

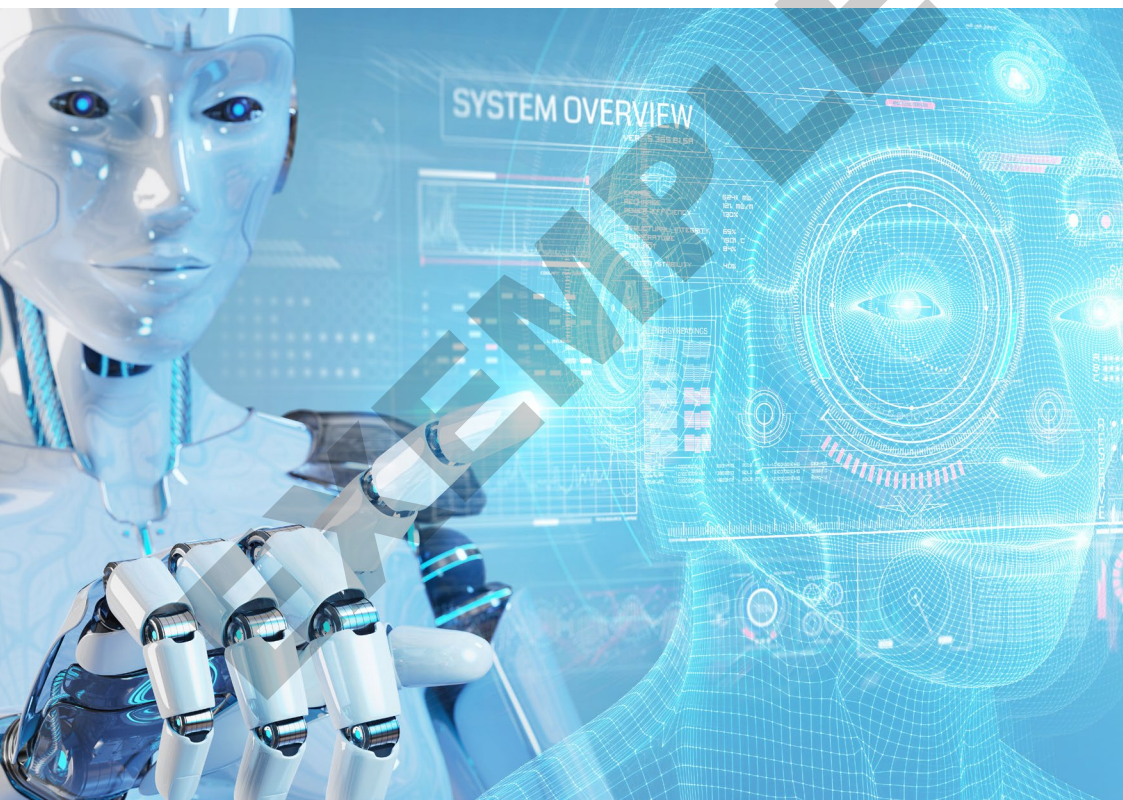
# ART IN THE AGE OF CYBERNETIC MACHINES

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# PREFACE

This book researches the historical relationship of cybernetics and art, an affiliation of technology and culture that emerged after the second world war. In the second phase of modernity, cybernetics became the main model and method for design and envision the societies of the future. From the modern utopias of film, art and television imagery to those of cyberspace, various kinds of media territories populate contemporary media culture. Unlike television and other traditional forms of mediation, digital images have established a spectrum of different forms of entertainment and interaction.

With the rise of digital images it seems that everything that was perceived as a solid melted into the air. When the vacuum of digitalism opened, it sucked in Empires, life, questioning the uses and nature of human beings and marked a change in the nature of reality. With the current shift away from the world as a 'natural' image, we are face a new ontological problematic as our contemporary digitized reality has multiplied the zones of feeling and sensing. The digital-cyber image appeared not just a new mode of representation, or a field of entertainment, rather evolved as a computerized factory that is continually producing a new consciousness, one aligned with the post-Fordist conditions of steamed capitalism. Software as commodities of this computerized factory of today are not just products organized to be consumed but also the products of certain forms of intensities and neuro-psychological vibrations, which alter the plastic body-brain and affect its bodily movement, motor-skills,

emotional tendencies and the way we perceive and processes the world around us. This manufacturing process constitutes the seeds for the production of a contemporary subjectivity offering a contemporary dispositif of a power that is biopolitical and noo-political, and addresses to the biological, economic and spiritual life of its users.

Emerging out of information and control theory, cybernetics offered to modern artists a new technological medium for creativity and experimentation. For example, digital artistic Roy Ascott sees in the mutation of art and cybernetics not just an experiment that took place in studios or universities but a whole new spirit that transformed and affected our societies and the way we perceive and understand the world. As Ascott writes referring to the mutation of cybernetics and art:

The art of our time tends towards the development of a cybernetic vision, in which feedback, dialogue and involvement in some creative interplay at deep levels of experience are paramount...The cybernetic spirit, more than the method or the applied science, creates a continuum of experience and knowledge which radically reshapes our philosophy, influences our behaviour and extends our thought.<sup>1</sup>

The affiliation of art and cybernetics was not just a technological experiment or a pure artistic process. The cybernetic method created a new spirit which transformed and altered human perception on knowledge, power relations, the nature of labour and even our own brain/bodies.

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<sup>1</sup>Ascott, 2007, p.194.

Accordingly, the study of the cybernation of arts will not be limited in the way that digital art acts as an affective map organized by the industry that aims to produce flexible active subjects, but also at the ways in which artists have responded to this modern technological regime. Thus, the cybernation of art will be studied both in terms of the production of a coded interface that is closely related with the military-entertainment complex, and as an artistic project that aimed for a further mechanization of life. Then, I will extend the genealogical study by placing the main emphasis on the historical development of cybernetics focusing on the period of their development starting between the von Neumann and Wiener cybernetic machines that was initiated around the end of the 40s. Proceeds to Deleuze and Guattari's ontology of a 'machinic life' in the 70s and pass through to the years of personal computers and the cyborg concept initiated in the 90s.

The second part of this chapter will address the concerns of philosophical theories of Lazzarato, Bifo, and Nick Land, about the digital image and its connection to the logic of late capitalism as a project for insidious 'brain control,' or the affective conditioning of desires, which are imposed and performed in the post-industrial practices of mediation assigned within a neo-liberal ideology. Throughout these theories, digital interfaces are perceived as the wider state machine that endlessly subjects its subjects through its coded virtual repetitions. In this dystopian cyberpunk world of affective governmentality, subjects are habituated into cybernetic modes of positive feedback loops which capture attention and affection, to create the state of an ideal : cyber-manager, artist or consumer, as Kittler, for example, suggests.

The fact is that we live in a world full of phantasms, reflections, representations and endless simulations that continuously calculate; mechanically reproducing everything under their own logic of control. This is the post-modern plane that our current phase of capitalism produced; a territory that ‘organises knowledge, affect, and other intellectual skills as a production force to be exploited.’ But, how can we break this subjectivity produced through our constant interaction with these screens? A virtual world of intense competition of value and profit produced by the institutions of software industry. How can we compose an artistic image outside the frenetic speeds of digitalism in order to create a simulation that overturns today’s world? How to break and how to compose when we are imprisoned within our human all too human cage of fears, clichés, self-obsessed egoisms and its organic thought?

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## MACHINES





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## CHAPTER I

# THE DIGITAL IMAGE



In the nineteen sixties, media theorist Marshall McLuhan challenged common assumptions about communication technologies with his predictions about the impact of electronic machines. McLuhan's idea was that electric speed of modern communication technologies would eventually 'compress' our globe to the size of 'a village...[bringing] all social and political functions together in a sudden implosion.'<sup>2</sup> Today, these electronic beams have been digitised and coded, turning the global village of modernity into a vast cyberspace.

The digital image entered our lives as a postmodern technological innovation. Unlike the modern image of television and film, the digital image brought a new mode of materiality and space. It appeared as a new computerized automatism which re-organised

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<sup>2</sup>McLuhan, 2001, p. 5.

space and time giving a new dimension to forms and lines. In this cyberspace, the Euclidean natural image has been replaced, expanded, and redesigned, under the topological lines of digital machines. It opened up a space of information where the perceptual and the visual, the historical and the architectural, the form and the space all lost their chronological movement, deconstructed as bits and represented upon a matrix table in a random order. The digital image is not an image of movement, but of probability. In the cybernetic regime of the digital image, movement has been distorted, the vertical and horizontal coordinates of space and time have been electronically re-organised appearing from 'any-point-what-so-ever'. This probabilistic mode of the digital image moved us further away from the world as a 'natural' image since space is no longer organised in an Euclidean geometrical line where time moves in linear chronological mode. Rather, it lies upon a deconstruction of time and space as the virtual dimension of the digital image, it does not have a model or a reference to an outside to represent it, by dividing the real with the imaginary. With the rise of the digital image, we are facing a new ontological problematic, in which the frame no longer functions as a window to another world: a painting, a print, or a boundary for a cinematic projection that is giving access to it. Instead, it has become a virtual matrix that organises data and simulates information. Digital

automatism on the opposite side 'has no longer have any outside (out-of-field), anymore than they internalised in a whole; rather, they have a right side and a reverse, reversible and non-super-imposable, like a lower to turn back on themselves'<sup>3</sup>. The real and the imaginary are not points of difference connected through a straight line in the digital plane, rather they become the one side of the same plane connected through a curved line transforming life into a virtual circuit.

The digital image has produced a new mechanical order, a postmodern simulation of images that opens up a mathematical space that is plastic, virtual, densely webbed, and infinitely complex. Within this cyber space, the digital and the brain are specific types of images that receive and transmit movement and, at the same time, they choose the manner in which they restore what they receive. Bergson in his ontology of images, separates the brain image from the other type of images, as he argues that the human brain acts as 'a special kind of image'; which is 'an interval that propels what we call thinking'<sup>4</sup>. This interval is a creative force that reveals a spiritual automatism and gives the possibility to generate a synthesis of reality. Deleuze, in his ontology of cinematic image, following Bergson, reminds us not to think of the brain as a specifically human organ, but as a modal organisation whose potential remains unknown. The brain, Deleuze argues, cannot be thought of as a pre-designed system, with

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<sup>3</sup>Deleuze, 1989, p. 17

<sup>4</sup>Flaxman, 2000, p.19

its own pre-established command center, but can be thought of alternatively as a ‘random mechanism,’ an infinite probabilistic space. The brain, thus, is not a Cartesian centre, but instead the ‘totality of all relations, including those not yet actualised.’<sup>5</sup> And as such machines, brains produce ‘probabilistic’ events, they cannot be reduced to their origins or contexts, nor can their effects be pre-determined. The digital image and the brain, both as probabilistic machines differ in materiality, function, and duration; however, they are connected by their reception and delivery of movement, as well as the selective manner in which they restore what they receive. This ontological regime of interdependence sets a dynamic relation between the ‘human subject’ and the ‘screen’; a relation where the subject acts as an active agent that constantly performs an immanent synthesis.

Even though Gilles Deleuze, in his ontology on cinema, doesn’t give us an analysis of the digital image and the emergence of its techno-aesthetics, in the conclusion of his book, *Cinema 2: The Time-Image*, Deleuze (1989) identifies the changing relationship between analogue cinema and the electronic image of video. Drawing on Edmund Couchot, he defines the electronic image of video as ‘numerical,’ an image no longer based on the movement of analogue succession, but on a cybernetic feedback organisation. Couchot (1984),

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<sup>5</sup>Ibid, p.116

sees the electronic image as a cybernised machine that is designed in terms of circuits, feedback loops, and information flows, that do not act to inform or communicate knowledge, but operate at a purely ordering level. Couchot, in his essay, *Image Puissance Image* (1984), takes into account the transition from an analogue image to a cybernetic one that through its constant exchange of numerical values, actualises a quantum space of two or three-dimensional structures. For Couchot, the new regime of video signifies a radical migration from the analogue cinématique one, as now it is not the film or the camera that projects the image, but the 'screen itself [that] constitutes an opaque, an intensive surface of information on which data is inscribed.'<sup>6</sup> Within this electronic matrix there is no center anymore, since electrons perform 'discontinuous quantum jumps by disappearing from one stationary state and reappearing in another one, somewhat like the smile of a Cheshire cat.'<sup>7</sup> This new organisation has created a 'breaking up of the linear connectivity of the analogue image'<sup>8</sup> by rearranging it within the chaotic electronic signals of continuous quantum jumps. Instead of a chronological and rational linkage, turning numerical images into objects of a continuous reorganisation, the

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<sup>6</sup>Deleuze, 1989, p. 265.

<sup>7</sup>Ibid

<sup>8</sup>Ibid



image ‘arises from any point whatever of the preceding image.’<sup>9</sup> The screen is ‘no longer a window on the world’<sup>10</sup>, as Deleuze writes; it has become a machinic center of indetermination that manages visual information. The numerical image, as Deleuze terms it, evolves functionally rather than representationally. Since, its semi-closed assemblages are not descriptions, but rather are programs that ‘auto’-replicate by way of an operation passing across an exteriority.

With the rise of digital, the cinematic image falls once again into crises, as digital technology becomes rearranged around a new type of organisation, that of an image that is no longer founded on the numerical expressions of electronic signals, rather emerging from a binary matrix which calculates and organises information. The cybernetic structure of the digital image stretched

out a vast space of information, like a complex, heterogeneous, anarchic space where the trivial and the cultural, the public and the private, the historic and the anecdotal, the imaginary and the real are brought together [in...] a network, in kinds of relationship which are never those of causality.<sup>11</sup>

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<sup>9</sup>Ibid

<sup>10</sup>Ibid

<sup>11</sup>Deleuze, 1989, p. 2680 - 9

This internalisation of the image marks the end of the modern art of cinema as the digital image no longer derives from a projection, but from an internal automatism. Thus, due to its computational architecture, the digital image is not an image of projection, but of an internal computation, and is designed in terms of circuits, feedback loops, and information flows. Within this context, our relation with the digital interface is not just a product of a coded hardware, as media theorist Kittler (1997) perceives it. Rather we are experiencing specific modes of spiritual automatisms which simultaneously interface their own modes of economics, logic, expressions, and sense. We are facing a virtual world of digitised images of ‘a new computer and cybernetic race, automata of computation and thought, automata with controls and feedback’<sup>12</sup>, as Deleuze writes.

For Deleuze, the managerial and control aspects of the numerical image present something darker than just the arrival of a new technology. Deleuze is the most skeptical of the possibilities of the digital-numerical image’s ability to produce an artistic will. What the electronic image does offer to us, he argues, is a new system of thought and as such a system it requires a new will to art to be invented. However, the answer to this question remains abstract since a new ‘will to art’, lies on a double movement—in past as in the present and future, since ‘the cinematographic image was already

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<sup>12</sup>Ibid, p. 264

<sup>13</sup>Deleuze, 1989, p. 266

achieving effects which were not those of electronics, but which had autonomous anticipatory functions in the time-image as will to art.’<sup>13</sup> But such a double movement Deleuze reminds us can be at the same time an expression of a will to power and at the same time a deconstructive process of the artistic will and its spiritual automatisms by turning the artistic image into a capitalistic delirium. ‘I am afraid that the new methods may invalidate all will to art, or make it into a business, a pornography, a Hitlerism’ Deleuze writes. This fear arises from the fact that while the digital image offers the possibility for an artistic creation, concurrently its cybernetic structure offers a greater system for a further technological and political control. In other words, the new modes of digital regimes activated a contemporary form of subjectivation and administration of ‘*Life*.’ But in which terms is this double is functioning? How is it be possible to have a will to power when power has been ‘diluted and reduced to ‘information’? How can we create an artistic image towards *Life*, which is always an image of philosophy in our contemporary societies of cybernetic control?

In ancient world, the art of philosophy was not just an image of a dialectical system towards knowledge. It was a practical system towards a will to life. A poetry. The poetry of the arts—the muses—is a vitalist movement which creates life for the Greeks, eternal time that is the driving force moving everything together with the God of

war, Polemos. A polemic art of life. Pre-socratic philosophy, contrary to modern philosophy's aims of producing different discursive practices, proposed an art towards living which is the poetic movement of dying. It is the framing of life within the tragic cycle of theatre, where the philosopher as a poet writes, shapes, forms and geometrizes its world. In its ancient embodiment, philosophy was an artistic exercise that sought through the creation of concepts to liberate thought from a humanised view of the world. Everything existed in a constant movement of liquified, steamed and matter as Thales announces. 'Becoming' is what I contemplate,' Heraclitus of Ephesus declares.<sup>14</sup> Pre-socratic philosophers see in philosophy as a plane of a poetic vision towards life. A plane that allows us to see things in their depths and set life and its substances into the ecstatic dance of a Dionysian tragedy.

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<sup>14</sup>Heraclitus in his philosophy rejects the notion of being as a static phenomenon and argues that that the contemplation of being should be perceived as part of the eternal waves of time that composes our universe. In this sense being is not something static but constant becoming.