. In this process, humans move a level further away from the world: if until then the relationship between humans and the world was mediated by images, now there are also texts that explain those images, with the intention of stripping them of their magical force. Texts arise as a metacode of images, in the intention of making their meaning clearer (Flusser 9). This is when the second level of the threshold comes in: language opens the possibility to otherness inside the plane of representation.

As developed above, the threshold has been considered as a linguistic element that opens up to the appearance of otherness within a level of representation, therefore, the threshold not only conveys meaning, but also unfastens a significative dimension within the same plane of representation. As Flusser explains:

> "The significance of the image as revealed in the process of scanning therefore represents a synthesis of two intentions: one manifested in the image and the other belonging to the observer. It follows that images are not 'denotative' (unambiguous) complexes of symbols (like numbers, for example) but 'connotative' (ambiguous) complexes of symbols: They provide space for interpretation." (Flusser 11)

In this regard, Charles S. Peirce's theory of signs may be useful to advance a semiotics of the threshold. According to Peirce, meaning is a triadic relation between a sign, an object, and an interpretant (CP 1.345). He describes a sign or representamen as anything which denotes an object, and he defines an object as anything which can be thought. He defines an interpretant as the mental effect of a sign and as the signification or interpretation of the sign (CP 8.184). Actually, for Peirce,

every thought is a sign in itself, and signs a mediating between an external or material world of objects, and an internal world of concepts, or ideas. As is also well known, as part of his theory of signs, Peirce distinguishes three categories, or "modes of being", which give sense to all events and to all objects of thought, and he names them firstness, secondness, and thirdness. Firstness is defined as there being no regard for the other, secondness as correspondence to the/an other, for example, there is a reaction, and thirdness as the correlation between firstness and secondness: in thirdness there is mediation, or discourse. Firstness is the mode of being a possibility, but secondness is the mode of being a fact, and thirdness is the mode of being a sign or representation (CP 8.328).

If, as mentioned before, the threshold is a linguistic element conveying meaning, it is possible to think of a semiotics of the threshold assimilating the world to the realm of objects, and thus as part of a relationship of firstness: the imaginary, the mental quality of images, desire, as a sign and as part of a relationship of secondness, and the threshold as the boundary of a world of models, of simulacra, which works as the interpretant, and fully completing a relationship of thirdness.

At this point, it is possible to retrospectively consider the train of thought on the threshold in the light of the reflections advanced above following the list of questions introduced in the premise.

The sublime is the epiphenomenon of the crisis of the image, whose conceptual apparatus was built upon a platonic ground that positioned the image in a non-productive immanence, but that, in some ways, was participating in the transcendent sphere of the pure forms. Neo-Platonism and Christianity – starting from different foundations that later intersected –, solved the problem of participation by codifying the relationship between image and prototype, by which the "other", intrinsic to transcendence, is achievable by harsh paths. Until this moment, the threshold was the appearance of the division among different worlds, which, however, asked to be reunited by trespassing the threshold itself. Nonetheless, when the image returns to the subject during the 18th century, the theme of the absolute-other suddenly appears, a kind of otherness that can be reached only via pathos, not via logos anymore. Through this transition the threshold gains power: from being a trespassing tool, it becomes the boundary between two different worlds, the latter of which does not belong to the realm human finitude anymore.

When Nietzsche breaks into the philosophical scenario, the eternal return takes the position previously occupied by the platonic-christian world. Several decades afterwards, Deleuze situates the image into this new scenario through the notion of simulacrum. The simulacrum is image among images, out of the necessity of the Platonic hierarchy. The simulacrum unleashes the logic of the image from the logos, settling it into different conceptual universes: power, desire. In Flusser's analysis of the image, ab origine the threshold leaves the four-

dimensional world to join the bidimensionality of the image. From that moment on, when it appears, the threshold becomes the sign of an otherness now internal to the set of images, outlining a moment of transition between divergent exteriorizations of the imaginary.

Given this scenario, the threshold moves away from the ontological discourse to be confined to a linguistic territory. It designates the boundary between divergent series of simulacra. The threshold does not lose the substantial connection with the human being – understood in its evolutionistic and biological sense; it is not confined to the pure abstract plane of language. The threshold, instead, remains alive as a spy revealing the process of intrinsic differentiation generated by the imaginary.

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New media, old publicness

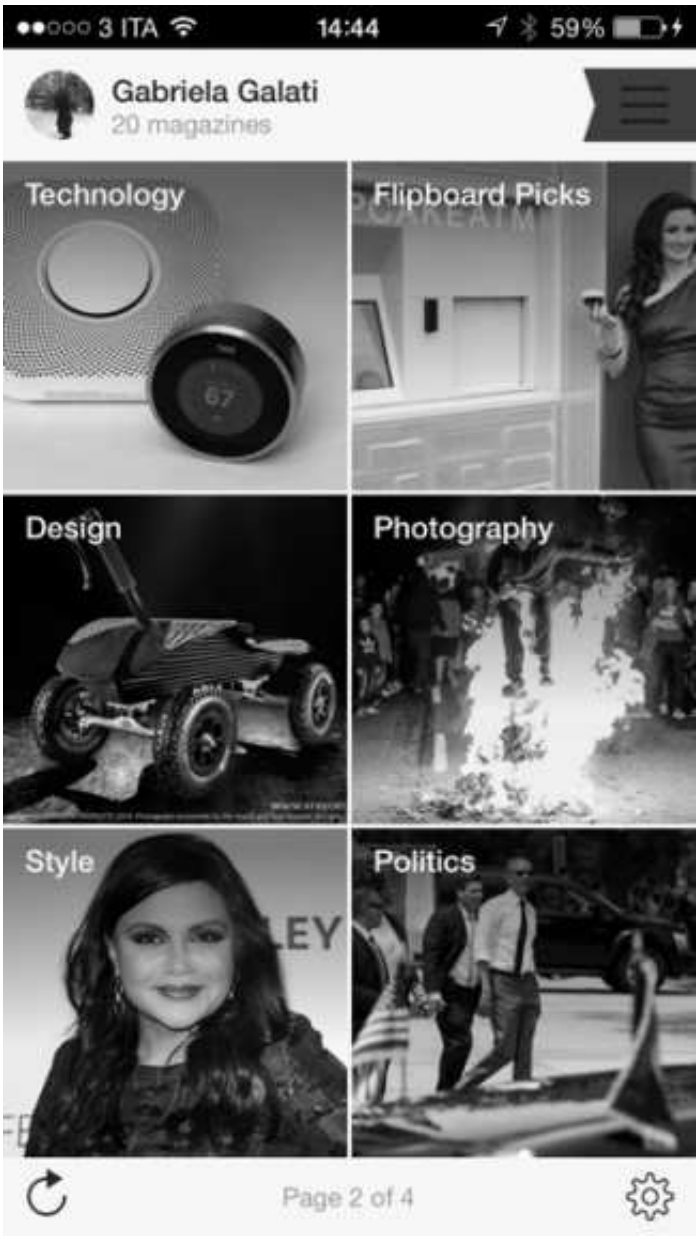
Gabriela Galati

Tra i fenomeni più recenti nei social media, quali i *selfie*, o i boom di alcune reti sociali e application, come instagram, twitter, o pinterest, è abbastanza sorprendente non trovare mai nominata un'app come flipboard. Questo articolo intende mettere in evidenza perché questo insuccesso meriti un'analisi approfondita.

Flipboard è strutturata intorno all'idea di "tiles", o "piastrelle", una ognuna delle quali funziona come un'icona che presenta l'accesso ad altre apps scelte dall'utente, come twitter, facebook, ma anche a temi generali, quali politica, moda, attualità, riviste e giornali particolari: Hufftignton Post, Elle, Vogue, The Guardian, Domus, etc. Da lì il suo nome, *flip*, che significa rovesciare, capovolgere. Toccando ogni piastrella si vedono prima alcune immagini dei post più recenti, poi si accede ai contenuti. Ogni utente decide quali temi, app, e riviste seguire.

Tutti questi compariranno come "tiles" che ogni lettore sceglie di capovolgere per leggere vedendo in anteprima gli ultimi titoli. Anche se la scelta di organizzare l'app in queste piastrelle può sembrare un po' arbitraria, il design è veramente pulito, e

i contenuti di ogni magazine sono esposti con una estetica curata e attraente. Un altro tratto interessante consiste nel fatto che flipboard privilegia il mondo dei portatili, sia smart phones che tablet, e snobba il web. In effetti, anche se è possibile sfogliare le riviste sul computer, l'effetto "piastrella" e "flip" si perde completamente.



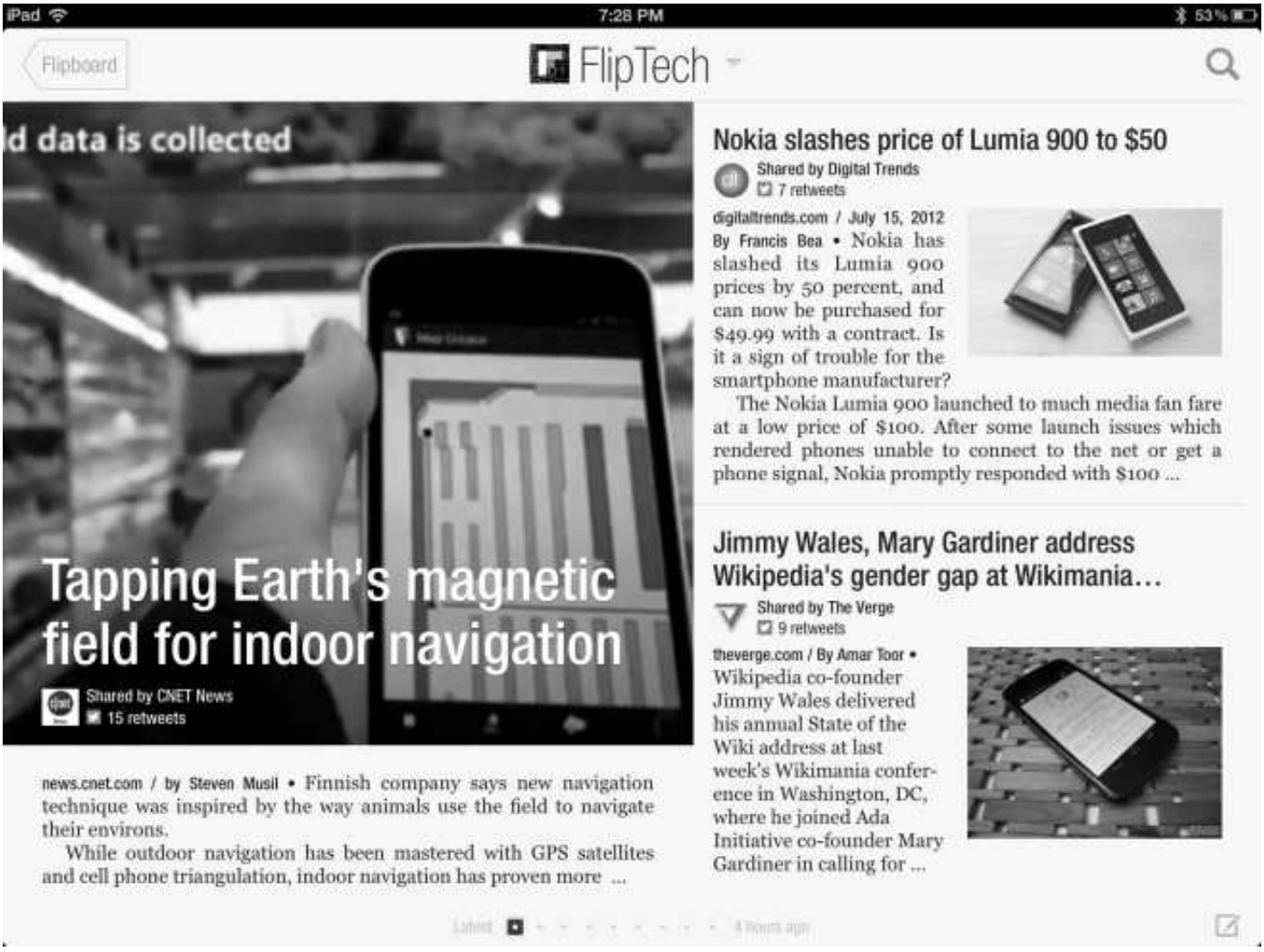
In *Postproduction. Come l'arte riprogramma il mondo* [2002, (2004)] Nicolas Bourriaud concepì la pratica dell'artista contemporaneo più come quella di un Dj che come un demiurgo creatore di mondi ex nihilo, cioè, come qualcuno che organizza "cose" già esistenti, presentandole in un ordine o contesto nuovo, e presenta questa scelta come la vera opera. Perciò, per Bourriaud, tutti i nuovi artisti sono in realtà curatori. Questa idea non è nuova: basti pensare all'operazione fatta da Marcel Duchamp nel 1917 con *Fountain*, su cui sono stati versati litri di inchiostro e su cui se ne verseranno ancora tanti, ma Bourriaud colse quello che c'era nell'aria, e non solo tra gli artisti più giovani.

In effetti, c'è sicuramente un abuso contemporaneo della parola "curatore", ed è facile percepire come ogni minimo avvenimento culturale che metta insieme una serie di cose o eventi, sia questo un libro, una mostra, o una festa è "a cura di" qualcuno. In questo senso, sembra ancora più significativo il fatto che una applicazione che fa di tutti gli utenti potenziali curatori di contenuti non abbia attirato ancora l'attenzione del grande pubblico. Infatti, la parte più interessante che offre flipboard è la possibilità di "seguire" riviste create da altri utenti, e crearne una nuova. In queste riviste ogni utente può salvare contenuti pubblicati da altri o da se stesso attorno a una certa tematica o interesse. Allora perché flipboard non è ancora "esplosa" né la troviamo tra i principali social media (e di conseguenza non è stata ancora acquisita da Zuckerberg per miliardi

di dollari)?

Tra le ipotesi più ovvie troviamo in primo luogo il fatto che l'esposizione dei contenuti non è così immediata come, per esempio, il raggruppamento delle immagini su pinterest o su instagram. In effetti, flipboard è più adatta al raggruppamento e pubblicazione di articoli che di singole immagini; il che, come è ovvio, implica l'impegno del tempo lungo della lettura.
In secondo luogo, anche se è possibile scegliere riviste da "seguire", non funziona tanto come un social network: anche se è possibile vedere quanti lettori si hanno per ogni magazine, non sempre, o meglio, quasi mai, si può sapere chi siano.
Inoltre, quest'app non sembra soddisfare così tanto i desideri narcisisti odierni d'esposizione personale, così ben esemplificati del fenomeno del *selfie*, come le altre app: infatti, flipboard serve per pubblicare contenuti, per lo più scritti, e bisogna anche un certo impegno per capire come farlo.

In realtà, queste tre ipotesi sono completamente interdipendenti e ci portano all'ipotesi principale, e cioè che il problema di flipboard è quello di essere un'app che ovviamente appartiene in maniera totale ai regno dei new media, ma in cui la modalità di rapporto con il pubblico che ogni utente sperimenta appartiene a quello dei vecchi media.



Per essere più chiari su questo punto bisogna far riferimento a un articolo pubblicato da Nancy K. Baym e danah boyd nel 2012 intitolato "Socially Mediated Publicness: An Introduction". In esso, le autrici, entrambe specializzate negli effetti delle reti sociali sui giovani e sui rapporti sociali, spiegano, tra altre cose, come la tecnologia, e specialmente i social media, sviluppi importanti differenze nei rapporti dei mittenti con le loro audience, in comparazione coi cosiddetti mass media, o media tradizionali.

Baym e boyd sviluppano il loro discorso a partire dalla differenza tra pubblico e audience, nella quale tradizionalmente il pubblico è considerato come più critico e indirizzato verso interessi concreti, mentre l'audience è considerata come una massa

aggregata di persone, più emozionali che razionale, e meno interessata in generale; per poi segnalare che la bi-direzionalità richiesta dai new media coinvolge ed esige una partecipazione da parte dell'audience in una maniera che, per esempio, la radio o la tv non richiedevano. In questo senso, anche se ovviamente la possibilità generalizzata di pubblicare è potenzialmente aperta ad una quantità di gente straordinariamente più ampia di quella aperta dai mass media tradizionali, e questo fatto appanna i limiti tra l'audience e i mittenti, allo stesso tempo proprio in ragione del coinvolgimento necessario non è detto che la quantità di audience sarà la stessa; o detto in altre parole, non è detto che sia strettamente "broadcasting".

Ma proprio per questo il punto più rilevante è che per i mittenti che trasmettono contenuti tramite new (social) media, la propria audience è molto più visibile che per i mass media tradizionali. Il fatto che la comunicazione sia veramente bi-direzionale fa molto più visibile, e controllabile, chi ci sta leggendo, guardando, scrivendo.
Questa caratteristica, che è alla base del successo di social media come instagram, facebook o pinterest, è quella su cui flipboard è tornata indietro, per così dire. Perché in flipboard, anche se esiste la possibilità di mettere "likes" e commentare, non sappiamo chi sta seguendo le nostre riviste, e quindi la visibilità della nostra audience è sparita come un tempo.

Come suggeriscono Baym e boyd, navigare i "contesti collassati", in cui il limite tra pubblico e performers non è così chiaro come quello delimitato dai mass media tradizionali, richiede strategie particolari e una consapevolezza crescente sulle sue possibili conseguenze (Baym-boyd 2012). In questo senso, sarebbe interessante cominciare a pensare, e sperimentare, nuove forme di publicness: forse la strada potrebbe essere qualche tipo di "publicness mista" – come quella suggerita dal modo di funzionamento sopra descritto, ma non solo – nella quale le vecchie forme di essere pubblici, di pubblicare e di considerare cosa significa avere un'audience alleggeriscano la pesantezza del narcisismo e della ossessione di controllo che molto spesso generano le nuove forme di publicness attraverso, soprattutto, l'accesso massivo alla produzione di contenuti e all'emissione di messaggi che permettono le reti sociali.

Riferimenti:

Baym, Nancy-boyd danah, 2012, Socially mediated publicness: An Introduction., Journal of Broadcasting & Electronic Media, 56:3,320-329
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https://flipboard.com/profile/gabrielagalati7

Tags dell'articolo: Face/Off Consumi Costume Design Politica Produzione Relazioni Società Tecnologia Articolo app artista contemporaneo contenuti curatore publicness reti sociali riviste selfie social media danah boyd Marcel Duchamp Nancy K. Baym Nicolas Bourriaud Flipboard

The Electronic Representation of Information: New Relationships between the Virtual Archive and its (Possible) Referent

ABSTRACT

"Our life is half natural and half technological. Half-and-half is good. You cannot deny that high-tech is progress. We need it for jobs. Yet if you make only high-tech, you make war. So we must have a strong human element to keep modesty and natural life." — Nam June Paik [1]

My present work focuses on the new relationship generated by electronic information between the virtual archive (the Web in a broad sense, certain specialized archives in particular) and its referent (material reality in general, museums, inter-art practices, and artworks in particular). It proposes that the relationship between information, its representation and the referent (or in other words, the relation between reality and the conceptual construction of reality) has to be re-thought.

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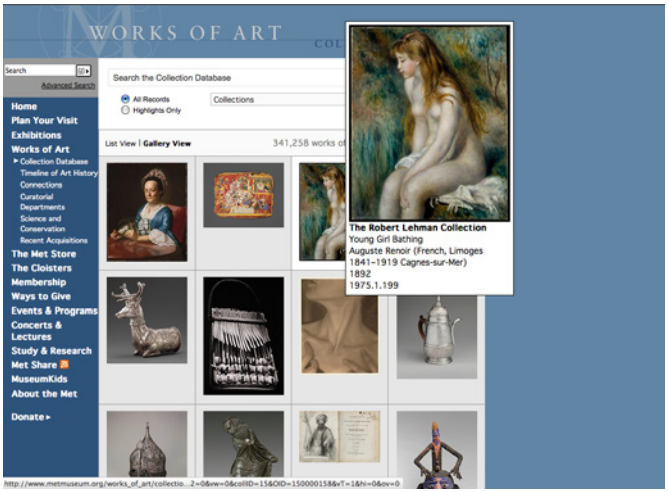

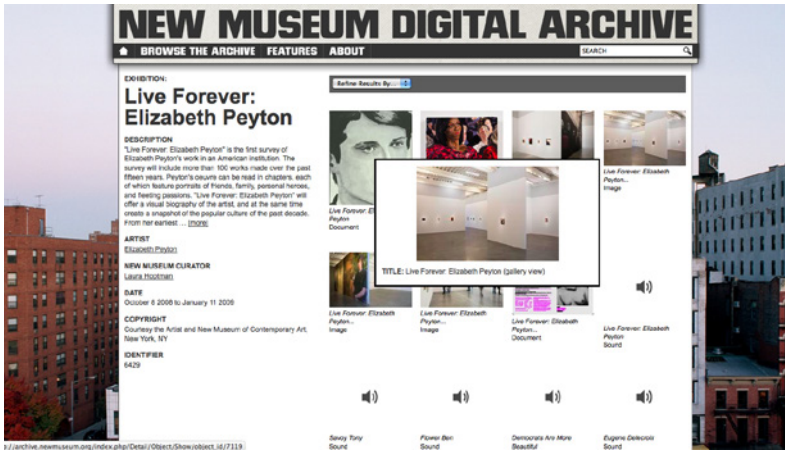

(Top left) screenshot: http://www.metmuseum.org/works_of_art/collection_database/ , (top right) screenshot: http://archive.newmuseum.org/index.php/Detail/Occurrence/Show/occurrence_id/930 , (bottom) screenshot: http://www.googleartproject.com/museums/reinasofia .

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Could it also then be said that some artworks are being produced to exist solely for the virtual archive?

lectics of seeing," represented by the positions of Walter Benjamin: namely, that photographic reproduction strips art of context and aura, and therefore its cult value and exhibition value are lost forever. In contrast, André Malraux claims that the museum guarantees art as such, and photographic reproduction offers the means to put together "the bits and pieces" into the meta-tradition of "style." [9]

If the museum guarantees the status of art and photographic reproduction permits stylistic affinities, what might a digital reordering encourage?

It is possible then that electronic information and digitalization establish new dialectics in which a museum's legitimatizing function is replaced by the virtual archive and/or museum/gallery websites?

Could it also then be said that some artworks are being produced to exist solely for the virtual archive? Moreover, has the time come when on-line documentation of exhibitions that never happened are created and presented?

At the same time, the influence goes in both directions – as Bolter and Grusin [10] described the process of "remediation" – from the digital to the material, in the ways artworks are documented, affecting the processes of legitimization (and probably also of production); and from the material to the digital, when the virtual is anchored to reality in the imitation, or realistic representation of it (especially three-dimensional space).

Without falling into modernist positions about the intrinsic possibilities of each medium, could we find a way in which the new archive can deal with art without imitating physical reality in the display? By exploiting the logic of the hyperlink – and thus of the "over-spill" and of ambiguity – can we create a non-linear, more experimental and open archive which each user could, ideally, build her/his own path through? The question of whether this 'freedom of choice' provided by hyperlink logic and the virtual database is only an illusion or a utopian realization of the medium has been widely discussed. However, even if not unlimited, the possibility exists and the medium undoubtedly offers a considerable degree of 'personalization' in the paths to follow through a database or archive.

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Sulla dicotomia interfaccia-database

Gabriela Galati

Nel suo articolo *Tesi sul racconto* lo scrittore e teorico letterario Ricardo Piglia propone l'idea che "un racconto narri sempre due storie". Nel caso del racconto classico (Edgar A. Poe, Horacio Quiroga), per esempio, lo scrittore "narra in primo piano la storia 1, e segretamente costruisce la storia 2. L'arte del narratore consiste nel cifrare la storia 2 negli interstizi della storia 1. Una narrazione visibile ne nasconde una segreta, raccontata in modo ellittico e frammentario" (Piglia n.d.). Ogni narratore gestisce in modo diverso il rapporto tra storia 1 e storia 2; tuttavia, la *Seconda tesi* di Piglia è che "la storia segreta sia la forma del racconto".

Giotto, Cappella degli Scrovegni (1303-1305)

Il presente articolo propone di pensare la (famosa) dicotomia tra interfaccia e database in termini di un rapporto tra storia 1 e storia 2. Con questo obbiettivo due approcci diversi ma possibilmente complementari saranno considerati: quello di Lev Manovich e Antonio Caronia.

Secondo Manovich “creare un’opera in new media può essere inteso come creare un’interfaccia che permetta l’accesso a un database. [...] Il database diventa il centro del processo creativo nell’era dei computer. Gli oggetti new media consistono in una o più interfacce al database di materiali multimediali” (Manovich 2001: 20).

Michelangelo Buonarroti, Cappella Sistina (1508-1512) Screenshot: http://www.vatican.va-various-cappelle-sistina_vr-index.html

Di conseguenza l'interfaccia diventa una "narrativa interattiva" che permette all'utente di attraversare il database seguendo il proprio percorso. Ad esempio, nei sistemi operativi Mac o Windows la narrativa della "scrivania" favorita viene preferita in opposizione ad un database nascosto. Come spiega Manovich (2001: 10):

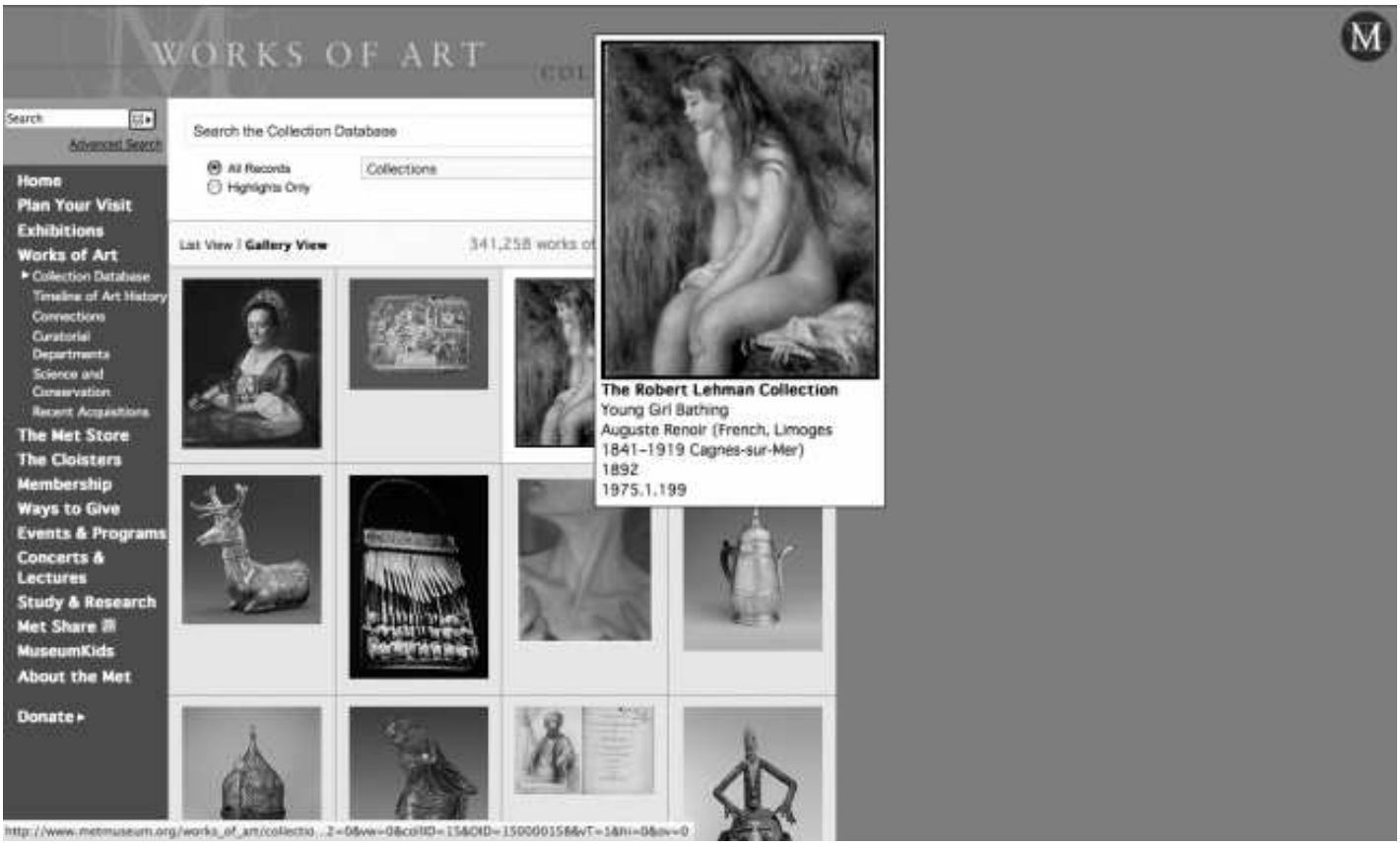
> Anche se gli oggetti new media si presentano come narrative lineari, narrative interattive, database o altro, al di sotto, al livello della organizzazione materiale, sono tutti database. [...] Più precisamente, un database può supportare la narrativa, ma non c'è niente nella logica del medium stesso che favorisca la sua generazione. Non sorprende allora che i database occupino un territorio significativo, se non il più vasto, nel panorama dei new media. Quello che sorprende ancora di più è perché nell'altro estremo dello spettro — le narrative — esistono ancora nei nuovi mezzi.

L'ipotesi di Manovich è che la dimensione narrativa (lineare) persiste perché la logica dominante del ventesimo secolo è quella del cinema. A questo punto bisogna aggiungere che la logica del cinema non è l'unica logica narrativa dominante. Le narrative sono pervasive nella cultura occidentale, filtrano le esperienze quotidiane in modo analogo a quello in cui i nuovi media filtrano tutta la produzione culturale, e aiutano anche a capire il mondo, a fare più accessibile lo sconosciuto.

Non è un caso allora che diversi teorici che investigano e scrivono su letteratura e narrativa abbiano anche affrontato temi che riguardano la tecnologia, o meglio, abbiano usato la letteratura e la teoria narrativa come modelli per capire meglio e cercare di spiegare non solo quello che i soggetti fanno con la tecnologia – reale o immaginaria – , ma anche quello che la tecnologia fa coi soggetti. Solo per nominarne alcuni: Brenda Laurel (1991), Janet Murray (1997), Katherine Hayles (1999, 2002, 2005, 2008), e in Italia, Antonio Caronia (2006, 2010). Nello stesso modo in cui la realtà virtuale funziona come un modello per la cognizione umana a molti livelli diversi, le narrative, le storie, i racconti di qualsiasi tipo sono in senso stretto una delle prime realtà virtuali create dall'uomo: il linguaggio, per così dire, è uno dei primi strumenti che permette la creazione di altri mondi.

Se il predominio di un paradigma temporale, lineare, cronologico coincise con l'ascesa della storia come disciplina umanistica nel diciannovesimo secolo, attualmente la logica del digitale sta riportando il paradigma spaziale, simultaneo, non lineare che era stato relegato allo status di cultura minore, o pop – come i comics, ad esempio (Manovich 2001). Ciò nonostante gli

antecedenti di questo paradigma nella cultura occidentale risalgono a diversi modelli, come alcuni cicli di affreschi ecclesiali, specialmente nelle cappelle, e in altri modelli spaziali immersivi che permettevano una lettura non lineare, e che allo stesso tempo che puntavano, con questa stessa "tecnica immersiva", a un maggiore coinvolgimento emotivo dell'osservatore – esattamente come la realtà virtuale.



Screenshot: http://www.metmuseum.org/works_of_art/collection_database/

Analogamente, e seguendo ancora Manovich, le dinamiche tra database e interfacce possono essere paragonate al modello semiotico del paradigma e del sintagma, secondo il quale gli elementi di un sistema possono essere messi in relazione in due dimensioni: sintagmatica e paradigmatica.

Screenshot: http://archive.newmuseum.org/index.php/Detail/Occurrence/Show/occurrence_id/930

Negli oggetti culturali "tradizionali", come la narrativa e il cinema, gli elementi della dimensione sintagmatica sono espliciti, i.e. si leggono tutte le parole appartenenti ad una frase; mentre la dimensione paradigmatica è implicita, i.e. tra tutte le scelte possibile tra tutti i sinonimi di una parola, solo una viene incluse nella frase. Di conseguenza, la dimensione sintagmatica ha una certa "materialità", mentre quella paradigmatica rimane "potenziale" o virtuale. Tuttavia, nei new media questo rapporto viene invertito: il database è presente, perché tutti gli oggetti new media sono database in ultima istanza; e la dimensione sintagmatica è quella volatile, la narrativa della interfaccia dipende sempre dall'utente, ed è sempre diversa, ri-creata ogni volta da capo.

Screenshot from Halo 3: http://www.hightech-edge.com/halo-3-game-review-video/1426/

Perciò la lettura proposta sul rapporto tra interfaccia e database si può sintetizzare come segue:

Storia 1) Interfaccia (narrativa)-sincronia-sintagma;

in rapporto con

Storia 2) Database-diacronia-paradigma.

La storia 1, la interfaccia, sarebbe nascosta negli interstizi della storia 2, il database. Il punto rilevante per questo tema è allora la *Seconda tesi* di Piglia, cioè, che "la storia segreta è la chiave della forma del racconto". Come è ben noto, ci sono oggetti new media che favoriscono specialmente l'aspetto narrativo, il che è ovvio nei videogames ad esempio; altri invece mostrano il database in maniera più aperta, come è il caso delle biblioteche o librerie online. Ciò nonostante, per la maggior parte, questi oggetti sono un combinazione di entrambi, in cui l'interfaccia "racconta una storia" che garantisce, o aiuta, nell'accesso a un database nascosto.

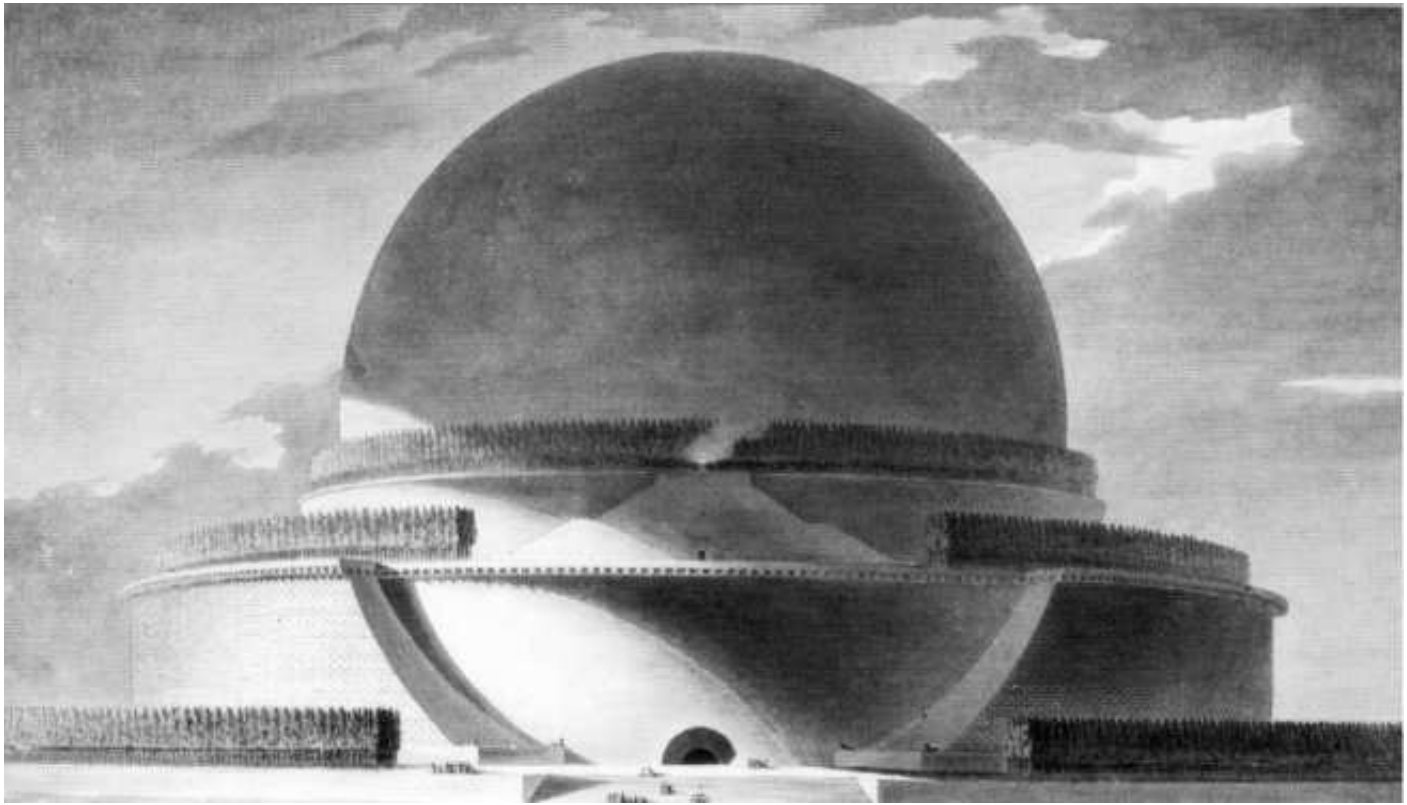
A questo proposito nel suo articolo *L'inconscio della macchina, ovvero, come catturare il significate fluttuante* (2006), Antonio Caronia propone di pensare ad una "estetica del database" in cui non c'è opposizione, in cui non ci dovrebbe essere una "storia nascosta", ma un intreccio coerente tra i due, e influenza reciproca. Quindi l'idea di avere due storie, o logiche, separate deve essere superata in favore di un rapporto senza storie nascoste, senza divisioni né gerarchizzazioni tra interfaccia e database (Caronia 2006: 2):

> Vorrei infatti proporre l'idea che il design dei media interattivi e digitali in genere debba necessariamente basarsi su una integrazione molto stretta fra interfaccia e database (per utilizzare una dicotomia usata dallo stesso Manovich), e che le intenzioni espressive, per così dire, delle opere e dei processi digitali non siano più di competenza esclusiva del livello dell'interfaccia, ma influenzino anche la loro "struttura profonda" (che possiamo metonicamente identificare nel database). In altri termini, se mi è consentito il ricorso a un vocabolo sempre più equivoco, suggerirei che ci sia un'estetica del database, e non più solo dell'interfaccia.

Leggere questa dicotomia tra database e interfaccia in termini di storia 1 e storia 2 può aiutare a sviluppare un modello complementare per svelare i modi nei quali uno codifica l'altro; e in seconda istanza può rendere possibile un approccio come quello proposto da Caronia nel quale database e interfaccia sono interdipendenti e uno dà senso all'altro. La pertinenza di questo approccio, come proposto in un articolo precedente, sta nel fatto che le interfacce mediano potenzialmente tutti le produzioni culturali a cui si può accedere, per non parlare delle attuali forme di comunicazione, e, come tali, formano il modo in cui ogni uno percepisce e decodifica il mondo, sia esso fisico o digitale. Come capita molto spesso, l'arte – di qualsiasi tipo – può provvedere uno spunto sui possibili percorsi a seguire.
E la conclusione, non può che essere quella di Piglia (Piglia n.d.):

> Il racconto è costruito per fare comparire in maniera artificiale qualcosa che era nascosto. Riproduce la sempre rinnovata ricerca di una esperienza unica che ci permetta di vedere, sotto la superficie opaca della vita, una verità segreta. "La visione istantanea che ci fa scoprire lo sconosciuto, non in una terra lontana, ma nel cuore stesso dell'immediato", disse Rimbaud.
> Quella illuminazione profana è divenuta la forma del racconto.

Copyediting versione italiana: Amos Bianchi.
Le traduzioni di Manovich e Piglia sono di Gabriela Galati



Etienne-Louis Boullée, Projet de cénotaphe à Newton (1780-93)

Tags dell'articolo: Face/Off Arte Letteratura Tecnologia Articolo new media Antonio Caronia Brenda Laurel Janet Murray Katherine Hayles Lev Manovic Riccardo Piglia

Interfacce: da Brunelleschi a iOS8

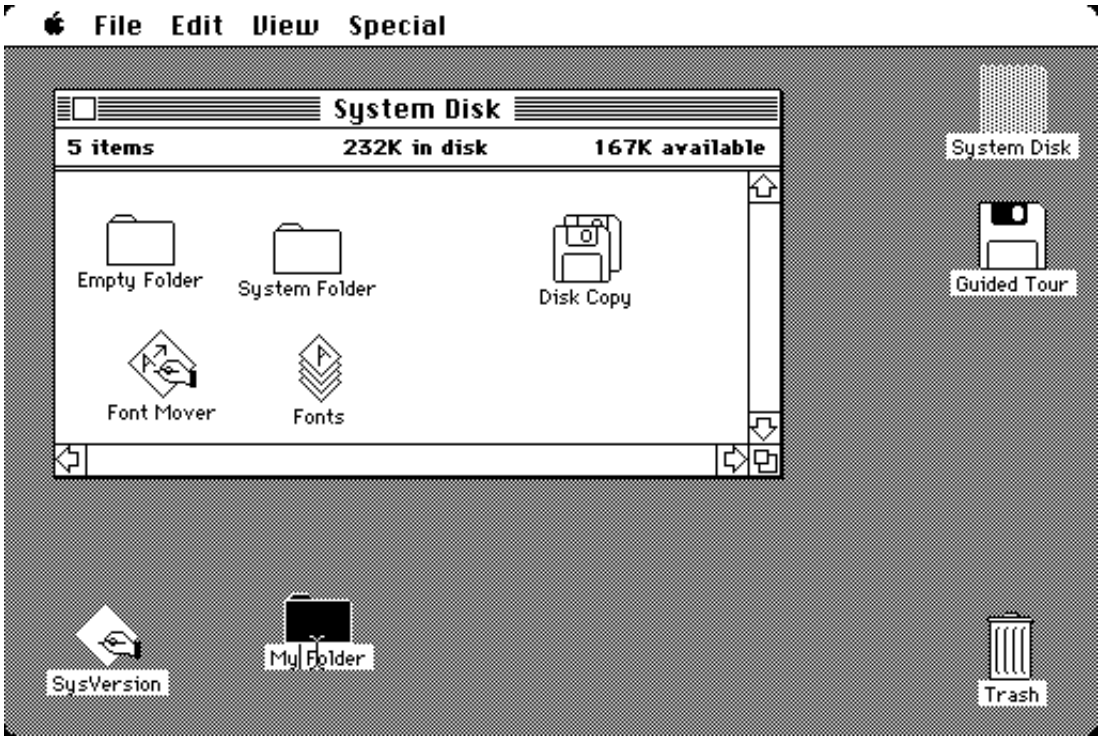
Gabriela Galati

Un'importante riflessione contemporanea è come la tecnologia, e più specificamente le interfacce, possa dare forma alle nostre modalità di percezione e interazione, e quindi alla nostra realtà quotidiana, attraverso le proprie *narrative* e forme di rappresentazione. È un tema vasto, e questo breve articolo si concentrerà sulla evoluzione della GUI (Graphic User Interface) della Apple confrontandola con l'evoluzione della rappresentazione dello spazio tridimensionale nell'arte occidentale per derivarne alcune conclusioni – e anche porre alcune domande.

Nel 1984 Apple lanciò il primo personal computer Macintosh dotato di Graphic User Interface, e con esso, il primo sistema operativo reclamizzato in una pubblicità di Ridley Scott ispirata al romanzo di George Orwell 1984:

Apple 1984 Super Bowl Commercial Introducing Macint...

Il sistema operativo includeva la ora onnipresente metafora della scrivania: una narrativa che costruisce la finzione del computer come continuazione della scrivania "materiale", nella quale gli utenti hanno cartelle in cui tenere i documenti, un cestino per buttare via la spazzatura, e così via. In precedenza, l'utente doveva essere in grado di programmare, di scrivere linee di codice, almeno minimamente, per poter interagire col computer.



Mac OS1

Se è vero che la narrativa della scrivania è più *user friendly*, è anche vero che è una finzione: non ci sono un "cestino", né "cartelle", né "documenti" dietro l'interfaccia, ma linee di codice che il computer traduce in zeri e uno. L'utente esercita una quantità di operazioni "finte" come se stesse utilizzando gli elementi presenti in un ufficio, e non ha la minima idea di cosa stia veramente facendo il computer.

Una parte di questo problema ha a che vedere con il tema del *software open-source* vs. *software a pagamento*: si deve avere un certo livello di conoscenze specifiche di programmazione per operare con Linux, e certamente questo non facilita le cose a

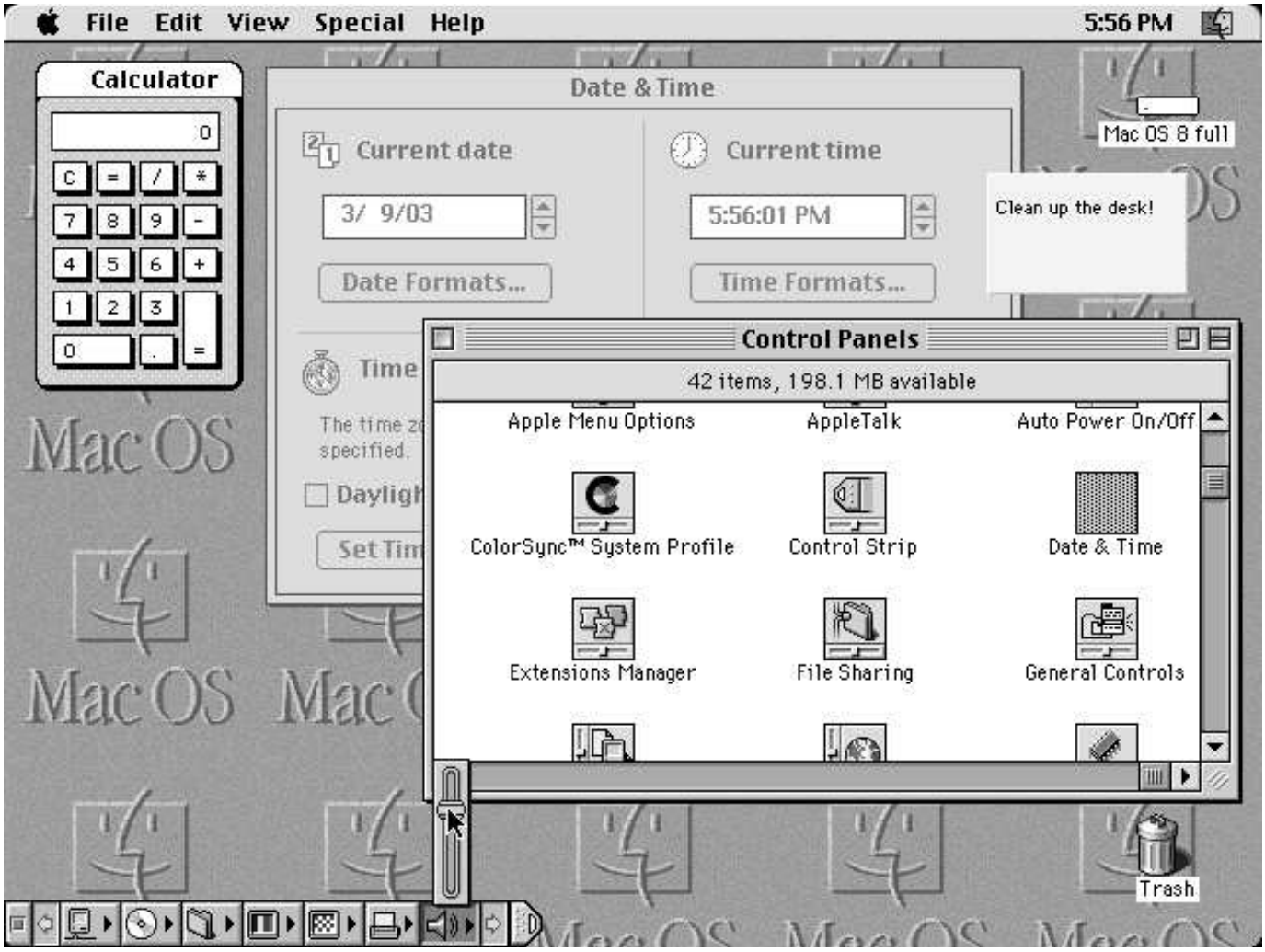
tutti in termini di tempo e capacità; invece Macintosh o Microsoft “nascondono” ai loro utenti come funziona il sistema, ed eventualmente, come ripararlo o migliorarlo. Linux è un programma aperto e gratis, ed è il risultato della collaborazione tra migliaia di utenti/hackers che l´hanno migliorato usandolo. Questo tema è stato seriamente trattato e approfondito da Neal Stephenson nel suo articolo *In the Beginning was the Command Line* (1999).

Il presente articolo, invece, vuole trattare un altro aspetto del problema pensandolo in termini di rappresentazione: rappresentazioni che vengono generate dalle condizioni sociali e materiali del presente momento storico, e che stanno allo stesso tempo formando le maniere di percepire e di pensare. Se la prospettiva geometrica come sistema di rappresentazione dello spazio tridimensionale è potuta nascere durante il Rinascimento italiano, essa da allora ha conformato il modo in cui il mondo occidentale percepisce e produce la rappresentazione dello spazio in ogni campo.

Questo è particolarmente evidente nell’evoluzione della rappresentazione di qualsiasi tipo di narrativa nel digitale. Per dirla con Lev Manovich, ciò che si sceglie di rappresentare, e in quale modo, privilegia una visione del mondo tra molte, e quindi tale scelta, anche se può essere più o meno consapevole, non è mai innocente né tanto meno innocua.

Per quanto riguarda Apple, come è risaputo, la compagnia lanciò la GUI nel 1984 con una interfaccia che esponeva quello che potrebbe chiamarsi una *estetica modernista*, chiara e funzionale, che evitava ogni illusionismo: l’utente poteva interagire col computer tramite rettangoli neri su uno sfondo bianco (conosciuti in seguito come “finestre”), e non c’era nessuna pretesa di imitare volumi, né ombre (nei pulsanti, per esempio).

Un *quaderno di note* era un rettangolo delimitato da bordi neri in cui si poteva scrivere, ma non simulava la pagina gialla di un quaderno, con righe e margini, come sarebbe stato più tardi il caso del “Notes App” dell’iOS per iPad. In poche parole: fino a quel momento la metafora della scrivania si trasmetteva tramite rappresentazioni più o meno schematiche del cestino, delle cartelle, etc. in piccole immagini chiamate “icone”.



Mac OS8

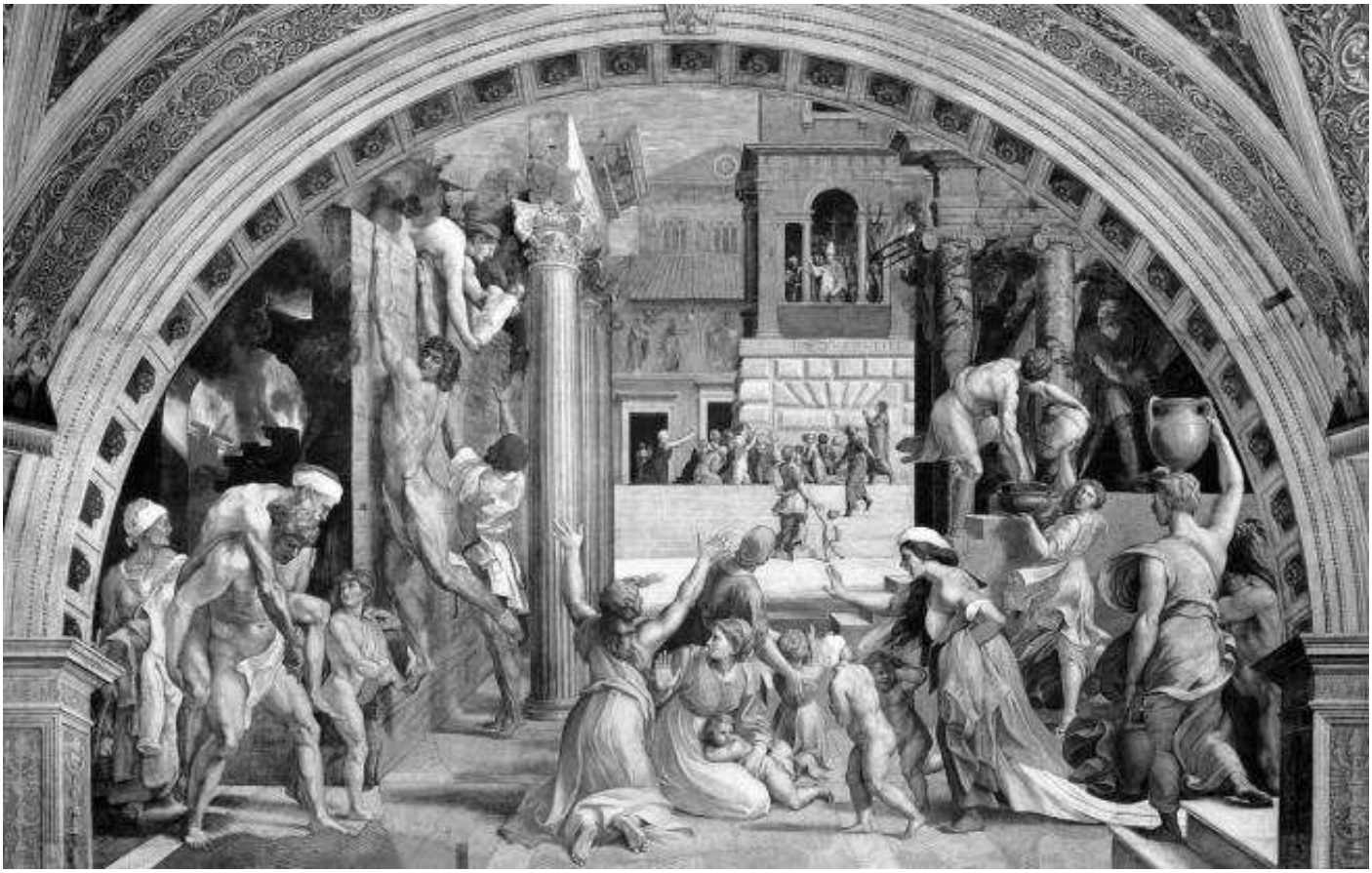
Man mano che i sistemi operativi si aggiornavano e miglioravano, la volontà di illusionismo cominciò ad aumentare. Ad esempio, nel Mac OS8 sul mercato dal 1997, a parte l'inclusione del colore già effettuata nel System 7 il cestino cominciava ad acquisire un certo volume, e i pulsanti della calcolatrice proiettavano un'ombra. Si può dire che era ancora tutto molto sintetico, ma si percepiva una crescente intenzione di rappresentazione tridimensionale degli oggetti.

Nei termini della semiotica di C.S. Peirce, si potrebbe considerare che era in corso un passaggio dalla rappresentazione simbolica a quella iconica: mentre nelle prime versioni il rapporto tra le rappresentazioni (segni) con il referente manteneva alcuni tratti salienti ma non era necessariamente similare, nelle versioni più recenti il livello di realismo stava crescendo fino a permettere un riconoscimento diretto dell'oggetto rappresentato. È solo in questo momento che l'icona della scrivania coincide con l'icona semiotica.

Si può fare poi un parallelismo con l'evoluzione della rappresentazione dello spazio nella storia dell'arte occidentale, e considerare che l'OS1 corrispondeva al periodo dell'uso della prospettiva gerarchica nella storia della pittura (medievale), nella quale gli oggetti si rappresentavano secondo la loro importanza e significato, senza cercare di trasmettere un senso realistico dello spazio. L'OS8 invece è più vicino al Rinascimento e all'invenzione della prospettiva lineare da parte di Filippo Brunelleschi (1377-1446) e della sua codifica scientifica da parte di Leone Battista Alberti (1404-1472).

Michelangelo Buonarroti, Cappella Sistina (Ignudi) (1508-1512)

Tuttavia, il perfezionamento di questa tecnica non si è arrestato allora, e dal periodo conosciuto come Alto Rinascimento, e più tardi Manierismo, gli artisti che lavoravano in Italia cercarono di esporre al massimo le loro abilità tecniche, e tramite queste, la rappresentazione di spazi estremi ed impossibili. Si considera che questo periodo cominci con le posture assai complesse degli ignudi della Cappella Sistina dipinta da Michelangelo.



Raffaello Sanzio, Incendio di Borgo (1514). Stanze Vaticane, Roma.

Ma una delle caratteristiche principali del Manierismo, oltre al grande virtuosismo, è lo spostamento dell'azione principale all'interno della composizione in una posizione secondaria in relazione al tema dell'opera, o persino verso il fondo, come per esempio succede nell'*Incendio di Borgo* (1514) di Raffello Sanzio in una delle Stanze Vaticane.

Bronzino (Agnolo di Cosimo), Allegoria del trionfo di Venere (1540-1545)

Molto spesso, il tema dell'opera era difficile da decifrare, e gli spazi e le figure dipinti erano incoerenti o molto distorti, come ad esempio è il caso di *La Madonna dal collo lungo* (1534-1540) del Parmigianino, o l'*Allegoria del trionfo di Venere* (1540-1545) del Bronzino. Perciò, in un certo senso, le rappresentazioni manieriste tendono a spostare l'attenzione dal nucleo più importante, o pertinente, a sezioni confuse, altamente finzionali e distorte della composizione.

Parmigianino (Girolamo Francesco Maria Mazzola), La Madonna dal collo lungo (1534-1540)

Seguendo la linea di pensiero esposta sopra, dal Mac OSX in poi, comincia quello che può facilmente identificarsi come il "periodo manierista dei sistemi operativi". Se il Manierismo nelle arti visive ebbe le sue ragioni di esistere e certamente non può essere giudicato come giusto o ingiusto, nemmeno è il caso per i sistemi operativi; tuttavia, trattandosi di una interfaccia attraverso la quale potenzialmente tutte le nostre produzioni culturali vengono filtrate oggi – cinema, musica, testi, comunicazione, etc. etc. (Manovich 2001: 75), questa situazione appare meno innocente, e deve sicuramente essere considerata con più attenzione.

Mac OSX Leopard

Uno dei tratti più manieristi, e inutile, che ha introdotto l' OSX è l'amplificazione e deformazione del "dock" che ha, ancora oggi, una certa "profondità" e "riflette" l'icona dei programmi su di sé. Mentre tutti questi dettagli "digitalmente virtuosi" possono essere più o meno interessanti, o esteticamente piacevoli per ogni individuo – nello stesso modo in cui la *Madonna dal collo lungo* può sembrare una figura troppo distorta per alcuni, e perfetta per altri – essi certamente distraggono l'attenzione da quanto sta veramente succedendo dietro l'interfaccia.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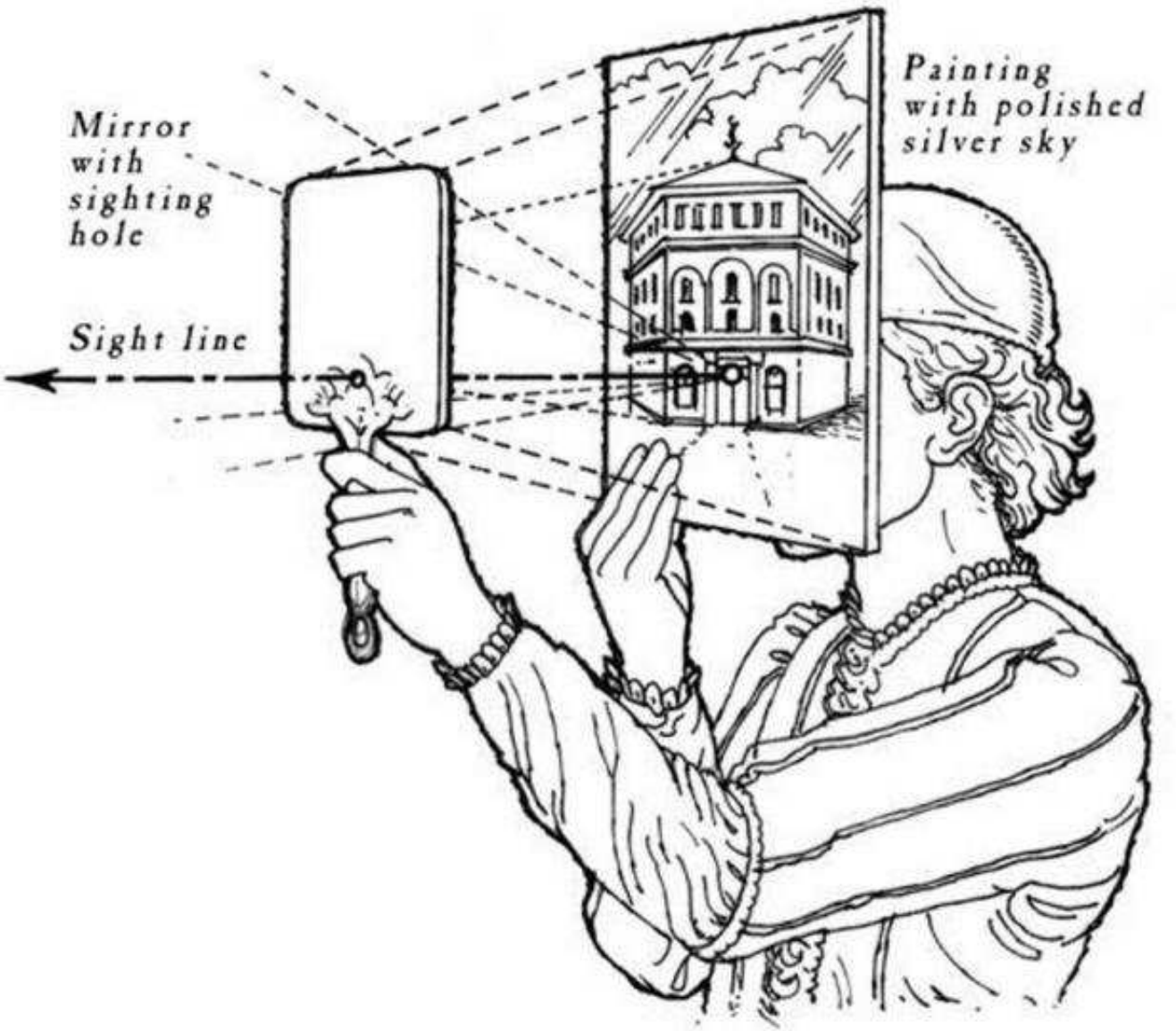
Mac iOS7

Tuttavia, come propone Henri Focillon nel suo canonico testo *Vie des formes* (1934), nel iOS7 per iPhone, iPad, etc. c'è ancora un ritorno al simbolismo degli origini. In molte delle sue caratteristiche, il nuovo iOS torna alla interfaccia GUI "modernista" originale: non c'è più un "finto" senso di profondità espresso tramite la proiezione di ombre dei pulsanti, per esempio; ogni icona è schematica e presenta la quantità d'informazione necessaria per riconoscerla; non imita pagine di libri di appunti di colore giallo; se anche le icone sono colorate, la maggior parte delle *apps* che include il nuovo iOS7 sono quasi completamente monocrome. L'estetica del disegno grafico è estremamente curata, ma in un certo senso le versioni "manieriste" precedenti sono state semplificate e limitate alle loro necessità funzionali. Un ritorno appunto all'estetica e alla logica modernista.

Ciò nonostante la vecchia dicotomia, che è una parte importante delle problematiche presentate in questa sede, rimane: il rapporto tra interfaccia e database. Se l'apparenza dell'interfaccia è stata pulita da una gran parte dei propri dettagli illusionistici e fuorvianti, se non tutti, ed è divenuta più trasparente, c'è comunque ancora una interfaccia che vela quello che veramente sta succedendo nel database, la parte più essenziale della macchina. Come si può risolvere questa tensione? È veramente quella la direzione che i sistemi operativi stanno prendendo? Perché? Sarebbe interessante rispondere a queste domande, ma nemmeno questo sarà sufficiente.



Tags dell'articolo: Face/Off Architettura Arte Segni / simboli Tecnologia Articolo interfaccia C.S. Peirce Filippo Brunelleschi George Orwell Henri Focillon Leone Battista Alberti Lev Manovich Neal Stephenson Raffaello Sanzio Ridley Scott Apple Graphic User Interface Macintosh

Non-Linear Models: Camillo's Theater of Memory & Warburg's Mnemosyne Atlas as Archive Models for the (Virtual) Conservation and Communication of Knowledge

Gabriela Galati

The 'idea of the Theatre' was fundamentally a structure of conceptual relationships rather than an actual building that Camillo understood as a spatial representation of chronology.
Warburg's 'Mnemosyne Atlas' project is centered on images: It is aimed at creating relations and bringing memories in rapport with each other.
Both models share stunning and almost predictive similarities with the actual Web, where the possibility of accessing knowledge has an analogous structure even if the materiality of the support is different for obvious reasons. The interest in the concept of ambiguity in this regard lays in the freedom it could open for a potential lecture that at the same time allows the possibility of triggering new relations and creative associations, opening conceptual paths that have not yet been considered; the aperture and simultaneity of non-unilateral models for (creative) thought allows the reconstruction of the Theater, or the Atlas, not as a 3D illusion, but as the conceptual architecture or structure when thinking about the history of art, on the history and theory of new media, and on the transmission, conservation and archiving of new media works and of knowledge in general.

non-linear model - art history - new media history - hyperlink - ambiguity

In his book What is the Cinema? (1971) André Bazin comments on the search for "transparency" in the use of montage in the prewar classics of American cinema:

The use of montage can be "invisible" and this was generally the case in the prewar classics of the American screen. Scenes were broken down just for one purpose, namely, to analyze an episode according to the material or dramatic logic of the scene. It is this logic, which conceals the fact of the analysis, the mind of the spectator quite naturally accepting the viewpoints of the director, which are justified by the geography of the action or the shifting emphasis of dramatic interest. But the neutral quality of this "invisible" editing fails to make use of the full potential of montage.
(Bazin 1971)

Moreover, Bazin explains the implications of the use of montage, of the use of the close-up and of the abandonment of the depth of field as an aesthetical choice that also has further significance: The director began to choose and decide for the viewer what was important, what has to be paid attention to, 'through the contents of the image and the resources of montage, the cinema has at its disposal a whole arsenal of means whereby to impose its interpretation of an event on the spectator' (Bazin 1971: 26). The spectator would no longer need to think, because what was relevant and what deserved attention in a certain story was being chosen for him.

The fact that depth of field puts the viewer in a closer relationship with the image than the one which s/he has in reality makes the experience even more realistic, according to Bazin. This implies the need for a more active mental attitude from the spectator and therefore that s/he has to put into practice at least a minimum of personal choice; the meaning of the film is thus completed by the viewer, and not presented to her/him as already closed.

> This is why depth of field [...] is a capital gain in the field of direction - a dialectical step forward in the history of film language. [...] In addition to affecting the structure of film language, it also affects the relationship of the minds of the spectators to the image and in consequence it influences the interpretation of the spectacle. [...] In short, montage by its very nature rules out ambiguity of expression.
> On the other hand, depth of focus reintroduced ambiguity into the structure of the image if not of necessity.
>
> (Bazin 1971)

The importance of ambiguity as part of a new model of thinking of new media models lies in the freedom it could open for diverse interpretations, and the aperture that at the same time allows the possibility of triggering new relations and creative associations, opening paths that were not yet considered, as non-linear thinking.

Non-Linear Models

There are two projects, which even if very distant in time, share stunning and predictive similarities regarding the logic of the actual World Wide Web: the 'Theatre of Memory' by Giulio Camillo (1480-1544) and Aby Warburg's (1866-1929) 'Mnemosyne Atlas' project.

Giulio Camillo was an Italian philosopher, and according to Frances Yates, he 'was one of the most famous men of the sixteenth century' (Yates 1966). Yates quotes Viglius Zuichemus, who in 1532, wrote in a letter to Erasmus

> that everyone was talking about a certain Giulio Camillo. 'They say that this man has constructed a certain Amphitheatre, a work of wonderful skill, into which whoever is admitted as spectator will be able to discourse on any subject no less fluently than Cicero. [Ö] It is said that this Architect has drawn up in certain places whatever about anything is found in Cicero'.
>
> (Yates 1966)

Camillo dedicated most of his life to the planning and construction of a Theater that would allow the people going into it to access all knowledge about the universe. The 'idea of the Theatre' was fundamentally a structure of conceptual relationships rather than an actual building that Camillo understood as a spatial representation of chronology. In Camillo's system, scholars (the "users" of the theatre) become spectators. Above all, he conceived of the Theater as the ideal of pedagogy: the ideas and memories it would trigger would be for the education of the spirit above all.

Camillo planned the Theater organizing it in seven sections that map the creation of the world. Seven pillars that are those of Salomon's House of Wisdom, symbolize eternity. In Camillo's system scholars (the users of the theatre) become spectators.

> The Theatre rises in seven grades or steps, which are divided by seven gangways representing the seven planets. The student of it is to be as it were a spectator before whom are placed the seven measures of the world 'in spettaculo', or in a theatre. And since in ancient theatres the most distinguished persons sat in the lowest seats, so in this Theatre the greatest and most important things will be in the lowest place.
>
> (Camillo 1554)

He adapted the model of the real Vitruvian classical theatre to mnemonic purposes.

> The Theatre is thus a vision of the world and of the nature of things seen from a height, from the stars themselves and even from the supercelestial founts of wisdom beyond them.
> Yet this vision is very deliberately cast within the framework of the classical art of memory, using the traditional mnemonic terminology. The Theatre is a system of memory places, though a 'high and incomparable' placing; it performs the office of a classical memory system for orators by 'conserving for us the things, words, and arts which we confide to it.' Ancient orators confided the parts of the speeches they wished to remember to 'frail places', whereas Camillo 'wishing to store up eternally the eternal nature of all things which can be expressed in speech' assigns to them 'eternal places'.
> (Yates 1966: 144)

So, the use of "loci" of the classical mnemonic techniques was replaced in Camillo's theater by "eternal places", which are the figures located in each level of it. This theatre was based on the principles of the classical art of memory, but in this building Camillo wanted to reproduce the order of eternal truth; 'in it the universe will be remembered through organic association of all its parts with their underlying eternal order' (Yates 1966: 147). He thought that everything that the human mind could conceive, even if not necessarily in the field of physical perception, could be put together through serene mediation and then expressed 'may be [...] by certain corporeal signs in such a way that the beholder may at once perceive with his eyes everything that is otherwise hidden in the depths of the human mind. And it is because of this corporeal looking that he calls it a theatre' (Yates 1966: 147).

Camillo's project is not a narrative model, but one in which the access to knowledge, and even more importantly, the triggering of ideas in the user can be accessed from different angles without the obligation of following a linear and unilateral path. Camillo's Theatre also implies the idea of spatialization: The chronological and syntagmatic logic/representation of (art) history shifts in a simultaneous and paradigmatic (spatial) logic/representation, in a similar fashion to computer logic. This does not necessarily means proposing a model for a program for a 3D representation of space in computer graphics, but suggests that these models are useful in the conception of a new ecological model of new media models.

In his conference 'Aby Warburg (1866-1929). The Survival of an Idea' Mathias Bruhn talks about Warburg's 'Mnemosyne Atlas', observing

> Warburg was a technophile. He was interested in telecommunication, the press and traveling; all these new technologies enabled new forms of traveling, but also prolonged the old idea of migration that connected civilizations from the beginning. Technology, for example in the form of printing, was also the direct link between Dürer's engravings and the 28 telephones in his avant-garde library building. He had already written an article entitled 'Airship and submarine in medieval imagination' that suggested that former societies had anticipated what he called 'vehicles of thought' and imagination that we dispose of today. Images were their vehicles.
> (Bruhn n.d.)

Remarkably, in the same way Warburg interpreted some medieval images as predictive of the airplane and submarine, his whole library project, but especially his 'Mnemosyne Atlas', predicted the logic of the hyperlink and of the Web.

The 'Mnemosyne Atlas' is centered on images: a figurative atlas composed by more than two thousand plates or screens; each plate is formed by photomontages on wooden boards that bring reproductions of different works, especially from the Renaissance, as well as an archeological repertoire and visual material from daily life, such as newspapers.

The project was born from Warburg's own non-linear thinking and thus from his need of presenting simultaneously, almost three-dimensionally, all kinds of relations and multiple forms of classification of images during his conferences and while writing and studying. So, the 'Mnemosyne Atlas' was aimed at creating relations and bringing memories in rapport with each other, not only in a linear, but also in a concomitant and transversal fashion. It was due to Warburg's need of combining (linking) heterogeneous elements, categories, and his need of accessing these elements simultaneously.

These models, as utopian projects, as they might be considered, share incredible and almost predictive similarities with the

actual Web, where the possibility of accessing knowledge has an analogous structure even if the materiality of the support is different for obvious reasons. The return of simultaneous and non-linear logic foregrounds the continuity between art history and new media art history, in which the undermining of the linear model through the return of a synchronic paradigm allows a more experimental way of thinking about the whole field. The medium itself dictates the methodology for approaching the object of study, and thus the hyperlink logic, generates the appropriate system for the archival and diffusion of knowledge within it.

In this regard, the interest of ambiguity lays in the freedom it could open for a potential lecture, which at the same time allows the possibility of triggering new relations and creative associations, opening conceptual paths that were not yet considered in non-linear thinking; the aperture and simultaneity of non-unilateral models for (creative) thought allows the "reconstruction" of the Theater, or the Atlas, not as a 3D illusion, but as the conceptual architecture or structure in the transmission of, and access to, knowledge.

This fact opens the possibility to the proposal of a non-linear model when thinking on the history of art, on the history and theory of new media, and on the transmission, conservation, documentation and archival of new media works and of knowledge in general. It could also be the starting point for a new conception of the museum, in which the theoretical framework of research and display, takes a similar shape of its object of study.

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ON GENUS

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Presence, telepresence, images and the self[1]

ABSTRACT

In the same way that humans have always had the need for inventing fictional and virtual worlds, they have also experimented an attraction for the threatening and fascinating ideas of the doppelgänger, automata, and by the related phenomena of desembodiment, ubiquity, remote viewing, bilocation, splitting personalities. *The phenomenon of* bilocation*, for instance, has been widely mentioned in different philosophical and religious systems such as Shamanism, Christian mysticism, Hinduism, Paganism and others as the ability that some individuals (often saints, monks or mystics) would have of being in two, or more, places at the same time. The advent of the Internet, new technologies and social networks has opened up new and unexpected possibilities in this respect, enabling one to expand oneself. If not long ago, these experiences had to be 'lived' through cinema and literature; today, it is possible to undergo them in first person: everyone is allowed to create other selves, other profiles, avatars, entities or doppelgängers that can operate in the world (remotely) as extensions of him or her. Consequently, the image has also undergone a change in function and status, opening new possibilities through its digitalization. The present work intends to explore the relationship between presence, telepresence, images and the self.*

KEYWORDS

double
telepresence
multiplicity
images
self
presence

1. 13th Consciousness Reframed International Research Conference.

From the beginning of its history, Christianity has used symbolism to present and transmit its doctrine to its followers, whether they were literate in theology or not. One of the best examples of this is the representation of saints with their corresponding attributes: Saint Peter is represented with the keys, Saint Jerome in his desk with a skull and an angel. In the case of martyrs, the iconography usually included the representation of the instrument, or object, of their torment as a way of easy recognition: Saint Sebastian with the arrows, Saint Stephan with stones, Saint Lawrence with the gridiron, Saint Lucile with the eyes on a plate and so on.

On its part, the cult of relics was considered a way of being closer and to reinforce the bonds with God. The physical contact with the 'sacred' was considered of great importance, and each part of the holy person was considered to have exactly the same value, the same sacred characteristics as the ensemble; all the remains were said to have power derived from the saint. The remains of martyrs and saints were scattered in shrines among different churches, cathedrals and places of cult, and since the Middle Ages the pilgrimages to these places became widely spread among Christians. Acquiring a relic became for many the possibility of being closer to the sacred at home, and of avoiding the need to make long trips for getting in contact with it.

Finally, the phenomena of *disembodiment*, *ubiquity*, *remote viewing*, *bilocation* have been widely mentioned in different philosophical and religious systems such as Shamanism, Christian mysticism, Hinduism, Paganism and others as the ability that some individuals (often saints, monks or mystics) would have of being in two or more places at the same time. In the Christian tradition, for example, many saints were said to be capable of *bilocation*: Saint Anthony of Padua, Saint Ambrose of Milan and Saint Martin de Porres are among the most relevant examples.

The advent of the Internet, of new technologies and of social networks has opened up new and unexpected possibilities, enabling one to expand oneself. Not long ago, these experiences were prerogatives of holy individuals with some kind of 'supernatural' ability; otherwise, they had to be 'experienced' through cinema and literature. Currently, it is possible to undergo them in first person: everyone is allowed to create other selves, other profiles, avatars, entities or doppelgängers that can operate in the world (remotely) as extensions of him or her. A similar logic to the use of symbolism in the iconography of the saints and martyrs in the Christian tradition, for instance, can be detected in the construction of avatar identities in the digital world; from the ones on Second Life to the South Park website, it basically consists of the selection of the most characteristic features of the person, for him or her to be easily recognized in the corresponding online avatar.

The present work intends to explore the relationship between presence, telepresence, images and the self.

As quoted by Rosalind Krauss in *The Optical Unconscious* (1996: 178–79), Walter Bejamin refers to technological advances as *prosthetic limbs* that humankind have developed to operate in the world enlarging its powers, alluding in turn to Freud's article *Civilization and its Discontents* ([1930] 1962).

Freud advanced that every tool humankind has created since its origins has been meant to extend its powers over the world.

> […] Long ago he formed an ideal conception of omnipotence and omniscience which he embodied in his gods. To these gods he attributed everything that seemed unattainable to his wishes, or that was

> forbidden to him. One may say, therefore, that these gods were cultural ideals. To-day he has come very close to the attainment of this ideal, he has almost become god for himself. With every tool man is perfecting his own organs, whether motor or sensory, or is removing the limits to their functioning. […]
>
> Man has, as it were, become a kind of prosthetic God. When he puts on all his auxiliary organs he is truly magnificent; but those organs have not grown on to him and they still give him much trouble at times. […] Future ages will bring with them new and probably unimaginably great advances in his field of civilization and will increase likeness to God still more.
>
> ([1930] 1962: 37–39)

In this regard, Benjamin observes that photography, enlarging the power of sight, has created a sort of 'optical unconscious' that permits to see what the eye is not capable of; the human eye cannot perceive, for instance, that when a horse is running, at a certain point, all its body is suspended in the air. That moment can be captured and revealed to the human eye by the camera: The possibilities of human vision enlarged to the ones of God by the photographic device.

Benjamin's article was written in 1931. Currently, technologies in general, and especially the Internet, have enlarged the possibilities of the self. Ubiquity, remote viewing, even attributes, used to be reserved to saints, shamans, or people with supernatural abilities. Social networks have made possible for each individual the multiplication of his or her persona. Skype and web cams make possible a version of remote viewing, and bilocation. The same can be said of sites like Second Life, which allows the building of a virtual and parallel reality.

In this sense, it is possible to say that Freud was right. Technology, and especially the Web, is giving humans possibilities that were previously reserved to gods. So would it be possible to talk about *prosthetic selves* as artificial extensions of the self that make humans able of exhibiting godlike capacities?

Considering bilocation, or multilocation, previously mentioned as the alleged ability that some people would have of being physically present in two or more places at the same time, it could be hardly regarded as exactly the same case of virtual avatars, social networks' profiles or virtual communication.

As Flusser had explained when talking about the photographic apparatus and its programme, there is 'a reversal in the vector of significance' in which information, the signifier, is what becomes 'real':

> To this extent, the traditional distinction between realism and idealism is overturned in the case of photography: It is not the world out there that is real, nor is the concept within the camera's program – only the photograph is real. The program of the world and the camera are only preconditions for the image, possibilities to be realized. We are dealing here with a reversal of the vector of significance: It is not the significance that is real but the signifier, the information, the symbol, and this reversal of the vector of significance is characteristic of everything to do with apparatus and characteristic of the post-industrial world in general.
>
> (1983: 37)

So what is happening with presence, with the body? The fact is that one gets in touch with a *projected* presence; this projected presence does not have the

same qualities, nor the possibilities, of the actual body, of the referent. In his article 'Image, medium, body: A new approach to iconology' (2005), Hans Belting advanced that

> The digital media reintroduce the body analogy via denial. The loss of the body has already haunted the mirror fantasies of the nineteenth century, when the doppelganger no longer obeyed the spectator but abandoned the mimesis of the reflecting body. Digital images usually address our bodies' imagination and cross the borderline between visual images and virtual images, images *seen* and images *projected*. In this sense, digital technology pursues the mimesis of our own imagination.
>
> (2005: 309)

Accordingly, even if the information provided by a Facebook profile, or by a communication via web cam, is more complex, and in a certain sense more complete than, for instance, the one provided by a letter or a telephone conversation there is no actual presence, there are no living bodies sharing the same space, to put it in Belting's terms. In this sense, both presences, the virtual and the physical, are situated in different ontological levels; and the logic of the relics is not equivalent in this case: the self and its virtual extensions do not share exactly the same powers, as the remains of saints do.

Belting considers negative, or even mistaken, to give artificial bodies, or prosthetic selves, the same status as a living body:

> But the uncertain notion of the body, whose ongoing crisis is evident, has led us to extrapolate the expectation of life and to invest artificial bodies, as against living bodies, with a superior life of their own. This tendency has caused a lot of confusion, turning the very function of visual media upside down. Thus, contemporary media have become invested with a paradoxical power over our bodies, which feel defeated in their presence.
>
> (2005: 312)

Therefore, the tendency to consider the *visible* in the same ontological level as the *presence* would have to do with the tendency to relate an *iconic presence* with *physical presence*, a kind of 'if I can see it, it is there'. Images replace the absence of the body with a different kind of presence, which is the image of that body, and thus the *iconic presence* implies a *visible absence*. In this way, '[images] perform *the presence of an absence*' (Belting 2005), and this is also valid to contemporary media and telepresence (Belting 2005: 312). But when an absence, an absent body, becomes present through images, this is a surrogate presence/visibility; and instead of making the world more accessible, they can be said to work as 'screens' that come between men and the world, obscuring their relationship with it, 'until human beings' lives finally become a function of the images they create' (Flusser 1983: 10).

Is Flusser's statement too apocalyptic? Are extensions of the self (social networks, avatars, virtual worlds, surrogates, etc.) obstructing the experience of the world? The point is that they are already part of the world and not opposed to it; so yes, the relationship between human beings and the world has changed, but this does not mean that it is being 'obstructed', or 'screened'. The powers of the self have been expanded, at least in terms of communication. The fact that the extended possibilities of the self through

new media do not equal the presence of the body does not mean that they are not expanding, or at least changing (and not necessarily only in a negative way) the possibilities of experiencing the world, and of creating different and new worlds, real, virtual, imaginary, and innovative ways of exploring and living them.

Brian McHale explains in these terms the recursive structure typical of the non-chronological and fragmented postmodernist narrative, which can be easily related to the mentioned logic:

> Each change of narrative level in a recursive structure also involves a change of ontological level, a change of world. These embedded or nested worlds may be more or less continuous with the world of the primary diegesis, as in such Chinese-box novels […] In other words, although there is always an ontological discontinuity between the primary diegesis and hypodiegetic worlds, this discontinuity need not always be foregrounded. […] It is rather the epistemological dimension of this structure which is foregrounded, each narrative level functioning as a link in a chain of narrative transmission. […]
>
> So if recursive structure is to function in a postmodernist poetics of ontology, strategies obviously must be brought to bear on it which foreground its ontological dimension.
>
> (McHale 1987: 113)

In this sense, the new possibilities of the self could make it more likely to experience reality in its fragmented and heterogeneous quality in different ontological levels, coherent as they are with the logic of new media. And in an analogous fashion, in the same way the recursive structure serves as a tool for investigating certain topics in narrative, such as 'authority, reliability and unreliability, the circulation of knowledge, and so forth' (McHale 1987: 113), the possibilities opened by new media and by the multiplication of selves can be useful to explore and expand knowledge and the chances for operating on similar subjects not only in the fictional, or virtual, but also in physical realm.

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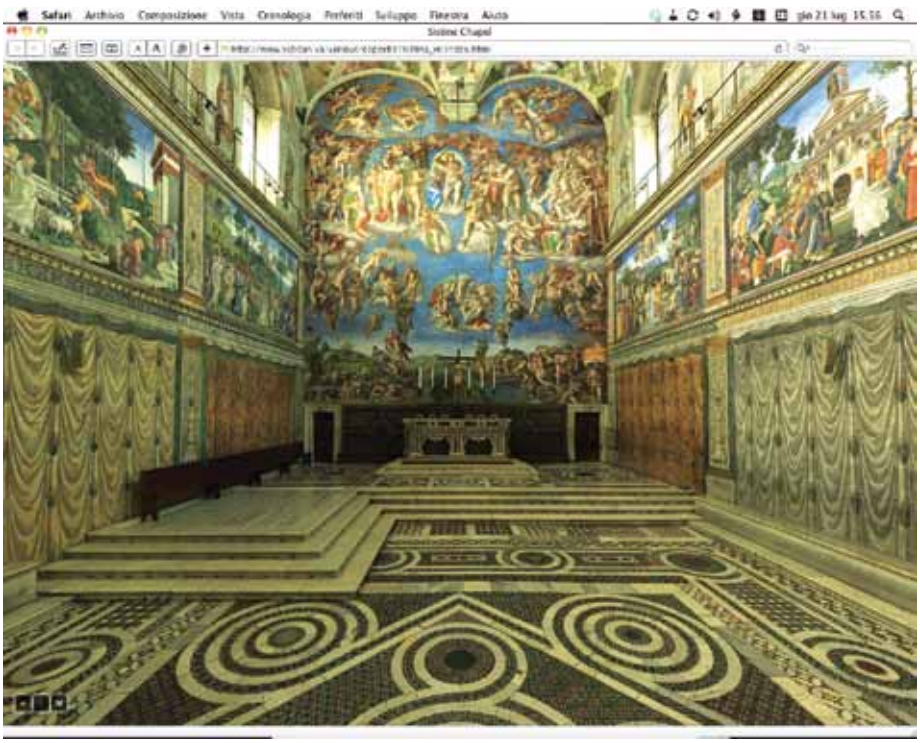
digitalizzazione e uploading dell'evento artistico

gabriela galati

"The Digitalisation and Uploading of the Artistic Event" (Digitalizzazione e uploading dell'evento artistico) si focalizza sull'influenza delle nuove tecnologie, in particolare Internet, rispetto ai modi di circolazione, legittimazione e produzione di eventi artistici, sui problemi della documentazione digitale delle pratiche artistiche, e il suo rapporto con la dematerializzazione e la memoria. L'interesse si concentra sul comprendere se esista effettivamente una tendenza alla dematerializzazione favorita dalle nuove tecnologie, e in caso di risposta positiva, quale potrebbe essere il rapporto con i modi di documentazione e conservazione digitali delle pratiche artistiche. La ricerca non verte necessariamente su artisti che lavorano con le nuove tecnologie e i new media, ma soprattutto su opere, artisti, critici, curatori che sono in qualche modo influenzati dalla specificità di queste, e sui modi in cui gli eventi artistici e le produzioni artistiche contemporanee sono prodotti e/o percepiti.



Si pone così particolare attenzione ai modi in cui i nuovi media sono utilizzati per riprodurre, documentare, legittimare e fare circolare eventi artistici e opere.
Una delle ipotesi che si intende verificare è la possibilità che l'informazione elettronica e la digitalizzazione stabiliscano una nuova dialettica secondo la quale la funzione legittimante del museo sia sostituita dall'archivio virtuale, dal sito del museo, oppure dalla galleria d'arte, sino ad affermare la condizione limite della produzione di alcune opere finalizzate esclusivamente all'archivio virtuale. Per questo motivo fanno parte integrale del progetto la ricerca su archivi virtuali e i loro rapporti col referente materiale, ovvero tra i siti web, specialmente dei musei, e le loro collezioni.
La digitalizzazione e il caricamento sui siti web cambia lo status dell'opera digitalizzata, e allo stesso tempo influenza la percezione di essa. Poiché il web, inteso come testo, influenza la percezione della realtà materiale, nello stesso modo in cui i linguaggi e le metafore costruiscono la "realtà" o strutturano la percezione del mondo, è necessario prendere in considerazione anche la natura ambigua del linguaggio. Seguendo l'affermazione di Levi-Strauss[1] che l'inadeguatezza tra significato e significante è causa di ogni invenzione estetica e artistica, le quali puntano a colmare questo difetto, diviene possibile pensare l'inadeguatezza tra l'archivio virtuale e il suo referente in termini simili. Se la sovrabbondanza di significato può essere considerata come l'ambiguità intrinseca di ogni produzione simbolica, è necessario capire cosa comporti questa sovrabbondanza, e, di conseguenza, cosa possa derivare dall'inadeguatezza tra l'archivio virtuale e il museo fisico. Inoltre, la ben conosciuta impossibilità di tradurre le produzioni simboliche è ciò che genera il mutamento nello status ontologico dell'opera digitalizzata.
In maniera analoga all'oggetto che viene digitalizzato nell'archivio, il medium perde la sua materialità originale per essere convertito in pura immagine. In seguito all'assorbimento e alla rigenerazione nel database, lo status diviene "immagine-testo", o "info-pixel"[2]. Per questa ragione l'archivio virtuale non ha più bisogno di un referente materiale: esso non è stato rimosso totalmente dal sostrato fisico, ma il supporto dell'informazione (memoria e database), che costituisce la nuova materialità dell'oggetto, non coincide con il supporto finalizzato alla fruizione (uno schermo). Di conseguenza, anche se la relazione referenziale non è stata completamente annullata, essa diventa più debole e frammentaria[3]. Il segno iconico mantiene ancora la sua somiglianza con l'oggetto (vedi Peirce), ma il medium è diventato una immagine-testo e un info-pixel[4]; la sua materialità è stata "tradotta" in informazione, in un codice.
Il nuovo database genera così una dematerializzazione della memoria e del registro, la quale però non implica un annientamento dell'oggetto artistico, ma solo un cambiamento nel suo status ontologico.

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Copy-editing della versione italiana: Amos Bianchi

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NOTAS

[Comunicación corta]

Nuevas tecnologías y las extensiones prostéticas del «yo»

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✉

Resumen: Del mismo modo en que el ser humano ha sentido la necesidad de inventar mundos ficticios y virtuales, también siempre experimentó una atracción por las ideas amenazadoras y fascinantes del doble (*doppelgänger*), de los autómatas, y por fenómenos tales como la ubicuidad, incorporeidad (*disembodiement*), la visión a distancia, la bilocación y las personalidades múltiples. El fenómeno de la bi-locación, por ejemplo, ha sido mencionado extensamente en diferentes sistemas religiosos y filosóficos como el chamanismo, el hinduismo, el misticismo cristiano, el paganismo y otros, como la habilidad que tendrían ciertos individuos (generalmente santos, monjes o místicos) de encontrarse en dos o más lugares al mismo tiempo. El advenimiento de Internet, las nuevas tecnologías y las redes sociales han abierto nuevas posibilidades respecto a esto, permitiendo la expansión del «yo» en cuerpos virtuales teledirigidos. Si no mucho tiempo atrás, experiencias de este tipo debían ser vividas a través del cine o la literatura, hoy es posible atravesarlas en primera persona: todo el mundo es capaz de crearse extensiones virtuales del «yo», otros perfiles, avatares, entidades o *doppelgängers* que pueden operar (controlados de manera remota) como extensiones de uno mismo. Como consecuencia, la imagen ha sufrido un cambio en su función y estatus, al mismo tiempo que se abren nuevas posibilidades a través de los procesos de digitalización. El presente trabajo intenta explorar la actual relación entre la presencia, la tele-presencia, las imágenes y las extensiones del yo.

Palabras clave: Telepresencia – Multiplicidad – Imágenes –-Presencia.

[Short communication]

New Technologies and the Prosthetic Extesions of the "Self"

Summary: In the same way that humans have always had the need for inventing fictional and virtual worlds, they have also experimented an attraction for the threatening and fascinating ideas of the doppelgänger, automata, and by the related phenomena of *desembodiment*, *ubiquity*, *remote viewing*, *bilocation*, *splitting personalities*. The phenomenon of *bilocation*, for instance, has been widely mentioned in different philosophical and religious systems such as Shamanism, Christian mysticism, Hinduism, Paganism and others as the ability that some individuals (often saints, monks or mystics) would have of being in two, or more, places at the same time. The advent of the Internet, new technologies and social networks has opened up new and unexpected possibilities in this respect, enabling one to expand oneself. If not long ago, these experiences had to be 'lived' through cinema and literature; today, it is possible to undergo them in first person: everyone is allowed to create other selves, other profiles, avatars, entities or doppelgängers that can operate in the world (remotely) as extensions of him or her. Consequently, the image has also undergone a change in function and status, opening new possibilities through its digitalization. The present work intends to explore the relationship between presence, telepresence, images and the extensions of the self.

Key words: Telepresence – Multiplicity – Images – Presence.

Introducción

Desde sus inicios, la cristiandad ha usado el simbolismo para presentar y transmitir su doctrina a sus fieles, fueran o no letrados en teología. Uno de los mejores ejemplos de esto es la representación de los santos con sus respectivos atributos: San Pedro con las llaves, San Jerónimo en su escritorio con la calavera y un ángel. En el caso de los mártires, la iconografía incluye la representación del instrumento u objeto del tormento para facilitar su reconocimiento: San Sebastián atravesado por las flechas, San Esteban con las piedras, San Lorenzo sobre la parrilla o Santa Lucía con sus ojos sobre un plato.

Por su parte, el culto a las reliquias era un modo de sentirse más cerca y reforzar los lazos con Dios. El contacto físico con lo sagrado era considerado de altísima importancia y se consideraba que cada parte del santo tenía el mismo nivel de sacralidad, las mismas características sagradas que el conjunto; todas las partes del cuerpo poseían el poder que derivaba de la santa persona. Los restos mortales de mártires y santos eran dispersos en santuarios en diversas iglesias, catedrales y lugares de culto y desde la Edad Media los peregrinajes a estos lugares fueron muy populares en el mundo cristiano. La posibilidad de comprar una reliquia, por ejemplo, era para quienes podían permitírselo, la de llevar una dimensión de sacralidad al propio hogar evitando así la necesidad de hacer largos y penosos viajes para entrar en contacto con ésta.

Finalmente, los fenómenos de incorporeidad, ubicuidad, visualización remota, bilocación, han sido mencionados extensamente en diferentes sistemas religiosos y filosóficos como el chamanismo, el hinduismo, el misticismo cristiano, el paganismo y otros, como la habilidad que tendrían ciertos individuos (generalmente santos, monjes o místicos) de encontrarse en dos o más lugares al mismo tiempo. En la tradición cristiana, por ejemplo, diversos santos fueron considerados capaces de bilocación, entre los más famosos: San Antonio de Padua, San Ambrosio de Milán y San Martín de Porres.

Todos estos temas han siempre generado un inmenso interés y una gran fascinación en la cultura occidental y, en consecuencia, han sido tratados en profundidad y repetidas veces en la literatura, el cine, la pintura y otras disciplinas artísticas. Podríamos decir que distintos períodos históricos y corrientes artísticas fueron particularmente afines a *topoi* específicos; sólo por dar un ejemplo, el tema del *doppelgänger* ha sido especialmente caro al Romanticismo.

Desde aproximadamente mediados de la década de 1990, el advenimiento de Internet, las nuevas tecnologías y las redes sociales abrió nuevas posibilidades respecto a estos tópicos. Si hasta hace poco tiempo este tipo de experiencia era prerrogativa de individuos con algún tipo de habilidad «sobrenatural», o de otro modo, debían ser experimentadas a través del cine, la literatura, o la televisión; actualmente, es posible atravesarlas en primera persona: potencialmente, cualquier individuo puede «multiplicarse» creando avatares, perfiles en redes sociales, entidades virtuales o *doppelgängers* que pueden operar (controlados de manera remota) como extensiones del «yo». Otro ejemplo de la continuidad cultural de la lógica correspondiente al uso del simbolismo en la iconografía de los santos y los mártires en la tradición cristiana, se puede detectar en la creación de avatares en el mundo digital: desde aquellos en Second Life a la página de South Park, pasando por la Nintendo Wii, el proceso consiste básicamente en la selección de los rasgos sobresalientes y más pregnantes de la persona de modo de hacer fácil el reconocimiento.

Es indagando en esta lógica, en el modo en que se desarrolla actualmente en la dimensión que podríamos llamar conectiva y digital, que este trabajo propone explorar la relación entre la presencia, la telepresencia, las imágenes, el yo, y sus proyecciones (o extensiones) virtuales.

Extensiones prostéticas del «yo»

En su ya canónico texto «La obra de arte en la época de su reproductibilidad técnica», Walter Benjamin (1936), inspirándose en el artículo de Sigmund Freud «El malestar en la cultura» (1930 [1962]), habla de los avances tecnológicos como *prótesis* que la humanidad ha desarrollado para ampliar su capacidad de operatividad en el mundo. Freud propuso la idea de que cada herramienta que la humanidad ha creado desde sus orígenes tenía como objetivo aumentar su poder sobre el mundo:

> Desde hace mucho tiempo [el hombre] se había forjado un ideal de omnipotencia y omnisapiencia que encarnó en sus dioses, atribuyéndoles cuanto parecía inaccesible a sus deseos o le estaba vedado, de modo que bien podemos considerar a estos dioses como ideales de la cultura. Ahora que se encuentra muy cerca de alcanzar este ideal casi ha llegado a convertirse él mismo en un dios, aunque por cierto sólo en la medida en que el común juicio humano estima factible un ideal: nunca por completo; en unas cosas, para nada; en otras, sólo a medias. El hombre ha llegado a ser por así decirlo, un dios con prótesis: bastante magnífico cuando se coloca todos sus artefactos; pero éstos no crecen de su cuerpo y a veces aun le procuran muchos

> sinsabores. (…) Tiempos futuros traerán nuevos y quizá inconcebibles progresos en este terreno de la cultura, exaltando aún más la deificación del hombre. Pero no olvidemos, en interés de nuestro estudio, que tampoco el hombre de hoy se siente feliz en su semejanza con Dios (1930 [1962]:37–39).

Al respecto, Benjamin observa que la fotografía, ampliando el poder de la vista, ha creado una suerte de «inconsciente óptico» que permite al ojo humano ver aquello que no sería capaz de percibir, como por ejemplo que cuando un caballo corre, en un cierto punto todo su cuerpo está suspendido en el aire. Ese momento puede ser capturado y revelado al ojo humano por la cámara: las posibilidades de la visión son ampliadas a aquellas de un dios omnisciente por el dispositivo fotográfico.

El artículo de Benjamin fue escrito en 1931 y publicado en 1936. En la actualidad, las tecnologías en general, y en especial Internet, han extendido las posibilidades del yo proyectando, por así decirlo, un cuerpo físico, material, en una infinidad de cuerpos virtuales. La ubicuidad, la visión remota, incluso la representación de atributos, estaban reservados a los santos, chamanes, o a personalidades con habilidades sobrenaturales. Las redes sociales han hecho posible para cada individuo con acceso a ellas la multiplicación del propio «yo». Skype y las *web-cams* han hecho posible una versión tecnológica de la visón remota y de la bilocación. Lo mismo se puede decir de sitios como Second Life, que consiente la creación de una realidad virtual paralela, incluyendo «sucursales» virtuales de negocios, o museos, o galerías de arte, por nombrar sólo algunos ejemplos, que tienen un referente en la «realidad material», como así también la creación de otros que tienen una existencia exclusivamente digital, imaginada y creada por los usuarios. En este sentido, es posible decir que Freud estaba en lo cierto. La tecnología, y especialmente la Web, está dando a la humanidad posibilidades que previamente estaban reservadas a los dioses. ¿Será entonces posible hablar de *personalidades prostéticas* como extensiones artificiales del yo, de la propia personalidad, que permiten a los hombres exhibir capacidades *quasi* divinas?

Si se considera la bi-locación, o la multi-locación, mencionada previamente como la supuesta capacidad que tendrían algunas personas de estar físicamente presentes en dos o más lugares a la vez, difícilmente podría esto equipararse a la experiencia proporcionada por avatares, perfiles en redes sociales, o a través de la comunicación digital.

Tal como ha explicado Vilém Flusser al hablar del dispositivo fotográfico y su «programa», existe una «inversión en el vector de la significación» en el cual la información, el significante, deviene «real»:

> En este sentido, la distinción tradicional entre realismo e idealismo, en el caso de la fotografía, se derrumba: No es el mundo allá afuera que es real, como tampoco el concepto dentro el programa de la cámara —sólo la fotografía es real. El programa del mundo y la cámara son solamente precondiciones para la imagen, posibilidades a ser realizadas. Estamos tratando con la inversión del vector de significación: No es la significación que es real sino el significante, la información, el símbolo, y esta inversión del vector de la significación es característica de todo lo que tiene que ver con el dispositivo y es característica del mundo post-industrial en general (1983:37).[1]

Del mismo modo, aun si la información que proporciona un perfil de Facebook, o una comunicación vía *web-cam*, es más compleja, y en cierto modo también más completa, que, por ejemplo, aquella que proporciona una carta o una conversación telefónica, de todos modos no existe una presencia real, no hay cuerpos vivientes compartiendo el mismo espacio. En este sentido, ambas presencias, la virtual y la física, se encuentran en niveles ontológicos distintos; y la lógica de las reliquias no es equivalente en este caso: el «yo» y sus extensiones virtuales no comparten exactamente los mismos poderes y atributos, como es el caso de los restos de los santos.

Hans Belting considera en manera negativa, incluso equivocada, el acto de dar el mismo estatus de un ser viviente a cuerpos artificiales o a «personalidades prostéticas»:

> Pero la noción incierta del cuerpo, cuya crisis en curso es evidente, nos ha llevado a extrapolar la expectativa de vida y a investir cuerpos artificiales, frente a los cuerpos vivientes, con una vida propia superior. Esta tendencia ha causado mucha confusión, revirtiendo completamente la función de los medios visuales. En consecuencia, los medios contemporáneos han sido investidos con un poder paradójico sobre nuestros cuerpos, que se sienten derrotados en su presencia (2005:312).

Entonces, la tendencia a considerar lo *visible* en el mismo nivel ontológico de lo *presente* tendría que ver con una tendencia a relacionar la *presencia icónica* con la *presencia física*, una especie de razonamiento del tipo «si puedo verlo es porque se encuentra allí». Las imágenes reemplazan la ausencia del cuerpo con un tipo de presencia diversa que es la imagen de ese cuerpo, y en consecuencia,

[1] La traducción es propia, como la de las siguientes citas en este trabajo.

la *presencia icónica* implica una *ausencia visible*. De este modo, «[las imágenes] actúan *la presencia de una ausencia*», y esto es válido también para los medios contemporáneos y la telepresencia (Belting 2005:312). Pero cuando una ausencia, un cuerpo ausente, deviene presente a través de imágenes, esta es una presencia-visibilidad subrogada; en vez de hacer el mundo más accesible, se puede decir que funcionan como «pantallas» que se interponen entre el hombre y el mundo, obscureciendo la relación con él, «hasta que las vidas de los seres humanos finalmente se convierten en una función de las imágenes que crean» (Flusser 1983:10).

Recursividad y niveles ontológicos

Posiblemente la afirmación de Flusser sea demasiado apocalíptica. El problema en realidad, es que las extensiones del yo (redes sociales, avatares, mundos virtuales, perfiles en redes sociales, etc.) no están realmente obstruyendo la posibilidad de experiencia del mundo porque son ya parte del mundo, y no se oponen a él; la dicotomía entre una realidad «real» y una «virtual» no parece tener más sentido. Entonces, sí, la relación entre los seres humanos y el mundo ha cambiado pero esta relación no está necesariamente siendo «obstruida», o «velada». El hecho de que las posibilidades de expansión del yo a través de las nuevas tecnologías no sean equivalentes a la presencia del cuerpo no significa que no estén amplificando, o al menos cambiando —y no necesariamente en sentido negativo— las posibilidades de experimentar el mundo, y de crear diferentes mundos, al mismo tiempo que modos de explorarlos y vivirlos, ya sean éstos materiales o digitales.

Más que la mencionada contraposición entre real y virtual, o material y digital, el tema central en este problema es la diferencia en los niveles ontológicos. En este sentido, es interesante el análisis propuesto por Brian McHale de la estructura recursiva típica de la narrativa postmoderna, no cronológica y fragmentada, y que puede resultar de gran utilidad para analizar el fenómeno mencionado precedentemente:

> Cada cambio en el nivel narrativo de una estructura recursiva conlleva también un cambio en el nivel ontológico, un cambio de mundo. Estos mundos incorporados o anidados uno dentro el otro pueden ser más o menos continuos con el mundo de la diégesis primaria, como es el caso de las novelas de tipo caja china (…) En otras palabras, aun si existe siempre una discontinuidad ontológica entre la diégesis primaria y los mundos hipodiegéticos, dicha discontinuidad no necesita ser siempre subrayada. (…) Es más bien la dimensión epistemológica de esta estructura que es

> destacada, cada nivel narrativo funcionando como un nexo en la cadena de transmisión narrativa (McHale 1987:113).

Como subraya McHale con respecto a la narrativa postmoderna, en este tipo de narrativa del tipo «caja china» o «matrioska», en la cual de una diégesis primaria —correspondiente a la «realidad»— se desprenden mundos «anidados», o incluidos uno dentro de otros, no es relevante el valor ontológico de cada narrativa o mundo dentro de la estructura diegética, sino el valor hermenéutico y epistemológico que deriva de ella. En este sentido, parece importante entender estas nuevas extensiones prostéticas del yo como instrumentos conceptuales que ayuden a experimentar la realidad en su cualidad fragmentaria y heterogénea y en sus distintos niveles ontológicos, coherentes como son con la lógica de las nuevas tecnologías. Análogamente, así como las estructuras recursivas sirven como instrumento de investigación de ciertos *topoi* en la narrativa, como «la autoridad, confiabilidad y desconfianza en la circulación del conocimiento» (McHale 1987:113), las posibilidades abiertas por los nuevos medios digitales y por las extensiones prostéticas del yo pueden ser útiles para explorar y expandir el conocimiento y las oportunidades de analizar —y actuar en consecuencia respecto de— temas similares, no solo en el ámbito virtual y digital, sino también en eso que por el momento se conoce como mundo material.

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ARTÍCULOS

[Up date]

Modelos no lineares, historia del arte y de los nuevos medios

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Resumen: La *Idea del Theatro* era fundamentalmente una estructura conceptual de relaciones más que un edificio real que Giulio Camillo entendía como una representación espacial de la cronología.
El *Atlas Mnemosyne* de Aby Warburg era a su vez un proyecto centrado en las imágenes: su objetivo era el de crear relaciones y despertar recuerdos en relación recíproca.
Ambos modelos comparten similitudes sorprendentes y casi predictivas con la actual *World Wide Web*, en la cual las posibilidades de acceso al conocimiento tienen una estructura análoga aunque la materialidad del soporte es diversa por razones obvias. En relación a lo anterior, el interés del concepto de ambigüedad radica en la libertad que podría permitir para una lectura potencial que permitiese al mismo tiempo la posibilidad de disparar nuevas relaciones y asociaciones creativas, abriendo recorridos conceptuales que no hubieran sido considerados hasta el momento. La *apertura* y la *simultaneidad* de modelos no unilaterales para el pensamiento (creativo) puede permitir la reconstrucción del *Theatro*, o del *Atlas*, no como una ilusión tridimensional, pero como una arquitectura o estructura conceptual para el pensamiento y la teoría del arte, de la historia y teoría de los nuevos medios; y para la transmisión del conocimiento en general.
Palabras claves: Aby Warburg − Hyperlink − Giulio Camillo.

Non-Linear Models for Thinking and Writing on New Media Art History

Summary: The *Idea of the Theatre* was fundamentally a structure of conceptual relationships rather than an actual building that Camillo understood as a spatial representation of chronology.
Warburg's *Mnemosyne Atlas* project is centered on images: It is aimed at creating relations and bringing memories in rapport with each other.
Both models share stunning and almost predictive similarities with the actual Web, where the possibility of accessing knowledge has an analogous structure even if the materiality of the support is different for obvious reasons. The interest in the concept of ambiguity in this regard lays in the freedom it could open for a potential lecture that at the same time allows the possibility of triggering new relations and creative associations, opening conceptual paths that have not yet been considered; the *aperture* and *simultaneity* of non-unilateral models for (creative) thought allows the reconstruction of the Theater, or the Atlas, not as a 3D illusion, but as the conceptual architecture or structure when thinking about the history of art, on the history and theory of new media, and on the transmission, conservation and archiving of new media works and of knowledge in general.
Key words: Aby Warburg-− Hyperlink − Giulio Camillo.

Es su libro *¿Que es el cine?* (1958) André Bazin comenta de la siguiente manera la búsqueda de «transparencia» en el uso del montaje en la clásicos de la pre-guerra del cine americano:

> El uso del montaje puede ser «invisible» y este era generalmente el caso en los clásicos de la pre-guerra de la pantalla americana. Las escenas eran divididas con un solo propósito, el de analizar cada episodio de acuerdo con el material o con la lógica dramática de la escena. En esta lógica, que esconde el hecho del análisis, la mente del espectador muy naturalmente aceptaba los puntos de vista del director, que eran justificados por la geografía de la acción o por el énfasis cambiante del interés dramático. Pero la cualidad neutral de este montaje «invisible» no logra hacer uso de todo el potencial del montaje (Bazin 1958 (1971): 23-4).[1]

Es más, Bazin explica las implicancias del uso del montaje, del uso del *close-up* y del abandono de la profundidad de campo como una elección estética con ulterior significación: El director comenzó a elegir y a decidir por el espectador qué era lo importante, a qué se debía prestar atención: «a través de los contenidos de la imágenes y de los recursos del montaje, el cine tiene a su disposición un entero arsenal de medios a través de los cuales imponer al espectador su interpretación de un evento» (*Ibíd.*1971:26). Entonces, el espectador no tiene más necesidad de pensar, porque lo que es relevante y lo que amerita atención en una cierta historia es elegido para él/ella.

El hecho de que la profundidad de campo ponga al espectador en una relación más cercana con la imagen de la que tiene en realidad hace la experiencia aún más realista, según Bazin. Esto implica la necesidad de una actitud mental más activa de parte del espectador y, consecuentemente, ella/él debe poner en práctica al menos un mínimo de elección personal; el significado de un film es, de esta manera, completado por el espectador, y no presentado a éste como ya cerrado.

> Es por esto que la profundidad de campo (…) es una ganancia capital en el campo de la dirección cinematográfica - un dialéctico paso adelante en la historia del lenguaje cinematográfico. (…) Además de afectar la estructura del lenguaje del film, también afecta la relación de la mente del espectador con la imagen y en consecuencia influencia la interpretación del espectáculo. (…) En resumen, el montaje, por su misma naturaleza, regula la ambigüedad de la expresión.
>
> Por otro lado, la profundidad de campo reintrodujo la ambigüedad dentro de la estructura de la imagen (...) (Bazin 1958 (1971):35-6).

[1] La traducción (como también de todos los textos citados) es propia de la autora.

La importancia de la ambigüedad como parte de un nuevo modelo para pensar modelos de la teoría de los nuevos medios radica en la libertad que puede aportar para interpretaciones diversas, y para la apertura que al mismo tiempo permite la posibilidad de disparar nuevas relaciones y asociaciones creativas, abriendo recorridos que no habían sido considerados hasta el momento, un pensamiento no linear.

Espacios navegables

La predominancia de un paradigma temporal, linear, cronológico que coincide con el advenimiento de la historia como disciplina en el siglo XIX está, desde algún tiempo a esta parte, siendo parcialmente erosionada por la resurrección de un paradigma espacial, simultáneo, no linear favorecido por la lógica digital. Los antecedentes de este paradigma pueden ser rastreados en la historia del arte en distintos ejemplos, como algunos ciclos de frescos en iglesias, pero especialmente en algunas capillas, y en algunos otros modelos espaciales *inmersivos*, algunos nunca realizados como el *Projet de Cénotaphe à Newton* de Etienne-Louis Boullée (1784).

> Una secuencia narrativa se presentó como particularmente incompatible con una narrativa espacial que había tenido un rol tan prominente en la cultura visual europea durante siglos. Del ciclo de frescos de Giotto en la Capella degli Scrovegni en Padova a *Un enterrement à Ornans* de Courbet, los artistas presentaban una multitud de eventos separados en un mismo espacio, fuera éste el espacio ficcional de una pintura o el espacio físico que puede ser captado por el espectador en un mismo momento. En el caso del ciclo de frescos de Giotto y de muchos otros ciclos de íconos, cada narrativa es enmarcada singularmente pero todas pueden ser captadas en su conjunto simultáneamente. En otros casos, eventos diferentes son representados como si tuvieran lugar dentro de un mismo espacio pictórico. A veces, eventos que formaban una misma narrativa pero estaban separados en el tiempo también eran representados en una misma pintura. Más frecuentemente, el asunto de la pintura se convertía en el pretexto para mostrar una cantidad de «micro-narrativas» separadas (por ejemplo, obras de Hiëronymous Bosch y Peter Bruegel). En su conjunto, en contraste con la secuencia narrativa del cine, en la narrativa espacial todas las «tomas» eran accesibles al espectador de inmediato. Como la animación en el siglo XIX, la narrativa espacial no desapareció completamente en el siglo XX; pero del mismo modo que la animación, fue relegada a una forma menor de la cultura occidental − el comic (Manovich 2001: 270).

Un representación espacial y no linear, como la Capella Sistina, no puede ser

considerada exactamente en el mismo sentido que un espacio *inmersivo*, como por ejemplo la Villa dei Misteri en Pompeii. En un caso, las distintas narrativas-conceptos son accesibles de manera simultánea, pero cada escena representada conserva una lógica narrativa interna; mientras que la pretensión de inmersión (virtual) en un cierto medio conlleva la intención de «disminuir la distancia crítica en lo que es mostrado y aumentar la participación emocional en lo que está sucediendo (…) La intención es la de instalar un mundo artificial que convierta la imagen espacio en una totalidad o al menos que llene completamente el campo visivo del observador» (Grau 2003:13).

La Capella Sistina es un perfecto ejemplo del primer caso. Los muros y el techo están cubiertos por un conjunto de frescos en los cuales diversas escenas del Antiguo y del Nuevo Testamento se pueden apreciar simultáneamente. Aún cuando cada escena tiene una lógica y una narrativa internas, su distribución en el espacio da al espectador la posibilidad de elegir el orden y el modo en el cual seguir las distintas historias, cada fresco tiene una narrativa individual, pero toda la secuencia puede ser apreciada al mismo tiempo sin un orden privilegiado. Actualmente, también existe la posibilidad de hacer una visita virtual a la Capilla en el sitio del Vaticano. La página web es un *rendering* tridimensional del espacio físico a través del cual es posible hacer un tour de 360 grados alrededor de la Sistina, efectuando *close-ups* y accediendo a ángulos y detalles a los cuales sería realmente muy difícil para el visitante acercarse en el espacio físico.[2]

Como propuso Flusser, mientras la función original del texto era aquella de librar a las imágenes de su poder mágico para promover el pensamiento conceptual;

> (…) la función de las imágenes tecnológicas es [aquella] de liberar a los receptores por medio de la magia de la necesidad de pensar conceptualmente, al mismo tiempo reemplazando la conciencia histórica con una conciencia mágica de segundo grado y reemplazando la habilidad para pensar conceptualmente con una imaginación de segundo orden. Esto es lo que queremos decir cuando decimos que las imágenes desplazan a los textos (Flusser 1983: 11-12).

De este modo, la imágenes tecnológicas reintrodujeron las imágenes en la vida cotidiana e hicieron los textos comprensibles otra vez para la sociedad; teniendo así una especie de efecto amalgamador entre los textos, las imágenes tradicionales y la tecnología.

Por lo tanto, el espacio navegable tridimensional de la Capella Sistina al cual se puede acceder *online* se convierte en un espacio virtual *inmersivo* en el cual un

[2] Ver: http://www.vatican.va/various/cappelle/index_sistina_en.htm

conjunto no linear de imágenes fue desplegado para una lectura potencialmente no linear es accesible de manera remota para ser navegado, al mismo tiempo que es mediatizado por la imagen tecnológica.

Un ejemplo notable del segundo caso −de una arquitectura de espacio *inmersivo*− es el *Proyecto para el cenotafio de Newton* de Etienne-Louis Boullée, actualmente en la Bibliothèque Nationale de Paris. El proyecto para la tumba del matemático, físico y astrónomo Isaac Newton reproduce el sistema heliocéntrico de Copérnico. El edificio debía contener una esfera, símbolo al mismo tiempo de la Tierra y del infinito, en cuyo centro gravitacional se ubicaría la tumba de Newton, aludiendo a la vez al sistema solar y a la posición de la humanidad en el centro de la naturaleza. Dentro del Cenotafio, los efectos del día y de la noche serían recreados de la siguiente manera: el día, con la creación de un brillo luminoso producido por una especie de astrolabio que irradiaría a todo el volumen desde su centro; la noche, con pequeños orificios perforados en la esfera, que al penetrar la luz, crearían un firmamento de estrellas. Un cosmos medido, un espacio *inmersivo* y creado en forma geométrica gracias a los axiomas de Newton y en su honor.

En el panorama de los nuevo medios, la concepción del espacio representado pasó de ser un conjunto continuo y coherente en el cual los objetos eran distribuidos dentro de la tela o del fresco, a una representación de un espacio discontinuo como sumatoria de objetos «new media». O dicho de otro modo, en palabras de Manovich, «no existe el espacio en el cyber-espacio» (Manovich 2011:219). Esta discontinuidad del espacio euclidiano es una de las características de los nuevos medios, e implica un desplazamiento desde una concepción coherente, geométrica y antropocéntrica del espacio con un punto de vista único y privilegiado hacia un espacio fragmentario, agregado, sin puntos de vista privilegiados, como es el caso, por ejemplo, de los ambientes de realidad virtual en los cuales el punto de vista cambia constantemente con el usuario

Por lo tanto, en el modelo espacial, el punto de vista privilegiado de la perspectiva tradicional es puesto en cuestión a través de la posibilidad de tener puntos de vista diversos, siempre cambiantes. La coherencia de este espacio no es unívoca: diferentes niveles semánticos y ontológicos pueden ser superpuestos y entrelazados.

Modelos no lineares

Existen dos proyectos que, aunque muy distantes en el tiempo, comparten sorprendentes y predictivas similitudes en relación a la actual *World Wide Web*: el *Teatro de la Memoria* de Giulio Camillo [1480-1544)] y el *Atlas Mnemosyne'* de Aby Warburg [1866-1929].

Giulio Camillo fue un filosófo italiano, y según Frances Yates, «era uno de los hombres más famosos del siglo XVI» (1966:145). Yates cita a Viglius Zuichemus, quien en 1532 escribió en una carta a Erasmo que todo el mundo estaba hablando de un cierto Giulio Camillo.

> Dicen que este hombre ha construido un cierto Anfiteatro, una obra de habilidad maravillosa, en el cual quien sea admitido como espectador será capaz de hablar sobre cualquier tema de manera no menos elocuente que Cicerón (Yates 1966:130-1).

Camillo dedicó gran parte de su vida a la planificación y construcción del *Theatro* que permitiría a quienes entraran en él el acceso al conocimiento sobre todo el universo. La idea del *Theatro* era fundamentalmente una estructura conceptual de relaciones más que un edificio real que Camillo concibió como una representación espacial de la cronología. En el sistema de Camillo, los «usuarios» del mismo se convierten en espectadores. Más que nada, concibió el *Theatro* como el ideal de la pedagogía: las ideas y recuerdos que éste dispararía serían para la educación de espíritu ante todo.

Camillo planeó el *Theatro* organizándolo en siete secciones que conforman un mapa de la creación del mundo. Siete pilares que son los de la Casa de Salomón, simbolizan la eternidad. En el sistema de Camillo los «académicos», los usuarios del teatro, se convierten en espectadores.

> El Teatro se eleva en siete gradas o escalones, divididas por siete pasarelas que representan los siete planetas. El estudiante se ubica como un espectador delante del cual se ubican las siete medidas del mundo «in spettaculo», o en un teatro. Y como en los teatros antiguos las personas mas distinguidas se sentaban en los asientos más bajos, así en el Theatro las cosas mas grandiosas e importantes se encontrarán en el nivel inferior (Camillo 1554).

Camillo adaptó el modelo del verdadero teatro clásico de Vitruvio con propósitos mnemónicos.

> El Teatro es entonces una visión del mundo y de la naturaleza de las cosas vistas desde las alturas, desde las estrellas mismas y desde las fuentes supracelestes de sabiduría más allá de éstas.
>
> Aún así esta visión es proyectada deliberadamente dentro del marco del arte de la memoria clásico, usando la terminología mnemónica tradicional. El Teatro es un sistema de lugares de memoria, aunque de «alta e

> incomparable» ubicación; actúa como un sistema de memoria clásico para los oradores 'conservando para nosotros las cosas, las palabras, y las artes que le confiamos'. Los antiguos oradores confiaban las distintas partes de los discursos que deseaban recordar a los «lugares frágiles», mientras Camillo 'deseando almacenar eternamente la naturaleza eterna de todas las cosas que pueden ser expresadas en el discurso' las asigna a «ugares eternos» (Yates 1966:144).

El uso de «loci» entonces de las técnicas mnemónicas clásicas fue reemplazado en el teatro de Camillo por «lugares eternos», que son las figuras ubicadas en cada uno de sus niveles. Este teatro se basaba en los principios del clásico arte de la memoria, pero en este edificio Camillo quería reproducir el orden de la verdad eterna; «en él, el universo será recordado a través la asociación orgánica de todas las partes con su orden eterno esencial» (Yates 1966:147). Pensó además que todo aquello que la mente humana pudiera concebir, aunque no necesariamente dentro del campo de la percepción física, podría ser reunido y organizado a través de la meditación y expresado «quizá (…) a través de ciertos signos corpóreos de modo que el espectador pueda a la vez percibir con los ojos aquello que de otro modo se encuentra escondido en las profundidades de la mente humana. Y es a causa de esta mirada corpórea que lo llama teatro» (Yates 1966:147).

El proyecto de Camillo no es un modelo narrativo, es un modelo en el cual el acceso al conocimiento, y lo que es aún más importante, el generar nuevas ideas en el usuario, pueden suceder desde distintos ángulos y perspectivas sin la obligación de seguir un camino único. El *Teatro* de Camillo conlleva la idea de «especialización»: La lógica/representación cronológica y sintagmática del la historia (del arte) cambia por una lógica/representación (espacial) simultánea y paradigmática, similar a la lógica informática. Esto no significa necesariamente proponer un modelo para un programa de representación tridimensional del espacio en gráficos por computadora, pero sí sugiere que estos modelos son útiles para la concepción de modelos para la teoría de los nuevos medios.

En su conferencia «Aby Warburg (1966-1929). The Survival of an Idea» Mathias Bruhn habla del *Atlas Mnemosyne* de Warburg y observa:

> Warburg era un tecnófilo. Estaba interesado en la telecomunicación, en la prensa y en viajar; todas estas nuevas tecnologías permitían nuevas formas de viajar, pero también prolongaban la vieja idea de migración que conectó las civilizaciones desde el comienzo. La tecnología, por ejemplo en la forma de impresión, era también un nexo directo entre los grabados de Durero y los 28 teléfonos en el edificio avant-garde de su biblioteca. [Warburg] ya había escrito un artículo titulado «Aeronaves y submarinos en la imaginación medieval» que sugería que las sociedades antiguas habían

> anticipado lo que él llamaba «vehículos del pensamiento» y la imaginación de los que disponemos hoy. Las imágenes eran sus vehículos (Bruhn n.d).

Es notable que en el mismo modo en el que Warburg interpretó algunas imágenes medievales como predictivas del aeroplano y del submarino, todo el proyecto de su biblioteca, pero especialmente el *Atlas Mnemosyne*, predijeron la lógica del *hyperlink* y de la Web en general.

El *Atlas Mnemosyne* se basa en imágenes: un atlas figurativo compuesto por más de dos mil placas o pantallas; cada placa está compuesta por fotomontajes sobre tablas de madera que presentan reproducciones de distintas obras, especialmente del Renacimiento, pero también de un repertorio arqueológico y material visual de la vida cotidiana, como de periódicos.

El proyecto es el resultado del pensamiento no linear propio de Warburg y por lo tanto, de su necesidad de presentar en manera simultánea, casi tridimensional, todo tipo de relaciones y diversas formas de clasificación de las imágenes durante sus conferencias, y mientras estudiaba y escribía. Esto significa que el *Atlas Mnemosyne* tenía como objetivo la puesta en evidencia de relaciones y recuerdos en manera recíproca, no en una manera linear, sino en modo concomitante y transversal; y esto se debía a la necesidad de Warburg de combinar (*linking*) elementos y categorías heterogéneos, y a su necesidad de acceder a estos elementos en manera simultánea.

Estos modelos, tan utópicos como puedan ser considerados, comparten similitudes asombrosas y casi predictivas con la Web, en la cual las posibilidades de acceso al conocimiento tienen una estructura análoga aunque la materialidad del soporte es diversa por razones obvias. El retorno de una lógica simultánea y no linear favorece la continuidad entre la historia del arte y la historia del arte de los nuevos medios, en la cual el debilitamiento del modelo linear a través del retorno de una paradigma sincrónico permite un modo más experimental de pensar el entero campo. El medio en sí mismo dicta la metodología para aproximarse al objeto de estudio, y de este modo la lógica del *hyperlink* general el sistema apropiado para el archivo y la difusión del conocimiento que contiene.

En relación a lo anterior, el interés en el concepto de ambigüedad radica en la libertad que podría permitir para una lectura potencial que permitiese al mismo tiempo la posibilidad de disparar nuevas relaciones y asociaciones creativas, abriendo recorridos conceptuales que no fueron considerados hasta el momento. La *apertura* y la *simultaneidad* de modelos no unilaterales para el pensamiento (creativo) puede permitir la reconstrucción del *Theatro*, o del *Atlas*, no como una ilusión tridimensional, pero como una arquitectura o estructura conceptual para el pensamiento y la teoría del arte, de la historia y teoría de los nuevos medios; y para la transmisión del conocimiento en general.

Esto último abre la posibilidad a una propuesta de un modelo non linear para la teoría del arte, la historia del arte y los nuevos medios, y para la transmisión, conservación, documentación y archivo de obras, y del conocimiento en general. Podría también ser el punto de partida para una nueva concepción del museo, en el cual el marco teórico de investigación y visualización tome una forma similar a la de su objeto de estudio.[3]

[3] Este trabajo fue presentado originalmente en *Rewire: Fourth International Conference on the Histories of Media Art, Science and Technology*- John Moores University-FACT Liverpool. Septiembre 28-Octubre 1, 2011.

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