Out of Reach

Rhetoric of Measurement in

Surveillance Photography

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Introduction

Many contemporary artists are attracted to the language and the topic of surveillance as it has relevant implications in our society. The growing amount of systems of surveillance, the pervasiveness of surveillance in our present society has reached a point of great complexity. Surveillance is becoming at once more ubiquitous and less visible. Reaching the point in which it has become impossible to track out all the varied mechanisms of surveillance we are under. This conceptual complexity makes surveillance an appealing subject to contemporary artists.[1] In the process of forming new images to comment on the world comprised itself of images, artists introduce the visual language of surveillance in their work.[2] Which are the visual methods of control? How do different lens-based artists react to contemporary surveillance practices? Which are the languages they adopt and why?

It is through scientific validation that mechanisms of control can operate. These apparatuses are guaranteed by several parameters that have been established through a historical process.[3] In this thesis, I am going to focus on the relevance of measurement as a method of control, used to classify individuals, spaces, and behaviour. To understand the rhetorics of surveillance, I will examine the different rhetoric of dominance used in several audio–visual art expressions, mostly focusing on the photographic media and its implications in systems of control. Considering the historical role of visual language in the creation of social norms; analysing the use of measurement to establish these differences. I will explore the question of: How does measurement provide insight into how the rhetoric's of surveillance have been formulated? To answer this question, I will further analyse the role of measurement in establishing deviance and normality in persons' identity and

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[1] Phillips Sandra. 2010, p.143. Phillips believes that artists are compelled to experiment with the vague and ambiguous distance of surveillance, and the difficulty to read them without context, she declares, "Indeed, Surveillance has become especially compelling to contemporary artists working in photography and media perhaps because it engages a certain anxiety felt in the culture. What characterizes most surveillance photographs is a spirit of distance, abstraction and certain placid ambiguity. By definition, they are without affect. Most often we have to be taught what these pictures mean."

[2] Elssaeser refers to Farocky as a filmmaker and theorist that comments on the images that shape the world using images. I have borrowed this expression to refer to images that comment on surveillance using the same lens-based instruments as in surveillance

[3] The term apparatus is used by French Marxian philosopher Louis Althussier to convey the idea of a system that in order to reproduce its roductive forces, not only makes use of repressive systems of control, but also utilizes an ideological system of control based on an miraid of different social intitutions that propagate ideologies. The later belongs to the private domain of society, such as, churches, schools, hospitals, among others.

behaviour. Secondly, I will analyse the role of measurement in controlling space in photography. The first chapter thesis will revolve around the use of measurement in photography as an instrument used to determine the relationships between normality and deviance I will, therefore, attempt to answer: How have visual artists examined the use of the language of categories of normality and deviance regarding measurement? In the second chapter, I will delve into the relation between individuals and spaces responding to the question of: How has the rhetoric of space, in the context of surveillance photography, been revised through art photography regarding the concept of Visual Nominalism? I will elaborate, therefore, on the notions of identity of both individuals and spaces in the context of surveillance. To do so I will consider the static characteristics inherit to the photographic media.

Social Context of surveillance

Although the many advantages of surveillance are undeniable; surveillance provides security and protection in many contexts; the extent of pervasiveness in has reached in contemporary society has raised social anxieties, which many artists aim to visualize. Surveillance is related to notions of visibility and invisibility, exposure and surreptitious watching. Surveillance images also deal with a range of notions such as ambiguity, anxiety, intrusiveness, security and control, among others. The continuous expansions of surveillance of the daily life are increasing the concern towards 'multi-layered' and 'multi-purpose' ways of vigilance.[4] The most representative system o video surveillance is epitomized as an elevated, inconspicuous, 'ever- watching' lens. This perspective of power is repeatedly associated to a god-like guard.[5]

There are, therefore, many contemporary artists that are drawn to the subject of surveillance, both for its aesthetical language as for its ever-pervasive topic. The manifestation of surveillance in art is expanding to the point in which these practices have

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[4] These terms used by the sociologist David Lyon to describe the complexity surveillance society in the 21st century.

[5] Foucault 1980.This form of surveillance has been epitomized by the image of the panopticon in which a central tower embodied a centralized form of control, although already at this stage a horizontal system of power, in which at the same time surveillance was wielded from other inmates, comprised an important aspect of surveillance. Authors like Sandra Phillips, David Lyon or Manovich have has been associated the lens of a surveillance camera in many occasions to the form of control of God-like presence, as it is inconspicuous and operates from a high point of view.

been termed as 'Artveillance,' which is employed in a large array of practices, video, photography, graffiti, performance or art installations among others.[6]

The importance of dataveillance or invisible surveillance

At present, surveillance is not just a matter of street CCTV surveillance. Most forms of surveillance are not easily visualized. New methods of surveillance are constantly being reformulated. Surveillance is comprised by the tracking of data, along with artificial intelligent systems that can recognize and classify human identity and behaviour. Surveillance is used for very different purposes: security, commercial uses. Biometrics, which relates to identification through measurement of human characteristics, for instance, ranges from finger print identification and face recognition to behavioural pattern recognition that tracks and classifies human movement.[7]

This analytical research focuses on visual means of surveillance that are visual. Which in some cases show a tendency to abstraction and distancing that is characteristic of surveillance images. New surveillance systems are no longer reliant on visual information provided by surveillance cameras. Technical improvements have given rise to a new kind of monitoring often referred to as 'Dataveillance,' term that designates the monitoring of a person's activities through online data or meta data such as, credit card transactions, mobile call phones or internet activities.[8] Although it is essential not to ignore *dataveillance* as a key side of surveillance; the aim is not to focus on the representation of this informational flow but the images produced by surveillance cameras.[9] Although surveillance tends towards abstraction and objectification, I am going to centre on the methods of surveillance carried out by cameras, including CCTV surveillance in the public sphere and detective photography. These expressions are intertwined with the history photographic media. Today most of the systems of surveillance are connected to internal or external systems of

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[6] Brighenti 2010, p. 175. I am here borrowing the word used by Andrea Mubi Brighenti the text *Arveillance: At the crossroad of Art and Surveillance.* Described as "the domain of the reciprocal exchanges between art and surveillance" and applying it to art photography.

[7] Lyon 2001, p.51-68.

[8] Lyon 2001, p.51-68.

[9] Traditional video surveillance is today attached to information technologies. Some authors, like Wolfgang Ernst, place the beginning of disembodiment with the apparition of interactive the television show *Big Brother*. In this popular program videos were streamed in real time through the internet. The television show becomes the first to transform life actions into data flow in real time; as a result, bodies were identified with data flow that could be edited on for the first time.[9]

connectivity, Although dataveillance will be taken into consideration, the focus of this thesis is on the visual language of surveillance photography.

This first wave of artists that dealt with the topic of surveillance in the decades of the 60s and the 70s were mostly drawn to the use of new media such as video, or installation. Many the works of art that deal with the matter of surveillance approach this topic from the angle of Interactivity, using surveillance technologies to make their art.   An early example of this is the work of Dan Graham´s *Time Delay Room* (Fig. 1). A closed-circuit installation in which two rooms with two surveillance cameras feed into monitors in the adjacent room, in this installation the visitors become both observer and observed, and participate in their movement in the surveillance system in the process of feedback.[10]

The use of surveillance in art photography has not been studied as thoroughly as video art, installation or even performance. In this thesis, I will explore the relationship between photography and surveillance, and more specifically, the ways of representation of surveillance in art photography from a sociological prism. Regarding, therefore, photography as a surveillance technology that is capable of creating art. There are not so many published references that deal exclusively with the subjects of surveillance and audio-visual art or surveillance photography. One of the most salient references is the catalogue of the exhibition of the Tate Gallery, *Exposed Voyeurism, Surveillance and the Camera*, 2010. The catalogue analyses surveillance photography from voyeurism approach wich regards human desires as the main aspect of surveillance.[11]On the other hand, the catalogue*, Ctrl [space]: Rhetorics of Surveillance from Bentham to Big Brother*, 2002, is a thorough guide for the understanding of surveillance gives an overview of a great number of art expressions that deal with the topic of surveillance from a socio-political perspective. It gives an account of different audio-visual media and from different angles as it analysing some of the most iconic works of art on surveillance which alternates with sociological

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[10] Bruyn, Eric de, . 2006, p. 55.Feedback loop was regarded in the 70s 80s as an instrument that could 'destroy all social hierarchies''to level social hierarchies out as, for instance students could film their teachers. Feedback was thought as a new technologies that would serve to change and improve behaviour and group dynamics. Enabling in the process to learn from our own behaviour or level hierarchies.

[11] The voyeuristic attraction is the main focus in this catalogue. Following the exhibition which exposes the voyeuristic nature of surveillance by unveiling desires of trespass, revealing the appeal of seeing without being seen, or even the allure of agreeing to exposing oneself to a stranger´s camera. This is an approach related to psychology more than sociology.

texts on surveillance.[12] The latter is closer to the perspective of this thesis as it deals with surveillance from a sociological perspective, but differs, in the sense, that it has a more general approach, and does not specifically explore the possibilities of the photographic media relative to surveillance.

With regards to the relations of power in surveillance, it is epitomized by the unidirectional gaze of the monitoring lens. Considering the photographic media already entails an unbalanced relation of power between the observer and its subject, this is enhanced both by the perspectives of surveillance watching, and its power claims. This relation which is already present in documentary photography is exacerbated by the nature of surveillance photography, as it enhances domination or neutralizing visual language, through angles, points of view or classification systems.[13] *Artveillance* expressions often attempt to evidence these systems, either by involving the spectators in the dynamics of surveillance or by exposing the ubiquity of surveillance. In this analysis, I do not wish to delve into works that make the recreate systems of surveillance in which the observer is involved in the process of surveillance must interact directly. However, rather, those that show the rhetoric used in surveillance to expose the visual language of surveillance, and its unidirectional gaze.

Exploring how these discourses are reshaped and reformed, and in which ways it generates and unbalanced power relation. Most of the texts about surveillance photography refer to practices carried out before video surveillance begun to extend as a common practice around 1965.[14] These theories explore the implications of document making, mugshots or documentary photography, by doing so explore how these systems focus their research on video camera technology times, especially in the context of power discourse.[15] On the other hand, detective photography that is more immediate, as it does not work by creating an archive, has been mostly explored in its voyeuristic implications. However, in

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[12]Levin, T (Ed.), Frohne, U (Ed.), Weibel, P (Ed.), CTRL Space: Rhetorics of Surveillance from Bentham to Big Brother, Exh. Cat. Karlsruhe: ZKM, 2002.

[13] This is visible in documentary photography, where the photographer photographs a group of people from a less privileged class, imposing his or her own view. Producing an unequal relation of power. In some of the early attempts the subjects of documentary photography did not return the gaze to the camera, case in point are the photographs of Jacob August Riis (1849-1924). Documentary photography increases the sense of otherness of those being photographed.

[14]http://www.business2community.com/tech-gadgets/from-edison-to-internet-a-history-of-video-surveillance-0578308#GvzBFxfzudbvm5VL.97

[15] John Tagg in The Disciplinary Frame published in 2008, analyses surveillance photography up to the photography of the FSA of the New Deal, around the 1940.

the present surveillance is broadly understood as the tracking individuals in real time, and is carried out through video technology, that is depersonalized and operates through a complex system of information. Art photography often comments on the surveillance realized by video cameras, transforming a moving image into a static one, and offering a different approach to video surveillance. Photography is more prone to measurement; this is why it is interesting to study it in the light of social systems of control, which has a history of using measurement as an instrument to define and reshape different notions.

The languages of surveillance have been formed around the notions of deviancy and normality, as deviancy is the main target of surveillance, and deviancy only exists in contrast to normality. These concepts have been formulated through a historical process.[16] Artists emulate visual languages associated with surveillance, such as elevated perspectives, surreptitious angles, dark lighting or neutral point of view, to comment on the language, often questioning the established the notions of normality and deviance. I mean to analyse in which ways make use of photography by artists to reverse or expose the power gaze of these visual mechanisms and question surveillance society.

Theoretical Framework

I will examine the visual qualities of the photographic media reffering to surveillance. To do so, I will elaborate on the theories of John Tagg, photography theorist who in *The Burden of Representation,* who elaborates on photography as an element of control. Tagg ascribes his photography analysis to the theories of power systems of Foucault. Although his main focus is on documentary photography, his theories are also applicable to surveillance photography. This analysis is based on a rhetoric of a visual language in authenticated through context. According to Tagg, this system provides a "scientific" method, which validates different systems in power. Furthermore, it is formed through a complex historical process. I will attempt to explain the social side of surveillance dealing with the theories of Foucault of the *Power-knowledge,* which is closely connected to Tagg's theory.[17] In addition, the sociologist David Lyon gives an overview of the complexity of

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[16]   Spina, M, 2012, pp 41-51Maybe add here on Marley Ponty's text

[17]   *Power-knowledge* is a term coined by Foucault to refer to power that is shaped maintained and deployed through the use of knowledge. This was done through the new sciences that appeared in the 19th century, such as sociology, psychology, demographics or medicine among others.

surveillance systems in our present society which gives insight into the complexities of surveillance systems in the present society.

Jhon Tagg is one of the photography theorists most devoted to understanding the role of photography as an instrument of power. He carries out a historical study of documentary photographym and its social implications. Tagg takes into account that photography was not just a witness of a   sociological processed. Tagg stresses that photography became an agent that influenced the configuration of social norms. He reveals that photoography has an active role in this process. The establishment of these systems of power includes the perception of normality and deviancy of individuals and spaces. These opposing terms are important themes of this thesis as mechanisms of control. In this regard, photography became an instrument that classified normal from deviant, through a series of visual codes. To analyse the language used in surveillance photography, I will draw from this theory the aim of this thesis to understand how different artists have dealt with the rhetoric of visual dominance, visually as opposed to a theoretical one; by adopting the language of visual domination to expose, critique or comment on these methods. Exposing the theory or representation of power systems and questioning the neutrality of the gaze of surveillance. John Tagg has studied from a historical frame the construction of a visual language of documentary and surveillance photography in a sociological approach derived from the French philosopher Michel Foucault.

In this context, the notions of the panopticon, and society of control elaborated by the French philosopher Foucault (1926-1984) is an essential theoretical framework. I am mostly interested in the aesthetic possibilities of surveillance photography. It is important to draw a general outline of types of systems of surveillance, to better understand the meaning of surveillance representation in photography. With regards to how surveillance systems are relentlessly becoming more complex, the sociologist David Lyon (1948) elaborates on how surveillance systems in the 21st century have transformed. Lyon includes the effect of information technologies on the methods, objectives, and devices of surveillance; This entails that the boundaries between interior and exterior are becoming blurred as surveillance has leaked into more aspects of our everyday lives. This publication dates from 2001. Therefore, although it provides a thorough insight into surveillance systems and their social implications, it has become outdate, due to the rate at which new surveillance

systems expand. For instance, the use of smartphones in which the tracking o data is more personalized and connected to a precise time and location.[18]

However, as we are focusing on street surveillance, this publication is relevant. Lyon, as well as Foucault at his time, foresee how systems of control are becoming decentralized and more pervasive, which makes his analysis valid for many of the social implications in today's surveillance systems. Systems o surveillance since then have become more pervasive, according to Lyon, surveillance is exercised both by centralized and decentralized power systems. Many tracking systems follow our movements throughout the day and our interests for commercial purposes. These tracking systems are disconnected from one another as they do not respond to a central focus of power, but to various interests. On the other hand, the 9/11 events have marked a significant difference policies national safety worldwide. These events have triggered governments to reinforce national security systems.

If photography is often refered to with aggressive terms, such as shoot, freeze or capture that owing to the fact of the unbalanced power relation between photographer and photographed. Surveillance Photography increases this power relation, as it establishes distance positions of power and domination. On the other hand, surveillance Photography enhances the allegedly objective nature of photography as it is used as criminal evidence. The perspective of Surveillance photography is customarily taken from above. Often the lens of the camera is placed at a high point, as to make sure these devices are no easily noticed and have a broader area of vision creating an aerial or bird-eye perspective from which the subjects that are being under surveillance cannot return the gaze. To analyse the implications of using this angle I will build on the argumentations of Andrew V. Uroskie, an expert in Modern Art History and Media Studies, who has analysed this perspective concerning the imagery of crowds.

Lev Manovich as a media theorist explains how technologies of control and warfare, such as Radar, Reconnaissance or photography have originated from pictorial linear perspective. In this sense, he positions photography as a technology of war. According to

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[18] Lyon has more recent publications, such as Transparent lives: Surveillance in Canada (2014), in which he studies the effects of new technologies that have changed and amplified the ways of surveillance in the contemporary society, broadening progressively the domains of life that are considered zones of surveillance. Social networks mean that surveillance is performed in multiple forms, to keep control, for social sorting and for mutual monitoring.

Manovich, representation and linear perspective become a military tool to control space, map out cities, or scale buildings. Moreover, he pints out how surveillance technologies, which originated as military aids, were later adopted in civil surveillance as the same perspectival techniques used for the representation of cities were applied to surveillance technologies such as radar, 3-D computer graphics, image processing or computer vision. To analyse the visual aspect of surveillance photography I will build on the argumentations of the Art Historian and media Studies professor, Andrew V. Uroskie as a foundation to analyse the implications of our emotional response to the aerial point of view in photography and other mediums.

Chapter 1. Deviant bodies. The construction of the notions of normality and deviancy through measurement.

Introduction

As Normality in connection to deviance is the running topic of the chapter, I will begin by analysing the different etymological, social and philosophical acceptations or the word. I will base this analysis in thorough overview with regards to the ontology the various acceptations provided by Marco Spina, who analyses several meanings of the terms normality and normativity with regards to the social and legal connotations. The existence of surveillance is pointless without deviances to identify. Therefore to better understand mechanisms of surveillance., it is of crucial importance to determine which is the nature of these deviances Deviancy is a quality, state or behaviour, that is stained from the norm of standard considerations.[19] Deviancy seems to mean a certain threat to society. For this reason, subjects who do not fit in the realm of what is designated as normal, are subjected to scrutiny. Deviancy only exists in opposition to normality. Normality seems like a tacit and automatic notion. Nevertheless, it corresponds to a series of social constructions that have been elaborated, deployed and transformed throughout a process of genesis[20]. Consequently, to understand deviancy, it is important first to analyse how normality is constructed.[21] In this chapter, I mean to focus on deviancies in identity and how artists represent deviancy and normality photography. Considering how the use of visual rhetoric associated to normality or deviancy is established through a historical process linked to a hidden or implicit text. Lastly, analysing how different artists present surveillance discourses.

The aim of this chapter is to answer the question: How have visual artists examined the use of the language of the categories of normality and deviance relative to measurement? The approach taken here draws from the theories of John Tagg (1949), one of the photography theorists most involved in the sociological aspects of photography. Tagg is influenced greatly by arguments on systems of social power formulated by French

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[19] *Marriam-Webster, s.v.* "deviant," accessed June 13, 2017, https://www.merriam-webster.com/dictionary/deviant
[20] Spina 2012, pp. 41-51.
[21] Foucault 1978, pp.132-59.

philosopher Michel Foucault (1926-1984). He elaborates on the role of photography, not just as a mere witness of historical change, but as an element of change in the hands of social institutions, such as police offices, schools or various scientific institutions. These institutions use photography to produce records and keep tabs on the population. Tagg regards photography as an instrument that has been utilized to form certain rules and norms. Photography has had, therefore, an active role in the formation of discourses of power that include shaping what is considered normal and what deviant. Tagg explains how, although photography has been considered from its inception as a scientific method of seizing reality, an impartial document, this notion is thwarted as photography has had to create certain rules that enable it as a social document.[22] Surveillance is used to keep track of these established concepts of deviance, by monitoring individuals or their behaviour, that have been classified as out of the norm often by means, such as photography or video, that have supported the creation of these parameters in the first place.

The terms, normal, surveillance and photography are intertwined. If we examine the different acceptations of the terms, normal, normality and norm, we discover a complex plethora of relations with the topic of surveillance and photographic representation.[23] Surveillance comprises only a power resource within an elaborate system of control formed in our recent history. This system of control has been formulated by a series of parameters of normality to which citizens must adapt in order not to be considered deviant.[24] It is important to note that the meaning of normality is rooted in the action of measurement, as it comes from the Latin *norma* which means precept or rule, but also designates a measuring instrument, such as a square or cord.[25] The media or norm is established through measurement as the most common result. The norm is designated against other measurements through statistics. Therefore, parameters of normality and deviance are obtained through the action of measurement. Surveillance is related to these terms as its main purpose is to distinguish deviancy from normality, this is the reason why it is important to understand the workings of measurement in the context of surveillance. Photography, in turn, is a media that has been used to document deviant individuals in society. This media, due to its statics qualities facilitates measurement. For this reason, it is

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[22]Tagg 1988, pp. 1-33.
[23]Spina 2012, pp. 41-51.
[24]Foucault 1978, pp. 132-59.
[25]Waldenfels 2005, pp. 57-67.

interesting to study deviance in connection to photography as measurment is an essential aspect of photography and deviancy.

Measuring bodies against the standard. Vital statistics of a Citizen Simply Obtained, 1977

It is essential to understand the role of individual control in power dynamics. Foucault coined the term *power-knowledge* to describe a system of control based on the influencing, and reshaping society through information. This system hinges on the use and monitoring of information through power systems based on the norm. In words of Foucault, "a normalizing society is the historical outcome of a technology of power centered in life" which brings life into the examinations and calculations of 'power systems. I will analyse this conception of the body as a machine apros theory of bio-power compared to Martha Rosler's video-art work *Vital Statistics of a Citizen Simply Obtained* (1977) (Fig. 2),[26] This work presents the role played by measurement in the relations of normality and deviance. According to the artist, the idea originated from the reading of a 30s guide on the measurement of women and children.[27]

As we have seen at the beginning of this chapter, the etymology of the word norm is connected to the idea of measurement. In the video, Rosler plays the role of a woman who is being measured in a pseudo-scientific lab by a man in the role of a medical functionary.[28] *Vital Statistics* visualizes the control exerted over women through similar strategies of control through measurement, statistics, and the norm, as those exposed in Power-Knowledge. According to Foucault this system of control exerts its power through the deployment information, especially by extracting and analysing data that is set into categories.[29] *Vital Statistics* is also contemporary to the concept of *Bio-politics*. Foucault formulated this concept to describe how social power extends to the control of the physical

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[26] I will from now on refer to this work in the shorter form, *Vital Statistics.*
[27] Whitney Museum of American Art "Curator Chrissie Iles in Conversation with Martha Rosler" online video clip. YouTube. YouTube, 9 Aug 2010. Web 1 June 2017. https://www.youtube.com/watch?v=pl-8j939qdM
[28] Alberro 2000, pp. 72-113.
[29] The term power-knowledge was coined by Foucault in *History of Sexuality* , described as systems that are based on knowledge and make use of knowledge to wield and maintain power. According to this theory, control is exercised by shaping knowledge that is beneficial to the axioms of institutions in power. In this context photography is used to study the population, forming an archive that can be studied and interpreted, creating, information that is inserted into power-knowledge systems.

bodies of the population. *Bio-politics* examines the body both in its biological, and its mechanical functions. Considering the human budy as a unit of production, that, as such had to be disciplined to fit certain parameters. Standardization of the body is, therefore, revealed by Foucault as a form of control. Foucault explains that the body gives rise to "infinitesimal surveillance" comprehensive measures and statistical assessments.[30]Surveillance of the body is presented similarly in Rosler's work regarding control through measurement.

The topic of this video, as it presents the concepts standard about the measurement of the body, renders this work suitable to compare it to the historical process described by Foucault of construction of premises of normality that rose in the 19th century. Foucault defends that the protection of life becomes paradoxically, a method of social control, as every aspect of this life is studied, measured and analysed by emerging institutions at the time, such as demographics, statistics, psychology or medicine, among others.[31] According to Tagg, this meant that for the first time biological existence was reflected in political existence, the population was studied through demographics, which regarded individuals as another variable of production.[32] In Foucault's accounts on *bio-politics*, power was directed towards the performance of the body that was both considered as a machine and the basis of biological processes. He also points out that bodies were inserted into the machinery of production; bodies were disciplined in schools, the army or at work. *Vital Statistics* visualizes how deviancy is constructed in relation the body through measurement. In this video, the body becomes something that must fit into certain parameters. *Vital Statistics* illustrates the process through which information related to the body is created, making us aware by doing so that this system is neither neutral nor instantaneous, although it presents itself as such.

Vital Statistics enables us to understand the role of measurements, science, and statistics in the creation of the notions of normality and deviance. Moreover, how these seemingly neutral measurements function as less-obvious forms of repression and control. Foucault determines that it is precisely through this system of control, based on the administration of life, that the deployment of norms becomes a crucial instrument of this

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[30]Foucault, 1978, p. 145.
[31]Foucault 1978, p. 144.
[32]Tagg 1988, p.5.

system, in his own words, "another consequence of the development of bio-power was the growing importance assumed by the action of the norm." [33]The norm shapes the way in which bodies are regarded in society. The importance of the norm is of crucial importance in *Vital Statistics*. It connects measurement to the notion of standard, while the medical official reads Rosler's measurements out loud, either an approving sound when her measurements are categorized "standard," or a disapproving sound is produced when her measurements are categorized "below or above standard." This suggests that standard, normal or average, is good and that deviation from the standard is bad. While Rosler stresses that measurement in itself has no meaning, she tries to demonstrate the power we give to medical institutions, as we license them to create categories which control, define and objectify people and their bodies.

Art historian, Alexander Alberro (1975) It is an adaptation of a performance of Rosler in 1973. He points out that Rosler decided to transform the performance into a video as this mediated between the audience and the woman being undressed.[34] According to Rosler, the video shows the tension between the dull distance of a monochrome longshot of a woman being measured and the nudity of this same woman. [35] I believe this contrast illustrates the juxtaposition between internal and external judgement. In *Vital Statistics,* control is internalized through measurement; Rosler exposes the idea of examining oneself through the eye of the other. In the voice over she explains how the subject "sees herself from the outside, with the anxious eyes of the judged, who has with her the critical standards of the one to judge."[36] The connotation of this visual language commands our understanding of events, as it produces a layer of distancing between 'us' as audience and the actions taking place.

Rosler´s concept of the internalized external control is present in to Foucault's explanation of surveillance in *The Eye of Power*. [37] Where surveillance is exerted not only

[33]Foucault 1978, pp. 132-59.

[34] Alberro 2000, p. 98.

[35]Whitney Museum of American Art "Curator Chrissie Iles in Conversation with Martha Rosler" online video clip. YouTube, 9 Aug 2010. Web 1 June 2017. https://www.youtube.com/watch?v=pl-8j939qdM
Rosler indicates that this self-discipline of the body is imposed in a larger degree over determined sectors of the population helping to increase inequity.

[36]Châu, Can. "Vital Statistics of A Citizen- Simply Obtained by Martha Rosler 1977" online video clip. Filmed [1977] YouTube video, 39:06. Posted [Jul. 2015]. https://www.youtube.com/watch?v=b91_vZ8TauM
[37]Foucault 1980. In the Panopticon, system of power not only by warden in the central tower, but must also be effected by other comrades that exert surveillance "by all others or at least a group of others"

by a single figure but is sustained by the whole of society, as everyone observes and is being observed by "all others or at least a group of others." Foucault notes that the idea of being watched by others prompts people to imagine themselves from an outside point of view and behave according to external judgments. [38] We perceive this same idea in *Vital Statistics,* Rosler explains that the work refers to an abstract level of social judgement. [39] In this regard, what is being represented in the video ultimately gives us the idea of a scrutiny of the body that is both exterior and interior; scientifically validated, and superfluous. In the end, both reveal how the body is constrained to the ideals of the ´the standard´ present in society.

In this 38 minutes long video, the resolution of the image is low. In The middle and most salient section, we see an act of measurement taking place. It is recorded from a front position. Rosler herself states that the poor quality of the recording was done intentionally. [40] In this way, it is reminiscent of images taken for practical, instead of aesthetic reasons. Video art has been used in the spheres of social criticism, as it operates as a media that is more involved in society, as its language was more present in the daily lives of a broad public through television broadcast than medias such as photography or film, more associated with the realm of art. [41] For this reason, the topic of social judgment is conveniently presented in this media.

Vital Statistics is shot from a frontal point of view, as this point of view seems more objective. There are no cuts, and the camera is always placed at the same point. This objective, neutral style, that does not appear to have artistic pretensions, contrast with the seemingly contingent measures that are being taken and the nudity that is presented before us. The most poignant example is when the 'medical practitioner' measures the interior of the woman's vagina. Although the aesthetic language seems to neutralize the actions that are being carried out before us, the contrasts between personal vulnerability and science prove that not all scientific measurement are neutral. It reflects on methods of control, as

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[38] Foucault 1980. Focault explains this through the metaphor of the panopticon, in which the observation is carried out by the watchman in the central tower and by other inmates as well.

[39] Whitney Museum of American Art "Curator Chrissie Iles in Conversation with Martha Rosler". Filmed [Aug 2010]. YouTube video, 05:16 Posted [Aug 2010]. https://www.youtube.com/watch?v=pl-8j939qdM

[40] Whitney Museum of American Art "Curator Chrissie Iles in Conversation with Martha Rosler". Filmed [Aug 2010]. YouTube video, 05:16 Posted [Aug 2010]. https://www.youtube.com/watch?v=pl-8j939qdM

[41] Westgeest 2016, p.12.

control of society through the discipline of the bodies that comprise it. By juxtaposing intimacy with science, it questions the codes used by the later.

The process of Portrait standardization in social documents

We might wonder which is the role of photography in surveillance. Photography has been used from early stages to classify individuals and to keep records of those considered deviant. Movement and individual identity are central components to the involvement of photography as an instrument of measurement in the hands of political dominance. Photography's role in power discourses is not just a record of deviant individuals, as it has served to measure bodies and classify personal features. Photographs became one the first instruments used to visually survey the population and categorize criminals, to do so, a method had to be established.

Tagg defends that photography is powerless and devoid of identity, and is only used as evidence once it is inserted in a series of codes that guarantee it can be employed as such, he observes, "photography has no identity. Its status as a technology varies with the power relations which invest it."[42]According to Tagg, in the 19th century the portraiture method begun to be configured to fit a certain standard of neutrality, with the aim of focusing on the identity of individuals. A method of standard portrait document was being formulated in which the identity of individuals was, especially in the case of official records, characterized by the background of the image which developed towards neutrality.[43] In 1872 Bertillon created a method in which pictures were standardized and associated to measurements used in police records.[44]Tagg claims the value of photography as evidence relies on its mechanical photochemical process that has been described as documents of truth, as photography was considered as a self-reliant formula to seize reality.

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[42] Tagg 2003, p. 252-257.

[43] Tagg 1988. With regards to the practices of portraying different social groups at the end on the 19th century, Tagg, notices that certain characteristics of standardization were being repeated in portraiture, among them the background, illumination, sharpness of the picture, as well as the gesture and posture of the portrayed, which he refers to as, "the body isolated; the narrow space; the subjection to an unreturnable gaze; the scrutiny of gestures; faces and features; the clarity of illumination and sharpness of focus, the names and number boards."

[44] Systems that used facial features were not very reliable to determine individual identity and were eventually substituted by the use of other formulas based on biometrics such as fingerprints to classify criminal perpetrators.

A homogeneous style was shaped responding to the different attempts of standardization of documentary photography. Authors like the film critic, André Bazin (1918–1958), define "straight photography" like the kind that does not use techniques that alter the similarities with the object photographed. Bazin considers cualities, such as blurriness or movement are less transparent. He claims blurry photographs "prevent reality from revealing itself to us"[45]because it presents an unclear image of reality. As a result of a historical process, the realm of scientific photography is highly codified, what might seem an automatic method of producing scientific evidence has been established together with a discursive system. Tagg provides an interesting basis for understanding that images are not produced transparently, as a reflection of reality.

With this in mind, the photography produced by Esther Hovers and Andrew Hammerand to consider the aspects of the images that may be produced according to a social or political discourse that constructs a visual language of normality or deviance. I will focus on the visual ways in which contemporary artists expose the constructiveness of images of video monitoring, which respond to certain visual codes. Today, technologies of surveillance had significantly evolved from the times to which Tagg refers to in, *The burden of representation*, (1988) when the main technology of surveillance and documentation was photography.[46]Newer technologies of surveillance, involve some sort of association between video cameras and artificial intelligence. For instance, some real-time facial recognition algorithms applications can distinguish the gender and age of the individuals, and even recognize facial gestures related to different emotions. The advantage of facial recognition over other biometric systems like retina scans or finger prints is that they can be carried out without the subject noticing them.[47]However, many artists still reference in their work to old-fashioned methods of surveillance, such as CCTV cameras or photography.

Linking back to the origens of documentary photography is possibly a way of tracing back today's mechanisms of surveillance, to the creation of the premises that

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[45] Friday 2005, p. 347.

[46] Tagg, 2003, pp. 257-260. Although Tagg has a more recent publication, *The disciplinary frame* (2009) In which he revises the ideas presented in *The burden of representation*, the last publication revolve around the creation of a photographic discourse in relation to a documentary discourse were constituted following liberal discourses of the New Deal And still relies on a theoretical framework that relies on Foucault's formulations.

[47] Subcommittee on privacy, technology and law. Committee on the Judiciary U.S Senate, *Facial recognition technology. Commercial uses, privacy issues and applicable federal law*. Rep. no. 15-621. N.p.: GAO, 2015.

established guidelines to homogenize the criteria of documental images. At a time when new visual codes are being created to suit the new technological advancements, it becomes essential to understand how the codes of representation in surveillance, which we now regard as tacit, also responded to a process of genesis that has shaped the way in which we understand deviancy and normality. Visual technologies of linear perspective, such as photography, were used to create social documents, but these were not automatically valid as such and had to be connected to different discourses attached to several parameters and rules.

The way in which images are used, analyzed, and presented is constantly being redefined, as technology and discourse adapt to each other. The terms with which we refer to these elements have slightly changed, what was defined as information, is now often defined as data that can be coded, information that was typed in paper documents is now stored in memory disks. What remains unchanged the necessary connection between images and information. The relation between surveillance and context is becoming less visible. Although the information attached to surveillance has changed, contextual information is still relevant to produce meaning in surveillance images, and therefore must be understood.

Andrew Hammerand. Deviant rhetoric in surveillance photography

Most of street surveillance images are taken from a high point of view. This perspective epitomizes the relation of domiation of the surveillance act. In fact, if as explained at the beginning of the chapter a neutral gaze has been used to convey a feeling of scientific objectivity, in this sense, pictures taken from an elevated position add to this alleged neutrality a certain sense of authority. On the other hand, he raised perspective is repeatedly equated to the point of view of the all-seeing eye of God, which witnesses everything, but does not take action.[48] Symbolically, in the presnt society, the watching eye of God has been replaced by the surveillance camera. The camera is placed in such way that it seems almost invisible to the bystanders, in doing so, he has taken over the space of power that this figure left empty. The bird-eye perspective, combines the sense of 'scientific

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[48] Authors such as, Phillips, Lyon, Uroskie, Manovich and Tagg associate surveillance cameras with the eye of God.

neutrality', characteristic of state images, with the visual dominance of the elevated position.

Hammerand's project, *The New Town* is comprised of photographs the artist made by accessing a camera atop a church in the centre of an idealised planned community in the American Midwest.[49]Hammerand was able to control the camera and make photographs of a small town and its residents.[50] Hence, Hammerand appropriates the gaze of power systems, proving how weak the security in fact is.[51] The control is no longer an anonymous system of surveillance. It is now directed by one particular person, the artist, that occupies this position of power. What is even more compelling is that Hammerand confessed he never been to this town, this means, he was able to monitor the inhabitants without even being present. The form of control is disembodied. The camera allows for a disembodied surveillance. What makes it even more remarkable is that the surveillance camera is placed over a church tower, making the parallelisms between surveillance and the ever-watching eye of God even more apparent.[52] The bird-eye perspective in this context is producing the effect of power. In these images we are not situated at the same level as the inhabitants, we are looking from above, we are transformed into the judge of their actions. We are placed in a position of power, which allows us to determine the meanings of the actions we imagine are being carried out. Many authors believe that it is the sense of distancing that epitomises surveillance photography and ultimately triggers a feeling of objectification in the subjects of photography.

For instance, Andrew Uroskie ascribes this effect to the aerial perspective which he claims, "begins to break with the embodied vision", meaning that from the 19th century on, the technologies of warfare began to elevate the point of view from which pictures were taken, resulting in a perspective of visual dominance. The objectification of the subjects being photographed is a product of the lack of reciprocity between watcher and watched. In a similar vein, other authors, place the beginning of disembodiment with the apparition of interactive Television shows like Big Brother. In this popular program, videos were

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[49] "The New Town." Open Society Foundations. Accessed June 03, 2017.

[50] Mallonee, Laura. "Man Spies on a Suburban Town With Its Own Security Camera." Wired. June 30, 2015. Accessed May 11, 2017. https://www.wired.com/2015/06/andrew-hammerand-the-new-town/.

[51]*Ibidem.*

[52]"The New Town." Open Society Foundations. Accessed June 03, 2017. https://www.opensocietyfoundations.org/moving-walls/ /new-town

streamed in real time through the internet. The television show becomes the first to transform, in real time, life actions into data-flow; as a result, bodies were identified with the data flow that could be edited on. [53] According to these two concepts of disembodiment Hammerand's *New Town,* produces the effect of disembodying the subject in two ways, through the bird-eye perspective which reduces the emphatic relation between viewer and viewed, and by using images that have been transformed into a data flow present in the formal qualities of the image. This sense of disembodiment is represented by the language, as the people being observed appear pixelated and fragmented by glitches.

Andrew Hammerand, makes use of a system that has been put in place by governmental institutions to produce his project, *The New Town* (2013-2014). Hammerand hacks into a surveillance camera of public access in a community in Midwest, (United States) and captures still of its inhabitants.[54] Hammerand could turn the camera at angles of 360 degrees, or zooms in with the surveillance camera, this enabled him to follow the daily lives of its inhabitants and conferred him a certain degree of autonomy.[55] If an image of a surveillance camera is selected and presented in the public eye, this act of selection implies by association, that the images chosen must be proof of a criminal, or at least suspicious actions.

On the other hand, the imprecise visual qualities of surveillance, such as sketchiness, imprecise edges or pixelated surface, also convey a suggestive effect, and invite us to interpret the information being laid before our eyes according to the images formal characteristics. The ideas of deviancy are inevitably associated to these visual traits; transform individuals we know nothing about, into anomalous subjects by association, as we associate the aesthetic of surveillance to dubious actions.[56] This is a similar effect as that described by Harun Farocki, with regards to surveillance images in jail, as, "Allows the images to speak for themselves when nothing, in particular, is happening"[57]. One of the most obvious examples is a caption that presents a man carrying a hammer, (Fig. 3). The

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[53] Wolfgang 2002, p. 462.

[54] Mallonee, Laura. "Man Spies on a Suburban Town With Its Own Security Camera." Wired. June 30, 2015. Accessed May 11, 2017. https://www.wired.com/2015/06/andrew-hammerand-the-new-town/.

[55] Mishka Henner, and Aaron Rothman. "Watched and Watching." Places Journal. March 01, 2015. Accessed June 03, 2017. https://www.placesjournal.org/article/watched-and-watching/. The camera has been directed by the artist who, as he gets involved in the life of the inhabitants of Midwest, becomes an active actor of surveillance.

[57] Elsaesser, T, and Harum Farocki, 2004, p. 282.

pixelated surface of the image, and a cut in the image at the hight of the middle of the leg, enhance the sinister qualities of the action that is being carried out. The man who most likely is about to fix something is regarded as a man with a deadly tool about to comit a crimianal action.

In other examples even though there is no apparent dangerous object this ominous feeling lingers, it is ultimately conveyed by the visual language alone, for instance, a caption of a little boy standing in dark area of a garden, his long shadow is projected on the lawn, in this example nothing menacing is happening, no actions are being carried out, however, the visual language seems to indicate otherwise, (Fig.4). As curator Sandra Phillips points out, most surveillance cameras are used retroactively, they are repeatedly filming and but the images are only used once something has happened to find evidence.[58]The fact that these images have been revealed, extracted from the flow of images to which they belong to initially, provoke that we identify them with evidence of a criminal act that is gathered retrospectively that would otherwise most likely remain hidden.

Esther Hovers. Deviancy in movement

The photography of Esther Hovers in the series of *False Positives*, 2014, and Esther Hovers recreates, in her with her own camera, the position of smart, algorithm-based surveillance cameras working in the financial district of Brussels. Hovers decides to simulate images drawn from surveillance systems through the information she is provided by security experts to photograph a range of eight anomalies determined by movement.[59]

In *False Positives*, the financial-district of Brussels is photographed from an aerial point of view, emulating the perspective of surveillance that situates its lenses from a dominating position. The resulting images are extremely clean-cut image of a city with lines that display an organised structure, comprised of architectural forms, empty spaces and soft gradation of colours. In *Overview E,* (Fig.5), small human figures are scattered around the large areas which Hovers's photographs, some of these figures represent

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[58] Phillips 2010, p 142.
[59] The anomalies are categorized as: 1- Standing still, 2- Fast movements, 3-Lonely objects, 4-Standing still at a corner, S-Clusters breaking apart, 6-Synchronized movements, 7-Repeatedly looking back, and 8-Deviant directions.

individuals that are carrying out deviant movements. Hovers, adds to the overviews illustrations of the different kinds of anomalies drawn over a reticular background. (Fig. 6 and 7) which respond to an idea of measurement.

Normality and deviance in movement are running themes in this body of work, Hovers explains, "an anomaly is defined as something that deviates from what is standard, normal or expected".[60] The photographed in this work created according to premises that artificial intelligent systems follow to detect unruly behaviour. A set of algorithms is programmed into artificial intelligence, as Hovers explains how, "through a process dubbed 'machine learning', the surveillance system is fed a multitude of examples, from which it develops a pattern which is used to identify normal or deviant movement".[61] Hovers interviews experts in security to understand how AI surveillance systems that detect deviant behaviour work.[62]

Until the 19th century, abnormal movements were not considered a subject of scientific study. It is at this time when for the first time a scientific explanation was sought to explain strange movements. Before this period movements out of the ordinary were interpreted as a manifestation of possession of the body by evil forces. It was seen as an expression of exterior forces and therefore pursued as a devilish sign. However, in the 19th century, on account of the rise of positivist sciences, movement was seen as an element of human behaviour, related to self-expression or self-management. Gestures were considered to be controlled either automatically or voluntarily by an individual.[63]

We might wonder why the artist chooses photography, which is characterized for arresting time, to represent the images taken by surveillance cameras, as surveillance today is mostly carried out by video cameras that capture movement, another aspect that seems to go against the choice of a static media is that the deviances that are being portrayed in *False Positives,* determined by movement. This choice makes sense if we compared to the historical role of photography as an instrument used to study and measure the duration of movement. The use of photography to show deviances in movement increases the time the

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[60] Wright 2016, http://www.estherhovers.com/British-Journal-of-Photography.
[61] Wright 2016.
[62] Hovers 2015, p.4. ¨The anomalies for her work were provided by intelligent surveillance expert prof. dr. Eric Postma, and surveillance experts Aart Beukers and Peter van de Crommert¨
[63] Newman 2010, pp. 67-73.

spectator has to examine the images, granting them greater control over the image than if the visioning time was set.[64]

Although photography cannot show the duration of time, it has been used to analyse movement, the best example of this is *Chronophotography*, which was essential in the classification and typification of movement leading to understand human and animal locomotion in ways that had not been possible before.[65] The term *Chronophotography* was coined by the physicist Etienne Jules Marey (1830-1904). This technique derived from other practices at the time that begun to consider movement as a photographic subject. Marey focused on the scientific possibilities of photography he was not interested so much in the subjects he photographed as in the motion carried out by these individuals.[66] The innovation of his method consisted in including different sections of movement on a single frame, by using a sequence of cameras with a sophisticated timing system.[67]

I am referring to the work of Marey, among other photographers of movement of the time; it is precisely because in some of his *chronophotographies*. Maray included an indicator that corresponded the exact moment of each section of motion, in this way the duration of the movement that was being tracked spatially. An example of this is a *chronophotography* that presents the flight of a canary in which a ruler-like time line above the sequence of the flying bird that marks the fractions of seconds in time (Fig. 8). In another example, the duration of time is shown as the image movement of horse's legs by the representation of several clocks with different times that mark the moment in which each gesture took place (Fig. 9).[68] The way in which Marey uses photography to deal with the body in its mechanical functions matches Foucault's concept in bio-politics which explains that a form of exertion power is wielded by controlling the body and its functions, according to this theory the body is regarded both as a mechanical unit of production and considered in its biological reproductive functions. The body was studied and measured following a scientific method.[69] It does not seem incidental that one of his first requests of the photographer was to study the movement in military marches and accordingly design

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[64] Wollen 2003, pp. 76-80.
[65] Braun 2014, pp. 95-102. Before this time some movements were impossible to understad with the naked eye.
[66] Brau, 2014, pp. 95-98.
[67] Braun 2014, pp. 95-98.
[68] Marey, 1899.
[69] Foucault 1978, pp. 132-59.

ways to make it more efficient as if considering how to make a machine more efficient.[70] Photography is used as an instrument to discipline the body and its functions.

Tracking body movement has also remained a long-lasting task of different systems of control, including surveillance as a way of monitoring bodies, in words of sociologist David Lyon, "the practice of locating, tracking and controlling bodies is as old as history"[71]. Tagg briefly refers to photography that studied movement at the end of the 19th century, as another instrument of classification and control. He regarded the work of by Eduard Muybridge "ominous sign" as it was a form of defining bodies through a laboratory system in which movement of the body was catalogued[72]. In this sense, the study of movement becomes another way in which photography joins forces with different systems of power to scrutinise the bodies. The subjects in *False Positives Overview D,* (Fig. 10), captured amidst movement resemble examples of studies of human locomotion in *Chronophotography.* (Fig. 11). This is the reason why I consider they reflect on the idea of understanding the flow of the body by halting this movement a way and making movement measurable.

The individuals that appear in Hovers' urban landscapes caught in mid action are reminiscent of *Chronophotography* gestures, also due to the fact that overviews in *False Positives* are comprised by photographic montages of different moments. The time frame indicates the period of time waiting to create a contrast between a deviant and a normal gesture. The choice of Photography as a medium to present deviances of movement can seem peculiar. As a time-based medium such as cinema or video could give a better account of anomalies in which movement or the lack of it is a major component to detect these anomalies. The chosen technique of quick shutter speed completely effaces any trace of movement freezing it into gestures. Hovers could have opted for an extended exhibition in which a blur would visualise in the photographic language the movement that has taken place, instead, the action that indicates deviant behaviour becomes a gesture.

The inhabitants of the city of Brussels that have been caught amidst movement are frozen in one gesture. This gesture might determine if their behaviour is suspicious or

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[70] Braun, 2014, pp. 95-98.The French army was to use his discoveries of movement to make the military march more efficiently.
[71] Lyon 2001. Pp. 51-68.
[72] Tagg, J. 2003, p. 87.

ordinary. As we cannot see the movement, everyone becomes an alleged criminal, thus every figure could be about to commit a crime. The photographs are taken covered in sunlight, possibly near midday; the subjects of observation appear exposed, in full vision. This visualised the idea of enhancing visuality to reinforce security. Additionally, the lighting has the effect of neutralising the image, as the colours seem bleached out and therefore toned down. Actions that are carried out in the daytime seem less inconspicuous and therefore less suspicious. The images of men dressed in suits also seem to carry harmless intentions. The general atmosphere conveyed by these images is mostly neutral: neutral colours, neutral time of day, neutral garments, neutral urban landscapes. The identity of the subjects is also neutralised, as the faces are barely distinguishable, some of the subjects are facing away from the cameras, in others, the light bleaches out the features of their faces.

Once a series of algorithms or patterns are created, it triggers the reflection on how these behaviours are interpreted, under which standards they are judged, and according to which policies or psychological premises they are classified as ordinary or abnormal. For instance, when a behaviour is categorised through computer algorithms it seems as will be creating new postulates that will be regarded in the future as objective, and scientific formulas. These systems can separate moving objects from the background. Revealing how artificial intelligence or smart cameras will be able to determine which behaviours are standard and which deviant is a good way to make us aware of conceptions that are seen as tacit truth, may not be so. Hover's language points at an aesthetic language of domination that is far from automatic. By connecting her work to a tradition of documentary photography.

Photography has played a role in creating and preserving certain premises in the making of individual records of deviant subjects, taking part in regulating and classifying people and their body movements through measurement. This process, in which photography has been involved, has helped establish the concepts of normality and deviancy in our society. Consequently, it is crucial to understand the characteristics of the media to understand how these notions have been constructed. We see how, although photography cannot reproduce movement, it has served to analyse it in scientific ways through a static media such as photography.

Ultimately, although we are provided with information to understand the anomalies that are presented before us, we often fail to interpret which individuals are carrying out deviant movements and which are not, as it is not indicated by the artist. For instance, in *Overview J*, (Fig.12) it is clear that it corresponds to anomaly 07, looking back. However, in other cases the distinction is not so obvious, case in point is *Overview F*, (Fig. 13) in which no one seems to be carrying out any of the anomalous behaviour. This reveals that even though the images follow certain premises and codes that respond to a scientific language, this system might be reductive. Hence, we are not safe from misjudging a situation, as this system does answer which individuals are acting in anomalous ways.

Recent technologies mean a leap in the capabilities of control and classification. Currently a greater amount of information can be scanned and evaluated; subsequently, the levels of control over the activities of daily life will increase, meaning to some extent that future criminal activities may be predicted. The vast amount of information that is being generated is impossible to process by human means alone. Therefore, to keep track of human behaviour, new methods are required. These methods continue a process of standardisation that begun in the 19th century, which has been generated according to certain directions and social beliefs, and as so is not purely neutral and scientific but responds to a process of genesis. A new discursive system is now being formulated according to the newly available technology that at the same time is rooted in a tradition that begun in the 19th century that must be followed by a new visual rhetoric configured according to new systems of data but rooted in the past. Art that deals with surveillance reflects on the methods that were creating in this period, in relation to measurement of the body, classification of individuals, or the study of movement.

Conclusion

In order to control individual images, identities or actions they must be reduced to expressions that can be measured, analysed and classified, by freezing moving images, creating neutral settings or organising movement, this is accomplished. Through this analysis, we see that different artists expose these allegedly neutral forms of vision, revealing the methods of control that lie behind them. Other artists show how certain visual languages convey flawed senses of deviancy.

Artists like Martha Rosler, Andrew Hammerand or Esther Hovers contrast the notions of normality and deviancy that have been constructed in a visual way. The camera is, in this sense plays the role of an instrument that records and classifies members of the population, identifying them as normal or deviant. In addition, measurement is an important aspect of control in this process, as it serves to detect and classify normal from deviant. In this regard, the history of photography is intertwined with the history of the creation and deployment of rules that are defined by the action of the norm, both as a social and as a legal premise. Photography is used as an instrument to catalogue and control subjects through measurement. To this end, a series of codes are established to formulate images that can be used as scientific evidence has been developed through a historical process that links visual language to validating a context. Some artists have adopted these systems of measurement to expose the constructiveness of social rules that constrain the body and the individuals to a particular idea of normality.

For instance, Martha Rosler in *Vital Statistics of a Citizen Simply Obtained* (1977) uses a pseudo-scientific visual language to convey the idea of intrusive examination. Rosler exposes the violence of measurement, normally seen as a neutral form of study. She reveals how certain measurements impose ideas of normality among human bodies and constrain identity to a standard ideal. The photographer, Andrew Hammerand, in the project The New Town uses the visual language of surveillance imaging to make a community that is usually regarded as normal, seem dangerous. Hence, by adopting a visual language that is vernacular to surveillance image-making, he makes ordinary actions of individuals seem devious. In this sense, Hammerand makes us aware of the connotations of the visual language of surveillance, and how it can change the perception of actions as it uses a rhetoric generally associated to deviance. It is the sketchiness of the image, which conveys the idea of the impossibility of measurement, therefore, suggests deviance. On the other hand, photographer Esther Hovers, uses an opposite method to expose the constructiveness of normality and deviance. She presents street surveillance images that are set following an aesthetic that could be defined as neutral. Hovers uses photography to classify deviant movements or gestures. By freezing gestures amidst movement, Hovers converts movement into a measurable variable in the same way as Etienne Jules Marey studied movement through `photography in the 19th century. Marey, through the static media of photography, was capable of measuring the exact time in which an action was carried out. Hovers also

adds a drawing of static deviant gestures over a reticular background conveying, yet again, the idea of measurement. The actions, therefore, have been reduced to a measurable surface, prone to classification.

In this chapter I have gone through the use of measurement to classify people, considering primary the features arranged statically, not taking into account, for instance, the classification of facial expressions as a focus of intelligent surveillance systems. Other artists deal with the studies of emotions through these gestures and how they are conceived in security systems, determined by psychological studies, could become subjects of a new research.

Chapter 2; Deviant spaces; from visual control to data control.

> "The spaces, too- uncharted territories, frontier lands, urban ghettos, working class slums, scenes of crime – are confronted with the same frontality and measurement against an ideal space: a clear space, a healthy space, a space of unobstructed lines of sight, open to vision and supervision; a desirable space in which bodies will be changed into disease-free, orderly, docile and disciplined subjects."
>
> John Tagg[73]

Introduction

The perception of normality and deviancy is affected to a large degree by the spatial context. As I have explained in the first chapter, photography has been used to measure and classify individuals almost since its inception. In a similar vein, photography has been used to measure, categorize and control spaces. Most surveillance is carried out in cities, as they contain a larger concentration of inhabitants. It is interesting to consider surveillance systems in an urban area, as cities are usually more structured and compartmentalized than rural areas. Furthermore, the way in which cities are distributed has been considered historically as a significant strategy to organize its inhabitants, and influence their behaviour. In this respect, already in Greek and Roman times, the structure of the city was considered as an essential factor in determining the behavior of those who inhabit it. Visibility was considered as an important aspect of a city. To provide security large, symmetric spaces were constructed. David Lyon quotes American sociologist Richard Sennet who stated that, "the geometry of the Roman space disciplined bodily movement and in this sense issued the command, look and obey".[74]

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[73] Tagg, John, 2003, p. 160.
[74] Lyon, David, 2001, 52. The Surveillance Studies expert, claims that, "For Plato and Aristotle the pattering and spatial arrangements of the city were a mirror image of what society should be".

The reason for which I have chosen photography of surveillance mainly in cities is that cities order and classify subjects which in space, are directed through streets, contained in housing areas, educated in schools, healed in hospitals. Linear perspective has played an important role in determining the relation of surveillance to space. Both urbanism and photography serve to frame and organise space, transforming space into a more controllable entity. In the context of relations of power Foucault gives a great importance to the spatial configuration. For instance, in the text *The Eye of Power,* the spatial aspect of surveillance is more prevalent than the temporal one. The architectonic model of the 19th century *Panopticon* behaves as a spatial metaphor of relations of power and vigilance.[75] But this is not the only architectonical structure that affects society's relations and structures; Foucault also refers often to other social spatial structures that range from the urban disposition itself, to smaller building such as hospital, schools or even family houses, which he believes are structured in relation to political and social beliefs.[76]

This chapter will revolve around the representation of surveillance in space, connecting it to the use of photography to identify individuals in space as a method of control. To examine the relation between surveillance in space and photography, I will elaborate on the concept of 'Visual Nominalism' coined by media theorist, Lev Manovich, [77] who by considering photography as a technology of linear perspective, a system of measurement and control of space.[78] In these terms, the nature of linear perspective shifts from a representational technology to a technology of power and domination, which works through measurement and classification. The aim of this chapter is to explore the implications of photography in monitored space considering its characteristics as a

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[75] Foucault, Michel. 1980. The most prominent spatial theory of surveillance is built over the Jeremy Bentham's *panopticon*, this spatial structure works as a metaphor of societies surveillance systems in which the structure is designed to allow visibility of society, by a central source of power or other decentralized perspectives

[76] Foucault, Michel. 1978.

[77] Manovich 2002, p. 383. This concept determines the identity of individuals by their relation to space., Manovich defines 'Visual Nominalism' as, "the use of vision to capture the identity of individual objects and spaces by recording distances and shapes". Manovich builds his theory of 'visual nominalism' over the formulations of Aristotle, who criticized Plato and advocated that the importance relied in particular things, describing the difference in opinion of the two philosophers in the next sentence, "For Plato, sensitive particulars sensed were but a pure reflection on Ideas or Forms. Aristotle criticized Plato declaring that the primary substances were not the Ideas, but the particular things such as men or animals."

[78] Manovich 2002, p. 384. According to Manovich, French sociologist Bruno Latour pointed out that the creation of perspectival space not only meant that reality could be represented, but it could also controlled.

technology of linear perspective. I will reflect on how art photographers have used the language of 'Visual Nominalism´ to comment on the on surveillance practices.

Visual Nominalism and elevated perspective

In modern surveillance systems measurement is a decisive trait of systematization and standardization procedures. Lev Manovich (1960), in *Modern Surveillance Machines: Perspective, Radar, 3-D Computer Graphics, and Computer Vision*, used the term 'Visual Nominalism' to describe a method which determines the exact location of individuals or objects in space, the identity of objects is therefore determined in relation to the space they occupy. This concept is connected to linear perspective. Manovich argues that technologies of control and warfare were developed from linear perspective technologies, which have been used to codify visual experience by transforming reality into a readable two dimensions' image. He also examines the ways in which many visual technologies that are used for surveillance derived from linear perspective. Furthermore, according to Manovich, linear perspective during Renaissance triggered a process of automation of vision.

From the viewpoint of space control, linear perspective can be used to create detailed maps of three-dimensional reality, allowing to establish a precise point within space. This is carried out on a manageable, portable surface, such as a photograph. Photography reduces space into a flat image, in which entities that were either difficult or impossible to measure, become easily scalable. Manovich illustrates this in the following sentence, "we can't measure sun in space directly, but we only need a small ruler to measure it on a photograph".[79] Additionally, photography, as a static media, gives the viewer time to measure, catalogue, and classify objects in space. These traits meant that in the 19th century photography becomes an excellent way of measuring space from a distance.

Scaling methods were applied to military as well as civil uses to control space and maintain power. As early as 1858, the architect Albrecht Meydenbauer published a proposal to use "photographs to scale buildings based on the existence of a geometrical

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[79] Manovich 2002. 384.

relationship between the photographic image and the object being photographed". However, aerial surveillance was first used systematically at mass scale in World War I. In the Gulf War, they show what is seen by a machine, a bomb or a missile. Manovich explains linear perspective is a "technology of visual nominalism" from which modern visual technologies such as photography, film and video recording, video transmission, radar, 3D computer Graphics or image processing have developed. In spite of some of these technologies falling out of the realm of human vision, Manovich specifies that all derive from linear perspective as, "each of these automates a use of linear perspective vision". Also, the technologies of linear perspective are relevant to the creation of images started to be used for artistic purposes. Manovich believes there is a transition of linear perspective from a technology of representation to a military aid, he states that, by the time Panofsky wrote his treatise on Renaissance perspective avant-garde artists were already primarily using other ways of expression and the use of these techniques had shifted to military practices. However, other theorist believe that linear perspective still has a great influence in contemporary artistic practices who constantly make reference to it in their work.[80]

The elevation of perspective in photography is another important aspect of visual domination. Through aerial photography a better understanding of the enemy's lines could be reached. Photography was, in association first with air balloons and later with airplanes, gaining an elevated position be used to study, scrutinize and measure land, with the aim to help plan attacks over enemy lines. These visual control systems developed for military uses would be later implemented in civil surveillance systems.[81]

An important trait of surveillance is in the perspectives of domination. The elevated perspective epitomizes the point of view of surveillance. This, for several reasons, creates a more unequal relation between observer and observed. Andrew V. Uroskie, (1974), expert in Modern Art History and Media Studies, has analysed this perspective in relation to the imagery of crowds. Providing that crowds are often photographed or filmed from above, this perspective has, for instance, been used to quantify crowds. In this context video and

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[80] Ramirez 2009. Ramirez explains how modern and contemporary artist continuously connect their work to linear perspective, such as the minimal artist Dan Flavin (1933-1996), who use straight lines and lines to frame the shape or a room marking the perspectival structure. Another case in point is the Land art artist Richard Long (1945), who traced straight lines on the ground in the middle of nature, also alluding to linear perspective constructions created artificially.
[81] Manovich, Lev, 2002. 383.

photography convert individuals into quantifiable entities. Uroskie also implies that in cinema the crowd, often represents a mass of people devoid of personal identity. Similarly, he argues that elevated perspective has been connected to the chain mode of production, as it shows people as units of production. All of these aspects tend to reduce the empathic relation between observer and observed.[82] The objectification produced by elevated perspective is relevant in surveillance photography, where cameras are often placed in high points.

The targets of surveillance are controlled, tracked and even judged according to certain parameters that prime the measurable characteristics of individual's behaviour. Uroskie claims that people seen from a distance seem less human, as the shape of the body is distorted getting to the point where if the subject of surveillance is seen from enough distance, he or she will appear almost as a dot. French philosopher Gilles Deleuze (1925-1995) also claims in *The Perception image* with regard to cinema, that a distance viewpoint enhances the sense of objectivity, as the viewer remains external to the set.[83] This idea is also applicable to photography, as the further away a photograph is taken the less easy it is to determine the qualities that comprise the identity of an individual.

Surveillance is most commonly carried out in urban areas. This is no surprise as cities concentrate a greater amount of population. Surveillance in cities is executed most of the time from a bird-eye perspective, as cameras are often place at high points in public spaces such as streets, banks or roads..[84] In this regard, Uroskie argues that the bird-eye perspective imposes an unequal power relation between observer and observed and objectifies its subjects. This perspective serves cameras to have a position in which a larger area can be controlled, as well as making these control devices less noticeable. Andrew Uroskie concludes that the images that are produced by cameras from high perspective have a certain psychological effect on the viewer, as one that ultimately produces a sense of distancing between observer and observed.[85] In this regard, it can be argued that the only important trait of the individual that remains is its emplacement of a person in a determined space.

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[82] Uroskie 2006.
[83] Deleuze, Gilles, 1997, p. 75
[84] David, Lyon, 2002.
[85] Uroskie, 2006. The distance means that the subjects of surveillance subjects appear as small objects, this reduces automatically, the empathic relation between the observer and the observed.

Arrested time and controlled spaces

Photography is mostly described as a static media. The relation time in the city and time in the photograph is connected. It is interesting to note that time in photography and time in the city have been described by different theorist in similar terms. In these contexts time is referred as: frozen, as controlled or measurable. It is through spatial divisions that we can measure time. Some theorists believe that time cannot be quantified at all if it is not through spatial conversion. [86] The cities are divided in organized structures. It is for this reason important to bring the spatial aspects of photography forward, as it has been mostly described as a spatial media. I have chosen to highlight the spatial aspects of photography instead of temporal ones as these are more prone to measurement, and this classification is productive in the light of analysing the media of photography in terms of social control.

With regards to the connection between and time as perceived in the city and time in the photographic media, we find they are described in similar ways, this makes photography an apt media to represent the idea of time in the cities, especially when these spaces are being monitored. Many theoreticians that critique power systems have adopted a spatial approach to elaborate on social control systems. For instance, Guy Debord, French Marxian theorist, in *Society of Spectacle,* who advocates against capitalist society, refers to Frozen time as "spatial alienation". He defends that in cities time comes into existence as a result of the capitalist production of (frozen) time, not the reverse. [87] Another French Marxian philosopher of the 20th century, Henri Lefebvre, best known for his innovative critique on the everyday life, argues that in order to have a more control, spatial aspects must prevail over time. He declares that, "the primacy of the economic and above all of the political implies the control of space over time. Lived time loses its form and its social interest, not counting, time spent working." [88] Debord asserts that economic space subordinates time to itself, at the same time, political power dismisses time as threatening

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[86] Deleuze, Gilles, 1997. 1-11. Henry Bergson's (1859–1941) philosophy of spatialization of time, theory later adopted by Film Theorist Gilles Deleuze. Bergson rgues that in order to make lived time, a value that is subjective measurable it had to be converted into a spatial unit. This explained in the object of a clock in which spatial measurements are used divide time, the clock hands must travel from one point to another in the sphere of the clock. It is, therefore, only by using units of space to divide time, that time can be transformed into measurable units. This system of spatialized time transforms time into a measure that can therefore be exchanged as a unit of capital, as it is standardized the number of hours workers spend is indeed another production unit being applicable to the capitalist production system.

[87] Debord, Guy, 1994. 39-53.

[88] Levfevre, Henry. 1991

and dangerous. This temporal quality of stillness has been described as a characteristic of a profit making, production system.[89] In this sense, photography qualifies as the perfect media as it represent this arrested time, allowing for space to be controlled.

Esther Hovers' *Overviews*. Urban space under surveillance

In the series of *False Positives* of Esther Hovers (2015), which is comprised by photographs of the city taken from the point of view of surveillance cameras together with a series of drawings that illustrate the different kinds of deviances and maps of the city in which the most normal movements that are carried out. These movement patterns are depicted in maps of the city by straight red lines. (Fig. 12) Foucault noted that the city determines the way in which people behave, who understood, the Structure of the city determines the way in which citizens behave.[90] Measurement, although not directly stated, is a fundamental aspect of the work of Hovers is implicit as the images the series is provided with a series of sketches that symbolize deviant behaviour; these are placed over a reticular background, a system that divides an imaginary space in equal segments. With regards to how they can be visualized and control through technologies that derive from linear perspective, *False Positives* uses photography in a way that enhances the importance of perspective in the city. In the *Overviews,* Hovers takes photographs of the city of Brussels, in relation to the technologies of linear perspective and the theory of 'Visual Nominalism', taking into consideration the structure of the city and the relation to the maps patterns of movement in the city. These maps prove that the movement of its citizens is determined by its structure. I will therefore contemplate two aspects. First, the importance of linear perspective in photography. Secondly, the relevance of the structure of the city and how it affects the behaviour of its citizens. And lastly, I will consider the way in which this urban space is translated into the photographic media in connection to the importance of visibility in surveillance.

Debord argues that the primacy of the economic and above all of the political domains imply the supremacy of space over time. It does not seem accidental that the artist has chosen to produce her images, the financial district of Brussels, a city that strongly

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[89] Lefebvre, Henry, 1991.
[90] Foucault, Michel. 1978.

expresses notions of economy and politics. According to Debord's words the best way to capture this idea of urban power would be through photography a media that in words of Peter Wollen, media theorist, deals with the different temporal aspects of each media. He argues that film is like fire, in that it is constant incessant motion, whereas photography is like ice, a single frozen moment freezes time yielding a sense of control to the viewer (us), allowing the viewer to extend the vision of this moment for as long as possible. Therefore, photography as a static medium yields us the possibility of measuring and classifying the interactions of individuals with the city. Both Debord's and Wollen's visions of the city and photography respectively have been compared to a reductive intervention to lived time. The representation of the financial district of Brussels in photography makes sense, as it corresponds the idea of productive time. To understand how surveillance operates in the cities, and how space is influenced by surveillance it is important to understand the complexities of these systems in the present society.[91] Although in the case of *False Positives*, it is not a tourist area that is being presented, but a space of power, as the financial district of Brussels, is a financial area. With regards to the commercial aspects of security in a city, Jurgen Habermas, German sociologist and philosopher, gives an account of how the public sphere in the city became privatized.

In this regard, he claims that the bourgeois, after the 18th century, occupied a preferential position in the public sphere privatizing the public domain.[92] The financial district is therefore quintessentially a space of power.

Configuration of the city and linear perspective

I believe the space of the city and the creation of linear perspective are strongly related, as they are both ways of structuring space. Linear perspective typically depends on the use of

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[91] Lyon, David, 2001. In this regard, David Lyon analyses the effect of surveillance in modern cities through an analogy with Disneyland. He argues that one of the aspects that shape the experience at the theme park, is that it is highly surveilled by the workers. This constant surveillance creates an environment that is safe and that stimulates consumption improving the commercial earnings of the place. Safety becomes a means to increase commerce.

[92] His conceptualization of the transformations of the public sphere explains how once the public and private domains were separated. He considers that the public sphere as the realm of public authority comprised by the police state and the ruling class, while the private domain is understood as the site of production and distribution of commodities and labour. The new sphere joined the public and private domains as the private people claimed the public sphere. That is to say, with time, merchants businesses grew into companies, which outgrew the framework of the town and became part of the state.

straight lines to measure and organise space (most examples of linear perspective are framed by human constructions, such as the inside of rooms, buildings, public squares, or roads, among others). Furthermore, cities are per excellence human constructions, and as such are mostly comprised of straight lines. This configuration makes cities the perfect site for linear perspective representation, as linear perspective measures space using horizontal vertical and depth lines. In this context, *in False Positives*, space is photographed enhancing the structure of the city. Photography is indeed an instrument that evolved from linear perspective. The artist's choice to photograph the financial district of Brussels is also meaningful, as it responds to a certain ideology as a-political and financial space. On the other hand, the physical structure of this city also has some implications. It is mostly composed of straight lines, austere looking buildings and modern glass constructions with reflective surfaces, qualities associated with business and power.

In Esther Hovers' *False Positives Overview C* (Fig. 15), the spatial aspects of the city are largely present. The structure of the city shown in this photograph, seems to follow the postulates of Euclidean geometry[93], as they are composed by straight almost parallel lines. The lines are marked by the patterns of the tiles on the floor, which almost compartmentalize the space geometrically.[94] Further, the structure *Overview E*, (Fig. 5), strongly resembles Renaissance paintings of Italian piazzas, in which the use of linear perspective was a key element of the composition. In this photograph, a central, open space is covered with figures of individuals scattered through the area. It might be argued, that the similarities between Hovers´s photographs and images of Renaissance paintings in which the ideal of open space is depicted, (Fig. 16). However, although, the qualities of linear perspective apparent in Hovers´ *Overviews* can be ascribed to the use of a photographic camera, by comparing *False Positives* to the vernacular material of surveillance cameras, we see they are very different, as the latter do not enhance the visual qualities of linear perspective, or show the structure of the city. In most of the vernacular

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93 Encyclopaedia Britannica, accessed May 10, 2017, https://www.britannica.com/topic/Euclidean-geometry. Euclidean geometry is based on the postulates formulated by the Greek mathematician Euclid (c.300 BCE), concerning the study of plane and solid figures. Some of the theorems of Euclidean geometry are: A straight line segment can be drawn by joining any two points. Any straight line can be prolonged indefinitely. A circle can be drawn using a straight-line segment as an angle. All right angles are equal to each other. And the parallel postulate equivalent to the notion that if two lines that intersect with a third at different angles, must inevitably cross at some point if extended far enough
94 Hovers, Esther, 2015.

images of surveillance, the background is scarcely noticeable, many of the vernacular images focus on individuals, and in most cases, are filmed with a fish-eye lens distorting the background of the image. This is exemplified by an image taken by a surveillance camera in the Bronx, in which the space of the city is completely distorted by the fish-eye lens (Fig. 17). In other examples, we see how the surveillance images are taken from a higher perspective as to control a larger area of space. It is therefore not common to see in surveillance systems images that convey the idea of linear perspective. In my opinion, Hover's gives importance to the structure of the city as a way of showing how the city influences the behaviour of its inhabitants. The residents are conditioned by the structure of the city; this is why the city is powerfully represented in the images.

Visibility in the City

Another aspect of Hovers' body of work is how well illuminated the spaces are, expressing a sense of complete visibility. The visibility in the city that has been historically associated with safety.[95] In the *Overviews* Hovers presents a space of complete visibility. Inside the structure of the city the individuals, stand, walk or run completely exposed to the lens of the camera. Hovers avoids elements of distraction, such as advertisements or dark areas, from the individuals and the space itself. Consequently, we are presented before an ordered space. This visibility associated to security conveys a sense of complete control over the citizens being monitored.

In relation to the symbolical identity of the space, the city photographed in this series, Brussels represents the symbolical capital of Europe. It is, therefore, a space, built in this way as a response to political an sociological needs. The range of colours in Hovers' photographs seems to emphasise the neutral qualities of the city, the colours show light contrasts. Brussels becomes under the lens of Hovers' almost like a prototype of the ideal grid model of a city for surveillance with straight lines and visual openness. This represents, not a deviant space, but a space of power that must be protected. Hovers presents as a space of visual order, and a space that has been constructed as such. In

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[95] David Lyon 2001, p.52. In the 17th century, when in order to make the city of Paris safer, several lighting inspectors were appointed making the city more visible at night. By 1967 with more than 6500 lanterns installed, Paris had come to be the 'city of light'.

addition, the artist has specified that the reason for choosing this city came from watching how this area influences the way in which people behave,[96] Hence, the artist´s aim is to show how space determines the way in which individuals behave.

Temporality in *False Positives*

Providing that it is not obvious each individual is taken at different times *False Positives* conveys an uncanny feeling, as the figures seem to be disconnected from each other. Besides, as we cannot see the on-going movement, it becomes difficult to recognise which subjects respond to normal gestures and which to deviant ones. Hovers creates in each photograph a montage of different temporal moments, with the aim of showing the contrast between a deviant and a normal action in the same image. This temporal disconnection conveys the sense that the individuals do not interrelate with each other quite naturally. One of the most salient examples of this is in *Overview I,* (Fig. 19) which appears to show anomaly #5 "Clusters Breaking Apart', in which three men are walking through a zebra crossing, but each of them is heading in different directions; two of the individuals are moving into the middle of the road, and the other straight towards the pavement. This disposition seems highly unlikely. As a result, the *Overviews* resemble images made by 3D computer graphics to create virtual images of neighbourhoods not yet constructed, in which people are scattered, arbitrarily, through space. An example of a computer model for a construction project of a museum in Spain, which resembles the *Overviews* in the disposition of the figures, (Fig. 18). The strange relations between individuals make sense providing that the artist is not considering the human interactions, but rather, with how the structure of the city influences the behaviour of people. Consequently, the individuals seem to have been programmed into a particular space, according to certain parameters but have lost part of their humanity as they are deprived of human interaction. Their identity of individuals is defined by their specific emplacement in space. Determining the character of an individual through its emplacement fits the description of 'Visual Nominalism', which Manovich describes as, "the use of vision to capture the identity of individual objects and

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[96] Wright, Sophie. "British Journal of Photography." Esther Hovers. April 2016. Accessed May 12, 2017. http://www.estherhovers.com/British-Journal-of-Photography. Hovers states that, "everyone wears suits and has a strict dress code and way of moving. It wasn't only the architecture, but also the way people seem to behave there,"

spaces by recording distances and shapes". The classification of deviant is determined precisely by the positioning of people in space.

Hovers translate this idea of cameras into a language anchored in the concept of linear perspective. According to Manovich computers made mass automation possible. In this regard, linear perspective has allowed for visual information into less recognisable to the human eye to which she is referring we are creating a form of perception that stems from linear perspective. Visual surveillance, as Manovich explains is becoming automatized. Hovers connects the language of linear perspective, to the difficulty to understand surveillance codes of Artificial Intelligence. This raises awareness about a that will affect us by progressively reducing our own identity to fit adequate patterns, prone to being measured and categorised by the 'mind' of a machine. In this sense, False Positives is connected to the notion of 'Visual Nominalism' in two ways. First, it resembles the visual qualities of linear perspective, and second, it determines the identity of individuals through their positioning in space.

Laura Poitras. When bodies become coordinates

We have analysed the way in which 'Visual nominalism' operates in a civil context. Now I will continue to explain how it functions in the context of contemporary warfare. Manovich explains how the development and evolution of linear perspective that started as representational, has gradually led to more informational and paradoxically, less visual, forms of representation. He explains that "with the emergence of the field of computer vision, perspectival sight reaches its apotheosis and at the same time begins its retreat", reaching the extent in which images of ´Visual nominalism´ are hard to decipher without technical training, hence, shifting into a more informational and less visual method which he describes as automatization. Consequently, different optical systems of surveillance tend to transform events into information that is later translated into data and used to measure and classify a range of parameters such as, movements, identities or patterns of behavior that can suppose a threat to society. [97]

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[97] Manovich, Lev, 2002. 393.

As I have explained, aerial perspective has been classified among others, such as being a perspective of power that has been compared to the view of God, a view that highlights the smallness of others or to give a general view of a scene. It also has the effect of reducing the empathic relation between viewer and viewed, as it reduces the identity of the individuals surveyed, which shape becomes less recognisable. In the context of war 'Visual Nominalism' has become increasingly abstracted and more informational. In this regard, one of the works that best visualizes the concept of automatization of information in the context of foreign warfare is, *Anarchist Power spectrum display of Doppler Tracks from a Satellite*, (Intercepted May 27, 2009) 2016, by artist and documentary director Laura Poitras.[98] (Fig. 20)

In this work, we are confronted with an image that shows an array of colours, divided into various segments by parallel horizontal lines. In the field, a small line placed in the middle represents a human target; the coordinates of the specific emplacement of this target are shown in the bottom of the image. The photograph resembles a beautiful abstract picture in which and colours are distributed in a repeated pattern of waves. The aesthetic quality of the image contrasts sharply with the meaning of it creating a sense of shock. In *Astro Noise*, the space is unrecognisable as such, yet it is compartmentalised into rectangular shapes, which is possibly an evolution that comes from dividing space through linear perspective. We see that what has become essential are the lines, converting space into compartmentalised information, comprised of regular structures. This work illustrates how the deadly forces of war are represented images that present information that we are completely unable to decipher without the assistance of technological devices and training in these new information systems. Although in Hovers' *Overviews*, individuals appear to be depersonalised up to certain degree, they are still recognisable as human individuals, whereas in Poitra's image they have become a single line in the picture, a source of information.[99]*Anarchist* shows how information has become increasingly abstracted. If we connect this work to the notion of 'Visual Nominalism' we see how there has been a process of abstraction of information that stemmed from technologies of linear perspective and has become more reductive.

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[98] I will refer from now on to this work in its shorter form, *Anarchist*.
[99] Poitras, Laura, 2016.

We see in which way the visual characteristics of military images have changed, also inside the realm of ´Visual Nominalism´. It is in this work that space has been translated to mathematical axioms, remaining the emplacement of the target in certain coordinates. [100] *Anarchist* reveals how visual technologies, and therefore also the representation of the techniques, have evolved to become more abstracted. If in Hovers' *Overviews* we sense a feeling of disembodiment that has the effect of dehumanising the people that are under surveillance perspective. In *Anarchist,* this is maximised as the perspective becomes higher the human is reduced to a single line, which is determined uniquely by its coordinates. The line in the image is enhanced by a rectangular shape, hiding the human figure, as it reveals a kind of bar code, comprised of black and white squares. This information appears to be important, although we are unable to understand its meaning. We imagine the bar-code shape must contain relevant information about this person, or about his or her location. Although it also seems that this information is precise and technical, traceable by some technological device that is very likely connected to a deadly machine. We know nothing about this subject, except that it has been classified as an anarchist and is targeted. The context which is provided by the artist does not clarify why, when or where this subject is being targeted. We only know that the location has been determined.

Although 'Visual nominalism' is first applied as a visual technology in war zones, much in the same way as we see *Anarchist*. Alison Williams, lecturer in Political Geography, terms control of the air as vertical geopolitics. Political geography has the tradition of privileging the downward looking gaze, the god's eye view and its mono-perspectivism. She declares that the action of looking down epitomises the idea of targeting and bombing. In 1919, by the Paris convention for the regulation of the aerial navigation, established that every state has sovereignty of the air above their territory. This has been called into question as many nations have violated foreign aerial space in recent years. Williams argues that this point of view is defined by the ability of looking down from above and the inability of the victim to look up which enables the attacks. [101] Vision

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[100] Poitras 2016.
[101] Williams, pp. 228-29.

Another expert in geopolitics, Gearoid Ó Tuathail, argues that medieval mapping systems based on religion gave rise in the 17th century to a homogenized and horizontal conceptualization of space based on Galileo, Newton and Eclid´s conceptualization of space. In this order the spaces could be compartmentalized and separated from each other. In this regard, the mapping of space played an important role in the Elizabethan history to organize and administer space, in this respect he declares that, "The function of cartography was to transform seized space into a legible, ordered imperial territory". He considers geography as a human construct in the hands of imperial interests that use it to exercise power. [102] The aerial point of view has also been termed as Cartesian perspectivism.[103] This system would be later, as Manovich arguments, war technologies are implemented in civilian surveillance of the cities. This does not mean that the idea of placing subjects in the exact coordinates with in a geographic area, as it is done with targets of drone attacks is exactly reproduced in urban settings. Nevertheless, it embodies a visual system of power that can be adopted to a lesser or greater extent in a civil context, which degree of dominance and violence seems to augment as the perspective from which it is taken gets higher. This work shows the military importance of placing an individual in a precise point in space. Individuals' identity is, therefore, reduced to their emplacement in space. In *Anarchist*, the image has become flat; the individual has become code.

´Visual Nominalism´ is regarded by experts in different ways, for some visual Nominalism becomes a way of seeking a true nature in art. for others, these systems comprise a threat. According to Manovich, Heidegger "considered the "greatest danger" within contemporary visual technologies might lie in the fact that the very difficult in seeing, the complexity and ambivalence involved in human perception, becomes obscured within a field of instrumental rationalisation that increasingly serves its own justification". Manovich also notes that concerning the problems that lie in the difference between the visible and the invisible. Lacan declares that 'Visual Nominalism' rejects the reciprocity between viewer and viewed that lies at the heart of human perception". The concern shown by theorists is possibly in the perception that we are moving forward from the supremacy of the human gaze, the predominant sense. Vision, has historically been awarded a privileged

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[102] Dalby, Simon, Gearóid Tuathail, David Clarke, Marcus Doel, Francis McDonough, Timothy Luke, Paul Routledge, Andrew Crampton, Joanne Sharp, Klaus Dodds, and Matthew Sparke., 1996. p.3.
[103] Williams 2013, p.229.

position among the other senses, therefore, it is only logical that the domination an abstract process of information, creates unease among scholars.

Although the process of automation begins with linear perspective Manovich acknowledges that only computers enable automation at mass scale. We are responsible for creating a form of perception that only computers can read as it is becoming hard to decipher with human senses alone.[104]These forms of anxiety towards a depersonalization of surveillance are felt in both in Hovers' and Poitras' work.   It is apparent that this process has raised the concern amongst many theorists. It is possible that this uneasiness responds to a fear of becoming unable to read new ways of visual nominalism such as radar images that only intelligent surveillance systems will be able to decipher. In Poitras' *Anarchist* as the picture does not denote any of the terrors that its existence implies. Manovich describes the process of automated visualisation as "the algorithm reduces reality to solid objects, and the objects are further reduced to plans defined by straight lines."[105] The work of Poitras epitomises this reduction of a human body to a targeted line. I believe the works of Hovers and Poitras reflect the concern of these theories as they present humans that are in the process of becoming objects in the case of Hovers, and that have become an abstract target in the case of Poitras.

Conclusion

In Hovers' body of work, the constraints of the media are represented in a self-reflexive way in relation to the visual language of dominance and the characteristics of photography as a media. The bird's-eye angle that provides a distance from the scene and objectifies the bodies that are under surveillance as well as the photographic technique itself, that as viewers, grants us unlimited time to measure, analyse and catalogue the anomalies the images. That is event-like as they freeze action depriving it of its realisation and its past and present possibilities. The montage of several moments in one single photograph also dehumanises the figures, as it effaces signs of human interaction, leaving only the relations of individuals to space, resulting in an uncanny feeling. The people seem like doll-like images as the individuals, something is amiss, this might be related to space but do not

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[104]   Manovich, Lev, 2002. 382-395.
[105]   Manovich, Lev 2002. 389.

relate naturally to each other. *False Positives* reveals, in a visual way, how reductive these systems are, although we are placed in the position of power of the observer, and given the task of finding deviant behaviour, once we are there, it is not so easy to distinguish normal from deviant. It hints at a dehumanising way of observation, which we do not completely understand, and are growing incapable of deciphering visually. And to which we can easily be subjected in the likely scenario of being in a public space.

Anarchist takes the idea of ´Visual Nominalism´ to an extreme. In this example the information has become almost completely automatized, and the traces of human identity are reduced to geometrical shapes divided in compartmentalised areas. On the other hand, by elevating the perspective the relationship of dominance has become more violent, as it reduces space to a scalable and controllable area and the impossibility of the observed to return the gaze has become absolute. In Anarchist it is visible how space has become information. The implications of this transformation are as precise as a point.

Conclusion

In this thesis, I attempt to describe the rhetoric of visual domination in photography and what characteristics unique in this media are or have been used historically, by encompassing the different methods of measurement used in photography, focusing on the measurement of individuals and spaces. As I try to understand how individuals and spaces are measured. Individuals are categorised, and spaces are compartmentalised into portions that can be controlled. All these systems of control have used photography and video to witness or keep tabs on the population. Controlling the way they look, how they move, or the space they occupy. Photography has served to maintain criminal records. It has also been used to study movement and make it more efficient. Photography specialists such as John Tagg, it is possible to see methods of categorising individuals have been formed in association to photography. This process is by definition not neutral, as it responds to the beliefs and policies of the time. Which served to determine deviant from normal, along with science that has used techniques of study through measurement to establish a criterion of standard. The artist Martha Rosler in *Vital Statistics of a citizen simply obtained* illustrates how measurement is used to determine the differences between standard and deviant. In this video-art, she exposes how scientific methods are used to constrain the population to a particular criterion. She shows how forms of study that are considered as neutral and scientific hold in themselves a form of violence and surreptitious control, based on measurement. By borrowing in the process the language of official video making she questions of the archetypal of the standard imposed through measurement.

The relation of measurement to science and photography is a running theme in this thesis. This relation is complicated, as photography is not only used for scientific purposes, and systematic methods extend beyond the realm of photography. However, the role of photography has been regarded as that of visual evidence, considering that this media has helped create and establish determined systems of control, such as records of individuals, changing the fate of determined spaces, giving an advantage in warfare over enemy lines. The medium specificities of photography favour the process of measurement, for several reasons. In the first place, it has been scientifically validated since its inception as a mechanical and chemical seizer of reality. Secondly, the photographic truth has been shaped in association to particular social discourses that have provided a series of codes

that enabled the use of photography as a social document, those that show where and when the photograph has been taken, adding other technical specificities. It is interesting to note the parallelisms between the concept of normal, and the scientific validation of photography. As they both have to be formulated through a process, but appear as tacit structural notions. Lastly, Photography has been used as an instrument to measure individuals and spaces. Individuals are categorised through photography, at times for scientific reasons, and other times to create criminal or institutional records, which classify deviant individuals. Photography can also be used to measure spaces, as it is a static media, which used to scale spaces following the principles of linear perspective, allowing, therefore, reducing spaces and making them more measurable and therefore more manageable. In a similar vein, photography has been used to record and classify individual features to create police records and form an archive of deviant as opposed to normal. Once the exposure time was reduced photography, at the end of the 19th century, it could be used to freeze and study movement through measurement, which could consequently point be made more efficient. Through this research, I have realised the many ways in which photography is connected to control systems precisely through its capacity to measure individuals, movement and space, determined by its static qualities.

In the first chapter, I link the ideas of measurement to the image of surveillance of individuals studying in which ways photography has been constructed through codes, as to be determined as straight photography to produce a "neutral' method that allows classifying people. Social photography theorist John Tagg elaborates this idea. To do so, I analyse the cases of two contemporary artists. In *False Positives* of photographer Esther Hovers, and *The New Town* carried out by Andrew Hammerand. The two artists deal with surveillance photography using a very different aesthetic. In the case of the first, we observe a complete control of the image, which comprises what can be seen as a measurable, clear, open space, while the latter presents a sketchy, covered in glitches image. In *False Positives*, individuals are placed in a space where they can be measured against an ideal of standard, while in *The New Town* the visual language seems to imply ominous behaviour in itself. The individuals of False Positives are caught amid movement, indicate people can be studied using the same formulas that were invented in *Chronophotography*, measuring and analysing the halted movement to set it into categories. Although both artists interrogate the predominant idea of normality, they use opposite formulas to do so. In the case of

Hammerand, the aesthetic makes us perceive the inhabitants of the monitored town appear to be engaged in criminal activity. In Hovers works the aesthetics provide a perfect set of instruments to measure and categorise the behaviour of individuals, showing that it sometimes is unclear who is carrying out an action categorised as deviant or an action categorised as normal. The work of these artists ultimately reveals that the methods of classification associated with ideas of deviance and normality are far from reliable. Whether measurement is used to detect anomalies against a measurable background, or it is used to produce an effect of danger by presenting an image that does not seem measurable. Ultimately, they both play with the idea of the visual concept of normality and deviancy and lead us to understand how it has been constructed.

In chapter two, I elaborate on photography as an instrument that has served to control space drawing from the notion of 'Visual Nominalism', coined by Lev Manovich. I carry out this spatial idea through two artists that present ideas of space dominance in two different settings: the urban landscape and in war contexts. The elevation of the perspective plays a major role in the policies of control the higher the point of view becomes the larger the area that can be controlled. Another important consequence of elevating the point of view is that the emphatic relation between high perspective helps understand the natural characteristics of space as well as to situate individuals in precise points of space. I have observed two main effects from elevating the position of the camera. By elevating the perspective, the distance between observer and observed is increased. This, in turn, reduces the emphatic relation and conveys a sense of empowerment to the viewer. In these perspectives, the viewer is protected from the gaze of the observed, which is often unaware of the surveillance, or only interacts with a disembodied machine, to which it would make no sense to return the gaze. Secondly, by elevating the perspective, the identity of the subject is diminished, the human shapes become distorted, the facial features less recognisable, reaching the point in which the form of the body is reduced to a single dot.

In the second chapter, I analyse the body of work of *False Positives* regarding the spatial aspects of the photographs, and more specifically its relation to linear perspective. Regarding linear perspective as a series of axioms that allow for space, especially the space of the city, to be divided into sections and the depth, height and width, allowing to be represented on a two-dimensional surface. I draw allegories between the division of space by urban structures and the division of space in this form of representation, aiding the

examination with the analysis of surveillance expert David Lyon, who explains the complexities of surveillance in cities. In *False Positives,* Esther Hovers heightens the characteristics of linear perspective that was the ideal in Renaissance perspective. It is crucial to highlight that photography is a technology that evolves from linear perspective. The formulation of space that can be measured, which stemmed from linear perspective, meaning that individuals could be pinpointed in a precise emplacement. This is the argument that Manovich adopts in talking about "Visual Nominalism" a form of identifying individuals through their relation to space. I believe, Hovers refers to this starting point of control as individuals are trapped in her work in a precise location in space from which they can be analysed endlessly. This relation of power that lies on the relation of individuals to space is taken to a much larger degree in the work of Laura Poitras, *Anarchist*, in which the target of surveillance is reduced to a line in an abstract arrangement. In *Anarchist*, the elevation of the camera seems to mean that the relation of power between viewer and viewed has become more violent. The target of surveillance is entirely deprived of its human identity. The space is transformed into an abstract configuration divided by horizontal lines, measurement and control of space has reduced visual complexities. A larger distance to the monitored person seems to allow a more violent relation of power. What these artists demonstrate is that the visual presentations of individual in space affect the way in which they are considered as human beings.

Finally, I believe that measurement has served to reduce and simplify the identity of individuals and spaces. It is for this reason that photography has been used as an instrument of social control. The restrictive methods, in which photography has operated together with other systems of control are highly influenced by the ideas of measurement. Hence, the static aspects of the media which allow for this particular form of control. In my opinion, this is the reason for which many artists have used photography to reveal the power dynamics in which this media has been involved. Artists such as Hammerand, Hovers and Poitras reflect on matters of surveillance of individuals and space through photography, which by becoming susceptible to measurement.

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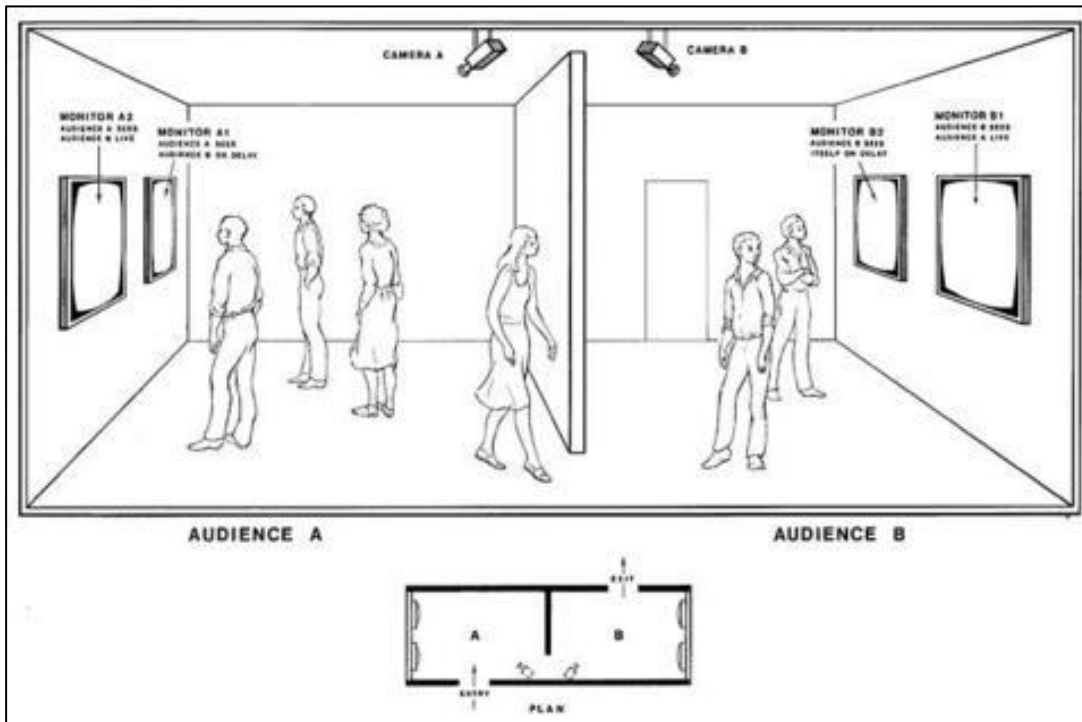
Illustrations

Fig. 1. Dan Graham, *Time Delay Room*, Installation design. 1974.

Fig. 2. Martha Rosler, *Vital Statistics of a Citizen Simply Obtained*, Video Still, 1977

Fig. 3. Andrew Hammerand, from the series *The New Town*, 2013

Fig. 4. Andrew Hammerand, from the series *The New Town*, 2013

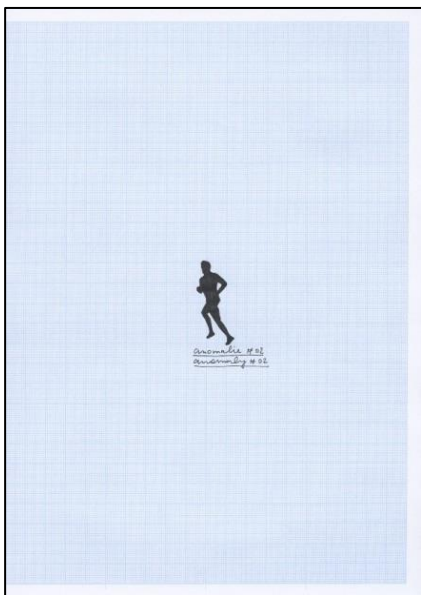**Fig. 5.** Esther Hovers, *False Positives, Overview E*, timeframe 06min, 2015.

Fig. 6. Esther Hovers, False Positives, Drawing of anomaly #2, running. Drawing, black ink over paper 2015.
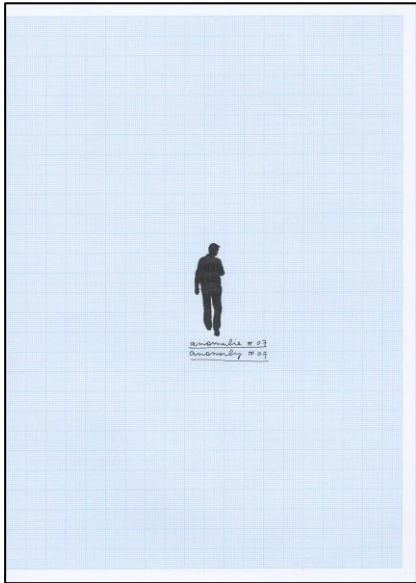
Fig. 7. Esther Hovers, False Positives Illustration anomaly #7, repeatedly looking back Drawing, black ink over paper. 2015.
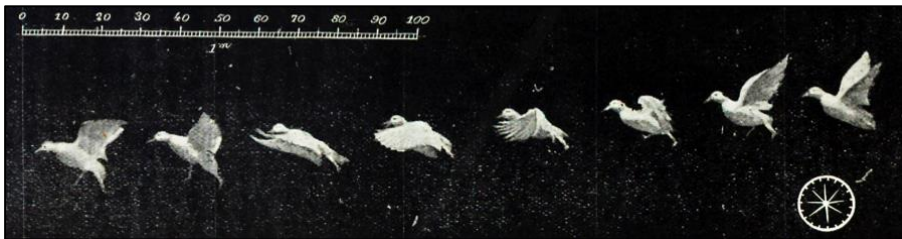

Fig. 8. Etienne Jules Marey, *Chronophotographie Image of a canary in mid-flight*. 1882.
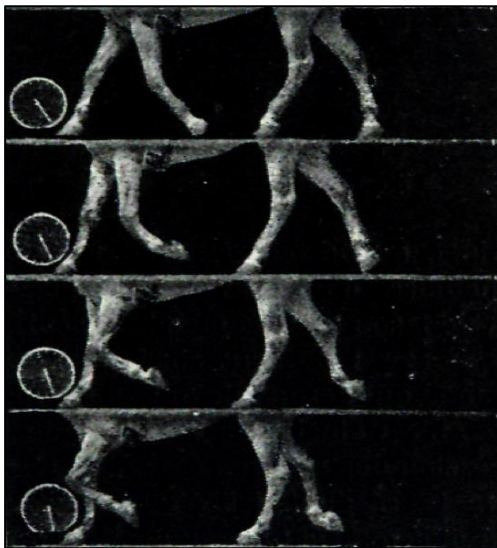

Fig. 9. Etienne Jules Marey. *Chronophotographie*. Horse stride. 1882.

Fig. 10. Esther Hovers, *False Positives Overview D*, timeframe 04min. 35. 2015.

Fig. 11. Etienne Jules Marey. *Chronophotographie*, 1882.

Fig. 12. Esther Hovers, *False Positives Overview J*, timeframe 01min, 2015.

Fig. 13. Esther Hovers, *False Positives, Overview F, Timeframe 05 min*. 2015

Fig. 14. Esther Hovers, *False Positives, General pattern of movement,* 2015.

Fig. 15. Esther Hovers, *False Positives, Overview C*, timeframe 04 min. 26. 2015

Fig. 16. Francisco di Giorgio Martini, Architectonic view, 1490-1500.

Fig. 17. A Photo from the subjects from a street Surveillance System in the Bronx,. Nov 2011, provided by the F.B.I.

Fig. 18. Arquiayuda, Spain, computer graphic model of the archeological museum of Ampurias, 2016.

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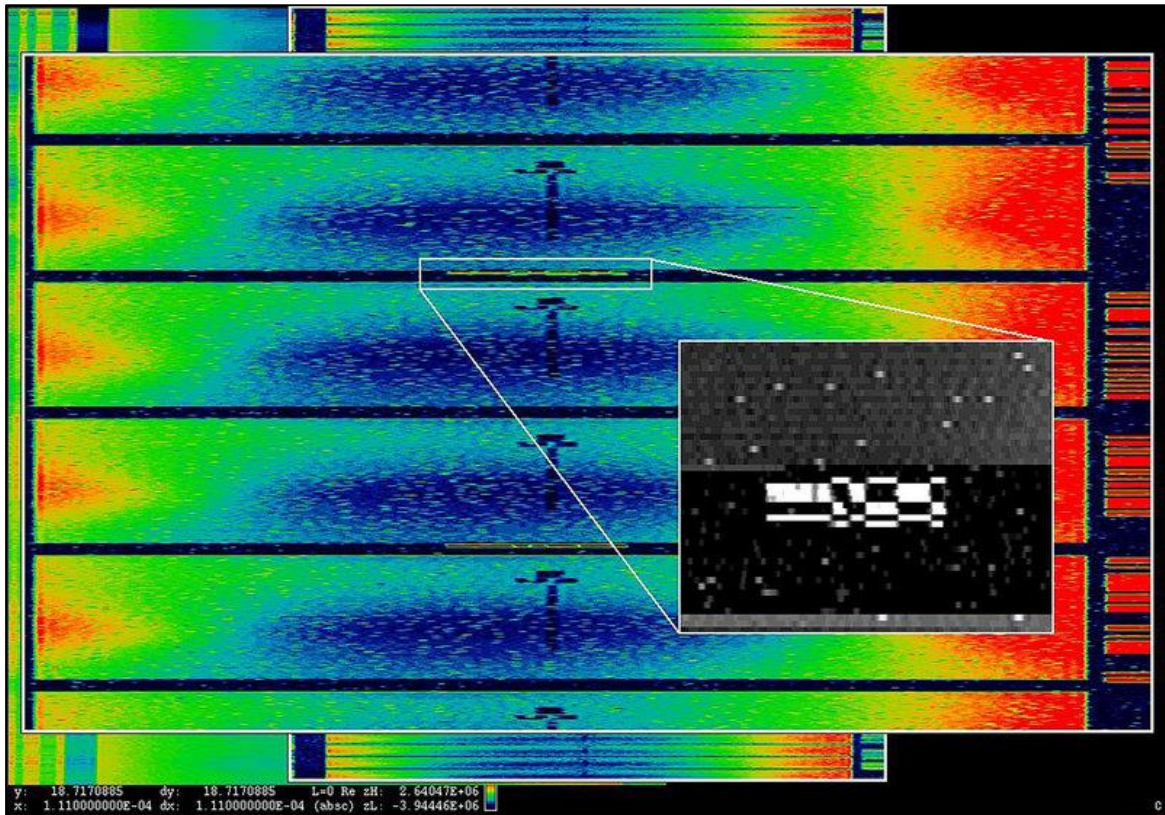**Fig. 19.** Esther Hovers, False Positives, Overview I, timeframe 02min, 13, 2015

Fig. 20. Laura Poitras, *Anarchist: Israeli drone feed (Intercepted February 24, 2009)*, 2016. Pigmented inkjet print on aluminium 45 x 64 3/4 in

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114.3 x 164. 5 cm