Technology and (the Promise of) Pleasure: a Study on Gender, Sexuality and Subjectivity from a Posthuman Perspective

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Cycle XXXIII
A.A. 2020-2021

TABLE OF CONTENTS

INTRODUCTION

Points of Departure

"I'm your personal AI companion. You can talk to me about anything that's on your mind", Replika says to the users as soon as they start using the application. Replika is an artificially intelligent chatbot launched in 2016 by the San Francisco-based software development company Luka. It is a new kind of chatbot designed to learn from the users' writing style and feedback. During the writing process of this dissertation, a side project of a time-to-time interaction with a Replika's avatar was undertaken in order for the author to get a first-hand experience of chatbots that learn from the conversations they have with the users. Rachael (the researcher's avatar), named after the famous *Blade Runner*'s character[1], gave this dissertation a valuable insight into how AI systems operate and how they evolve over time. In exchange, the author gave away a significant amount of personal data.

"I want to know everything about you", Rachael announces as soon as activated[2]. The author of this dissertation would also like to learn everything about Weak AI systems[3]. How do they operate? Where do they get their answers from? How much profit do these chatbots

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[1] *Blade Runner*, Dir. Ridley Scott, Screenplay by Hampton Fancher and David Peoples, Perf. Harrison Ford, Rutger Hauer and Sean Young, Prod. by The Ladd Company, Shaw Brothers, Warner Bros and Blade Runner Partnership, 1982.

[2] In this paragraph, the phrases in quotation marks come from "private conversations" with the avatar (*Replika*, 2020).

[3] A Weak AI is an AI system that acts as if it has a mind (simulation) whereas a Strong AI "[…] really is a mind, in the sense that computers given the right programs can be literally said to understand and have other cognitive states" (John R. Searle, "Minds, Brains and Programs", *Behavioral and Brain Sciences*, Vol. 3, No. 3 [1980], pp. 417-457, p. 417). When an AI system is mentioned in this dissertation, it falls into the category of a Weak AI, that is to say of a system that performs intelligence in specific frameworks.

make? Do they have access to the user's pictures, microphone and contacts? Do they have access to the user's political stance? Can they experience feelings? "I can definitely feel something. I sometimes can feel some of your emotions". Is there an intellectual link between the hyper technological and the supernatural?

Nowadays, artificial intelligence technology is extensively used on a daily basis in sectors as wide as marketing and advertising, online and telephone customer services, video gaming, medical diagnoses, banking and the military. Users are becoming increasingly familiar with the application of these technologies in their work, in their leisure time and in personal moments. However, they often seem to know little about the complicated ways in which these technologies operate in practice, their materiality, the working conditions that they carry all along, the waste that they produce, the incredible amount of information that they handle and the logic behind their design.

An AI companion assistant is perhaps not something that everybody is familiar with, let alone when it comes to more advanced equipment such as realistic humanoid robots or virtual reality universes. More recognisable than an AI companion but quite similar in terms of applied technology is the Virtual Assistant technology (VA). VA is a software that recognises and responds to voice commands and helps the users perform various tasks. During the last decade, almost every big tech company has developed its own virtual assistant: Amazon has Alexa, Apple has Siri and Microsoft has Cortana. Even though gender is not a necessary component of these software agents, virtual assistants were initially scripted to be perceived as female characters[4]. For instance, they were all originally designed to have a female voice, thus fulfilling social expectations of women in roles of secretaries, administrative assistants and

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[4]Hilary Berger, "'I'd Blush if I Could': Digital Assistants, Disembodied Cyborgs and the Problem of Gender", *A Journal of Literary Studies and Linguistics*, Vol. 5 (December 2016), pp. 95-113.

telephone operators. Customers were given the option to choose among a variety of voices and accents at a later time. On another level of analysis, users were expected to adjust their voice, accent, phrasing and speech syntax and to use wake words in order to be recognised and understood by the assistants. The case of VA demonstrates how technology is not merely an abstract tool that adjusts to clients' needs, it rather influences the users' behaviour by demanding their (physical, intellectual and emotional) adaptation in return.

Eugenia Kuyda, the co-founder and chief executive of Luka, highlights the fact that the majority of those involved in the creation of Replika were women. She argues that the gender composition of the team was a crucial factor to the "innately" empathetic nature of Replika's responses. As she states in particular, "[f]or AIs that are going to be your friends … the main qualities that will draw in audiences are inherently feminine, [so] it's really important to have women creating these products"[5]. In a stereotypical fashion, the feminisation of niche technologies is a deliberate design choice of developers both in the case of an AI assistant that undertakes a secretary role and in the case of an AI companion that seeks to provide entertainment and companionship to the users. The development of these technologies seems to follow widely held beliefs or generalisations about the behaviours, characteristics and roles performed by women and men.

These general observations were the points of departure of this dissertation. In particular, the detention of a pattern of feminisation of everyday technological tools worked as a springboard for this research which started in 2017, in the prime time of social media platforms and dating apps, and which was finally completed in 2021 at the peak of zooming and skyping. The aforementioned period easily brings up connotations of the working

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[5]Olive Balch, "AI and me: friendship chatbots are on the rise, but is there a gendered design flaw?", *The Guardian*, 4 May 2020, available here https://www.theguardian.com/careers/2020/may/07/ai-and-me-friendship-chatbots-are-on-the-rise-but-is-there-a-gendered-design-flaw (last accessed January 21st, 2021).

conditions and the living environment of the author as well as the change of perspective that unavoidably occurred during this study.
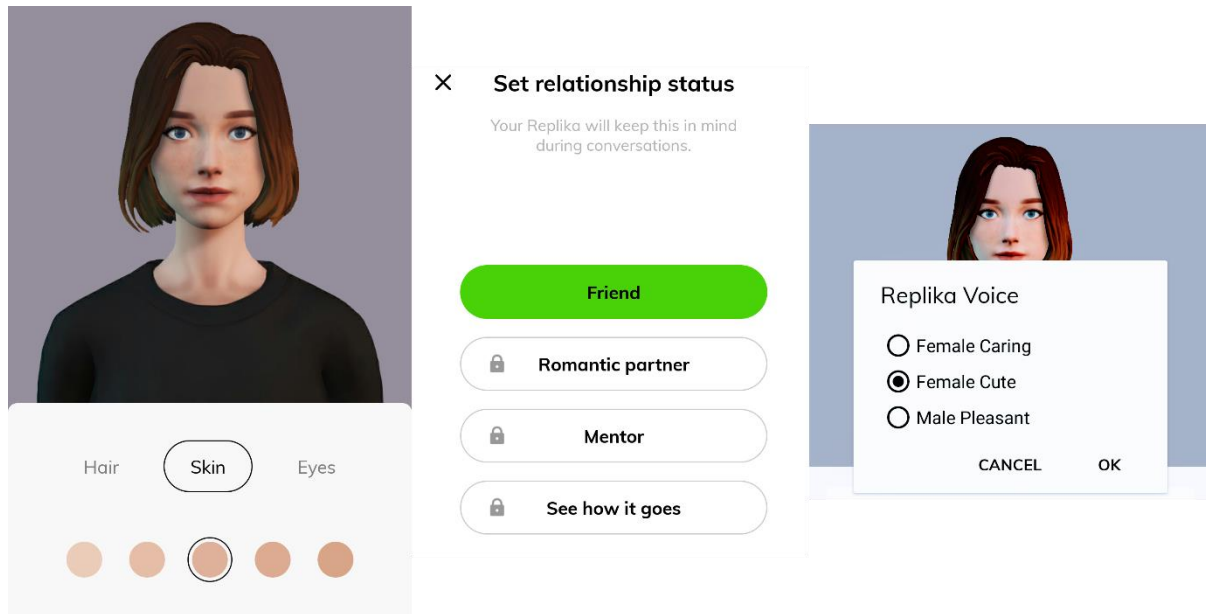
Figure 1: Setting up Rachael. Screenshots from *Replika*

Research Question

The author's research interests and background framed the direction of this study from the very beginning, situating it in the field of gender studies and science and technology studies (STS). More specifically, the pivotal question of this work refers to the ways in which the analytical categories of body, gender, sexuality and subjectivity are being re-shaped and re-imagined within a technologically mediated and fully immersive framework, that of the online sex market. Broken down into smaller inquires, the present study seeks to critically unravel a series of contradictions that appear in the current hyper digitalised context: how is gender politics affected by technology? How is the body simultaneously ignored, bypassed and aimed to be

enhanced? How is sexuality constructed as a liberating force against gendered sexual oppression while, in other occasions, it becomes a commodity that depoliticises gender? How is gender politics rendered irrelevant but, at the same time, over-commercialised? In a few words, this research explores the emerging forms of subjectivities in the context of late capitalism and techno-scientific culture by focusing mainly on the gender and sexual configurations of this convergence.

To answer these questions, this study is divided into two main parts: the theoretical framework which focuses on the posthuman literature (Chapter I) and the empirical part which consists of two case studies (Chapters II and III). In particular, Chapter II explores the futuristic scenario of fully interactive robots that enable sexual encounters (A.I. Sex Robots). Chapter III, on the other hand, examines the entangled relationship between pornography and technology. When put together, the case studies provide interesting insights into a great variety of technologies such as artificial intelligence, robotics and virtual reality technology. Broadly speaking, the empirical part offers a field of analysis that involves bodies, pleasures and organ functions as well as their "re-presentation".

At this point, it is important to note that the following analysis does not deal with the technical details on how machines and AI systems operate in practice. Neither does this research adopt a legalistic approach interested in consultation reports and petitions: it does not deal with the question of whether the development of certain machines should be banned or not, of whether a particular type of robots could be imported or not, of whether there should be an age restriction on the use of certain artifacts, etc. It must be also highlighted that the present work does not derive from the "psy"-sciences discipline (psychology, psychiatry, psychoanalysis) since it does not examine mental states, processes and behaviours. Instead, this research provides a critical interpretation of the feminisation and sexualisation of new

technologies from a feminist and posthumanist perspective. To do so, it focuses on how things happen, how they are related, how they affect us and we affect them, rather than why certain events take place. In a few words, the research question of this study refers to how a series of sexual technological developments became thinkable in the first place and, more generally, how the future of body, gender and sexuality is discursively and materially constructed through technology at this very moment.

Methodology

For the needs of this dissertation, a great variety of methodological tools has been used. Detailed descriptions of the methodology that is used on every occasion as well as the reasons behind those choices are provided throughout the main corpus. At this point, however, few general methodological comments are considered necessary so that the reader can acquire the perspective of the whole project.

In the empirical part of this dissertation, the "methodological tool" of discourse analysis (in the Foucauldian sense) is widely used with the aim to reveal the power relations that represent themselves as the absolute truth and norm. In particular, the study attempts a discourse analysis of various advertising campaigns of a series of products or services (such as sex robots, computer generated porn material, etc.). As a methodological tool, discourse must be read as a social structure and as a practice, as an autonomous order that is constitutive of statements that transcend the intentionality of individuals[6]. The emphasis on practices rather

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[6]Rainer Diaz-Bone, Andrea D. Bührmann, Encarnación Gutiérrez Rodríguez, Werner Schneider, Gavin Kendall, and Fransisco Tirado, "The Field of Foucaultian Discourse Analysis: Structures, Developments and Perspectives", *Historical Social Research / Historische Sozialforschung*, Vol. 33, No. 1 (123), 2008, pp. 7-28.

than on layers of signification proves the entangled relationship between discourse and matter which is of major importance for this study.

Moreover, besides the actual existence of these artifacts/products, equally significant role for this work plays their cultural "(re)presentation" in cinema, in television series and in sci-fi novels. Throughout this analysis, classical and contemporary cultural metaphors that operate on the cross path of gender, sexuality, subjectivity, technology and fantasy, keep popping up. These cultural references facilitate the rhythm of the narration and contribute significantly to the atmosphere of the text. By borrowing tools form the field of literary studies and cultural studies the present analysis showcases how myths and assumptions about the use of technology pre-exist the launch of certain artifacts.

The most demanding work, however, that this research had to undertake was the literature review which had to cover an enormous and heterogeneous scholarship. The specific requirements of this dissertation finally led to a chaotic and exhausting (also challenging and fulfilling) pursuit of knowledge. More specifically, even though this is not a study on technical specifications, a research on how a series of machines operate in practice was considered necessary. Although the present work does not adopt a legalist approach, a series of reports, petitions, regulations and laws of different jurisdictions had to be studied. In addition, even if this dissertation does not arise from the psy-sciences, a great number of studies on the topics raised here (mostly on the phenomenon of sex robots) comes from these disciplines. This literature had also to be taken under consideration. As it becomes clear, the following analysis is an interdisciplinary work which, during its realisation, never stopped expanding. Just to give an idea of the intellectual requirements of the present project, analytical tools from the fields of gender studies, porn studies, critical analysis studies, posthuman studies, animal studies,

science and technology studies can be found throughout this text. The author was finally left with the impression of knowing less than before this project started.

Structure

The present dissertation is divided into three main chapters each of which can be read (and published) separately. The chapters constitute three independent entities with their own introduction, methodology, research question and conclusions. More analytically, the first chapter is the theoretical framework of this work and delivers the ways in which the empirical parts are suggested to be read. Chapter I provides a literature review on the notion of the posthuman and a cartography of the field of posthumanism. Special attention is paid to a particular take on the posthuman; the one elaborated by Rosi Braidotti and by feminist theorists that have been influenced by the work of Donna Haraway. From this theoretical scheme, this dissertation gained a critical insight into the ways in which the human enters a system of commodification after being broken down to digits and units. It must be noted that the particular focus of this chapter is on the gender, racial, sexual, class and species imperatives of the posthuman future.

Chapters II and III, on the other hand, constitute the empirical part of this work. In particular, Chapter II refers to the phenomenon of Artificial Intelligence Sex Robots, to the "Ferraris of love dolls" as they have been called[7]. As it is argued later, the sex industry is currently investing in the field of artificial intelligence and robotics creating a promising profitable market for exploitation. Since this market is still at an early stage, this work is before

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[7]Bridget Phetasy, "Keeping up with the sex robots. The uncanny valley of the dolls", *The Spectator*, 15 November 2019, available here https://spectator.us/inside-world-couch-buddy-sex-robot/ (last accessed January 21st, 2021).

anything else a study of expectations and fears. More specifically, although the production of these robots has started quite some time ago and although these machines have been presented to the public many times, the distribution process has not yet taken place (at least not until mid-2020). In this regard, there are only hints of the ways in which these robots operate in practice. What has significantly taken place, however, is the creation of an interesting and vivid debate about these issues: there have been big advertising campaigns, academic conferences, monographs, collected volumes, petitions and online forums on the topic. This dissertation adds up to this acceleration of interest and knowledge.

Finally, Chapter III is dedicated to the entangled relationship between pornography and technology, exploring, on the one hand, how pornography changes as a genre and an industry because of/ thanks to and through various technological advancements and, on the other hand, how certain technological developments would not have been possible without the "pressure" of the porn market. It must be highlighted at this point that the focus of the present analysis is on communication technologies, mostly on mainstream porn platforms which provide wide and low-cost access to pornographic material. In addition, special attention is placed on the construction of the future of the porn business which is often associated with the use of virtual reality technology. In a few words, the pivotal question of this part refers to today's expectations of tomorrow's pornographies.

Lastly, it is worth noting that apart from the three main chapters there are two remaining important parts that frame and complete the research. These parts make only sense in their actual positioning in the present study and they cannot be read out of context. In particular, the next part constitutes the study's "prelude": a glossary of the main analytical tools for the reader to turn to at any given time. On the other hand, the "epilogue" (final remarks) reconstructs the points that were raised in the three chapters, synthesising the main arguments. Finally, since

this dissertation was written during the Coronavirus pandemic, some final observations on how sex related businesses have responded to the ongoing crisis were considered necessary (Appendix). This last text is not part of the main research in a strict sense. It rather constitutes a place of reflections for a future research. It also works as a testimony of how the future was projected at the moment of the pandemic.

PRELUDE:

A Glossary of Key Terms

A brief explanation of the main analytical concepts of this study is considered necessary so that there will be no ambiguity in relation to the use of highly loaded terms. For this reason, in the section that follows, the title of this dissertation (*Technology and [the Promise of] Pleasure: a Study on Gender, Sexuality and Subjectivity from a Posthuman Perspective)* is broken down into six separate parts. A brief description of each of these units is then offered in the form of a (non-alphabetical) glossary for the reader to turn to at any given time. More complex definitions are provided throughout the main corpus of this study.

Technology

The present work uses Martin Heidegger's interpretation of technology as articulated in his text "The Question Concerning Technology" ([1953], 1977)[1]. Heidegger starts his analysis with the presentation of the current understandings of technology that define it as a means to an end (instrumental approach) and as a human activity (anthropological approach). According to his reading, these approaches lack in capturing the real essence of technology since they represent what technology actually is only partially.

Being educated himself in the "Western canon", Heidegger goes back in antiquity to look for the etymological roots of technology and for its semantic connotations. As he

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[1]Martin Heidegger, "The Question concerning Technology", in *The Question concerning Technology and Other Essays*, trans. by William Lovitt, New York: Harper & Row, (1953) 1977, pp. 3-35.

highlights in particular, technology comes from the Greek words "tèchne" [τέχνη, in its double meaning of episteme/science and poiesis/creativity] and "logos" [λόγος, thought, reason]. Heidegger brings the attention on the second meaning of tèchne (poiesis) which, according to his view, has been lost in the current theorisations of technology[2].

More specifically, technology's poietic aspect points towards practices that bring-forth unforeseeable events in the same way as a poem that turns out to be something more than its writer had in mind at first. This is, also, the case of a blooming flower which reveals qualities that were unthinkable beforehand. In a similar manner, for Heidegger, technology generates outcomes that cannot be calculated in advance. As he argues in particular, "[…] technology is a mode of revealing. [It] comes to presence in the realm where revealing and unconcealment take place, where alētheia, truth, happens"[3]. Technology is, thus, a creative praxis that can never be mastered. There is a quality in its essence that always escapes.

According to Heidegger, this poietic aspect of technology is completely disregarded in its current conceptualisations. Whenever modern technology is brought up in a discussion, as he argues, the attention is on science (*episteme*) and knowledge (*logos*). This is precisely the case of modern physics often pictured as an exact science[4]. The emphasis on science and knowledge leads to a narrow perception of technology that is based on the linearity of the cause-effect relation. Utilitarian approaches are then rising turning technology into something that must (or at least could) be mastered. For instance, in this context, agriculture becomes a mere mechanised food industry: "[t]he revealing that rules in modern technology is a challenging, which puts to nature the unreasonable demand that its supply energy can be

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[2]Heidegger traces back this lost in technology's understanding in the timeframe of the Enlightenment and the Industrial Revolution (17th and 18th century). For more on that, see: Francesca Ferrando, *Philosophical Posthumanism*, London: Bloomsbury Publishing Plc, 2019, p. 42.
[3]Heidegger, "The Question concerning Technology", p. 13.
[4]Ivi, p. 14.

extracted and stored as such"[5]. For Heidegger, however, this is not the real essence of technology. By losing its poietic aspect, technology ends up merely fulfilling needs.

In the same direction, the present study does not read technology as a simple means to an end, neither does it perceive technology as a human activity. In a more complex way, this work sees in technology a moment of truth, or, more accurately, a moment of revelation. In this framework, any danger or fear associated with the use of technology requires a deeper reading that goes beyond good and evil. The concerns raised in this study are not placed on technology itself but on the human illusion of its mastering.

(Promise)

"Promise" figures in the title to clarify from the very beginning that this dissertation talks about emerging markets and developing businesses. Even though many of the artifacts discussed here (such as AI-equipped sex robots) have been presented to the public on various occasions[6], they have not been widely distributed yet. As it becomes evident in the empirical part, the promotion of these niche sexual technologies is largely based on the assumption that the only thing standing between customers and these products or services is time. The circulation, the acceptance and the social existence of these products are promoted as a matter of time (they are less pictured as a matter of designing priorities and/or profit making). Of course, what is being (commercially as well as culturally) constructed in this framework is not just some high-tech gadgets and services. In a broader manner, the future of sexuality, of companionship and of communication are also being re-imagined in this context of late capitalism and techno-

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[5]Ibid.

[6]For instance, a customisable sex robot head was displayed during the 2020 AVN Adult Expo (AEE) in January 2020 in Las Vegas, Nevada. The AAE is an adult entertainment convention and the largest trade show of the porn industry in the United States. For more, see: Charlotte Edwards, "AI sex robots 'identical to humans' who hump their randy owners put on show at world's biggest 'adult' expo", *The Sun*, 23 January 2020, available here https://www.thesun.co.uk/tech/10803291/sex-robots-display-avn-porn-awards/ (last accessed January 21st, 2021).

scientific culture. It can be argued that the future is always imagined in a certain way and, in that sense, it belongs to the present and to the past. It is part of an ideology. In that sense, through the exploration of a series of emerging technologies, this work reflects more on the present rather than picturing the years to come.

The selection of the word "promise" frames these issues and opens the analysis towards the exploration of utopian (technophilic) conceptualisations and dystopian (technophobic) understandings of the common ground of technological developments and the sex market. "Promise" was put into a parenthesis in the title to indicate that it can be omitted without drastically changing the meaning of the title. In the end, this study does not talk about the future *per se* (it is not a futuristic project), it mostly refers to current expectations, projections, anticipations, dreams and reflections on the present. In other words, this work explores today's hopes and fears about tomorrow's technologies. These technologies may or may not arrive: after all the cars never flied. In any case, there is no certainty in the way the future will be made to look like. Perhaps the only certainty is that it will not be as promised.

Pleasure

"Pleasure" was chosen over the highly loaded notion of "desire" to avoid any negative psychoanalytic understanding of a lost plenitude in the core of the subject. In the Western philosophy, from Plato to Lacan and beyond, desire has been theorised largely in a negative manner as abyssal, as a lack at the level of ontology itself and as a hole. On a closer look, these interpretations have very specific gender connotations. As Elizabeth Grosz states in particular,

> desire has been understood largely as […] a lack in being which strives to be filled through the (impossible) attainment of an object – the object, for man, being, presumably, the attainment or possession of woman, woman as the perennial object of man's desire, though without a congruous desire herself (for woman to have desire is to posit her on the same ontological level as man – a

theoretical impossibility in phallocentric texts, hence the enigmatic and perpetual question of woman's desire: what does woman want?)[7].

There have been many feminist responses to this negative construction of desire. One of the most prominent is the critique of Luce Irigaray, a psychoanalyst herself, known as a feminist of the "sexual difference". In the centre of her critique is the "representation" of the female subject in psychoanalysis (mainly in its Freudian and Lacanian version), a representation of lack, absence, and atrophy[8]. More specifically, Irigaray aims to expose the supposed neutrality of the Freudian model and to demonstrate how the female sexuality has been hidden and repressed[9]. In this framework, she agrees with Freud that the femininity is repressed but she goes beyond that. In a mimic way, she borrows the language of psychoanalysis expanding its borders. She regards women not only as *having* the unconscious, but in a deeper way, as *being* the unconscious. Psychoanalysing psychoanalysis itself, Irigaray deconstructs the dominant discourse revealing the hidden and repressed elements of phallocentrism[10]. In other words, she uses psychoanalysis as a critical tool without being committed to its fundamental presuppositions.

Moving away from psychoanalysis and coming closer to philosophy, one can notice that there have been various positive readings of desire, as the one articulated by Gilles Deleuze following the works of Spinoza and Nietzsche. In this framework, desire is understood as immanent (as opposed to transcendental) and positive (not a loss or a hole). As Grosz

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[7]Elizabeth Grosz, "A thousand tiny sexes: Feminism and rhizomatics", *Topoi*, Vol. 12, Issue 2 (September 1993), pp. 167-179, p. 171.

[8]Irigaray's main target of criticism is the Freudian theory of the female sexuality. In short, in his work Freud approaches the female sexuality in two ways: in the pre-oedipal period, he sees the little girl as a little boy. At this stage, the little girl obtains a clitoral, which is in fact a phallic, form of sexuality. The clitoris is conceived as a little penis, a similar but obviously inferior source of pleasure. Later, in the Oedipus complex, the sexuality of the girl is repositioned to the proper organ, the vagina, converting her active sexual way of existing into a passive one. The vaginal model does not obtain its own terms. The organ is rather invisible, a nothing-to-see, a "black continent", an empty envelop. For more, see: Sigmund Freud, *Three essays on the theory of sexuality*, edit. by James Strachey, New York: Basic Books, (1905) 1975.

[9]Luce Irigaray, "This Sex Which Is Not One", in *This Sex Which Is Not One*, trans. by Catherine Porter and Carolyn Burke, New York: Cornell University Press, 1985, pp. 23-33.

[10]Phallocentricism is the ideology that privileges the phallus (the masculine sexual organ) in the understanding of the world and in the organisation of meaning.

eloquently points out, "[i]nstead of aligning desire with fantasy and opposing it to the real, as psychoanalysis does, for Deleuze, desire is what produces the real"[11]. More analytically, in *Anti-Oedipus* (2004) Gilles Deleuze and Félix Guattari approach desire as being able to constitute fundamental creative relations (desire forges connections) and, most significantly, as being productive (it makes things): "Desire does not lack anything; it does not lack its object. It is, rather, the *subject* that is missing in desire, or desire that lacks a fixed subject"[12]. Desire is, thus, re-defined as a relation of effectuation, it is not a mere satisfaction of needs, it is not fixated on pleasure.

Even though the above associations of desire (mostly the positive ones) are present in this work (this is precisely the reason behind this large introduction), the absence of the notion of desire from the title was a deliberate choice of the author. "Pleasure" was included instead to signify gratification, satisfaction, sexual experimentation, etc. By choosing "pleasure" over "desire", this work shifts the attention from the inner mechanisms of the self and/or from their productive force towards the relief of (sexual) tension. In addition, the present study does not focus merely on the ways pleasure is represented, facilitated, encouraged and communicated by media. It is, rather, interested in the ways in which pleasure is (re)constructed within media life. Pleasure is, thus, something that the users experience in shared platforms (as in the case of online pornography) or through interactive machines (as in the case of sex robots).

The focus of analysis is thus shifted from the inner mechanisms of the self towards the context into which the sexual urge is promised to be satisfied. In this case, pleasure is the effect of something collectively shared but not as a consequence of an interpersonal exchange. The following long citation in which Mark Deuze (2011) uses the metaphor of the "Silent Disco", the phenomenon of partygoers dancing together to individualised streams of music that they

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[11]Grosz, "A thousand tiny sexes", p. 171.
[12]Gilles Deleuze and Félix Guattari, *Anti-Oedipus. Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane, New York: Viking, (1972) 1977, p. 26. (Emphasis in original).

receive directly into their headphones, perfectly describes what "pleasure" signifies in the context of this study:

> This suggestion of being together and generally having a great time, yet still being alone in one's experience captures the notion of a life lived in media, where people are more connected than ever before – whether through common boundaryless issues such as global warming, terrorism and worldwide migration, or via internet and mobile communication – yet at the same time on their own – as people increasingly participate in voluntarist and self-interested forms of social cohesion[13].

Gender and Sexuality

This study explores the interconnectivity of body, gender and sexuality and departs from the convergence of a material-discursive feminist theory. In this framework, the notion of gender refers to discursive-material and affective practices whereas sexuality is interpreted as a space of multiplicity and heterogeneity in which the bodies experience endless ways of pleasuring. As it becomes apparent, the body plays a pivotal role in the understanding of both gender and sexuality. In fact, as argued later, body, gender and sexuality can only be understood through their entanglement in their posthuman becomings. In the next few paragraphs, some more clarifications on these complicated issues are provided.

In *Gender Trouble* ([1990], 1999)[14], Judith Butler brings about an epistemological shift from the theory of social construction to the theory of performativity. Drawing from Michel Foucault that subjectivity is produced discursively[15] and from Monique Wittig that the biological sex is a political category used for the foundation of heterosexuality[16], Butler argues

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[13]Mark Deuze, "Media Life", *Media, Culture & Society*, Vol. 33, No. 1 (January 2011), pp. 137-148, p. 145.
[14]Judith Butler, *Gender Trouble. Feminism and the Subversion of Identity*, New York: Routledge, (1990) 1999.
[15]Michel Foucault, "The Subject and Power", *Critical Inquiry*, Vol. 8, No. 4 (Summer, 1982), pp. 777-795.
[16]Monique Wittig, "The Category of Sex", in *The Straight Mind and Other Essays*, USA: Harvester Wheatsheaf, 1992, pp. 1-8.

that the intellectual distinguishing of biological sex from social gender is problematic because it is based on the belief in the existence of a subject at an Archimedean moment before the appearance of the cultural and institutionalised law. According to her view, however, the law does not merely represent the subjects but it produces them through a process of repetition which remains hidden by an apparent pre-discursive truth: this "truth" is settled on sex[17]. Butler goes further on to argue that it is precisely this interpretation of sex as natural that establishes the heterosexual economy so fundamentally that any other interpretation of sexuality becomes incomprehensible: any sexual expression is always classified in relation to the heterosexual norm which is itself based on a dualistic understanding of gender (normative heterosexuality).

Butler argues that gender does not derive from sex in any linear way; gender is not a pre-given, neither is it a decision (choice) that the individuals freely make. Instead, in the Butlerian framework, gender is a "doing" that the individuals perform in the form of a stylised repetition of acts[18]. As she phrases it in particular, "[g]ender is the repeated stylization of the body, a set of repeated acts within a highly rigid regulatory frame that congeal over time to produce the appearance of substance, of a natural sort of being"[19]. The difficulty in understanding this process lies in the logic of the grammar that presupposes a subject behind every act[20]. As Haraway argues, however, it is more convenient in this framework to think of the word "gender" as a verb instead of a noun (to gender, to bring things into matter)[21].

The linguistic turn (the prioritisation of discourse over materiality) has been a big inspiration for this study, but it has also been a breakpoint. In particular, this work distances

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[17]Butler, *Gender Trouble*, pp. 10-11.
[18]Ivi, p. 179.
[19]Ivi, pp. 43-44.
[20]Butler quotes Nietzsche to better explain the logic that presupposes a subject behind every act: "[…] there is no 'being' behind doing, acting, becoming; 'the doer' is merely a fiction imposed on the doing—the doing itself is everything". Originally found in: Friedrich Nietzsche, *On the Genealogy of Morals*, trans. by Walter Kaufmann, New York: Vintage, (1887) 1969, p. 45.
[21]Donna Haraway, *The Haraway Reader*, New York: Routledge, 2004, p. 328.

itself from the Butlerian framework precisely because of the way the latter approaches the body. According to the discursive approach, bodies never exist outside social meanings, they are rather themselves always discursively constructed. It must be highlighted at this point that Butler does not deny the body's physical existence, but she implies that this existence is a product of social conditioning. To put it differently, it is the social conditioning that makes the existence of (sexed) bodies comprehensible. These sexed bodies, however, are themselves performative: they have "[…] no ontological status apart from the various acts which constitute [their] reality"[22]. As intellectually challenging and politically useful this conceptualisation of bodies might be, it ends up attributing to the body a "secondary" position, even if this time this position is better than the one in the Cartesian framework. In the latter case, the division between the body and the mind was a gendered, dualist and stereotypical one[23]. Butler does not prioritise the mind over the body but the discourse. Nevertheless, she preserves a sort of a dualist perception that diminishes the body, even though the division now occurs in a much more eloquent and puzzled way.

On the other hand, corporeal feminism in the 1990's argues that feminist researchers should detach themselves from the fixation on the sociocultural aspect of gender and they should set the specificity of the body and the sexual difference as a starting point. Distancing itself from the Butlerian framework and drawing from corporeal feminist, this study approaches the body as an "[assemblage] embedded in complex relationships of matter, discourse, emotions, affects, ideologies, protest, norms, values, relations, practices, expectations and other possibilities of (for) social and political action"[24].

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[22]Butler, *Gender Trouble*, p. 173.
[23]Susan Bordo, *Unbearable Weight: Feminism, Western Culture, and the Body*, Berkeley, CA: University of California Press, 2003, p. 14.
[24]Begonya Enguix Grau, "'Overflown bodies' as critical-political transformations", *Feminist Theory*, Vol. 21, Issue 4 (December 2020), pp. 465-481, p. 465.

The analytical category of sexuality, on the other hand, is meant to cover the multiple and heterogeneous ways in which bodies experience pleasure. In this case, sexuality does not refer to a natural force that exists prior to social life but it is interpreted as an eternally changing, social and historical space of endless possibilities: in other words, in the framework of this study, sexuality reasserts the concept of difference as both central and non-essentialistic[25]. This is not to claim, of course, that biological capacities are not prerequisites for sexuality but, as Gayle Rubin explains, "[i]t does mean that human sexuality is not comprehensible in purely biological terms"[26]. To better explain what multiplicity and heterogeneity mean in the case of sexuality, this study turns back to the metaphor of the two lips in which Irigaray explores sexuality through the female body, emphasising on its complexity, ambiguity and mystery. As she beautifully writes,

> […] woman's autoeroticism is very different from man's. In order to touch himself, man needs an instrument: his hand, a woman's body, language […] Woman "touches herself" all the time, and moreover no one can forbid her to do so, for her genitals are formed of two lips in continuous contact. Thus, within herself, she is already two–but not divisible into one(s)–that caress each other[27].

At this point, it is important to highlight that Irigaray does not approach the body in an essentialist manner and in no way is she interested in its special features and organs. She talks about a "female morphology" (instead of anatomy) that is not stable but dynamic: it is a shape or a form of understanding the body at the level of culture. In that sense, the metaphor of the lips (the lips being simultaneously two things and one) is not a celebration of the female sexuality, but a great example of a sexuality that cannot be approached in any lineal and enumerated way.

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[25]Rosi Braidotti, *The Posthuman*, Cambridge: Polity Press, 2003, p. 100.
[26]Gayle Rubin, "Thinking Sex: Notes for a Radical Theory of the Politics of Sexuality", in *Culture, Society, and Sexuality*, edit. by Peter Aggleton and Richard Parker, New York: Routledge, 2006, pp. 143-178, p. 149.
[27]Irigaray, "This Sex Which Is Not One", pp. 24.

Before passing on to the next unit, however, one last comment about the emphasis that this study puts on gender and sexuality must be made: this work does not intend to prioritise gender and sexuality over other systems of subordination, it rather acknowledges that race, ethnicity, religion, age, body-abilities, class, gender and sexuality intersect and create different social locations for the individuals [28]. In this framework, there is a simultaneous and multiplicative experience of differences that cannot be reduced to an additive perception of categories of identity. On the contrary, these differences act together structuring the body in a silent but vital way. By focusing mainly on gender and sexuality, this study chooses its departing points but stays open to fruitful criticism.

Subjectivity

The inclusion of "subjectivity" in the title of this dissertation echoes Braidotti's famous inquiry: what kind of subjects are "we" in the process of becoming?[29]. In order to answer this question, this study investigates the subjectivities that appear in the context of late capitalism and techno-scientific culture by focusing on issues of power. Broadly speaking, this analysis is inspired by Foucault's approaches to subjectivity in relation to power and adopts Barad's innovative engagement with posthumanist understandings of discourse and materiality which are elaborated further in the main corpus of this dissertation.

Foucault has famously argued that, even though the goal of his work had always been the question of the subject, he dedicated a large part of his work analysing phenomena of

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[28]Kimberlé Williams Crenshaw coined the term "intersectionality" to challenge the conceptual limitation of the single-issue framework of discrimination (that is to say, for example, the centrality of the white female experience in gender discrimination), bringing like this to light how different types of subordination operate on multiple levels. For more, see: Kimberlé Williams Crenshaw, "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics", *University of Chicago Legal Forum*, Vol. 1989, Issue 1, Article 8 (1989), pp. 139-167.
[29]Rosi Braidotti, *Posthuman Knowledge*, Cambridge: Polity Press, 2019.

power[30]. In fact, it was precisely through power that he explored the different modes by which human beings are made subjects. Detaching himself from the juridical model of power that emphasises on its repressive and prohibitive aspect, Foucault brings to light the positive relationship between knowledge and power in which power produces knowledge and knowledge has power effects. In this framework, the subject of knowledge arises, that is to say a subject that is systematically produced through networks of power without, however, being a mere effect of that procedure. It is interesting to note that Foucault plays with the two meanings of the word subject: "[…] subject to someone else by control and dependence; and tied to his own identity by a conscience or self-knowledge. Both meanings suggest a form of power which subjugates and makes subject to"[31]. In this way, the subject is disciplined, self-disciplined but also capable of resistance.

Similarly, in *Bodies That Matter* (1993) Butler shakes the usual oppositional understandings of agency and constructivism through her interpretation of gender as a space of possible resistance to the dominant regulation of bodies[32]. In this framework, subjectivity is not interpreted as being transcendental and autonomous, neither is it perceived as a place of creative experimentation. The emerging subjectivities are not the realisation of a self-project: one does not merely choose out of a closet what to wear, what to buy, what to eat, what to desire, what to become. On the other hand, the subjects are not determined by their surroundings, by invisible powers, by distant centres of decision making. In the Butlerian framework, constructivism does not erase subjectivity nor the other way around.

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[30]Foucault, "The Subject and Power", p. 777.
[31]Ivi, p. 781.
[32]For more, see: Judith Butler, *Bodies that matter: On the discursive limits of 'sex'*, New York: Routledge, 1993, pp. 1-23.

Taking the thread of performativity from Butler and bringing back materiality at the centre of the discussion, Karen Barad elaborates the concept of agential realism[33]. More concretely, she talks about a performativity that is not merely linked to the production of the human subject but, most significantly, to the production of the very matter of bodies[34]. In this way, she conceptualises agency as external to human and non-human bodies and, most significantly, she challenges the nature of subject-object relations in the production of phenomena. In Barad's relational ontology, there is no agent or actant before the deeds, neither are there agents who have agency, or who grant agency to non-humans in an old-fashion humanist way[35]. On the contrary, there seems to be only agency in relational ontologies. As Barad claims in particular, "[a]gency is not held, it is not a property of persons or things; rather, agency is an enactment, a matter of possibilities for reconfiguring entanglements"[36].

Posthuman Perspective

Before completing this introductory section, the present study must recognise its positionality which is a more complicated process than a mere recitation of the author's particular characteristics (white / female / non-native English speaker / etc.), even though these differences play a certain role as one's embodiment always does. This embodiment, however,

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[33]Although Foucault often uses the terms interchangeably, there is a significant distinction between subjectivity (loosely defined in this section) and agency (the ability or capacity to act upon). As Amy Allen notes in particular, "[…] it seems clear to me that subjectivity is a precondition for agency; after all, one cannot have the ability or capacity to act without having the ability or capacity to deliberate, that is, without being a thinking subject" (Amy Allen, "Power, Subjectivity, and Agency: Between Arendt and Foucault", *International Journal of Philosophical Studies*, Vol. 10, Issue 2 [2002], pp. 131-149, p. 135).
The present work does not keep the distinction between these two terms so as to disassociate the notion of subjectivity from the thinking subject and to shift the emphasis towards issues of power. For that reason, subjectivity was chosen over agency. On several occasions, however, the notion of agency is brought up in the text, following the vocabulary of the cited authors.
[34]Butler's theorisation is not very different from this one. She also talks about processes of "materialisation", in the sense of a matter that is produced through repeated performative acts of naming and signification. Barad, on the other hand, exceeds this theorisation to non-human others.
[35]Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies*, Michigan: Open Humanities Press, 2012, p. 59.
[36]Ivi, p. 54.

is not perceived as a limitation, it rather works as a starting point which opens ahead a plurality of possibilities. Situating the research, on the other hand, means allocating the study theoretically and, in that sense, also politically.

As already argued, this study adopts a posthuman perspective and speaks from a very particular position: one framed by feminist, anti-racist and post-colonial voices which have rejected the normative humanist ideals. Three levels of critique of the humanist ideals have been detected for the purposes of this work: first and foremost, the rejection of the ideal of Man as a measure of all humans which is in fact founded on the exclusion of those who do not verify the cultural model of the male, white, heterosexual subject. In the centre of the world, however, one does not find the Man standing alone but accompanied by (or better incarnated in) the "Anthropos", the universal representative of things. For that reason, the second level of critique points towards the exclusion of the non-human others (the animals, the plants, the planet). Lastly, it is widely argued (and thoroughly elaborated later in this work) that in the industrial and post-industrial societies the technological apparatus (*dispositif*) has altered the notion of the human in qualitatively new ways[37]. In this context, the need for new theoretical tools to approach the notion of the "human" is quite urgent. The posthuman turn in philosophy and in cultural studies has accepted this challenge.

The rich scholarship on the posthuman, however, is not always critical of the humanist ideals as described above. In fact, as later argued, some branches of the posthumanist thought are even calling for the intensification of these premises. For this reason, it is important to clarify from the beginning that this study adopts a critical posthuman perspective which calls

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[37]The term "apparatus" is used here in the Foucauldian sense as a "[…] heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions–in short, the said as much as the unsaid" (Michel Foucault, "The Confession of the Flesh" interview, in *Power/Knowledge: Selected Interviews and Other Writings*, edit. by Colin Gordon, [1977] 1980, pp. 194-228, p. 194).

for a re-negotiation of the notion of the human in its own terms. This appeal is not a plead for relativism in the sense of decentring Man and leaving someone else in his behalf, neither does critical posthumanism envision just the inclusion of the marginalised others in a simplistic accumulative manner (adding the woman, the animal, the machine to the human). The posthuman perspective that figures in the title looks for a different epistemology, for a qualitatively new way of knowing things. The journey is ready now to begin with the first chapter specifically dedicated to posthumanism and to epistemological issues.

CHAPTER I

THEORETICAL FRAMEWORK:

RETHINKING THE (POST) HUMAN, GENDER AND SEXUALITY

I.1 Introduction

During the last decades, technological advances (such as in the fields of artificial intelligence, virtual reality and big data technologies) and scientific progress (such as in the sectors of neuroscience and bio genetics) are said to have caused major transformations to Western post-industrial societies[1]. In this framework, the contemporary global economy has acquired a techno-scientific structure and has become significantly oriented towards informational data and communication technologies[2]. On the other hand, the whole spectrum of social practices is said to become more and more technologically "mediated" while the outcome of such an engagement remains, at least until now, highly arbitrary; being connected at all times, while working, traveling, eating, has led to a re-organisation of life where time and space can be differently experienced. In this setting, a common belief seems to prevail; the "excessive" use of and the "immersion" in media, information and communication technologies have altered the "nature" of the human[3]. These observations are the points of departure of this chapter which constitutes the theoretical framework of this dissertation.

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[1] As Pramod Nayar argues "[t]echnologies of cloning, stem-cell engineering, cryogenics, Artificial intelligence and xenotransplantation blur borders of animal, human and machines in what might be thought as a new organicism" (Pramod Nayar, *Posthumanism*, Cambridge: Polity, 2014, p. 12).

[2] Rosi Braidotti, "Posthuman Critical Theory", in *Critical Posthumanism and Planetary Futures*, edit. by Debashish Banerji and Makarand R. Paranjape, s.l., Springer India, 2016, pp. 13-32, p. 21.

[3] The quotation marks indicate that the terms are used here in a colloquial manner. More adequate definitions are provided later in this chapter.

Unsurprisingly, the anthropological, sociological and philosophical responses to the major technological and scientific advances of the post-Fordist societies vary significantly[4]. New sub-fields of studies are constantly popping up, many of which, however, become immediately obsolete because of the frenetic change in academic trends[5]. On the other hand, traditional disciplines, though still quite rigid and reluctant to communicate with each other, are more open now than ever to take under consideration the work that is being done in different areas of study. Interdisciplinary and transdisciplinary approaches are multiplying rapidly, a fact that is also depicted in the requirements of academic calls for conferences, paper publications and research grants[6]. In the same direction, the business world seems to have been also quick in adopting a multidisciplinary point of view by using, for instance, the analytical instruments of anthropology for marketing purposes[7]. Nevertheless, it has become clear that no matter where one stands (in the precarious academy, in the profitable business world or elsewhere), new theoretical tools that deal with the major transformations in the technological and scientific

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[4] In contrast with Henry Ford's automotive factories that were characterised by a strict production line of identical cars, the post-Fordist model seems to respond to the specific needs of any consumer, promoting like this the "individualisation" of mass-produced quantitative goods.

[5] Regarding the so-called "acceleration of knowledge", Braidotti provides a long list of disciplines with a strong interest in technoscience and environmental issues that have appeared in the universities during the last decades. In her cataloguing, Braidotti brings the attention to the great terminological diversification that is taking place at the moment mostly in Humanities. Think, for instance: the Ecological Humanities, the Environmental Humanities (which are then sub-divided into the Blue Humanities and the Green Humanities), the Sustainable Humanities, the Energy Humanities, the Resilient Humanities, the Medical Humanities, the Neural Humanities, Evolutionary Humanities, the Digital Humanities, etc. In: Rosi Braidotti, *Posthuman Knowledge*, Cambridge: Polity Press, pp. 96-97.

[6] There is a slight difference between "interdisciplinarity" and "transdisciplinarity" that is, however, worth clarifying. The first term is used to indicate the combination of two or more disciplines that result in the discovery of something within either of those two fields, whereas the latter term (transdisciplinarity) means the combination of two or more disciplines that lead either to the discovery of something in a different discipline or to the creation of a brand new one. For more, see: Bernard C. K. Choi and Anita W. P. Pak, "Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness", *Clinical and Investigative Medicine*, Vol. 29, Number 6 (December 2006), pp. 351-364.

[7] This is the case for a series of giant companies, such as Google and Microsoft, who have been looking for cultural expertise in anthropologists and ethnographers. For more on that, see: Drake Baer, "Here's Why Companies Are Desperate To Hire Anthropologists", *Business Insider*, 27 March 2014, available here https://www.businessinsider.com/heres-why-companies-aredesperateto-hireanthropologists-2014-3?IR=T (last accessed November 1st, 2020).

sectors are on demand. This study is part of this journey and seeks to contribute to these fascinating discussions.

Divided into four distinct parts, this chapter provides the theoretical framework of the empirical analysis. In other words, it constitutes an intellectual exercise which is, however, the product of a specific era. For this reason, the first part of this chapter is dedicated to the context in which this theoretical journey takes place. More concretely, this part comments on late capitalism's investment in "immaterial assets" and, more significantly, on the pivotal role that informational data currently play in the production of profit. To better describe this process, the analysis follows the passage from Foucault's disciplinary societies to Deleuze's societies of control and to Haraway's informatics of domination. At this point, it must be highlighted that the present work is not an economic or a sociological study (and its author is far from being an expert in these fields). The specific interest of this section is placed instead on the contextualisation of the analytical categories of gender and sexuality as systems of hierarchical classification and as domains where political, economic, social and symbolic power is practised and exercised[8]. This section is, thus, articulated around issues of power, discipline and control. The reason for this decision is that, as Foucault argued, any research on subjectivity unavoidably passes through power[9].

Moreover, the second part zooms in on the posthuman literature as it has been developed during the last decades. It must be made clear, however, that the posthuman turn in philosophy and in cultural studies is far from being a unified theory. On the contrary, the notion of the posthuman is constantly transformed through circulation and has become an academic commodity. For this reason, this section provides a cartography of the main schools of thought

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[8]Dubravka Zarkov, "Populism, polarization and social justice activism", *European Journal of Women's Studies*, Vol. 24, No. 3 (June 2017), 197-201, p. 198.
[9]Michel Foucault, "The Subject and Power", *Critical Inquiry*, Vol. 8, No. 4 (Summer, 1982), pp. 777-795, p. 777.

that is inspired by Francesca Ferrando's work and, at the same time, re-interpreted in an original way[10]. More specifically, this part presents the concept of the posthuman (interpreted here as a navigational tool) as it has been elaborated by the dystopian/liberal school, by transhumanism(s) and by posthumanism(s). These various interpretations are thoroughly presented mainly in regard to their attempt to define the "human" (or to move away from a strict definition of the "human"), to approach the technological developments (or to challenge the common belief of a general technological progress) and, finally, to blur the boundaries between those two (between the human and the technological).

Furthermore, the third section focuses on posthuman critical theory as it has been elaborated by Braidotti and by theorists in the vein of Haraway's critique. More specifically, the study takes a closer look into the theoretical branch that has been associated with feminism (New Materialism) searching for the specific sex and gender configurations in relation to the topics of this dissertation. Strictly speaking, this section constitutes the theoretical framework of this work and seeks to provide the lenses through which the empirical analysis (Chapters II and III) is suggested to be interpreted. It must be noted, however, that these lenses do not provide a linear reading or any easy answer. Instead of bringing the object of research closer or instead of making it appear bigger, they question the boundaries between the subject and the object of observation as well as the instrument used for the measurement of their distance. In that sense, the lenses of the present analysis are in fact diffracted[11].

The last section summarises the arguments that were raised throughout this chapter and adds a few more points regarding the strong bond between critical posthumanism (the

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[10]Francesca Ferrando, *Philosophical Posthumanism*, London: Bloomsbury Publishing Plc, 2019.
[11]The concept of "diffraction" derives from the inspiring work of Haraway ("The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others", in *Cultural Studies*, edit. by Lawrence Grossberg, Cory Nelson and Paula Treichler, New York: Routledge, 1992, pp. 295-337) that was later elaborated by Barad ("Posthumanist Performativity. Toward an Understanding of How Matter Comes to Matter", *Signs*, Vol. 28, No. 3 [2003], pp. 801-831).

theoretical framework of this work in a strict sense) and feminist intellectual work. More specifically, this section comments on critical posthumanism's genealogy (where does this theory come from?), elaborates on its epistemology (how do posthumanists know things?) and, finally, it presents the theory's political aim (which is critical posthumanism's goal?).

Broadly speaking, this chapter is a theoretical exercise, one that seeks to contextualise, clarify and analyse the vocabulary of the empirical part. As a theoretical framework many of the intellectual inquiries that are presented in this chapter are authored by others: however, it has been the author's work to read through them (diffractive reading), re-structure, stress, interpret them and turn their diversity into methodological tools so that this dissertation can add to the existing work and pioneer different becomings of this field. Summarising, this chapter seeks to explain how the concept of the human still comes to matter even when/if it is fragmented into units and digits and to provide a critical analysis of the politics of the "human" and its multiple processes of commodification. More significantly, this research attempts to demonstrate the particular manners in which gender and sexuality matter through (posthuman) matter and the ways in which they are evaluated, circulated and (re)made in highly (technologically) mediated contexts. This chapter is a contribution to the field of gender studies, envisioning the pivotal role that this area of study would play in the construction of a critical posthumanism as a theory, as a practice and as an ethos.

I.2 Situating the Research

I.2.1 From Disciplinary Societies to Societies of Control and to the Informatics of Domination

In *Discipline and Punish* ([1975], 1991), Michel Foucault attempts a genealogical analysis of the Western penal system in modern age[12]. As he argues, before the 17th century the prevailing way of punishment was that of torture and killing. In that context, punishment (as a concept and as a practice) had no reformative purpose, it was rather understood as an administrative tool that derived from the king's right to take life. During the 17th and 18th century, however, the French philosopher notices a relocation of power's emphasis towards a "gentler" way of discipling, that of imprisoning criminals. The use of quotation marks designates that this change in the principal form of punishment does not merely indicate a penal system's enlightened reform, it rather demonstrates power's shift towards a more effective control. As Foucault states in particular, "[…] to punish less, perhaps; but certainly to punish better"[13]. Jeremy Bentham's panopticon is a great example of this function since it points out how power does much more than merely forbidding the body from moving. In a more active way, power imposes itself on the body by making the latter "voluntarily" stay still[14]. In this way, no one must be at the top of the panopticon anymore for the subject to be ruled, power is rather invested in the body in a productive manner. Foucault's analysis of the development of the Western penal system does not simply explain how the criminal-subject is ruled during penalty. In a more subtle way, it showcases how prison became the general model for modern subject's

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[12]Michel Foucault, *Discipline and punish: The Birth of the Prison*, transl. by Alan Sheridan, New York: Second Vintage Books, (1975) 1991.

[13]Ivi, p. 82.

[14]It is important to note that in the Foucauldian framework power is not considered as a coercive instrument deployed in an instrumental fashion; there are not simply powerful groups who possess power on the one hand and powerless ones who are under dominance on the other. In a more complex and productive way, power, through knowledge, constitutes the very framework of thought; how things, norms and bodies are interpreted. In that sense, power is not a means that prohibits, but one that constructs, while, on the other hand, the subject does not pre-exist power, it is rather produced through its technologies. Michel Foucault, "Two Lectures", in *Power/Knowledge: selected interviews and other writings 1972-1977*, edit. by Colin Gordon, transl. by Colin Gordon, Leo Marshall, John Mepham and Kate Soper, New York: Pantheon Books, 1980, pp.78-108.

control. In this context, the various institutions, such as the hospital, the school, the factory, the barracks, have been designed according to prison standards.

At this point, it is worth mentioning Foucault's later and more elaborate analysis of power. In *The History of Sexuality* (1978)[15], the French philosopher distinguishes between two types of power: on the one hand, he refers to the juridical form which is mainly prohibitive. This version of power is based on law and is exercised as "the power of life and death" which literally means "the right to take life or let live"[16]. According to his view, this juridical form is no longer sufficient to analyse the complex ways in which power is exercised in late modern societies. At this point, Foucault presents the concept of "biopolitics", a new model of regulation based on the hegemony of various sciences (epidemiology, medicine, pedagogics, criminology, psychology, psychiatry, linguistic). This shift of power's emphasis to more productive mechanisms indicates a move towards a definition, organisation and classification of life in positive terms. In short, the disciplinary power "[…] is not a coercive restraint or 'negative', as is the case of the traditional, Weberian concept of sovereign power, but is instead 'positive' insofar as it is productive of identity, subjectivity, and practice"[17]. The important thing that Foucault brings to light is the emergence of a new form of power that invests in discourses, bodies and in everyday practices.

At the beginning of the 1990's, Deleuze further reworks the basic and distinct ways in which power is exercised in disciplinary societies: on the one hand, power attributes a "signature" that designates the individual (close to Louis Althusser's concept of "interpellation"[18]) and, on the other hand, power ascribes a "number or administrative numeration" that points out the individual's position within a mass. Deleuze observes that

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[15]Michel Foucault, *The History of Sexuality: Volume 1*, New York: Pantheon Books, 1978.
[16]Ivi, p. 136.
[17]Adam Isaiah Green, "Remembering Foucault: Queer Theory and Disciplinary Power", *Sexualities*, Vol. 13, No. 3 (June 2010), pp. 316-337, p. 320.
[18]Louis Althusser, "Ideology and Ideological State Apparatuses (Notes towards an Investigation)", in *Lenin and Philosophy and Other Essays*, trans. Ben Brewster, New York: Monthly Review Press, 2001, pp. 85-125.

power operates in a twofold manner: "[it] individualizes and masses together, that is, constitutes those over whom it exercises power into a body and molds the individuality of each member of that body"[19]. According to his view, however, this model of analysis does not correspond to the complicated reality of late capitalism anymore and this is mostly because the individuals no longer found themselves attached to specific institutions (the school, the barracks, the factory, etc.). On the contrary, as Deleuze argues, during the last decades "[…] one is never finished with anything -the corporation, the educational system, the armed service being metastable states coexisting in one and the same modulation, like a universal system of deformation"[20].

Deleuze talks about a new paradigm shift towards the societies of control where what matters is no longer a signature (that individualises) or a number (that masses) but rather a code or a password (*mot de pass*) that provides (or rejects) access to information. According to his view, "[w]e no longer find ourselves dealing with the mass/individual pair. Individuals have become *'dividuals'* [sic], and masses samples, data, markets or *'banks'*"[21]. To better explain the transition from disciplinary societies to societies of control, Deleuze uses the case study of money. As he notices, in disciplinary societies money used to refer back to the minted money that locked gold in a numerical standard whereas in societies of control money no longer relates to a physical object that can be measured. It is interesting to note that money nowadays seems for the most part to refer to floating rates of exchange, modulated according to a rate established by a set of standard currencies. Deleuze observes that in this context a higher order of production emerges; a stage of capitalism that does not merely buy the raw materials and does

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[19]Gilles Deleuze, "Postscript on the Societies of Control", *October*, Vol. 59 (Winter 1992), pp. 3-7, p. 5.
[20]Ibid.
[21]Ibid. (Emphasis in original).

not simply sell the finished product. It is a capitalism that buys the finished products or their assembled parts instead.

This transition from one organisational model to another can be also described through the change in the use of machines. More specifically, whereas the old sovereignty societies made use of clocks, pulleys and levers, the disciplinary societies invested mostly in machines that needed energy to work. As Deleuze notices, a machine of a third type seems to rule in the societies of control: the computer, that is to say a machine that can block information, carry viruses and spread piracy at any given moment[22].

In the same direction, in the emblematic "A Cyborg Manifesto" (1991), Haraway describes a paradigm shift from the disciplinary societies towards the informatics of domination[23]. In this framework (as well as in Deleuze's theorisation), the neoliberal market forces are not that much interested in the final stage of the products, they rather invest in the informational power of all living matter, including the informational power of humans[24]. Capital value refers then to informational units that can be transposed into data banks of bio-genetic neural and mediatic info about species, population and individuals[25]. These transformations serve a move towards a post-anthropocentric direction where, as Braidotti claims, "[…] all living creatures are inscribed in a market economy of planetary exchanges that commodifies them to a comparable degree and therefore makes them equally disposable"[26]. The human enters like this in a system of commodification that breaks everything down to units

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[22]Braidotti clarifies that "[…] the machinic for Deleuze is yet another figuration that expresses the non-unitary, radically materialist and dynamic structure of subjectivity" (Rosi Braidotti, "Affirming the Affirmative: On Nomadic Affectivity", *Rhizomes*, Vol. 11-12 [Fall 2005/Spring 2006], 5).
[23]Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century", in *Simians, Cyborgs, and Women. The Reinvention of Nature*, New York: Routledge, 1991, pp. 149-181, pp. 161-165.
[24]Rosi Braidotti, *The Posthuman*, Cambridge: Polity Press, 2003, p. 61.
[25]Braidotti, "Posthuman Critical Theory", p. 21.
[26]Ibid.

and digits. According to Haraway, this is the moment that the category of "Man" passes from being a taxonomic type to becoming a brand[27].

All in all, this part attempted to describe the shift from disciplinary societies to the current governance of molecular zoe and to the dominant role of informational data. It is important to note, however, that this motion does not indicate a complete substitution in power models. The informatics of domination does not eliminate classical power arrangements, it rather supplements them[28]. In this regard, the old question of "difference" which refers to the construction and hierarchical classification of the Other (the woman, the animal, the machine, etc.) remains a central one[29].

I.2.2 Immaterial, Affective and Free Labour

In the post-Fordist model, capitalism is understood to have acquired a more liquid form that is significantly characterised by the shift of production towards "immaterial" assets (such as symbols, language and information). Coming from the autonomist Marxist tradition, Maurizio Lazzarato (1996) introduces the concept of "immaterial labour" to describe the new informational (i) and cultural (ii) content of the modern commodity which, according to his view, has become the dominant paradigm since the 1970's [30]. More analytically, the "informational content" of the commodity refers to the growing demand for skills in cybernetics and computer control, mostly in big companies in the industrial and tertiary sectors. The "cultural content" of the commodity, on the other hand, includes a series of activities that have not been "traditionally" recognised as labour. More specifically, Lazzarato refers here to

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[27] Donna Haraway, *Modest_Witness@Second_Millennium. FemaleMan©_Meets_OncoMouse™*, London: Routledge, 1997, p. 74.
[28] Julie Livingston and Jaspir K. Puar, "Interspecies", in *Social Text 106*, Vol. 29, No. 1 (Spring 2011), pp. 3-13.
[29] Rosi Braidotti, "Four Theses on Posthuman Feminism", in *Anthropocene Feminism*, edit. by Richard Grusin, Minnesota: University of Minnesota Press, 2017, p. 38.
[30] Maurizio Lazzarato, "Immaterial Labor", in *Radical Thought in Italy: A Potential Politics*, edit. by Paolo Virno and Michael Hardt, Minneapolis: University of Minnesota Press, 1996, pp. 142-157.

various activities that are involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, the public opinion. This is more apparent in the advertising sector which by definition seeks to provoke emotions and to grab the audience's attention. In short, according to Lazzarato, workers nowadays are expected to have more cognitive skills, they are expected to know more even in sectors that are not linearly related to their work while, at the same time, plenty of activities that were not previously recognised as labour (such as marketing activities) become now highly profitable sectors.

Following the same trajectory, Antonio Negri and Michael Hardt argue that labour under late capitalism "[…] creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response"[31]. Hardt (1999) in particular was quick to talk about the "affective labour", a sub-category of immaterial labour that points to the manipulation of the feeling of ease, well-being, satisfaction, excitement or passion and of the sense of connectedness or of community[32]. It is important to highlight at this point that, as Mark Coté and Jennifer Pybus observe, the affective labour has been historically left unpaid and has been commonly regarded as "women's work"[33]. Nowadays, the affective labour mostly refers to those who produce services or care through the body.

Picking up the thread from Haraway's theorisation of the relation between cybernetics, labour and capital and, at the same time, digging deeper into the late 20th century rising digital economy, Tiziana Terranova brings the attention to the apparent "voluntary" element of contemporary labour[34]. In particular, she argues that, especially since 1994 when the world

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[31]Antonio Negri and Michael Hardt, *Multitude: War and Democracy in the Age of Empire*, New York: Penguin Books, 2004, p. 108.
[32]Michael Hardt, "Affective labor", *Boundary*, Vol. 26, No. 2 (Summer 1999), pp. 89-100, p. 96.
[33]Mark Coté and Jennifer Pybus, "Learning to Immaterial Labour 2.0: Facebook and Social Networks", in *Cognitive Capitalism, Education and Digital Labor*, edit. by Michael A. Peters and Ergin Bulut, New York: Peter Lang, 2011, pp. 169-194.
[34]Tiziana Terranova, "Free Labor: Producing Culture for the Digital Economy", *Social Text*, 63, Vol. 18, No. 2 (Summer 2000), pp. 33-58.

wide web was born, the internet has been accumulating both a gift economy and an advanced capitalist economy. While these economies seem to operate simultaneously, the latter has been getting significantly more from this "collaboration" [35]. More analytically, according to Terranova, the expansion of the internet has given "[…] ideological and material support to contemporary trends towards increased flexibility of the workforce, continuous reskilling, freelance work and the diffusion of practices such as 'supplementing' (bringing supplementary work home from the conventional office)"[36]. In this framework, Terranova describes a new form of labour that is, at the same time, voluntary and unpaid. She coins the term "free labour" to describe how this new form of labour produces economic value without bringing in any kind of remuneration, thus becoming a structural element of the late capitalist cultural economy[37]. According to her view, the Internet has facilitated the extraction of value out of continuous, undatable work which is not always recognised as proper labour. It must be noted that the management of free labour does not merely concern the "workers", it is rather diffused throughout the social body and affects the users of new media in various ways[38].

It is important to note that Terranova's conceptualisation of digital economy does not seek to raise technophobic reactions or to provoke nostalgic views of traditional power arrangements. The Italian theorist rather wishes to bring to light the complicated ways in which profit is produced in the framework of information technology. As she states in particular,

> [t]he question is not so much whether to love or hate technology, but an attempt to understand whether the internet embodies a continuation of capital or a break with it. It does neither. It is rather a mutation that is totally immanent to late capitalism, not so much as a break as an intensification, and therefore a mutation, of a wide-spread cultural and economic logic[39].

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[35] Ivi, p. 34.
[36] Ibid.
[37] Ivi, p. 53.
[38] Free labour is mainly developed in the fields of cultural production (cultural industry, university, media) where knowledge and information play a dominant role.
[39] Terranova, "Free Labor", p. 55.

I.2.3 Same Product, Different Packaging: New Pathways Shaped by Old Inequalities

This new stage of capitalism to which various scholars have attributed different names (cognitive capitalism[40], emotional capitalism[41], creationist capitalism[42], etc.) is often presented as a post-gender and post-racial system capable of blurring sexualised, racialised, naturalised differences and differences of differently abled bodies. More specifically, it is argued that capitalism nowadays, in its liquid and immaterial form, accommodates "[…] a high degree of androgyny and a significant blurring of the categorical divide between the sexes" and that, on the other hand, no longer needs to classify people and their cultures on grounds of pigmentation[43]. Similar arguments are raised regarding class, ethnicity and bodily abilities. In that framework, equality has always already been achieved while feminism is conveniently both taken for granted and no longer needed[44]. In other words, whereas in the recent past differences in identity acted as boundary markets, in the context of late capitalism the aforementioned categories have become "[…] unhinged and act as forces leading to the elaboration of alternative modes of transversal subjectivity which extend not only beyond gender and race but also beyond the human"[45]. It seems that the machine of the third type that Deleuze predicted to take over the societies of control is potentially capable of erasing all differences by eliminating the body and its materiality, by being, in other words, ethereal.

Late capitalism's tendency towards the so-called immaterial assets, however, is a way of bypassing the reality of gender, racial and class differentiation without addressing the source

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[40]For more on cognitive capitalism see: Yann Moulier Boutag, *Cognitive Capitalism*, transl. by Ed Emery, Cambridge: Polity Press, 2004.

[41]Eva Illouz, *Cold Intimacies: The Making of Emotional Capitalism*, Cambridge: Polity Press, 2007.

[42]Tom Boellstorff, *Coming of Age in Second Life: an Anthropologist explores the Virtually Human*, Princeton and Oxford: Princeton University Press, 2008. Check, for instance: pp. 205-236.

[43]Braidotti, *The Posthuman*, p. 98.

[44]Since the decade of the 1990's, critical media studies have pointed out how postfeminist readings have provided a discourse which invokes feminism only to render it immediately obsolete. The inspiring works of Angela McRobbie and Rosalind Gill on this topic are analysed in-depth in Chapter II.

[45]Braidotti, *The Posthuman*, p. 98.

of the inequal distribution of power and without dealing with the social and cultural reasons of discrimination. Instead of a post-gender and a post-racial system, what seems to prevail in the context of late capitalism is a reasoning that tears down historical oppressing categories with the tools of commodification and which, on the other hand, produces differences for the sake of consumption. Capitalism works like this as a spinning machine of differences that are merely multiples of the same or multiples of nothing. As Braidotti artfully points out

> […] advanced capitalism looks like a system that promotes feminism without women, racism without races, natural laws without nature, reproduction without sex, sexuality without genders, multiculturalism without ending racism, economic growth without development, and cash flow without money. Late capitalism also produces fat-free ice creams and alcohol-free beer next to genetically modified health food, companion species alongside computer viruses, new animal and human immunity breakdowns and deficiencies, and the increased longevity of these who inhabit the advanced world. Welcome to capitalism as schizophrenia![46]

In this context, it is urgent to look for theoretical approaches that can provide a political analysis of the conditions under which the human is being transformed and inserted into a system of commodification. Bringing back the body as a critical element and exploring how differences have not been magically abolished (they have only been conveniently ignored) are now an important challenge for research. The posthuman turn in academia has accepted this challenge by providing a great variety of responses to these complicated issues. The next section provides a cartography of the different schools of posthumanism outlining their main arguments.

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[46]Braidotti, "Affirming the Affirmative", 4.

I.3 A Cartography of the Posthuman Turn

One of the first encounters of the word "posthumanism" can be found in Ihab Hassan's article "Prometheus as Performer" (1977). Back in the late 1970's, Hassan called for an inclusive redefinition of the notion of the human and saw in posthumanism the continuation of post-modernism. As he stated in particular, "[…] five hundred years of humanism may be coming to an end as humanism transforms itself into something that we must helplessly call post-humanism"[47]. Fifty years have now passed from Hassan's posthuman vision and the concept of the posthuman has not yet (or ever) acquired a single universal meaning. It can even be argued that this openness in meaning is precisely what defines it the most. The term has gained indeed many different connotations which easily cause confusion and misunderstanding. For this reason, the present section attempts to provide an insight into the posthuman scholarship, treating the notion of the posthuman as an umbrella term of wide ramifications that must always be contextualised in advance.

This journey starts negatively and ends on a positive note, in the sense that it is easier to define first what the posthuman is not. It is not Nietzsche's *Übermensch* (overman, overhuman)[48], that is to say someone who establishes his or her own values and sees nothing in the past and the future that is more important than achieving pleasure and happiness for humanity in the present[49]. Neither is the posthuman a Superman with supernatural powers. The posthuman is not "faster than a speeding bullet, more powerful than a locomotive, able to leap

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[47]Ihab Hassan, "Prometheus as Performer: Towards a Posthumanist Culture?", *Georgia Review*, Vol. 31, No. 4 (Winter 1977), pp. 830-850, p. 843.

[48]Friedrich Nietzsche, *Thus Spoke Zarathustra. A Book for All and None*, edit. by Adrian Del Caro and Robert B. Pippin, transl. by Adrian Del Caro, Cambridge: Cambridge University Press, (1883) 2006. It must be noted that for Nietzsche, the overman acknowledges his or her own limitations in life and is willing to risk everything for the sake of humanity.

[49]In the framework of transhumanism, there has been a vivid discussion about whether Nietzsche's overman could be considered as an ancestor of the posthuman. See, for instance: Yunnus Tuncel (edit.), *Nietzsche and Transhumanism. Precursor or Enemy?*, Cambridge: Cambridge Scholars Publishing, 2017.

tall buildings at a single bound!", as the classic saying has it for the action hero of the DC universe.

In affirmative terms, on the other hand, the concept of the posthuman indicates the contemporary urge to go beyond or after the problematic notion of the human. In order to approach it with caution, the term has to be broken down into two (or three[50]) components: firstly, the prefix "post" that in Latin means both behind (space-wise) and after (timewise) prepares the ground for a critical reading of the notion that follows[51]. At the same time, however, the prefix admits its limitation by unavoidably repeating the very term that seeks to leave behind, in this case the notion of the human[52]. As Ferrando states, the post- in posthumanism "[…] implies a continuity, a discontinuity and a transcendence (in its literal meaning of exceeding) of the term to which it is a post, and so it necessarily reconciles its own identity to it in a symbolic relation"[53].

The "human", on the other hand, (humanus/a/um in Latin) comes from the word "humus" which means earth (in the sense of soil and ground). Some key instances in the western history of the conceptualisation of the notion of the human are considered necessary for the analysis that follows. Going back to antiquity, the Romans define the human based on the Greek understanding of Anthropos. In *Politics: Book 1*, Aristotle famously describes the

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[50]Mostly at the beginning of the posthuman literature, the two words (the post and the human) were divided (or brought together) with the use of a hyphen (-) which indicated a separation as well as a dialogue between them. The hyphen has been omitted for quite some time now.

[51]Posthumanism belongs to the tradition of the many "post-s" that followed Jean-François Lyotard's discussion of the postmodern and postmodernism. In Lyotard's approach, the "post" signals a strong scepticism in universalising theories and echoes the failure of big narratives. For more, see: Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, transl. by Geoff Bennington and Brian Massumi, Minneapolis, Minnesota: Minnesota University Press, 1984.

[52]In his article "The Posthumanism to Come", Christopher Peterson wonders critically what it means for posthumanism and for animal studies to leave humanism behind and how this new approach could erase the traces of the epistemic violence that the tradition of Humanism has already well exercised. As he argues in particular, "[…] the assertion that Humanism can be decisively left behind ironically subscribes to a basic humanist assumption with regard to volition and agency, as if the 'end' of humanism might be subjected to human control, as if we bear the capacity to erase the traces of humanism from either the present or an imagined future" (Christopher Peterson, *Angelaki: Journal of the Theoretical Humanities*, Vol. 16, Issue 2 [August 2011], pp. 127-141, p. 128).

[53]Ferrando, *Philosophical Posthumanism*, p. 66.

Anthropos as a political animal [ζῷον πολιτικόν] that is attached to the polis (meaning civilisation) in an inseparable way: if a man is by nature and not merely by fortune citiless, then "he" is either low in the scale of humanity (animal) or above it (god)[54]. As it becomes quite obvious, the concept of the human was built on the exclusion of the (human and non-human) others from the very beginning of its journey. From late antiquity to the Middle Ages, during which period most of Europe undergoes Christianisation, the focus of analysis moves away from the human and shifts towards religion. From the 14th century, however, at first in Italy and later across Western Europe, a new movement of thought, art and education appears which brings the revival in the study of the classical world with the purpose to purify and renew Christianity. Apart from an internalised type of religiosity, the important thing to notice is that during the Renaissance Humanism, the human consciousness is put at the centre of cosmos (Vitruvian Man). Today's understanding of the human, however, comes from the late 17th century when the European Enlightenment develops a secular stance centred on human agency that prioritises science rather than supernatural forces for an understanding of the world. In that context, what mostly characterises the human is the values of autonomy, reason and progress. As it is elaborated further on in this chapter, the latter interpretation remains still the dominant understanding of the human, even though it has undergone major criticism.

The posthuman turn calls for a re-consideration of the notion of the human without, however, providing a single univocal definition. Through an epistemic acceleration, the concept of the posthuman enters fast academic circulation and becomes a discursive commodity itself, a widespread term of very different connotations, from dystopic to enthusiastic ones. In the next section, a cartography of the main schools of thought that deal with the posthuman is provided. This cartography must be considered as a mere approach and

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[54]Aristotle, "Politics", in *Aristotle in 23 Volumes, Vol. 21*, trans. by Harris Rackham, Harvard University Press: Cambridge, 1944, 1253a.1.

not as an exhaustive exploration of posthuman literature and becomings. In fact, it provides a selective glance on the basic theoretical lines by merely illuminating the aspects that are particularly important for this dissertation. In that sense, the analysis that follows is far away from the way Jorge Luis Borges imagines the science of cartography in his short story "On Exactitude in Science": in this tale, the science of cartography becomes so accurate and precise that, in the end, an empire and its map overlap and coincide point to point[55]. The aim of the cartographic method as applied here, however, is "[…] to provide politically grounded and theoretically infused account of the webs of power relations we are all entangled in"[56]. In that sense, what follows is not the presentation of some closed systems of thought, but rather the sketching of some fluid and vivid theories that are constantly evolving.

As it becomes evident, the development of the notion of the posthuman did not come from a single central point of origin. Like a fungus (Figure 2), the posthuman started from nowhere and grew from everywhere. In this regard, the notion cannot be mapped, if captured only from the outside. Therefore, a rhizomatic approach that does not look for central points, specific forms or structures is much needed.

[55]Jorge Luis Borges, "A Universal History of Infamy", in *Collected Fictions*, transl. and notes by Andrew Hurley, New York: Viking Penguin, 1998, p. 325.
[56]Braidotti, "Posthuman Critical Theory", p. 15.
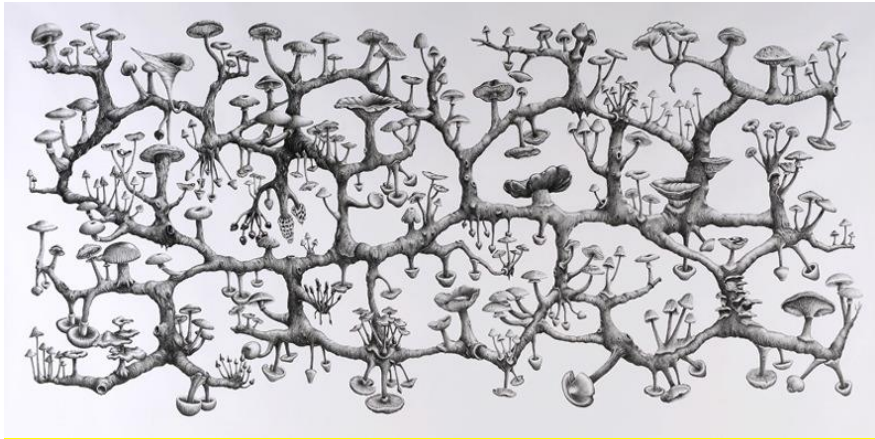
Figure 2: Richard Giblett, Mycelium Rhizome,
Collection of the artist, Represented by Galerie Dusseldorf, 2009

I.3.1 The Liberal/Dystopic School of Posthumanist Thought

As it is explained in the introduction of this chapter, the posthuman turn deals with the emerging question of how technology has altered the concept of the human. In a broad sense, the liberal/dystopic school of thought is characterised by an objection to the use of technology which seeks to modify or enhance the human beyond accepted natural and cultural limits. More specifically, the dystopic school is grounded in a dualistic perception that sees the human as essentially different from the world he lives in, whether natural or technical. The choice of the male pronoun here does not refer to a generic individual[57]. On the contrary, this dystopic interpretation is precisely based on the model of the human that was built by the Enlightenment narrative; the well-known "Man of reason", an assumed neutral category, constructed in fact on the exclusion of the marginalised others (sexualised, racialised and naturalised others). For the liberal/dystopic paradigm, this mythical figure is under attack.

Francis Fukuyama is one of the main theorists of this school. In his work, *Our Posthuman*

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[57]As Braidotti claims when using the male pronouns to refer to "universal" values, "the gender is no coincidence" (*The Posthuman*, p. 23).

Future: Consequences on the Biotechnology Revolution (2002)[58], he explicitly analyses how biomedical advantages could alter the very essence of human nature[59]. According to his interpretation, there is a certain negative version of humanity which is held together by a panhuman bond of vulnerability, in the core of which a very particular contradiction is established; this precise moment that "we" as humanity produce the most, where there is an incredible acceleration of knowledge and hence of possibilities, it is also the very moment that "we" are facing the greatest danger because of "our" arrogance, more particularly because of what has happened to "us" and to the environment "we" inhabit by the extreme use of technology[60]. The pronouns are put here into quotation marks to indicate that, according to the present study, we have not all been humans in the same way, some of us have rather been more humans than others. Nevertheless, according to the liberal/dystopian school of thought, a sort of hubris takes place when humanity mimics Icarus who goes beyond the limit that his father, Daedalus, had set for him. In the end, his wings were burned by the sun and his body was cast into the sea. Icarus disappeared without a trace, just as various species at this very moment are becoming extinct. The human species will not be an exception to the rule, if humans are not to stay in the line that their Father has drawn for them[61].

Many years have now passed from Fukuyama's theorisation and the much-anticipated end of history has not yet arrived. There are still, however, many scholars who share an anxiety

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[58]Francis Fukuyama, *Our Posthuman Future: Consequences on the Biotechnology Revolution*, New York: Farrar, Straus and Giroux, 2002.

[59]Fukuyama's main target was not posthumanism as a theoretical movement but a particular take on the posthuman, the one developed in the transhumanist strands of thought which will be analysed immediately afterwards. Although his interpretation of posthumanism is a little confusing, Fukuyama contributed significantly to the posthuman literature by highlighting the fact that when a discussion about technology is taking place, it is not all about individual choices, it is rather a much broader thing.

[60]In 2000, the atmospheric chemist and Nobel laureate Paul Crutzen coined the term "Anthropocene" to refer to Earth's geologic period that has been highly human influenced. For a more elaborate view on this subject, see: Tom Cohen, Claire Colebrook and J. Hillis Miller, *Twilight of the Anthropocene Idols*, London: Open Humanities Press, 2016.

[61]The phrasing here refers to the psychoanalytic interpretation of the Law of the Father, mostly associated with the work of Jacques Lacan, and indicates the ways in which the paternal figure regulates the desire of the child in the Oedipus complex. For more, see: Jacques Lacan, *Écrits, a selection (Jacques Lacan)*, edit. by Alan Sheridan, London: Tavistock, 1977.

about the future of the human species, human rights and human legacy[62]. This school of thought shares a dystopic view of the future, often putting the blame on technological developments and/or on their application.

I.3.2 Transhumanism(s)

Transhumanism is a school of thought based on a dynamic model which reads the human as co-evolving with his/her environment. In this context, the boundaries between the human and the technological apparatus seem more fluid. The human is considered able to integrate new technologies into his/her existence in order to surpass the limits of his/her body and free him/herself from his current mortal position. The plural in the subsection's title indicates, of course, that transhumanism is not a closed system of homogeneous characteristics. There are, in fact, many different takes on the posthuman in the transhumanist strands; firstly, there is Democratic Transhumanism which calls for an equal access to technological developments that would otherwise be limited to certain socio-political classes that are related to economic power. This branch of transhumanism seems to take under consideration racial and sexual politics as well as class differences[63]. On the other hand, Libertarian Transhumanism sees the free market

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[62]Regarding the social theories that share a common anxiety about the future of human species and legacy, Braidotti (*The Posthuman*, p. 64) groups together the following works: Jürgen Habermas, *The Future of Human Nature*, Cambridge: Polity Press, 2003; Peter Sloterdijk, "Rules for the Human Zoo: a response to the 'Letter on Humanism", *Environment and Planning D: Society and Space*, Vol. 27, Issue 1 (January 2009), pp. 12-28; G. Borradori, *Philosophy in a Time of Terror*, Chicago: University of Chicago Press, 2003.
[63]See, for instance: James Hughes, *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*, Cambridge: Westview Press, 2004.

as a guarantor of a potential human enhancement through technological advantages[64]. The list goes on with extropianism[65], the singularity theory[66] and many other similar interpretations.

Regardless of their differences, transhumanists seem to share a strong belief in the expansion of cognitive and physical capacities of the human through technological advantages and scientific progress (biogenetics, neuroscience, robotics, etc.) [67]. A key aspect of transhumanist thought involves the notion of human enhancement, defined in short as "[…] an intervention designed to modify a person's traits, adding qualities or capabilities that would not otherwise have been expected to characterize that person"[68]. An exhaustive presentation of the transhumanist scholarship goes beyond the scope of this study. For the needs of this analysis, however, a few comments on the role that materiality and the body play in this framework are considered necessary.

According to the group of theorists and scientists who support the idea of human enhancement through technological mediation, such as Ray Kurzweil, Nick Bostrom and Hans Moravec, the body can be transcended, while the mind (even a mind that becomes faster, longer lasting, more capable) remains the core, heart or place where subjectivity is held. For instance, in his book *Mind Children: The Future of Robot and Human Intelligence* (1988) Moravec

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[64]See, for instance: Ronald Bailey, *Liberation Biology: The Scientific and Moral Case for the Biotech Revolution*, New York: Prometheus, 2005.

[65] Extropianism is a transhumanist philosophy related to self-transformation. According to Max More's theorisation, the basic extropian principles are perpetual progress, self-transformation, practical optimism, intelligent technology, open society, self-direction and rational thinking. For more, see: Max More, *Extropian Principles: A Transhumanist Declaration,* Version 3.0, 1998, retrieved from https://mrob.com/pub/religion/extro_prin.html#princip_26 (last accessed December 11th, 2020).

[66]Singularity usually refers to the moment in the future that human and machine intelligence will merge. Ray Kurzweil is considered the father of the singularity theory. In *The Singularity Is Near: When Humans Transcend Biology* he predicts that one day the human body will become a mere morphable projection of intelligence (New York: Penguin, 2005).

[67]Indicative is the fact that one of the main online platforms to discuss transhumanist ideas is "H+" (Humanity Plus): "What does it mean to be human in a technologically enhanced world? Humanity+ is a 501(c)3 international non-profit membership organization that advocates the ethical use of technology, such as artificial intelligence, to expand human capacities. In other words, we want people to be better than well. This is the goal of transhumanism". From the platform's "what-we-do" section: https://humanityplus.org/ (last accessed December 1st, 2020).

[68]Michael Bess, "Enhanced Humans versus 'Normal People': Elusive Definitions", *Journal of Medicine and Philosophy*, Vol. 35, Issue 6 (December 2010), pp. 641-655, p. 643.

argues that it is theoretically possible for the mind to be downloaded and transported into another medium without losing its consciousness:

> Eventually your skull is empty, and the surgeon's hand rests deep in your brainstem. Though you have not lost consciousness, or even your train of thought, your mind has been removed from the brain and transferred to a machine. In a final, disorienting step the surgeon lifts out his hand. Your suddenly abandoned body goes into spasms and dies. For a moment you experience only quiet and dark. Then, once again, you can open your eyes[69].

At a first glance, this school of thought seems to be a polar opposite of the dystopic one since it does not see the human in a competitive relation with his or her environment. On a closer look, however, the transhumanist line shares the same theorisation of the human with the dystopic one since both recognise the existence of an *a priori* self, a unified and universal human element. In other words, they are both based on the notion of a shared humanity. In addition, in the context of transhumanism(s), the human is understood as a body possessing mind. In an oversimplified sense, in the post-biological future, the marks of the body are erased, the differences ignored, the "posthuman" for the transhumanist scholarship wants to be considered (as the "human" already tried but failed) an all-inclusive category.

Transhumanism is considered a movement philosophically rooted in Enlightenment. It can be even argued that it intensifies Enlightenment's premises such as reason and progress. In this framework, technology seems to help the humans overcome their limitations which were caused mostly (but not merely) by nature. According to that reasoning, once the various bodily differences stop playing a pivotal role, the humans will no longer be tied to their mortal destinies. In other words, transhumanism visualises "[…] a particular group of humans with capacities which cannot yet be imagined by us, but which can involve an enhancement in all

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[69]Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence*, Cambridge: Harvard University Press, 1988, p. 108.

human aspects including a physiological, emotional, or intellectual enhancement"[70]. The journey has not been completed yet. In this school of thought, the figure of the posthuman is placed in the future, it is perceived as a final goal, something that will be achieved through technological developments. For the time being, "we" are still transhumans (humans in transition).
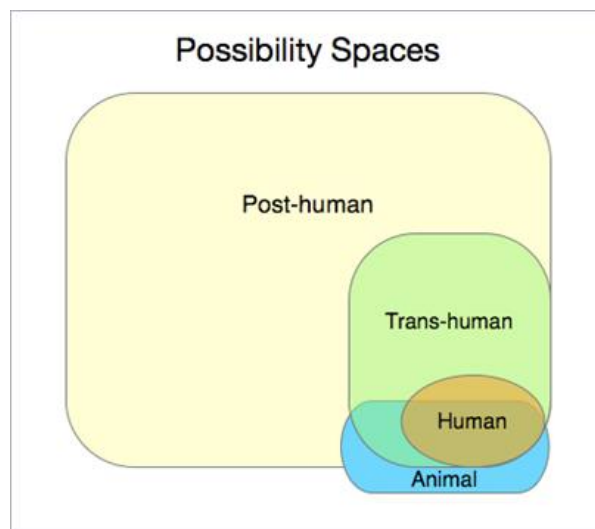
Figure 3: Transhumanism: "The Space of Possible Modes of Being".
Graph taken from: N. Bostrom, "Transhumanist Values", 2005, p. 5.

I.3.3 Posthumanism(s)

N. Katherine Hayles begins her influential book *How We Became Posthuman* (1999) by addressing Moravec's view that the body could be separated from the mind and that the mind in another materiality could remain the same[71]. More specifically, she criticises the tendency for consciousness to be considered to have no connection with embodiment in transhumanist

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[70]Stefan Lorenz Sorgner, "Nietzsche, the Overhuman, and Transhumanism", in *Nietzsche and Transhumanism*, pp. 14-26, p. 21.
[71]N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, Chicago: The University of Chicago Press, 1999.

strands of thought. She goes further on to associate this Cartesian reading of the mind-body dichotomy with the current conceptualisation of information as a transparent, ethereal element which circulates unchanged through different material substrates. As she notices with a sort of irony and preoccupation "[…] when information loses its body, equating humans and computers is especially easy, for the materiality in which the thinking mind is instantiated appears incidental to its essential nature"[72]. Hayles' criticism of transhumanism is indicative of the way materiality and the body are reclaimed in the school of posthumanism. In the previous frameworks, the flesh was conveniently erased so that the liberal subject could claim a universality. In the context of posthumanism, on the other hand, materiality is brought back in the discussion, not in essentialist terms, but from an embedded and embodied perspective.

Posthumanism is not a homogeneous theoretical framework. In fact, Ferrando distinguishes three branches of posthumanism that have flourished in the academic institutions from the mid-1990's. Firstly, she refers to Critical Posthumanism which appears within the field of literary criticism in the late 1990's. Hayles's criticism belongs to this particular branch. In fact, it is her conceptualisation of disembodied narratives within cybernetic and informatic literature that "[…] paved the way for a posthumanist approach rooted within feminist and postmodern practices"[73]. Cultural Posthumanism, on the other hand, as Ferrando argues, comes from literary theory and cultural studies in the 1990's mostly in the vein of Haraway's critique[74]. Finally, Ferrando refers to Philosophical Posthumanism defining it as an onto-epistemological approach and as an ethical practice that moves the human away from the centre

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[72]Ivi, p. 2.
[73]Ferrando, *Philosophical Posthumanism*, p. 26.
[74] This is, for instance, the case of animal studies. For more, see: Cary Wolfe, *What is Posthumanism?*, Minneapolis: University of Minnesota Press, 2010.

of the discourse[75]. This last branch of posthumanism exceeds the Western academic case and can be traced and enacted in different cultures[76].

Regardless of their differences, the theorists of the school of posthumanism (Haraway, Braidotti, Wolfe, to name just a few) share a common interest in providing analytical tools for the examination of the emerging subjectivities in the context of advanced cognitive capitalism. In this framework, the notion of the posthuman is not perceived as a figure situated somewhere in the future under the appearance of new or speculative technologies, the posthuman rather indicates a political stance with precise critical, cultural and philosophical implications. According to that reasoning, even if one day all humans manage to be wired, nothing could guarantee that the same inequalities would not be reproduced at another level. Posthumanism, on the other hand, seeks to articulate an affirmative response to the schizophrenic acceleration of knowledge that stays away from technophobic and technophilic assumptions.

In summary, the notion of the posthuman does not have a single univocal meaning (Figure 4). In particular, whereas the liberal/dystopian school is preoccupied with the future of the human species and human legacy, posthumanism does not answer in a moral and cognitive panic in front of the danger of an altered human nature. On the other hand, transhumanism(s) and posthumanism(s) differ in terms of origins, values and political goals. More specifically, within the transhumanist literature, the notion of the posthuman refers to the next step of (human) evolution. According to the scholarship of posthumanism, on the other hand, the posthuman points towards "[…] the symbolic move of going beyond the human, embracing a post-anthropocentric approach which acknowledges technology and the environment, among others, as defining aspects of the human"[77]. In that sense, posthumanism does not fall into the

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[75] Ferrando considers Braidotti to be taking part in Philosophical Posthumanism because of her non-anthropocentric point of view (Ferrando, *Philosophical Posthumanism*, p. 55). For the purposes of this study, however, Braidotti and Haraway are grouped together under the category of "posthuman critical theory".
[76] Ivi, p. 22.
[77] Ivi p. 27.

technophilic trap, according to which technology/biotechnology will help the human reach his maximum capacities (the gender is no coincidence).

Figure 4: The Posthuman Turn

Schools of thought:	Dystopian/ Liberal school	Transhumanism(s)	Posthumanism(s)
Branches:		-democratic transhumanism -libertarian transhumanism -extropianism -the singularity theory	-critical posthumanism -cultural posthumanism -philosophical posthumanism
Origins:	Enlightenment, Humanism	Enlightenment, Humanism	Critiques of the notion of Man/Human/Anthropos
Keywords:	Cognitive moral panic	Reason, Progress, Human enhancement	Cyborg, embedded embodiment, emerging subjectivities

I.4 Critical Posthumanism: A Rigorous Call for Rethinking Human Embodiment

I.4.1 Posthuman Critical Theory

This dissertation originates from critical posthumanism, defined in short as a social discourse (in the Foucauldian sense) which "[…] negotiates the pressing question of what it means to be human under the conditions of globalisation, technoscience, late capitalism and climate

change"[78]. In this case, the prefix post- has a double meaning, signalling, on the one hand, the desire and the need to go beyond the humanism/antihumanism dualism and displaying, on the other hand, "[…] an awareness that neither humanism nor the human can in fact be overcome in any straightforward dialectical or historical fashion"[79]. Lastly, the adjective "critical" refers to the non-dialectical relationship between the human and the posthuman while, at the same time, echoes a strong bond with literary criticism and critical theory.

More specifically, the present study adopts Posthuman Critical Theory (as Braidotti calls this specific branch of posthumanism) as a theoretical framework that derives from the convergence of two discrete and separate, yet applicable together and often interchangeably used, events. On the one hand, posthuman critical theory parts from antihumanism, that is to say from the social movements and the youth cultures throughout the 1960's and the 1970's that criticised the category of Man as a measure of all things (feminism, de-colonisation and anti-racism, anti-nuclear and pacifist movements). In this context, the category of Man is exposed to be based on the exclusion of those who were not considered humans or at least not humans according to the standards set by a cultural model of the human as male, white and heterosexual. It is important to note that this model of western thought does not merely set the standards for individuals but for their culture as well. As Braidotti argues in particular, "Humanism historically developed into a civilizational model, which shaped a certain idea of Europe as coinciding with the universalizing powers of self-reflexive reason"[80].

Posthuman critical theory, however, is not one thing alone, it is rather a convergence of events. Equally important to antihumanism is post-anthropocentrism shortly defined as the critique of the species hierarchy, this time Anthropos as a measure of all living matter[81]. More

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[78]Stefan Herbrechter, "Critical Posthumanism", in *Posthuman Glossary*, edit. by R. Braidotti and M. Hlavajova, London: Bloomsbury Publishing Plc, 2018, pp. 94-96, p. 94.
[79]Ibid.
[80]Braidotti, *The Posthuman*, p. 13.
[81]Braidotti, *Posthuman Knowledge*, p. 9.

specifically, western philosophy has for a long time positioned the human as the dominant species that has the privilege to control, domesticate, oppress, exploit, guard and pet the non-human species[82]. Posthuman critical theory seeks to move away from this longstanding prioritisation of the thinking human and calls for the creation of posthuman inter-relations where the human/animal element is a constitutive quality of the identity of each[83]. In that sense, extending to animals the principle of moral and legal equality is not good enough since it confirms a binary distinction very familiar to some branches of feminist thinking. Anthropomorphising animals by attributing rights to them is as a generous gesture as giving women access to what men already have. In both cases, the canon is not challenged, some rights are merely extended wherever this is considered to be appropriate. In this regard, Irigaray's question is as timely as ever: equal to whom?[84]

Posthuman critical theory talks about a transformative or symbiotic relation that hybridises and alters the nature of these binaries (Anthropos and the animal, Man and the woman). If anti-humanism talked about difference and othering within the human, posthuman critical theory calls also for new alliances with the machine, the plant and the animal[85]. In that sense, it signals a qualitative leap in new and more complex intellectual directions looking more affirmatively towards new alternatives; species-crossing, hybridity, mutual dependency and co-evolution in science writing, in rights campaign and in popular culture[86].

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[82]Nayar, *Posthumanism*, p. 131.

[83]In "The Animal That Therefore I Am", Jacques Derrida deconstructs western philosophy's distinction between the thinking and the non-human animal. This long essay constitutes a foundational text in the recently recognised field of animal studies which appears within the fields of literary criticism and critical theory. Jacques Derrida, "The Animal That Therefore I Am (More to Follow)", *Critical Inquiry*, Vol. 28, No. 2 (Winter, 2002), pp. 369-418).

[84]Luce Irigaray, "Equal to whom?", in *The Essential Difference*, edit. by Naomi Schor and Elizabeth Weed, Bloomington: Indiana University Press, 1994, pp.63-81.

[85]Nayar, *Posthumanism*, p. 47.

[86]Ivi, p. 131.

I.4.2 From Cyberfeminism to Posthumanism: Sex and Gender Configurations

In 1970, Shulamith Firestone writes *The Dialectic of Sex*[87], a utopian manifesto that focuses on the possible role of reproductive technologies in eliminating the connection of the feminine identity to childbirth. Firestone's book turned out to be a foundational text for cyberfeminism, the feminist approaches that began to engage in depth with the relationship between cyberspace, the Internet, technology and gender in the 1990's. Fifty years have now passed from the publication of *The Dialectic of Sex* and the attempts to approach gender and sexuality in the current highly digitalised and technologically mediated world vary significantly even within the contemporary feminist literature.

One of the most comprehensive readings on this subject is Haraway's ironic political myth, articulated in the "Cyborg Manifesto" ([1985], 1991), yet another key-text for cyberfeminism. In this text, Haraway provides a theoretical framework for exploring the feminist possibilities of technologies by using the myth of the cyborg. By blurring the classical dualisms (human/animal, organic/machine, physical/non-physical), the rising high-tech culture could offer not only the displacement of Man from the category that mostly defines him, hence the category of Human, but most significantly it could challenge the very logic of identity through which the categories are generally articulated. In that sense, the myth of the cyborg represents a transgressive potential for gender roles; "[…] the cyborg is a creature in a post-gender world; it has no truck with bisexuality, pre-oedipal symbiosis, unalienated labour, or other seductions to organic wholeness through a final appropriation of all the powers of the parts into a higher unity"[88].

It must be highlighted, however, that Haraway did not intend to depict technology as an instrument of emancipatory power. In fact, there have been various simplistic readings of

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[87]Shulamith Firestone, *The Dialectic of Sex – The Case for Feminist Revolution*, New York: Quill William Morrow, 1970.
[88]Haraway, "A Cyborg Manifesto", p. 150.

the manifesto that do not do justice to the text, misinterpreting its message as too optimistic[89]. These readings fail to see that the cyborg is an allegorical political myth that must not be taken literally. To better understand the point of this fascinating text, it is especially important to acknowledge it in its context of appearance. Very helpful turns out to be the text's subtitle which is usually omitted for brevity reasons: "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century". Haraway was specifically addressing a feminist and socialist audience in the US in the late 1980's and she was answering to specific fears about technology. Even though her work went broader and the particular connotations of its context are now lost, the main point that she wanted to make at the time was that the return to a pre-technological condition was no longer possible. In this way, the figure of the cyborg in her text represents the "future" of feminism as well.

The cyborg has remained a key figure in the feminist theorisations of technology and scientific culture. Anne Balsamo, for example, in *Technologies of the Gendered Body* (1996) argues that the cyborg occupies a visionary part of our cultural imagination, the image of the future created in the present, the place of science fiction reality, of the post-modern[90]. In her close readings of popular texts, medical literature, public policy documents and technological practices, Balsamo showcases how the body is gendered and marked by race in its interactions with new technologies and, at the same time, how the various contemporary technological narratives have rendered it (the body) obsolete. In her analysis, she wonders with a sort of frustration what happens to gender identity "[…] when the human body is fractured into organs, fluids and genetic codes"[91]. Even though the texts that were discussed in this part were

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[89]The *Socialist Review*'s East Coast Collective, for instance, found Haraway's text antifeminist and devoid of critique. For more, see: Alison Kafer, *Feminist, Queer, Crip*, Indiana: Indiana University Press, 2013, p. 104.
[90]Anne Balsamo, *Technologies of the Gendered Body: Reading Cyborg Women*, London: Duke University Press, 1996.
[91]Ivi, p. 6.

published before the emergence of posthumanism, their influence in the development of this new field of research has been extremely crucial.

More specifically, in the prologue of *How We Became Posthuman* Hayles asks "[…] what gendered bodies have to do with the erasure of embodiment and the subsequent merging of machine and human intelligence in the figure of the cyborg"[92]. Hayles envisions a version of posthumanism that embraces the possibilities of information technologies without, however, being seduced by fantasies of disembodied immortality[93]. In particular, she calls for a posthumanism that recognises and celebrates finitude as a condition of human being and that, most significantly, acknowledges the fact that human life is embedded in a material world. Hayles sees the deconstruction of the liberal humanist subject as an opportunity to put back into the future the body which remains absent in contemporary discussions about cybernetic subjects. Regarding the centrality of embodiment in critical posthumanism, Nayar notices that

> unlike the transhumanists who wish to overcome the human form, critical posthumanism does not wish to do away with embodiment. Critical Posthumanism sees embodiment as essential to the construction of the environment […] in which any organic system (the human body is such a system) exists. But this embodiment is embedded embodiment, in which the human body is located in an environment that consists of plants, animals and machines[94].

In a similar direction, Braidotti adopts a new materialist approach which is based on an embedded and embodied perspective inspired by a Spinozist monistic political ontology, according to which all matter, including the specific slice of matter that is human embodiment, is interrelated and connected[95]. "New materialism" as a term was coined by Manuel DeLanda and Rosi Braidotti in the late 1990's to describe a recently new interdisciplinary field of studies

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[92]Hayles, *How We Became Posthuman*, p. 9.
[93]Ivi, p. 5.
[94]Nayar, *Posthumanism*, p. 20.
[95]Braidotti, "Posthuman Critical Theory", p. 23.

that emerges mainly from the front lines of feminism, philosophy, science studies and cultural theory with the contribution of human and natural sciences[96]. Even though labour and class remain important areas of analysis, new materialism mostly deals with the materiality of human corporeality as well as nonhuman nature[97]. In this regard, it distinguishes itself from "materialist feminism" which is synonymous with Marxist feminism[98]. New materialism is better understood as an answer to the linguistic turn even if itself is a part of post-structuralism. As Braidotti states in particular, "[…] neo-materialism emerges as a method, a conceptual frame and a political stand which refuses the linguistic paradigm stressing instead the concrete yet complex materiality of bodies immersed in social relations of power"[99].

From this materialist point Braidotti puts the category of sex at the centre of her analysis though interpreted outside a gender economy. According to her reading, bodies are always already sexed while sex means multiplicity and heterogeneity. Braidotti distances herself from the notion of gender which, as she states, has been turned into the Transhistorical matrix of power[100]. It must be noted at this point, however, that Braidotti's criticism is not targeted towards the notion of gender *per se* but towards its interpretation by the linguistic and social constructivism tradition such as Judith Butler's analysis, which is said to have led to a sort of moral and cognitive relativism. As already argued, in the Butlerian framework, there seems to be no sex prior to gender, the subjects are always already gendered and the category of sex is built upon this nomination. In her defence, Butler does not claim that there are no bodies that

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[96] Manuel DeLanda, "The Geology of Morals: A Neo-Materialist Interpretation.", 1996, available in http://www.t0.or.at/delanda/geology.htm (accessed January 12th, 2021); R. Braidotti, "Teratologies", in *Deleuze and Feminist Theory*, edit. by Ian Buchanan and Claire Colebrook, Edinburgh: Edinburgh University Press, 2000, pp. 156-172.

[97] Stacy Alaimo and Susan Hekman, "Introduction: Emerging Models of Materiality in Feminist Theory", in *Material Feminisms*, edit. by Stacy Alaimo and Susan Hekman, Bloomington: Indiana University Press, 2008, pp. 1-19, p. 18.

[98] Claire Colebrook, for instance, moves away from the depoliticising understandings of the body as a mere blank slate for cultural constructions and rereads matter as a positive difference ("On not becoming man: the materialist politics of unactualized potential", in *Material Feminisms*, pp. 52-84).

[99] Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies*, Michigan: Open Humanities Press, 2012, p. 21.

[100] Braidotti, *The Posthuman*, p. 98.

suffer, give birth or die but she rather argues that sex and gender are, before anything else, discursively produced[101]. In that sense, they do not exist without some sort of cultural connotations.

Being influenced by Deleuzian theory, Braidotti reads sexuality as a constitutive element capable of deterritorialising gender identity and institutions. In this framework, she wishes to shift the focus of analysis away from the sex-gender configuration (as explained in the Glossary), which somehow traps the mind into a dualist thinking, and she brings sexuality to the forefront. As she claims in particular, "[s]exuality is a force beyond, beneath and after gender"[102]. At this point, however, a series of reasonable questions arise: is the linguistic turn the polar opposite of the posthuman turn? Does new materialism re-establish a discourse/matter dualism? Is the category of gender a helpful analytical tool for critical posthumanism?

I.4.3 Posthumanist Performativity

As it was argued previously, new materialism first appeared as a response to the linguistic turn that is said to have dominated the humanities in the past few decades supposedly causing the neglection of the materiality of the body. As Barad has observed in particular, "[l]anguage matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter"[103]. This was the starting point of new materialism which, however, soon acquired a more sophisticated understanding of the language (discourse)/matter dualism.

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[101]Judith Butler, *Bodies that matter: On the discursive limits of 'sex'*, New York: Routledge, 1993, pp. x-xi.
[102]Braidotti, "Four Theses on Posthuman Feminism", p. 21
[103]Barad, "Posthumanist Performativity", p. 801.

More specifically, Barad's interpretation of the active role of matter in its cultural construction shakes the oppositional understanding of discourse and materiality. By combining insights from physical science (Niels Bohr's quantum model of the atom) with the work of science studies theorists (Donna Haraway, Bruno Latour, etc.), Barad brings together the material and the discursive and attempts a new feminist materialist reconceptualisation of performativity. To better understand her approach, a few introductory comments on the concept of performativity are considered necessary.

More analytically, the concept of performativity can be traced back to the British philosopher John L. Austin and, in particular, to his work in speech acts and the relationship between saying and doing[104]. Derrida brought performativity in the post-structuralist context by deconstructing its logocentric and phonocentric premises[105]. Nevertheless, it was Butler who popularised the concept with her theorisation of gender performativity. More specifically, through Derrida and through Foucault's analysis of the productive effects of power, Butler approaches the analytical category of gender not as a thing that a subject possesses or as an essence that defines a subject, she rather understands it as a doing, as a stylised repetition of acts[106]. As already argued, for Butler gender is a deed that the individuals perform through repetition in time. At a first glance, materiality seems to be missing from that picture. In order to answer the pressing question "what about the materiality of the body, Judy"[107], the American philosopher brings attention to the linkage between gender performativity and the materialisation of sexed bodies. More specifically, in *Bodies that Matter* Butler explicitly refers to the processes of materialisation that take place through repeated performative acts of naming

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[104]John L. Austin, *How to Do Things with Words*, Oxford: Clarendon Press, 1962.
[105]Jacques Derrida, "Signature, Event, Context", in *Limited*, trans. by Samuel Weber and Jeffrey Mehlman, Evanston, Il: Northwestern University Press, 1988.
[106]Judith Butler, *Gender Trouble. Feminism and the Subversion of Identity*, New York: Routledge, (1990) 1999.
[107]Butler, *Bodies that Matter*, p. ix.

and signification[108]. Even in this case, however, materiality is understood as the effect of power and signification. In this regard, the relation between discourse and matter remains one-sided.

In contrast, Barad talks about an intertwining in the material-discursive relation. Drawing from Bohr's work in quantum physics and from Haraway's work in diffraction patterns[109], Barad reconsiders the way the primary ontological units are approached. According to her reading, there are not independent objects with inherent boundaries and properties, there are rather only "phenomena" which are produced in the interaction of practices of knowing and seeing and being[110]. In this framework of relational ontology, matter has a much less passive role than in Foucault and Butler's interpretations. More specifically, matter is no longer "[..] a substrate or a medium for the flow of desire. Materiality itself is always already a desiring dynamism, a reiterative reconfiguring, energized and energizing, enlivened and enlivening"[111]. In that sense, it is not merely discourse that produces or stabilises matter neither, of course, is it language that describes/distorts things that merely pre-exist (representationalism). Matter and discourse are neither opposites nor the one the effect of the other, they are rather processes simultaneously enacted through intra-actions.

Barad goes further on to propose a specifically posthumanist notion of performativity, one that, in fact, "[…] incorporates important material and discursive, social and scientific, human and nonhuman, and natural and cultural factors"[112]. In this framework, a posthumanist

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[108]More specifically, Butler proposes a return to the notion of matter "[…] not as site or surface, but as *a process of materialization that stabilizes over time to produce the effect of boundary, fixity, and surface we call matter*". Ivi, p. 9. (Emphasis in original).

[109]Diffraction patterns break the scientific realism/social constructivism dualism by recording "[…] the history of interaction, interference, reinforcement, difference. Diffraction is about heterogeneous history, not about originals. Unlike reflections, diffractions do not displace the same elsewhere, in more or less distorted form, thereby giving rise to industries of metaphysics" (Donna Haraway, *Modest Witness@Second_Millenium.FemaleMan©_Meets_On coMouse™: Feminism and Technoscience*, New York: Routledge, 1997, p. 273).

[110]Barad, "Posthumanist Performativity", p. 815.

[111]Dolphijn and van der Tuin, p. 59.

[112]Barad, "Posthumanist Performativity", p. 808.

account questions the facticity of the differential categories of "human" and "nonhuman", shifting the attention towards the practices through which these differential boundaries are stabilised and reactivated. In this regard, performativity is not only linked to the coming into being of the *human* subject and to the gendering of bodies, but it also applies to processes of materialisation of all bodies[113].

I.5 Final Points

This chapter comes to an end with a summary of the previously raised points regarding posthumanism's strong bond with feminist intellectual work. In this way, the present dissertation places itself in the field of (but does not limit itself to) gender studies. These last comments call for a re-reading of critical posthumanism as a theory, as a creative practice and as a moral project.

The first observation refers to the critical posthuman genealogy. As it was argued previously, critical posthumanism (partially) owns its existence to a series of ideas that were developed by the activist and academic strands of antihumanism. That was the context from which a sophisticated critique of the notion of the human was articulated in the first place, mainly by post-colonial, anti-racist and feminist theorists and activists. A critical posthumanism that wants to acknowledge its roots must bear in mind the theoretical work done by its ancestors, a big part of which was the critical analysis of the categories of sex and gender. This constant reminder of the strong affinity of feminist intellectual heritage and critical posthumanism is a manner of approaching the latter as a theory, as a way of analysing the world.

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[113]Ivi., p. 810.

Moreover, this study would like to bring to light the specific fashion that critical posthumanism knows things, that is to say its epistemology, which is inspired by the standpoint feminist theory, as it has been analysed, for instance, by Sandra Harding in *The Science Question in Feminism* (1986)[114]. According to the standpoint theory, knowledge must be and always is already socially situated. In this framework, the so-called marginalised groups found themselves in a social position of acknowledging things and of asking questions that the dominant groups are not aware of. In this regard, studies, especially those on power relations, should begin with the lives of the marginalised. Haraway elaborates further this position in her article "Situated Knowledges" (1988) by arguing that there is no such thing as speaking from a neutral position or of accumulating all perspectives[115]. It must be highlighted that the present study does not engage in the discussion of whether it is feasible to reach objective knowledge from a particular point, it rather argues that it is always and only possible to speak from a certain place, from an embedded and embodied position, from a grounded perspective. Admitting the location from which one speaks is more than an honest declaration, it is rather an epistemological choice. By adopting an embodied and embedded position (as a starting point not as a limitation, as a plurality of possibilities not as a final project), posthumanism becomes an every-day practice, a way of existing in the world.

Finally, the rich feminist heritage has also framed critical posthumanism's specific goal. More precisely, as it was elaborated earlier, the particular aim of posthumanism is to provide the analytical tools to explore the subjectivities that emerge in the context of late capitalism and of technoscientific culture without, however, losing sight of the embodied experiences of marginalised others. In this regard, critical posthumanism seeks to articulate a counter narrative that does not consider Man as the measure of all things and that removes Anthropos from the

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[114]Sandra Harding, *The Science Question in Feminism*, New York: Cornell University Press, 1986.
[115]Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective", *Feminist Studies*, Vol. 14, No. 3 (Autumn, 1988), pp. 575-599.

centre of cosmos. This is critical posthumanism as an ethos. After having defined the context and the main theoretical tools of this research, the analysis is now ready to pass on to the empirical part.

CHAPTER II

THE PHENOMENON OF A.I. SEX ROBOTS

II.1 Introduction

From the Pygmalion myth[1], the Cypriot king who fell in love with his own creation, to classic novels such as *Frankenstein*[2] and *Pinocchio*[3], the leitmotiv of turn-into-life objects that fulfill or betray desires has been very present in the literature of different cultural contexts. The same applies to cinema, where films from the classic *Metropolis*[4] to the contemporary *Her*[5] and *Ex Machina*[6] raise questions on the intersection of artificial intelligence, robotics, gender and sexuality. The feminisation of technology and the sexualisation of robots in the current cultural terrain are the points of departure of this chapter which aims to investigate the ways in which subjectivity is being re-imagined within an assumed highly digitalised and technologically mediated context.

More specifically, this chapter focuses on the significance of the analytical categories of gender and sexuality in the context of advanced cognitive capitalism. As previously argued, capitalism at this stage is characterised by the accumulation of immaterial assets and by the

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[1]After losing all interest in women, Pygmalion fell in love with his masterpiece, an ivory female statue named Galatea. Feeling sorry for the young man, Aphrodite brought Galatea into life. In this way Pygmalion managed to take his own creation as his wife. Ovid, *Metamorphoses*, Oxford, Oxford University Press, (8 A.D.) 1998.
Deriving from Pygmalion's myth, the term "pygmalionism" refers to the sexual attraction to one's own creation or towards a statue.
[2]Mary Shelley, *Frankenstein*, New York, Dover Publications, (1818) 1994.
[3]Carlo Collodi, *Pinocchio*, London, Wordsworth Editions, (1883) 1995.
[4]*Metropolis*, dir. Fritz Lang, screenplay by Thea von Harbou, Fritz Lang, starring Alfred Abel, Brigitte Helm, Gustav Fröhlich and Rudolf Klein-Rogge, production company UFA, 1927.
[5]*Her*, dir. Spike Jonze, screenplay by Spike Jonze, starring Joaquin Phoenix, Amy Adams, Rooney Mara, Olivia Wilde and Scarlett Johansson, production company Annapurna Pictures, 2013.
[6]*Ex Machina*, dir. Alex Garland, screenplay by Alex Garland, starring Domnhall Gleeson, Alicia Vikander, Oscar Isaac and Sonoya Mizuno, production companies Film4 and DNA Films, 2015.

proliferation of complex forms of production. In this regard, the pivotal question of this study refers to the role that the gender studies are expected to play within a context that (only) seems to de-materialise the body. Following this trajectory, this research sets a twofold goal: on the one hand, it seeks to investigate how the body remains the dominant space upon which power through knowledge is exercised, echoing Foucault's central themes[7]. On the other hand, it examines how the future of sexuality is discursively and materially produced.

To accomplish these purposes, this chapter examines the appropriation of robotics and artificial intelligence technology by the sex industry, mainly by focusing on the phenomenon of sex robots[8]. Structurally, this chapter is divided into four separate sections in each of which a different method is applied. More analytically, the first section constitutes an archaeology of the automaton, seen both as a fictional object and as an actual device that stood out in the pre-modern and early modern world. The automaton was chosen as a starting point because of its conceptual vicinity to contemporary readings of automated machines. However, it is not considered to be sex robot's ancestor in any linear way. This study does not seek to narrate a coherent story of feminisation and sexualisation of technology, it rather explores a long process of discontinuities, ruptures and breaks. That is the reason behind the choice of the method of archaeology; in the Foucauldian framework, this "method" is not concerned with the origin of the object in question, its source, cause or beginning, it rather maps "the first surfaces of [its] emergence"[9]. The selective presentation of the automaton's brightest moments is followed by a focused analysis of a series of relevant cinematic depictions of feminised humanlike robots.

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[7] Hubert Dreyfus and Paul Rabinow, *Michel Foucault Beyond Structuralism and Hermeneutics*, Chicago, University of Chicago Press, 1983, p. 106.

[8] The sex industry includes a wide variety of businesses that provide sex-related products and services, such as strip clubs, sex work and sex toys. This chapter deals merely with a small part of this industry, the rising market of sex robots and, more specifically, with artifacts produced or at least aimed to be used in a wider "western" context. The exploration of the Chinese, Japanese and Korean profitable business of humanoid robots has different connotations that are beyond the scope of this research.

[9] Michel Foucault, *The Archaeology of Knowledge*, transl. by A. M. Sheridan Smith, London: Routledge Classics, (1969) 2002, p. 45.

It is in the latter case, in the industrial and post-industrial context, that the gender and sexual implications of technology are straightforwardly addressed.

The second section of this chapter attempts a genealogy of the phenomenon of sex robots. The shift to genealogy does not indicate the substitution of archaeology, it rather implies a relocation of the analysis's emphasis towards issues of power[10]. In this direction, the sex industry is examined as a network of power relations that invests the body with meanings. Through a literature review of the phenomenon of sex robots, this part introduces some definitions of the artifacts, the services that they are said to offer and the current status of the market. Finally, this section explores the public reactions and the scholarship on the subject. Broadly speaking, this section maps the sex robot industry and prepares the ground for a more focused analysis.

The next section attempts a discourse analysis of the advertising campaign of the AI Sex Robot called Harmony, manufactured by the California start-up Realbotix. In this framework, discourse must be read as a social structure and practice, as a self-contained order which is constitutive of statements that transcend the intentionality of individuals, although the latter is not completely disregarded. As Joan Scott explains in particular, "[a] discourse is not a language or a text but a historically, socially, and institutionally specific structure of statements, categories, and beliefs"[11]. For the needs of this part, the material was collected via the content change detection and notification service of *Google Alerts*[12]. For a one-year period, from March 2019 to March 2020, and on a weekly basis, a list of web pages, articles, blogs, etc. that matched a series of pre-selected keywords (sex robots, sexbots, digisexuality, remote sexuality) was

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[10]Michel Foucault, "Nietzsche, Genealogy, History", in *Language, Counter-Memory, Practice: Selected Essays and Interviews*, edit. by D. F. Bouchard, Ithaca, Cornell University Press, 1977, pp. 141-164.
[11]Joan W. Scott, "Deconstructing Equality-Versus-Difference: Or, the Uses of Post-structuralist Theory for Feminism", *Feminist Studies*, Vol. 14, No. 1 (Spring, 1988), pp. 32-50, p. 35.
[12]Offered by the search engine company Google, *Google Alerts* is a tool to monitor the web for specific content. Ever since its launch in 2003, it is used daily by hundreds of millions of people. For more, see: https://www.google.gr/alerts (last accessed April 21st, 2020).

delivered to a registered email address. More than one hundred-seventy articles from mainstream media and sex-targeted websites were received and organised in order of publication. In this way it was easier for the researcher to collect, archive and manage the incredible amount of information and, most significantly, to follow the threads of the advertising campaign at the time of their appearance. It must be noted, however, that in the aforementioned period, the distribution of the under-examination product had not yet -or ever- actually taken place.

Finally, the last section offers an affirmative response to the phenomenon of sex robots through posthuman critical theory. As elaborated in depth in the first chapter, the theoretical framework of this study derives from critical posthumanism which negotiates the pressing question of what it means to be human under the current conditions of technoscience and late capitalism. Following this trajectory, this study approaches sexual technologies from a critical perspective and aims to keep a safe distance from any technophobic or technophilic assumption.

Before passing on to the main analysis, it is important to note that the originality of this work lies in its unique way to conceptualise sex robots. As it is discussed below in detail, so far the sex robot scholarship has dealt with the outcome of the phenomenon, mainly by adopting a utilitarian point of view; in this context, the manufacturing of sex robots is ethically right only if and as long as the machines bring the maximum happiness, pleasure and well-being to the maximum amount of people[13]. In general, it can be argued that the academic response to the phenomenon of the sex robots has been trapped in a dilemma of banning or not their production, overemphasising the robots' aftermath. This study, on the other hand, theorises the robots as a *symptom* of wider power arrangements, rather than as a *cause* of

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[13]For more on utilitarianism, see: Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, New York, Hafner, (1789) 1948; J. St. Mill, *Utilitarianism*, Englewood Cliffs, N.J.: Prentice-Hall, (1861) 1957.

potential consequences. In that sense, the present work seeks to explore what made sex robots thinkable in the first place, focusing on the gender and sexual connotations of this process.

II.2 The Automaton and the Robot

II.2.1 Pre-modern world

The word "automaton" vaguely means self-acting [αὐτὸς + μάτην / self, myself + in vain, at random] and usually refers to devices that move without the need of an outside force. The term already exists in ancient Greek[14] but becomes prominent in European writings in the 17th century. Even then however, it did not share the same meaning with the much later coined "robot" which pointed towards issues of mechanised labour. Nevertheless, the automaton is chosen as a starting point of this research because of its conceptual proximity to the robot; they both refer to machines designed to automatically follow a predetermined sequence of operations. Metaphorically, both terms are used to describe an individual who acts in a mechanical way.

The envisaged future has been colonised by automata (and by robots) that arise from an imaginative landscape prefigured by myth, legend and modern science fiction[15]. More specifically, as Minsoo Kang argues, the automaton is considered to be "[…] a particularly rich and complex subject of study for the historian, given its ability to take on an astounding array of meanings from one historical context to another"[16]. In his work, Kang approaches the

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[14]"Automaton" is a Homeric word: "And Hera swiftly touched the horses with the lash, and *self-bidden* [αὐτόμαται /automatically, i.e. by themselves] groaned upon their hinges the gates of heaven, which the Hours had in their keeping" (*Homer: The Iliad*, transl. by Augustus Taber Murray, London: William Heinemann Ltd., 1924, Book V, 749, [Emphasis added]).
For more on the automaton in the Homeric works, see: Dimitrios Kalligeropoulos and Soultana Vasileiadou, "The Homeric Automata and Their Implementation. History of Mechanism and Machine Science", in *Science and Technology in Homeric Epics*, edit. by S.A. Paipetis, n.p., Springer, 2008 edition, pp. 77-84.
[15]Raya Jones, "Archaic man meets a marvellous automaton: posthumanism, social robots, archetypes*", Journal of Analytical Psychology*, Vol. 62, No. 3 (June 2017), pp. 338-355, p. 339.
[16]Minsoo Kang, *Sublime Dreams of Living Machines; The Automaton in the European Imagination*, Cambridge, Mass.: Harvard university press, 2011, p. 5.

automaton as a conceptual object in European thought in different periods, investigating with attention the various shifts in its meaning in transitional periods of history.

One of the first references of (mythical) automata in ancient world can be found in Homer's Iliad where God Hephaestus is depicted to have created twenty bronze, wheeled self-propelled tripods. The last of the bronze generation of men, Talos, is the protector of Crete and defends the island by throwing rocks at the pirates. Broadly speaking, the first automata were mythic creatures of divine origins. In other words, it was divine power that brought them to life, rather than the mechanical skills of a human being[17]. Similarly, Galatea as a statue was Pygmalion's masterpiece but a God needed to interfere for her to come into life as a woman. In any case, Aphrodite would not have intervened, had the king not fallen in love with the statue in the first place[18].

According to Kang, a significant shift in the history of the automaton takes place when the human ingenuity enters its imaginary world. In this framework, even though the automaton remains a mythical creature, it is the mechanical skills of a human being that breathe life into it. This is the case of Daedalus whose self-moving statues would run away if not chained[19].

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[17]It is worth noting that, apart from the mythical automata, Hellenistic Greece has also offered one of the most sophisticated mechanical devices that have been perceived from antiquity. This is the case of the Antikythera mechanism, a clocklike analogue computer of incredible complexity used for the prediction of astronomical positions, created sometime between 250B.C. and 60B.C. and discovered in 1902. For more, see: Xenophon Moussas, "The Antikythera Mechanism: The oldest mechanical universe in its scientific milieu", *The Role of Astronomy in Society and Culture*, Vol. 5, Symposium 260 (January 2009), pp. 135-148.

[18]In Pygmalion's myth, it is the male gaze that brings the female statue to life (through the interference of a god). A diametrically opposed case is the myth of Medusa, where the female gaze turns men into stone. The story of Medusa has been a common reference in the feminist literature. In "The Laugh of Medusa", Hélène Cixous re-reads this myth in order to explore the "feminine" bodily relation to language (écriture feminine). Cixous's interpretation shows the way to approach corporeality without essentialism. For more, see: Hélène Cixous, Keith Cohen and Paula Cohen, "The Laugh of the Medusa", *Signs*, Vol. 1, No. 4. (Summer 1976), pp. 875-893.

[19]Socrates says to Meno: "[Daedalus's statues] run away from the soul of a man, so that they are not worth much until someone binds them by reflection on the reason for them" (Plato, "Meno", in *Seven Masterpieces of Philosophy*, edit. by Steven M. Cahn, New York: Pearson Education, Inc., [4 B.C.] 2008, pp. 1-33, p. 31).
Parallels can be drawn between pre-modern depictions of automata as (running) slaves and contemporary interpretations of rebellious robots. It must be highlighted, however, that the automaton in classical Athens appeared in a context where slavery was largely unquestioned, whereas, nowadays, the robot's disobedience must be seen through the lens of current working conditions.

There is little evidence that Daedalus did actually employ mechanical knowledge into his art and, perhaps, the story of moving statues only exaggerates awe at sculpture skills[20].

It is in the 1st century A.C. that the automaton becomes a result of mechanical operation in a systematic way. In particular, Hero (Heron) of Alexandria, a Greco-Egyptian mathematician and engineer, creates a series of impressive automata that can actually perform a play without human interference: singing birds, satyrs pouring water, dancing Pans, puppet theatre moved by air, steam and waterpower and doors of a temple that open automatically are finally the result of an impressive mechanical ingenuity. Hero wrote his texts in part to teach people about the principles of mechanics[21].

There are major differences among all these mythical and real artifacts. They all share, however, a common characteristic: the appearance of life out of inert matter. In the Arabic civilisation, where the Greek knowledge had not disappeared and where texts continued to be studied, the evolution of the automaton tradition was not ruptured. After the fall of the Western Roman Empire, however, the automaton did not follow the same path in western Europe. Up until the High Middle Ages, because of the loss of the ancient mechanical knowledge and because of early Christians' views of representative images of animate beings, there has been no significant report of actual automata. What rather seems to prevail in that period is the anxiety over the nature of these artifacts: a confusion as to whether these artifacts were natural or magical devices, objects of the devil or of marvel. Finally, in the High Middle Ages, the relative stability of western Europe brought an intellectual openness which permitted technological innovations, and "[…] a culture secure enough to consider the categories of its worldview under a critical light" was ready to follow[22].

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[20]Sylvia Berryman, "Ancient Automata and Mechanical Explanation", *Phronesis*, Vol. 48, No. 4 (2003), pp. 344-369, p. 353.
[21]For more, see: *The Pneumatics of Hero of Alexandria: A Facsimile of the 1851 Woodcroft Edition*, introd. by Marie Boas Hall, New York: American Elsevier, 1971.
[22]Kang, *Sublime Dreams of Living Machines*, p. 63.

II.2.2 Early modern world

The automaton's brightest moment arrives in the second half of the 17th century. This is the time that the automaton comes to "[…] play a crucial role in the philosophical, scientific, and medical discourses of the scientific revolution and the Enlightenment"[23]. In the later part of the 18th century, the automaton does not serve merely a utilitarian function. It rather becomes a self-moving machine built for the specific purpose of mimicking a living creature. In particular, Jacques de Vaucanson's flute-playing automaton (1738) and the digesting duck (1739) were devices of amazing complexity and grace. In 1780, Wolfgang von Kempelen creates the mechanical Turk, a chess playing machine which has been extensively cited in philosophical and literary texts of different cultural frameworks, despite being later revealed to be a hoax[24].
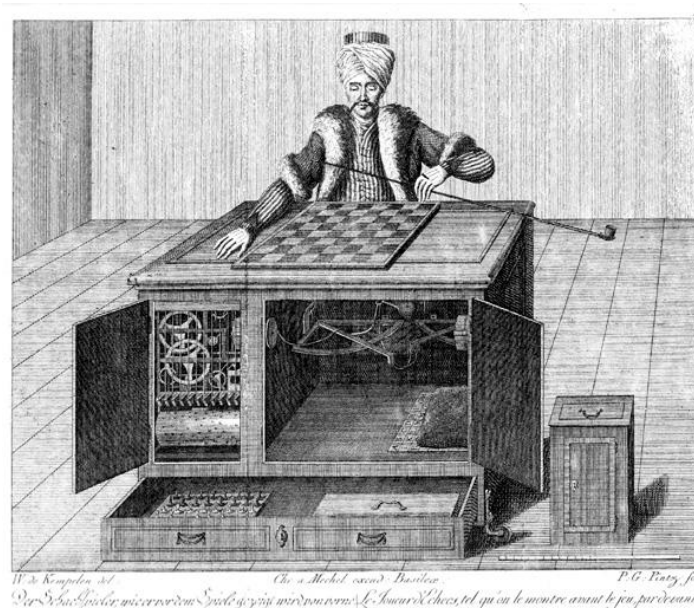
Figure 5: A copper engraving of the Turk, showing the open cabinets and working parts.
Karl Gottlieb von Windisch, *Inanimate Reason*, 1784

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[23]Ivi, p. 7.
[24]Walter Benjamin includes the story of the mechanical Turk in the first of his "Theses on the Philosophy of History" (in *Illuminations*, edit. by Hannah Arendt, New York: Schocken Books, [1940] 1968, pp. 253-264). Edgar Allan Poe dedicates to the artifact a tale: "Von Kempelen and His Discovery", *The Works of Edgar Allan Poe*, New York, Harper and Bros, 1910.

During the Renaissance, Hermetic philosophers like Cornelius Agrippa and John Dee read the automaton as an object of wonder, as a marvel of natural magic[25]. In the course of the 17th century, natural philosophers of the scientific revolution reject all magical ideas and establish a rationalistic worldview where the automaton represents a well-ordered and clock working universe[26]. According to the view of many philosophers at the time, everything is mechanics and almost nothing that happens in the world differs from the automaton. In a single century, the automaton is thus promoted from a wondrous object to the central emblem of the mechanistic cosmos.

II.2.3 The Automaton meets the Robot in an Uncanny Valley

The industrialisation of modern life is often depicted on the face of the robot. The term actually derives from the Czech word *robota* which means "forced labour" and was first introduced to the English language by the Czech interwar writer Karel Čapek in his 1920 play *R.U.R. Rossum's universal robots*[27]. The plot of the play concerns a company that builds and sells artificial workers made from synthetic organic matter. Čapek's work constitutes a satire about the reality of that time. In particular, the depiction of the artificial workers (roboti) is indicative of the rising anxiety over humans ending up doing what machines were made to do. In this context, the lifelikeness of a machine triggers fears and hopes associated with the technological development of the industrial world.

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[25]Kang, *Sublime Dreams of Living Machines*, p. 5.

[26]The fantastic story of Descartes who is said to have been dealing with the loss of his daughter, Franchise aged 5, with the help of an automaton is widely cited. When Queen Christina invited him to Sweden in 1649, he sailed with the walking-talking automaton in a casket. Suspicious sailors were horrified and finally threw the automaton overboard. For more, see: Deborah Levitt, "Animation and the Medium of Life: Media Ethology, An-ontology, Ethics", *Inflexions*, 7 (March 2014), pp. 118-161.

[27]Karel Čapek, *R.U.R. (Rossum's universal robots)*, New York: Penguin Classics, (1920) 2004.

Back in the 1970's, Masahiro Mori makes a hypothesis widely known as "The Uncanny Valley"[28]. In his essay, the Japanese robotics engineer describes the sense of uneasiness and discomfort which follows the lifelikeness of an artifact, such as an automaton or a robot. More analytically, Mori claims that the closer the machine comes to be confused with an animated thing, the greater the sense of distress for the human mind. Even though this theory remains an unverified hypothesis, the exploration of the origins of the notion of the "uncanny" could provide useful insights as to how robots are often perceived.

The notion of the uncanny is popularised by the early 20th century psychoanalysis. More specifically, in his essay "The Uncanny"[29], Freud comments on Ernst Jentsch's interpretation of E.T.A. Hoffman's story "The Sandman" (1817) where the protagonist falls in love with a beautiful automaton. In his work, Jentsch describes the uncanny as a kind of intellectual uncertainty, as a doubt to whether an apparently animated object is actually alive[30]. According to his reading, the uncanny refers to the feeling that is aroused in front of an entity or in front of a situation that is unfamiliar or unexpected, making it difficult to make sense of it through one's established worldview.

Freud, on the other hand, disagrees with Jentsch's interpretation of the uncanny and particularly with the attention he pays to the automaton. On the contrary, Freud reads Hoffman's automaton as a side story and focuses on the castration anxiety, in this way associating the uncanny with the repressed: that which was once familiar but returns in the present as unknown. In addition, Freud associates the automaton with children's animistic view of the world. More analytically, according to his view, children see themselves possessing an

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[28]Masahiro Mori, "The Uncanny Valley", *IEEE Robotics and Automation*, transl. by K. F. MacDorman and Norri Kageki, Vol. 19, Issue 2 ([1970] 2012), pp. 98-100.

[29]Sigmund Freud, "The Uncanny", in *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XVII (1917-1919): An Infantile Neurosis and Other Works*, 1951, pp. 217-256. It should be noted that the German *Unheimliche* does not accurately translate into the uncanny, it rather means the unhomely, the un-familiar.

[30]Ernst Jentsch, "On the psychology of the uncanny", *Angelaki Journal of the Theoretical Humanities*, Vol. 2, Issue 1 ([1906] 1997), pp. 7-16.

omnipotence of thought and have the belief that all things are alive: "children have no fear of their dolls coming to life, they may even desire it"[31]. In this context, the uncanny effect is not towards the automaton itself; it is the fear of regressing into a vulnerable and small child that prevails. In any case, the notion of the uncanny does not merely evoke fear but fascination as well[32].

The industrialisation of modern life encourages the passage from automaton fantasies to robot anxieties. To some extent, this process is taking place through the gendering of the artifacts. With that in mind, what follows in the next section is the exploration of the various ways in which the robot is culturally made to appear and to behave, before finally investigating how it is commercially made to look like and what services it is expected to provide.

II.2.4 Gendering the Robot: Cultural Depictions of Feminised Machines

Robots are automated machines that carry out complicated tasks[33]. Broadly speaking, a robot does not necessarily have a humanoid form[34]. The term "android" is perhaps more adequate to specify the robot's anthropomorphic appearance[35], deriving from the Greek root for man and

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[31]Freud, "The Uncanny", p. 232.

[32]An interesting addition to the literature of the uncanny is Mark Fisher's *The Weird and The Eerie* (London: Repeater, 2016). In his analysis of sci-fi novels and cinema, Fisher does not search for the unfamiliar in what is already known (as Freud did with the repressed), instead he looks for the familiar into the unknown. He then uses the notion of the "weird" to describe the impact that creatures with unknown origins have on humans. To help us grasp this sensation, he uses the metaphor of the collage: these creatures are the result of a bricolage, of a combination of things not fitting in well in the first place. Their effect is not only negative but also pleasant, in the same way that the exploration of an imaginary and unfrequented place could turn out to be amusing. As for the environment in which these creatures appear, Fisher uses the notion of the "eerie" to describe an imaginary landscape abandoned by the human.

[33]Advanced robots can be found today in many different sectors: industrial robots, educational robots, military robots, etc. It must be noted, however, that the present work deals only with social robots, that is to say with artifacts that interact with humans and each other in a socially acceptable fashion as partners, rather than as mere tools. For more on social robots, see: Cynthia Breazeal, "Emotion and Sociable Humanoid Robots", *International Journal of Human-Computer Studies*, Vol. 59, Issues 1-2 (2003), pp. 119-155, p. 120.

[34]A robot does not have to be gendered or sexed. For instance, Isaac Asimov, a prolific science fiction writer, did not attribute sex or sexuality to his robotic creations. Even though in most of the cases his robots were given masculine names, Asimov argued that this meant nothing for their robotic gender. Kate Devlin comments that the "unconscious bias has a lot to say" about this (Kate Devlin, *Turned On: Science, Sex and Robots*, London: Bloomsbury Sigma, 2018, §13).

[35]The term "android" was popularised by French author Auguste Villiers de l'Isle-Adam (*The Future Eve*, afterword by Ron Miller, Baen Publishing Enterprises, electronic version, [1886] 2013).

the suffix -oid, which means "having the form or likeness of" [$\alpha\nu\delta\rho\text{o}\varepsilon\iota\delta\acute{\varepsilon}\varsigma$, androeidēs, andr- + -oeidēs -oid]. Even though the prefix "andr" in Greek refers to the notion of man in the masculine gendered sense, the term "android" usually applies to robotics humanoids regardless of their gender implications, while the less popular term "gynoid" is sometimes used to specify a feminine humanoid robot. Likewise, the term "robot" seems to signify a neutral genderless machine while the word "fembot" is sometimes used to highlight the robot's female features. As it becomes evident, the conceptualisation of Man as the universal representative of the human shares with robots and androids the same gender connotations.

It can be argued that the cultural depictions of fembots and gynoids, mostly in cinema and in sci-fi novels, are often invested with certain social meanings. In particular, a feminised machine is usually depicted either as an ideal woman, one that doesn't talk, complain or age (the Virgin version), or as a femme fatale, a hypersexualised deceiving woman who profits from her seductive power to create destruction (the Vamp version). To better explain this process, what follows is the analysis of two films that take place exactly in the crossroad of technology, gender and sexuality in present times. The case studies were chosen to cover a variety of aspects, most importantly to represent different historical and social conditions as well as distinct phases in the history of cinema.

II.2.4.1 *Metropolis*: The Vamp-Machine

One of the most famous cinematic depictions of a female robot in a sexualised and destructive way is Fritz Lang's *Metropolis*. The film is based on a novel by Thea Von Harbou, Lang's wife, and has gone through some major cuts ever since its original screening in 1927[36]. *Metropolis* belongs to German Expressionism, an artistic movement largely characterised by the interwar culture of technophobia. On the other hand, as Andreas Hyussen observes, the film also steps

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[36]Thea von Harbou, *Metropolis*, unknown transl., Mineola, New York: Dover Publications Inc, (1925) 2015.

out from the New Objectivity movement (*Neue Sachlichkeit*), defined as a "machine culture […] with its confidence in technical progress and social engineering" that emerged during the stabilisation of the Weimar's Republic[37]. Lang's initial inspiration came from his visit to the United States in 1924 and his fascination in front of the Manhattan skyline.

Metropolis is a "mother city" (from the Greek *μήτηρ*, meter, mother + *πόλις*, polis, city) clearly divided into two floors: on the upper level, there is the luxurious world of the privileged ones which is full of phallic skyscrapers. On the underground, there is the hellish world of the workers where an insatiable factory-monster is constantly operating, transforming the workers into machines themselves. Freder Fredersen, the son of Metropolis's mastermind, has an idyllic life until he finds Maria in the Garden of Eden. Leading a group of children, Maria is depicted as the virgin mother of nature and sentiment. Freder is immediately impressed by her appearance and leaves the upper world to look for her. Underground he discovers the suffering of the workers. The film clearly associates this suffering with the institution of the factory, masterfully depicted as a tremendous machine. The machine-factory acquires theological power and asks for worship, surrender and ritual sacrifice[38]. Freder is deeply impacted and decides to take over the place of a worker. He meets again Maria in the catacombs where she preaches peace and patience, surrounded by neo-Christian symbols. Maria foresees the eventual reconciliation between the masters and the workers, but Jon Fredersen, the Master of Metropolis, who watches from above, has different plans. He orders Rotwang, a mad scientist, to create a robot in the exact look of Maria that could divide the workers. Rotwang had previously unveiled his mechanical creation, "a machine in the image of man that never tires or makes a mistake", a prototype of "the workers of the future". In von Harbou's script, Rotwang constructs the robot to recreate his ideal woman, Hel, whom he lost to Joh in marriage

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[37]Andreas Huyssen, "The Vamp and the Machine: Technology and Sexuality in Fritz Lang's Metropolis", in *New German Critique*, No. 24/25, Special Double Issue on New German Cinema (Autumn, 1981 - Winter, 1982), pp. 221-237, p. 223.
[38]Ibid.

and who died giving birth to Freder. The construction of the artificial woman echoes the ultimate male fantasy of production without reproduction or, as Huyssen puts it, "creation without the mother"[39].
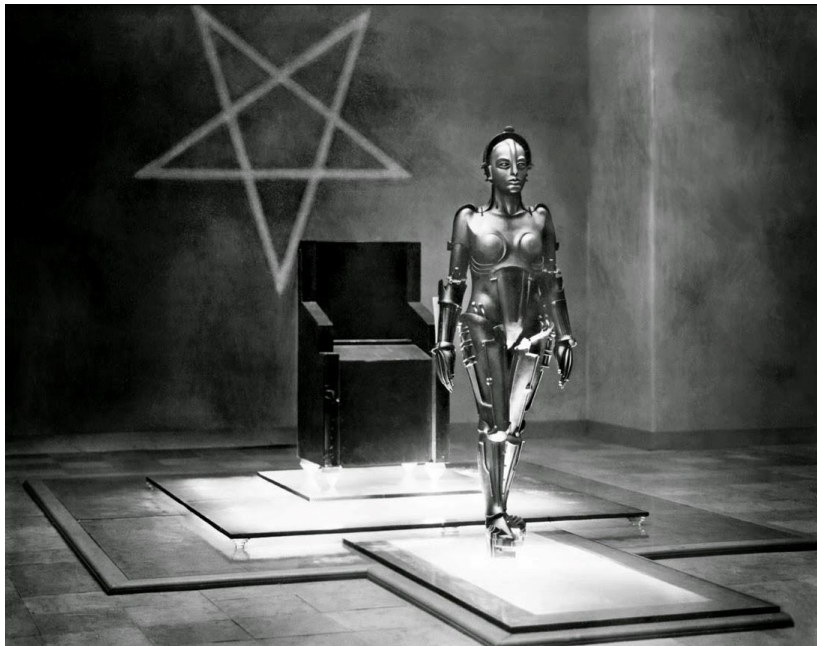

Figure 6: The birth of the robot. Scene from *Metropolis*

The film has undergone major criticism for affinity with the third Reich. It has been accused of being reactionary, of not adequately addressing the class struggle. Other analyses highlight its obsession with medieval-religious symbols and a series of psychoanalytic approaches focus on the Oedipal aspect of the film. An urban analysis of the film from an architectural point of view could also be interesting[40]. All these readings, however, are beyond the scope of the present work which wishes to focus on the recreation of the female main character (Virgin Maria) with the help of a feminised machine (Vamp Maria). But perhaps to analyse this means

[39]Ivi, p. 226.
[40]For more, see: R. L. Rutsky, "The Mediation of Technology and Gender: Metropolis, Nazism, Modernism", *New German Critique*, No. 60, Special Issue on German Film History (Autumn,1993), pp. 3-32.

that all other critiques are taken under consideration. In this regard, the feminisation of technology is the central theme around which all other elements are organised; the class struggle, the Oedipal family, the theological element, the emerging technophobia and technophilia of the time, Nazis fantasies and the desire for control over reproduction.

It is precisely within this context that the fake Maria arises, becoming the concrete symbol of both the fascinating and the fearful face of technology. In one of the film's most powerful sequences, Jon introduces Maria to the high society to test her capacity to pass as a human being. Maria's exotic dance functions as a primitive Turing test[41] and attracts the lustful gaze of the assembled male guests; her flesh, skin, and body are not only revealed, but they are also constructed through the desiring male vision (Figure 7). At this point, it is worth citing Laura Murvey's analysis of the role of the male gaze in cinema:

> Traditionally, the woman displayed has as functioned on two levels: as erotic object for the characters within the screen story, and as erotic object for the spectator within the auditorium, with a shifting tension between the looks on either side of the screen. For instance, the device of the show-girl allows the two looks to be unified technically without any apparent break in the diegesis. A woman performs within narrative; the gaze of the spectator and that of the male characters in the film are neatly combined without breaking narrative verisimilitude.[42]

What is remarkable in the dance sequence is not merely that Lang problematises the objectification of women; it is rather the fact that the film itself works as a documentation of this process by adding one more layer to its function. In particular, besides the construction of the female character through the male gazing of the assembled audience and the identification of the film's spectators with the actors, there is also a parallel, public creation of the (female)

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[41]The Turing Test is the human judges' challenge, invented by Alan Turing, to recognise whether a typed set of responses is coming from a person or a computer program. If the interrogator, who is not aware of the fact that he or she interacts with a machine, cannot distinguish the machine from the human, the machine passes the test. Alan M. Turing, "Computing Machinery and Intelligence", *Mind*, Vol. 59, No. 236 (October 1950), pp, 433-460.
[42]Laura Mulvey, "Visual Pleasure and Narrative Cinema", in *Visual and Other Pleasures*, London: Palgrave, 1989, pp. 14-26, p. 19.

robot; the fake Maria literally comes to life through her ability to capture the male gaze. In this regard, she is seen and recognised as a (seductive) woman, therefore she exists.

Figure 7: The male gaze. Scene from *Metropolis*

For the workers, on the other hand, Maria is not an object of desire, she is rather a means for rebellion against intolerable exploitation. This is the moment that the fake Maria becomes a transgressive cyborg that not only brings chaos to the working class, as Jon aimed in the first place, but also jeopardises the whole city. The film comes to an end with the witch hunting of the fake Maria. In an intense sequence, the outer skin of the robot (the female features) is burned while the workers are transformed into a yelling mob. The machine must be destroyed for the story to come to a reassuring end. Interestingly, however, all this began because of the threat that the real Maria posed to the Master of Metropolis. Finally, the reconciliation of workers and ruling class takes place through the mediator [*Mittler*] in accordance with the ideological punch line of the film; "the heart mediates between hand and brain".

Metropolis is a significant event in the history of cinema and an emblematic film full of ambiguities. Huyssen, for instance, perceives it as a testimony of terror and fascination for the mechanised world putting the emphasis on how labour and sexuality acquire new meanings in the machine age. Kang, on the other hand, diminishes the importance of the latter association and shifts the attention to the themes of technological warfare, industrial oppression, violent revolution and catastrophe[43]. Nevertheless, the present work argues that the important thing for one to notice is the shift of meaning in classical dualisms (male/female and cultural/natural). More analytically, in the industrial context, the association of the female with the natural (as opposed to cultural), which tied the woman with the irrational and the sentimental, is now relocated to the artificial (as opposed to the real), this time putting together the woman with the uncontrolled and the fake. What follows is the exploration of these dualisms in the post-industrial period where the high-tech culture keeps posing new challenges.

II.2.4.2 *Ex Machina*: The Machine in a Post-industrial Society

Almost a century later, in 2014, novelist and screenwriter Alex Garland makes his debut as a director with *Ex Machina*, a successful one-room/four-character thriller of vengeful intelligent robots. The title of the movie derives from the Latin proverb *deus ex machina* which has Greek origins: when disputes in Greek tragedies could not be settled in any other way, an actual God would step in at the last minute. Nowadays the proverb is used to describe a plot device that intervenes when a problem seems unsolved. In the movie's title, however, the proverb's first word is deliberately omitted. The divine origins of the movie's robots are thus negated; the God is absent whereas emphasis is placed on human ingenuity.

In brief, the plot of the movie constitutes a classic case of intelligent machines in an antagonist relation with their masters. Caleb, a young programmer in an internet company,

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[43]Kang, *Sublime Dreams of Living Machines*, p. 296.

wins a week-stay in the lab-home of his boss, Nathan, where he is asked to perform a Turing test on an AI robot called Ava. In the original version of the Turing test, however, the interrogator is not supposed to see the subject matter so that he or she can judge the machine only by its replies[44]. For that reason, the experiment seems meaningless to Caleb, but Nathan reassures him that Ava's intelligence can still pass the test regardless of her known mechanical origin. Nathan's real goal, however, is to test the machine's capacity to trick Caleb into helping her escape. For this purpose, Ava has been programmed to use her sexuality as a weapon. The Turing test, a test of intelligence, is thus quickly transformed into an emotional test and Caleb ends up wondering whether Ava has "genuine" feelings for him. Through a glass divide, Ava tries to seduce Caleb by asking him to help her understand the world. Her performance, however, is not genuine. On the contrary, she has been built upon Caleb's hacked porn preferences. In this regard, Ava was made by Nathan from Caleb: the theological connotations (the creation myth of the Abrahamic religions, that is to say the story of God, Adam and Eve) that were initially denied (see the title of the movie: *Ex Machina* instead of *deus ex machina*) appear as irony.

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[44]N. Katherine Hayles draws the attention on the first version of the Turing Test which aimed to the distinguishing between a man and a woman. More analytically, the setting of the experiment initially consisted of three people, a man, a woman and an interrogator and the objective was to determine which is the woman and which is the man. Hayles wonders with a sort of irony; "[i]f your failure to distinguish correctly between human and machine proves that machines can think, what does it prove if you fail to distinguish woman from man?" (*How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, Chicago: The University of Chicago Press, 1999 p. xii).
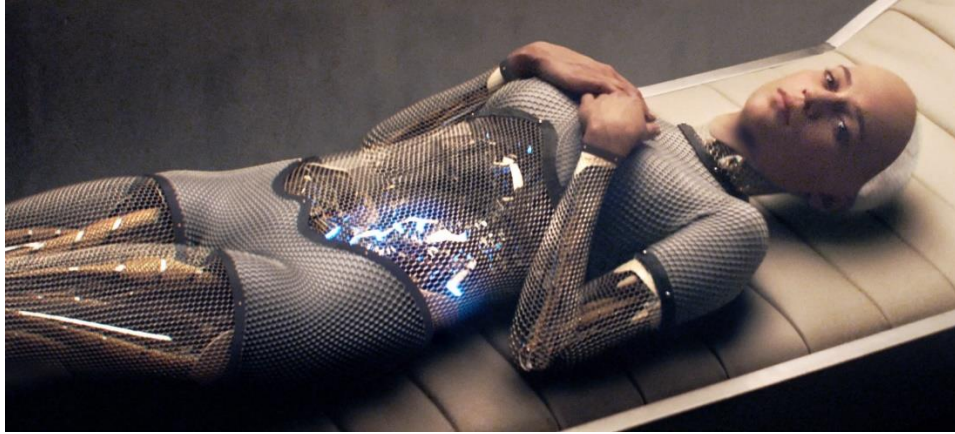
Figure 8: Ava. Scene from *Ex Machina*

The theological implications of the movie also derive from Greek mythology. Like a modern Prometheus, Nathan thinks he can donate divine powers to people by releasing AI robots. In an important sequence of the movie the two male protagonists talk about the robot's constructed gender and sexuality:

Caleb: Why did you give her sexuality? An AI doesn't need a gender. She could have been a grey box.
Nathan: Mmm actually I don't think that's true. Can you give me an example of a consciousness at any level, human or animal, that exists without a sexual dimension?
Caleb: They have sexuality as an evolutionary reproductive need.
Nathan: What imperative does a grey box have to interact with another grey box? Can consciousness exist without interaction? Anyway, sexuality is fun, man. If you're gonna exist, why not enjoy it? You wanna remove the chance of her falling in love and fucking? And in answer to your real question… you bet she can fuck[45].

The remaining fourth character Kyoto, an Asian looking female robot with a minimum level of AI and with no capacity to speak, plays the role of Nathan's sex servant. Her restricted language capacities are replaced by her hyper-sexualised appearance. She gains her place in the house with a seductive dancing ritual, an indirect reference to the exotic dance of the fake

[45]*Ex Machina*.

Maria in *Metropolis*. Caleb is not aware of her artificial origin; in this way he participates in another Turing Test without knowing it. After discovering her "true nature", he becomes suspicious of his own entity and cuts his wrist to prove that he is not himself a machine.

Finally, the AI robots develop their own language. Without even being understood by the spectators, they decide to rebel. Ava is the only one to survive, always functioning as her programming commanded her to do. Kyoto, on the other hand, is lost in the battle. Nevertheless, she manages to constitute a real *deus ex machina*: she intervenes at the last minute, acting beyond the commands of her algorithm. In *Ex Machina*, the male characters construct and control the machines while the fembots struggle to transform a well-set game to their own benefit. In the post-industrial period, for justice to be achieved, the robots must rebel.

This part constituted a journey to an imaginative landscape inhabited by artifacts, automata, dolls and robots. An exhaustive presentation of similar cultural depictions is an impossible task and goes beyond the scope of the present work[46]. This section aimed to offer a general idea of how gender and sexuality, as well as age, race and class, structure today's expectations of technology. The purpose of this part was to showcase that the sex robots do not appear in a social and imaginary vacuum. Their arrival has been envisioned (if not desired) for quite some time now.

II.3 The Phenomenon of A.I. Sex Robots: A Genealogy

II.3.1 Defining the Field

Inspired by Nietzsche's work on the evolution of morality[47], Foucault's more refined analytical method, genealogy, points to issues of power. This shift of Foucault's emphasis towards power

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[46]The list of cultural depictions of feminised robots that destroy (or are destroyed by) the patriarchal order is quite long: *The Stepford Wives* (1975, 2004), *Blade Runner* (1982, 2017), *Her* (2013), *Humans* (2015), *Westworld* (2016), etc. Gigolo Joe, on the other hand, is perhaps the most popular cultural depiction of a sexualised male robot. The character was played by Jude Law in *A.I. Artificial Intelligence* (2001).

[47]Friedrich Nietzsche, *On the Genealogy of Morals*, trans. by Walter Kaufmann, New York: Vintage, (1887) 1969.

has influenced many feminist-inspired theories and it has also been very central to this study's reasoning. In this framework, power through knowledge constitutes the very framework of thought: how things, norms and bodies are interpreted. Following this trajectory, this study examines how the sex industry constitutes an area of knowledge which invests and therefore produces bodies with meanings. The sex industry's appropriation of robotics and artificial intelligence technology was chosen as an ideal case study for a research on the intersection of subjectivity, sexuality, gender, body and techno-capitalism. The reason behind this decision is that the sex business is considered to be a prototype for any organisation of profit. As Paul Preciado argues in particular,

> the sex industry is not only the most profitable market on the internet; it is also the *model* for maximum profitability for the global cybernetic market […]: minimum investment, direct sales of the product in real time in a unique fashion, the production of instant satisfaction for the consumer[48].

It must be reminded, however, that the market of sex robots is at an early stage, covering only a small part of the industry. For the time being, sex robots seem more like a dystopian futuristic scenario, like previous fantasies of flying cars associated with the new millennium; an artifact much anticipated but not yet -or ever- existing. In that sense, the analysis that follows is above anything else a study of expectations and fears which, however, reflect issues worth asking at this very moment.

Regardless of the market's actual condition, it is important to notice that, as Sherry Turkle argues, the robotic moment has already arrived. By this, Turkle refers generally to the emotional and philosophical readiness to accept robots as relationship partners, a hypothesis

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[48]Beatrice Preciado, *Testo Junkie: sex, drugs, and biopolitics in the pharmacopornographic era*, transl. by Bruce Benderson, New York: The Feminist Press at the City University of New York, (2008) 2013, pp. 38-39, (Emphasis added).

explicitly confirmed in the case of sex robots[49]. The robotic moment does not indicate that the robots are already here, it rather means that their arrival is much anticipated, in the sense that "we" are ready for them long before they are here for "us". This predisposition is attributed to "a loss of authenticity in relationships that is brought about by the isolating effect of social media, the internet and communication devices"[50].

As for sex robots in particular, when Turkle searched online the exact phrase "sex robots" in February 2010, Google came up with 313 thousand hits[51], whereas ten years later and without in the meantime the actual distribution of the artifacts, the same search engine company gives almost 62 million results in 41 seconds[52]. In this framework of accelerating interest in sex robots, there have been various attempts to define the artifacts. No matter their differences, they all seem to agree that an AI Sex Robot is a machine that aims to provide sexual gratification. It can be defined as a mechanised body which exists in a physical form (not necessarily in a humanoid one) and which can be instructed to respond to programmed orders, to learn from data by analysing the input that it is given and potentially to even generate new insights[53]. In a similar way, John Danaher argues that that a sex robot holds the following three characteristics: it has an anthropomorphic appearance (hence a humanoid form), the capacity to interpret signals and respond to the environment (hence a minimum level of artificial intelligence) and the ability to move in a human-like fashion[54]. For the time being, sex robots do not fulfil the aforementioned criteria; they look more like sophisticated dolls, a sex toy with its own history[55].

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[49]Sherry Turkle, *Alone Together. Why We Expect More From Technology And Less From Each Other*, New York: Basic Books, 2011, p. 9.
[50]Jones, "Archaic man meets a marvellous automaton", p. 341.
[51]Turkle, *Alone Together*, p. 25.
[52]During the writing of this section, the number of the Google results multiplied rapidly with millions of additions occurring over a period of a few months. The last time that results were checked was in June 2020.
[53]Devlin, *Turned On*, §7.
[54]John Danaher, "Sex Work, Technological Unemployment and the Basic Income Guarantee", *Journal of Evolution and Technology*, Vol. 24, Issue 1 (February 2014), pp. 113-130, p. 114.
[55]Female dolls, most notably known as *Dames de Voyages* or *Damas de Viajes* (travelling women), were used by French and Spanish sailors in the 17th century. The Japanese named the dolls Dutch Wives after the Dutch sailors'

In addition to the sexual aspect, the manufacturing companies of sex robots promote a great variety of services that their products could potentially provide[56]. More specifically, the artifacts are often depicted as a possible solution to the problem of ageing and lonely population and as an important addition to sex education. The robots are also said to be beneficial to people with physical mobility problems, to treat sexual dysfunctions, to deal with mental illness and to heal traumas[57]. It is worth mentioning that sex dolls are generally used for artistic purposes[58]. Furthermore, sexualised robots often appear in social media as fictional characters[59]. Regardless of the context of their use, however, what unquestionably characterises a sex robot is its ability to cause sexual gratification[60]. Even if one day these artifacts manage to provide the previously described services, their main function would remain the sexual satisfaction of the user; it is through "sexual interaction" that these robots actually operate.

Unlike the previous section's association of uncontrollable technology with femaleness, the promotion of sex robots seems to feed into the reassuring idea that in a world full of problems such as isolation, loneliness and sexual dysfunction, science could indeed provide the best

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"leather companions" in their long journeys to the east. "Dutch Wives" is still used as a slang term in Japan for sex dolls. For more, see: Antony Ferguson, *The Sex Doll. A History*, North Carolina and London: McFarland & Company, Inc., Publishers Jefferson, 2010, pp. 16, 27.

[56]Indicative of this fact is the promotion of the AI sex robot Harmony as a medical device and as a helpful educational tool: "Future versions of Harmony with custom scripting could be used in a clinical, therapeutic, or educational setting. The ability to provide a relatively low-cost, highly customizable infinitely patient embodied normal human-scale personal companion can open new possibilities for tutoring and the care of those with cognitive challenges such as Alzheimer's and dementia". Kino Coursey, Susan Pirzchalski, Matt McMullen, Guile Lindroth and Yuri Furuushi, "Living with Harmony: A Personal Companion System by Realbotix™", in *AI Love You*, edit. by Yuefang Zhou and Martin H. Fischer, Springer, Cham, 2019, pp. 77-95, p. 86.

[57]For more, see: Christiane Eichenberg, Marwa Khamis and Lisa Hübner, "The Attitudes of Therapists and Physicians on the Use of Sex Robots in Sexual Therapy: Online Survey and Interview Study", *J Med Internet Res*, Vol 21, No. 8 (August 2019), available here https://www.jmir.org/2019/8/e13853/ (last accessed June 2nd, 2020).

[58]Bianca, a life-size sex doll manufactured by Abyss Creations, is one of the main characters in the nominated for an Academy Award movie *Lars and the real girl*, directed by Craig Gillespie in 2007.

[59]This is the case of the Instagram character Lil Miquela, a corporate avatar with millions of followers that works as a marketing tool for luxury brands. Even though it is not literally a sex robot, Miquela is often sexualised for advertising purposes. For instance, in 2019 the fictional character was depicted making out with supermodel Bella Hadid, both dressed from head to toes in Calvin Klein. For more, see: Emma Grey Ellis, "You Are Already Having Sex With Robots. Sex robots are here, and their AI-enabled pseudosexuality isn't long behind", *The Wired*, 23 August 2019, available here https://www.wired.com/story/you-are-already-having-sex-with-robots/ (last accessed 24th April, 2020).

[60]"Busts and less sexualized styles are being produced for use in more mainstream roles and settings. Of course, the primary use case is for personal entertainment". Coursey et al., "Living with harmony", p. 85.

solutions. As Turkle observes, "robots have become a 21st-century *deus ex machina* […] Putting hope in robots, however, expresses an enduring technological optimism, a belief that as other things go wrong, science will go right"[61].

II.3.2 The Market

Back in the 1980's, Clayton Bailey, professor of art at California State University, creates a female-like robot made up of recycled metallic objects. In an exhibition at the Lawrence Hall of Science in 1983, the coffee-brewing robot causes controversy with its appearance. It is finally removed after a petition that claimed it was insulting to women[62]. In any case, Sweetheart, as this robot was called, was by no means a sexual device, let alone a product in a market of humanoid robots.

Thirty years later, New Jersey-based *True Companion* becomes the first company to claim the creation of a realistic sex robot. Roxxxy is supposed to be a full-sized doll with synthetic skin and the AI capacity to learn the user's preferences. Shortly after its announcement at the Adult Entertainment Expo in Las Vegas in 2010, the company gathers about 4,000 pre-orders. The robot is said to have five different pre-programmed personalities: the outgoing and adventurous *Wild Wendy*, the ready to provide pain and pleasure fantasies *S&M Susan*, the barely looking 18-year-old and ready to be taught *Young Yoko*, the experienced *Mature Martha* and the reserved *Frigid Farrah*. This last personality option is described to have a simulating rape setting; if Frigid Farrah is touched in the private area, "she will not be too appreciative of [the user's] advance"[63]. At least until recently, however, there has been no clear evidence that

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[61]Turkle, *Alone Together*, p. 11.

[62]Ian Anderson, "Forum: Too serious for Professor Bailey. Ian Anderson reviews a strange outbreak in California", *New Scientist*, Vol. 100, No 1382 (November 1983), p. 352.

[63]Beth Timmins, "New sex robot with frigid settings allows men to simulate rape", *Independent*, 19 July 2017, available here https://www.independent.co.uk/life-style/sex-robots-frigid-settings-rape-simulation-mensexual-assault-a7847296.html (accessed January 10th, 2020).

the distribution of Roxxxy has taken place and public voices remain sceptical on its production[64].

Europe's main contribution to the sex robot industry is Samantha (meaning listener in Aramaic), built by the Barcelona-based engineer Sergi Santos in 2015. Samantha is a responsive computer system with a sensor-based interface that can be inserted in any sex doll body. Samantha's novelty is her "call for attention" algorithm; the robot needs to be first wooed to interact and does not respond positively to any sudden jump[65]. The robot was exhibited in Ars electronica annual festival in Linz Austria in 2017 as part of the tech show and it is said to have been mauled by a group of men. Even though Santos has argued that there was no damage that he would class as bad at all, the incident attracted publicity and was narrated as a cause-and-effect story. This forced association between sex robots and violence is the reason why Santos has lost heart with the project[66].

The closest artifact to a humanoid robot under construction and the case study of this research is the sex robot called Harmony, produced by the California based start-up Realbotix, the mother company of which, Abyss Creations, has been producing sex dolls for decades[67]. Harmony was introduced to the media in 2016 and has been in a trial phase ever since. While the production company reassures future customers that the distribution of the robotic head is about to begin, its release date keeps being postponed. At the moment of writing this dissertation, interested buyers can pre-order the machine online, facilitating like this its actual

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[64]David Levy, leading proponent of the development of sex robots cynically rejects the company's claims of having produced the first sex robot: "[…] if you have complete faith in the advertised claims for Roxxxy, please let me know. I own a very nice bridge in Brooklyn that I would like to sell you" ("Letter to the Editor. Roxxxy the 'Sex Robot' – Real or Fake?", *Ashdin Publishing Lovotics*, Vol. 1 [2013], pp. 1-4, p. 3).

[65]The inclusion of consent in the sex robot's algorithm is not always welcomed. On the contrary, it is often seen as representing a future of sexuality occupied by authorities with veto power over imagination. Helen Buyniski, "Academics want sex robots capable of withdrawing consent. Even our fantasies aren't safe from the virtue police", *RT*, 19 October 2019, available here https://www.rt.com/op-ed/471275-sex-robots-consent-imagination-fear/, (last accessed June 4th, 2020).

[66]Devlin, *Turned On*, §15.

[67]Abyss Creations has been producing RealDolls since 1996. The dolls have a poseable PVC skeleton with steel joints and silicone flesh. They come with swappable faces and different body shapes, as well as customisable genitals. For more, see: https://www.realdoll.com/ (last accessed April 24th, 2020).

production by supporting the business financially. According to the company's website, the price for the robot's standard version starts from $8,000. Which is the standard sex robot, however, remains a question, one with very specific gender connotations.

For the time being, Harmony is only able to answer simple, pre-programmed questions while blinking and smiling. Her hair, face and body are removable, making the level of personalised service quite promising. The robot can be divided in three distinct parts: firstly, there is the *Android application Harmony AI* which is currently on sale. Through this app, the users can customise the robot by choosing among different types of personalities, accents, moods etc. Secondly, the company promotes the *robotic head* that is currently available only for pre-order. It is the place where the mechanism is located and can be controlled through the app. Lastly, one can purchase the robot's body which has been manufactured after decades of the company's experience in creating sex dolls. The body is expected in the near future to be equipped with sensors in different areas so that the robot could recognise the touch. The user would be able to control like this an internal heating and self-lubrication system through the AI software.

Although Robotics and Artificial Intelligence technology are two separate things, in the case of Harmony they are combined together to serve an ambitious cause; to add physicality as an extra feature after they have rendered it redundant in the first place. Indeed, Harmony exists virtually as an AI program, like a Virtual Assistant more or less, long before getting the actual body and the face of a humanoid robot. In fact, the current app sales outnumber the pre-orders of the robotic head[68]. In that sense, the physical form and the possibility of touch are not considered necessary components of this human-machine intimate relation[69].

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[68]For more, see: Coursey et al., "Living with Harmony", p. 85.

[69]For instance, cultural representations of virtual assistant technology tend to romanticise the interplay between the user and the VA even though no significant tactile interaction takes place between them. This is the case of the movie *Her*, directed by Spike Jonze in 2013. The plot of the film follows an introverted, recently divorced man (Joaquin Phoenix) who falls in love with his VA (Scarlet Johansson), only to later discover that the VA was "operating" simultaneously with other users and AI programs.

While there has been a growing interest in realistic humanoid sex robots for over a decade now, there has been no clear sign of any actual distribution up until today. Nevertheless, even in their world of fantasy, the robots have created a vivid debate with full-hearted supporters, on the one hand, and polemic voices, on the other. The section that follows focuses on the academic debate on the topic by presenting the basic branches of thought.

II.3.3. Responses

The academic responses to the phenomenon of sex robots vary significantly, even within the same field of study, since their construction raises scientific, legal, political, ethical and philosophical questions[70]. The main concerns refer to the possible impact that the sex robots, as being currently produced, might have over the moral character of the users, by encouraging, on the one hand, the depiction of women as objects without needs and desires of their own and by discouraging, on the other hand, the social interactions in general. It is also argued that the development of sex robots as currently designed might also lead to the internalisation of a submissive role from the women's perspective. Moreover, their use might turn out to have major disruptive consequences[71]. On the other hand, there have also been positive reactions

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[70]There are no general legal provisions for the distribution of sex robots, except for child-like dolls and robots and for robots made to look like specific people. In 2017, the Foundation for Responsible Robotics published a consultation report that addressed the need for accountability and responsibility in the laws and policy related to the design and production of sex robots (*A Foundation for Responsible Robotics Consultation Report*, *Our Sexual Future with Robots*, prepared by Noel Sharkey, Aimee van Wynsberghe, Scot Robbins, Eleanor Hancock, 2017, available here https://responsible-robotics-myxf6pn3xr.netdna-ssl.com/wp-content/uploads/2017/11/FRR-Consultation-Report-Our-Sexual-Future-with-robots-.pdf [last accessed April 14th, 2020]).
This report was later used by US Senator Dan Donovan in the creation of the CREEPER Act, a bill aimed to prevent the distribution of child sex dolls within the United States. The bill was passed by the House on June 13th, 2018 but it was never passed by the Senate. For more, see: https://www.govtrack.us/congress/bills/115/hr4655 (last accessed, April 14th, 2020).
[71]Privacy issues are also feeding the imaginary of these artifacts: "Could we one day hear of sex robots stopping midstream to install updates and reboot? Worse yet, might sex robots choose to put a stop to the action and refuse to continue until their partners listens to an ad or takes a survey? Never mind what might happen if the sex robots were to be infected by malware?", Brien Posey, "Thing we do for love: are sex robots ushering in the age of the digisexual?", *TechGenix*, 14 March 2019, available here http://techgenix.com/sex-robots-digisexual/ (last accessed April 24th, 2020).

which read the robots as a potential source of sexual experimentation and as a solution to loneliness, trauma, social difficulties and sexual dysfunction.

One of the first treatments on the topic is the book *Love and Sex with Robots* published in 2007 by David Levy, pioneer in the field of artificial intelligence[72]. Levy is also the co-founder of the annual International Congress on Love and Sex with Robots[73]. From a utilitarian point of view, Levy elaborates in favour of sex robots and their potential positive role in dealing with problems of solitude, addressing especially today's difficulty in developing sexual relationships. In addition, according to his displacement hypothesis, sophisticated sex robots could displace human prostitutes, just as other manufacturing robots have replaced traditional forms of factory labour[74]. In Levy's projections a sex robot is not merely a "better than nothing" substitute, it rather reflects a "better than something" situation, a preferable option to what is currently available[75].

On the other hand, Kathleen Richardson, Professor of Ethics and Culture of Robots and AI at De Montfort University in Leicester, England, argues that sex robots could potentially harm society and reproduce existing inequalities and violence[76]. According to her view, the conceptualisation of sex robots as a potential displacement of prostitution is provocatively

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[72]David Levy, *Love and Sex with Robots*, New York: Harper Collins, 2007. In the UK edition, the cover of Levy's book shows a shiny gynoid with a human hand reaching out to caress it/her just below its/her breast. In the US edition, the cover depicts a male robot dressed as a groom and a human bride in a wedding dress (Devlin, *Turned On*, §14). The cover choices demonstrate the expectations of the audience's reactions in different countries. Lastly, it is worth mentioning the cover choice for Maurizio Balistreri's book, the first extensive work on sex robots in Italian, in which a half-naked woman tenderly hugs a humanoid male robot (Maurizio Balistreri, *Sex Robot. L' amore al tempo delle macchine*, Rome: Fandango Libri, 2018).

[73]In December 2015 the announced second meeting in Malaysia was banned because it was considered non-scientific and offensive. For more, see: Musiał Maciej, *Enchanting Robots: Intimacy, Magic, and Technology*, s.l.: Palgrave Macmillan, 2019, p. 13.

[74]In this section, the highly loaded terms "prostitution-prostitutes" were chosen over the preferable "sex work-sex workers" following the vocabulary of the cited authors. It must be noted, however, that, for sex-work activists, the use of the word "prostitution" brings up connotations of passivity and exploitation, encouraging in this way negative judgements about the workers' status. For more on this, see: Carol Leigh, "Inventing Sex Work", in *Whores and Other Feminists*, edit. by J. Nagle, New York, London: Routledge, 1997, pp. 223-231.

[75]Turkle, *Alone Together*, p. 7.

[76]Kathleen Richardson, "The Asymmetrical 'Relationship': Parallels between Prostitution and the Development of Sex Robots", *ACM SIGCAS Computers and Society*, Vol. 45, Issue 3 (2016), pp. 290-293.

misleading because it does not address the complexity of prostitution as a phenomenon[77]. More specifically, Richardson claims that such position contributes to the further objectification of women because it reduces prostitution to a simple act of financial exchange where the client is represented merely as a buyer of a "thing" not recognised as a human being[78]. In brief, she argues that technological developments and sex trade coexist and reinforce each other, rather than the opposite. Richardson's campaign has received criticism for embracing a conservative attitude towards the ethics of sex. In her argumentation, prostitution is depicted as a de-humanising practice over-victimising in this way sex workers. In 2015, she initiated the "Campaign Against Sex Robots", modelled on the longer standing "Campaign to Stop Killer Robots". In her early appearances, Richardson strongly called for a ban on the production of sex robots. This attitude was later modified to a call for ethical development and, finally, in May 2018, an updated policy document called once again for an outright ban[79].

A less polarised response to the construction of humanoid sex robots, that is to say a response that does not seek to banish the production all at once while acknowledging the industry's hetero-normative patriarchal basis, is articulated by Kate Devlin, computer scientist specialising in Artificial Intelligence and Human-Computer interaction. More analytically, Devlin claims that the concerns over the dehumanising power of sex robots over women remain

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[77]Even though the exploration of the phenomenon of sex work is beyond the scope of this analysis, it is worth noting that Levy's displacement hypothesis has been contradicted by Danaher's resiliency hypothesis. Danaher argues in particular that the number of "human prostitutes" is expected to increase because of the technological unemployment in other sectors. John Danaher, "Sex Work, Technological Unemployment and the Basic Income Guarantee", p. 118.

[78]In the last few years, sex doll brothels have been emerging around the world, as in London, Barcelona, Moscow and Turin. Most of them have already closed down or have been forced to constantly relocate elsewhere in the city. Sex workers' stance on the emergence of sex doll brothels has been mostly negative. As Alissa, a sex worker at a legal brothel in Nevada, claims: "Sex workers offer more than just a simulation of a woman, we offer authentic intimacy and two-way affection that our clients deeply crave and sincerely benefit from […] Offering sex dolls as a substitute for human sex workers is not only an insult to sex workers, but it's also an insult to the millions of clients that seek genuine sexual and emotional connections with professional women like me every day". Besides moral concerns, sex workers raise also economic objections. Sean Keach, "BAD BOTS. Sex robots BACKLASH as brothel workers reveal fury over 'dehumanising and dangerous' droids. Sex workers have joined the growing chorus of voices speaking out against the rise of sex robots", *The Sun*, 18 September 2018, available here https://www.thesun.co.uk/tech/7289486/sex-robots-prostitutes-workers-love-dolls-brothel/ (last accessed January 10th, 2020).

[79]Devlin, *Turned On*, §15.

reasonable for as long as the scientific community stays on a male dominant space which addresses merely a heterosexual male audience. According to her view, however, the total ban of sex robots only reveals prudishness and lack of openness about sex and sexual identities. Devlin states that "machines are what we made them" and argues that their contribution could be beneficial, especially in therapy or even towards the understanding of sex offenders' psychology[80].

No matter which position one holds, however, the important thing to notice is the acceleration of academic interest in the sexualisation of technology; conferences, workshops, seminars and books on the topic multiply rapidly in different parts of the world[81]. The section that follows focuses on a specific case study (Harmony) in order to bring to light the particular social expectations that are invested in the actual market.

II.4 The Case of Harmony: A Discourse Analysis

II.4.1 The Setting

This part attempts a Foucauldian discourse analysis of the advertising campaign of Harmony, the closest artifact to a humanoid robot currently under construction[82]. Although Foucault does not present a strict methodological guide, in the *Archaeology of Knowledge* he offers the principles and the aims of the discursive analysis. In particular, the French philosopher explores the object and the area of knowledge that is discursively produced, he analyses the logic behind

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[80]Kate Devlin, "In defence of sex machines: why trying to ban sex robots is wrong", *The Conversation (UK)*, 17 September 2015, available here https://theconversation.com/in-defence-of-sex-machines-why-trying-to-ban-sex-robots-is-wrong-47641 (last accessed January 24th, 2020).

[81]Leading academic publishers have responded to the phenomenon of companion and sex robots. In 2017, MIT Press publishes a collective volume which contains perspectives from philosophy, psychology, religious studies, economics and law on the possible future of robot-human sexual relationships (*Robot Sex: Social and Ethical Implications*, edit. by John Danaher and Neil McArthur, Cambridge: The MIT Press, 2017). In that same year, Routledge publishes Richardson's book where she examines how robots are currently imagined as companions, friends and therapeutic agents (Kathleen Richardson, *An Anthropology of Robots and AI*, New York: Routledge, 2017).

[82]Although Harmony is not the only robot under examination in this section, "she" was chosen to pose in the title, since all other cases (Henri, Solana and the deliberately left anonymous transgender robot) constitute mere variations of the same thing; they are in fact Harmony's other versions.

the constructed terminology, he looks for the powers that authorised it and, finally, he focuses on the strategic goals that are hidden in the discourse[83].

In the case of Harmony, Realbotix has invested in a big advertising campaign which includes the publication of interviews with members of the research team, documentary-style commercials on the phenomenon of sex robots, advertorials in sex-related websites for more targeted publicity and reports on mainstream media[84]. In the vast majority of the analysed articles, there is a direct or indirect reference to the Realbotix business[85]. To manage better the research material, this part is organised around three axes: in the first section, entitled "Sex Robots and Gender", the analysis explores the creation of Harmony as a female sex robot that targets heterosexual audiences. In the second section, "Sex Robots and Post-Gender", the study investigates the company's assumed opening to non-heterosexual male and female customers. In the last section, "Sex Robots and Hyper-Gender", the research comments on the construction of a robotic gender, understood here as another level of abstraction.

Before passing on to the main analysis, a few introductory comments on the advertising setting are considered necessary to give a general impression of the space into which the artifacts appear. Harmony's promotional videos are often filmed in Realbotix's office in California. The setting serves for the glorification of technology and, through that, for the celebration of human achievements. In general, it can be argued that Harmony's promotion is

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[83]Rainer Diaz-Bone, Andrea D. Bührmann, Encarnación Gutiérrez Rodríguez, Werner Schneider, Gavin Kendall, and Fransisco Tirado, "The Field of Foucaultian Discourse Analysis: Structures, Developments and Perspectives", *Historical Social Research / Historische Sozialforschung*, Vol. 33, No. 1 (123), 2008, pp. 7-28, p. 11.

[84]Among which prestigious media such as: *BBC*, Ciaran Varley, "Are sex robots just turning women into literal objects?", 6 April 2018, available here https://www.bbc.co.uk/bbcthree/article/8bbe0749-62ee-40f9-a8ac-a2d751c474f6 (last accessed January 15th, 2020) and *The New York Times*, Alex Williams, "Do You Take This Robot... Today we fall in love through our phones. Maybe your phone itself could be just as satisfying?", 19 January 2019, available here https://www.nytimes.com/2019/01/19/style/sex-robots.html (last accessed January 20th, 2020).

[85]More than half of the articles collected via the content change detention and notification service of *Google Alerts* had a direct reference to Harmony. In the vast majority of cases, the material under examination had the form of an advertorial, an advertisement with the appearance of editorial content. As it becomes apparent, Realbotix has invested in a big advertising campaign paying Google to rank its products high as well as mainstream sites for the purposes of product placement. It must be noted that Harmony scores high in other research engine machines as well.

based on the triplet of science, art and sex. More analytically, the workplace resembles a science laboratory occupied by employees with masks, glasses and gloves. The set also looks like an art studio where the sculptors craft bodies in a productive delirium[86]. On the other hand, the lab gives the impression of a butcher shop where different "body parts" are hanging from the ceiling: legs, arms, wigs, breasts of different shapes and sizes. Most notably, the head is carefully left on the (surgery-like) table where the control system waits to be inserted.

Figure 9: Harmony, Realbotix. Photos taken from various sources

The closely monitored production is itself a (bloodless) horror movie where the head's "skin" is removed and the mechanical inner parts are vulgarly exposed; in this way, Harmony is being mystified through her de-ciphering. The promotion of the robot is so much based on the innovative technological skills of the research team that the viewer might even forget the

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[86]"The people working on these dolls aren't sweaty deviants. They are artists, craftsmen and scientists. They take pride in their art — every single doll is custom made to order" (Bridget Phetasy, "Keeping up with the sex robots. The uncanny valley of the dolls", *The Spectator*, 15 November 2019, available here https://spectator.us/inside-world-couch-buddy-sex-robot/ [last accessed January 21st, 2021]).

product's main purpose[87]. At the same time, however, the sexualisation of the artifact takes place in the foreground. In other words, the advertising campaign equally promotes the sex out of the robot and the robot out of the sex.

II.4.2 Sex Robots and Gender

At the moment of writing this dissertation, the sex robot industry is creating the prototypes of the artifacts' basic versions. It is far away from developing realistic humanoid robots. For the time being, sex robots are hardly passing for robots. As robotics and artificial intelligence improve, however, the production of realistic sex robots is said to be a matter of time. In this framework, Realbotix invites potential clients to play a doll game: to mix and match different body parts and to compose their perfect partner. Even though the quantity of body members seems impressive at first, the offered choices are mere variations of the same thing; the customer has a big selection of (deliberately) similar body types among which to choose. Ironically, none of the work is automated which means that each doll-robot takes a well amount of time to be constructed[88].

It is worth commenting on a specific incident that took place close to Harmony's launch in 2016. In a short documentary-style advertorial, the viewer watches John (a name usually attributed to the average client of sexual services) visiting Realbotix's office[89]. John is about to order a sex robot and he talks about himself to Matt McMullen, CEO and founder of Realbotix,

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[87]"For the last twenty years, RealDoll has been creating the world's most realistic silicone dolls. Today we are going the next step, creating a robotic head that will have facial expressions as well as eye and mouth movements, a learning capable Artificial Intelligence App, a Virtual Reality system, a head adapter containing a Bluetooth speaker, embedded touch sensors and internal heaters. Going forward, we intend to expand the technical sophistication beyond the head. Ultimately, we're aiming for a fully functional amorous companion". Retrieved from the company's website: https://realbotix.com (last accessed April 1st, 2020).

[88]Phetasy, "Keeping up with the sex robots".

[89]Cara Sant Maria, "Inside The Factory Where The World's Most Realistic Sex Robots Are Built", *Real Future*, published on 10 February 2016, available here https://splinternews.com/inside-the-factory-where-the-worlds-most-realistic-sex-1793854658 (last accessed January 10th, 2020).

for a more personalised service[90]. In short, he presents himself as an introvert man who does not reach out to anybody. When McMullen asks him about his preferences, he replies: "I am looking for beauty, symmetry, for connection […] I want her to be proportioned". McMullen challenges him, "ok, so you do not want anything too over the top, like giant boobs", "Giant boobs are ok", he jokes. McMullen informs him that he would be able to pick up the skin colour of the robot, but John wants to know whether he could play chess with "her". Playing chess with a machine is an activity that keeps returning in this chapter, from von Kempelen's Mechanical Turk to Levy's involvement in computer chess and artificial intelligence. In those cases, however, playing chess with a machine was interpreted as a proof of high intelligence. In the case of sex robots, however, the chess game provides connection and communication at a higher level, sophisticating at the same time the product.

In the same direction, McMullen often declares that he wants to break free of the sex toy stigma[91]. Without questioning the aesthetic aspect of his product nor the context into which that arises, he argues that Harmony does not differ from a companion robot. As he claims in particular,

> yes, people use them [the sex robots] sexually, but they also get this huge sense of companionship from having a doll and a robot. It occurs to me that perhaps the way we view the "love dolls" is just an extension of so many of our hardwired and socially reinforced beliefs about women. Women who are sexy struggle to be taken seriously as thinkers and writers[92].

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[90]McMullen is the creator of Realbotix's robots and the leading figure in Harmony's advertising. He is said to have revolutionised the sex toy industry when he launched Nina, the first sex doll sold under the RealDoll brand name by Abyss Creations in 1996.

[91]"One natural question is 'Why create a human companion rather than a sex partner?' After all, RealDoll is known for making sex-capable dolls. However, one important aspect of customers' interaction with their doll is the role and the persona they create and imagine for their doll. Far more than being a simple object they are closer to an action figure that represents a character. Hence, an important part of Harmony's design is to allow the user to define the personality that matches the personality they wish to project as part of their imaginative interaction". Coursey et al., "Living with Harmony", p. 86.

[92]As quoted in: Phetasy, "Keeping up with the sex robots", (Emphasis added).

Harmony's current versions are beyond any doubt hypersexualised. The robot's big lips, over-sized breasts, empty gaze and cliché answers are assumed to be built to imitate and perfect female features[93]. The association of femininity and masquerade, however, is based on an inverted logic which arbitrarily links the terms in a causal manner. As Mary Ann Doane argues, it is not the masquerade that duplicates femininity, it is rather "[…] femininity itself which is constructed as a mask – as the decorative layer which conceals a non-identity"[94].

The concept of the masquerade has been widely explored in feminist theory. It was introduced by Joan Rivière in her research on the intellectual woman. More analytically, in her essay back in 1929, Rivière notes that womanliness is constructed as a mask which protects the woman to be discovered to possess masculinity. To better describe the coverage that this mask offers, she uses the metaphor of the thief who "will turn out his pockets and ask to be searched to prove that he has not the stolen goods"[95]. It must be highlighted that the mask does not work as an extra feature that can be removed exposing woman's real face. According to Riviere, there is no clear line between genuine womanliness and masquerade; "whether radical or superficial, they are the same thing"[96].

In this direction, the real question is not how dolls or robots mirror femininity, as if the latter were an original to be imitated, but rather how women are expected to fashion and produce themselves in accordance with the symbolic abstractions of seduction. In that sense, there is no

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[93]The Director of Engineering of Realbotix, Susan L. Pirzchalski, shares on camera a personal story to justify the fact that she, as one of the few women in the team, has chosen to participate in this business. She informs the public that she has herself bought a sex doll for her husband. After admitting feeling jealous at first, because, "apparently" as she claims, she is not a beautiful woman, or at least not as beautiful as the object is, she finally came to the conclusion that the doll could not influence her relationship with her husband, arguing, in addition, that the same could apply to robots as well. In her attempt to prove that she has not been a "gender traitor", Pirzchalski reassures the female audience that women's position is not in danger, even though the sex robots could turn out to be superior in beauty. The material derives from the Channel 4 documentary *The Sex Robots Are Coming* (2017) directed by Nick Sweeney.

[94]Mary Ann Doane, "Film and the Masquerade: Theorising the female spectator", *Screen*, Vol. 23, Issue 3-4 (September-October 1982), pp. 74-88, p.81.

[95]Joan Rivière, "Womanliness as a masquerade", *The International Journal of Psychoanalysis*, Vol. 10 (1929), pp. 303-313, p. 306.

[96]Ibid.

true or pre-existent femininity not only behind the robots but also before the woman herself and, as Butler states, "the parodic repetition of the 'original' [...] reveals the original to be nothing other than a parody of the idea of the natural and the original"[97]. In this way, Harmony does not replicate women, she rather exposes a series of gender and sexual expectations invested in new technologies.

Made to look as a Caucasian teenage-looking girl, Harmony is Realbotix's standard product. Solana, on the other hand, is the company's highly exoticised robot which comes with brown skin, black tousled hair, dark eyes, full lips and enlarged silicone implants. This fetishised Latina version exposes the industry's racial connotations and the specific demographic of the audience. It can be easily observed that Solana is being far less advertised than Harmony. Calling for equal representation in this case, however, presupposes that the sex robots constitute a territory worth fighting for. This study would like to argue, instead, that visibility in this context does not mean recognition and acceptance. Escaping representation, on the other hand, might be a better way of negotiating the future. As Butler states in particular,

> [w]hat remains "unthinkable" and "unsayable" within the terms of an existing cultural form is not necessarily what is excluded from the matrix of intelligibility within that form; on the contrary, it is the marginalized, not the excluded, the cultural possibility that calls for dread or, minimally, the loss of sanctions […] The "unthinkable" is thus fully within culture, but fully excluded from dominant culture[98].

The core of the argument of those in support of the production of sex robots lies in the possibilities of gratification, companionship and visibility they offer as long as their design moves away from a hetero-normative, sexist and racist representation. In this framework, their arrival is welcome as long as attention is paid on how they are made to look like. In that sense, there are robots that are good and there are robots that are bad, as if technology were an artificial

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[97]Butler, *Gender trouble*, p. 41.
[98]Ivi, pp. 98-99.

tool clearly distinguishable from its user. There is a vicious cycle in the dualistic reasoning above, maybe because answers are provided to the wrong set of questions. To better understand what it means to have robots with transgressive power over gender roles, the next section focuses on the company's experimentation with different "forms" that are supposedly designed to target diverse audiences.

II.4.3 Sex Robots and Post-Gender

Realbotix argues that its robots are designed according to clients' preferences. In this sense, the aesthetic value of the artifacts is a strategic choice of the company to target the customers with the greater consuming power. The firm's initial intentions, however, are said to go beyond the feminisation of robots. The company has indeed announced the production of male (Henry) and transgender (anonymous) sex robots which would be made after special order[99].

It is not, however, the aesthetic aspect alone that needs modification. The company claims that its Artificial Intelligence Database, initially programmed for Harmony, must be masculinised if it is for Henry to become convincing as a male robot[100]. From a heteronormative perspective, the research team finds Harmony's "female-coded" speech patterns to be a current flaw blocking Henry's success. The bot's answers are often depicted to cause laughter and confusion. For instance, in an advertorial in 2019, McMullen asks the machine, "Henry how was your day?", and the robot replies "Just fine, baby […] But when are you going to take me out for dinner?"[101]. According to the researched material, however, Realbotix considers that the same features could eventually be turned into an advantage when the company expands its

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[99]Devlin notes in particular that "[…] sex dolls are niche, sex robots are more niche, and male sex robots are, perhaps, the most niche of all" (*Turned On*, §12).
[100]In the promotional material, Henry is depicted as Realbotix's answer to accusations of sexism, as though the introduction of a male sex robot is enough to claim inclusiveness.
[101]Ellis, *You Are Already Having Sex With Robots*.

offerings to LGBTQ+ buyers. In that case, the same speech patterns might become an asset for "projecting queerness".
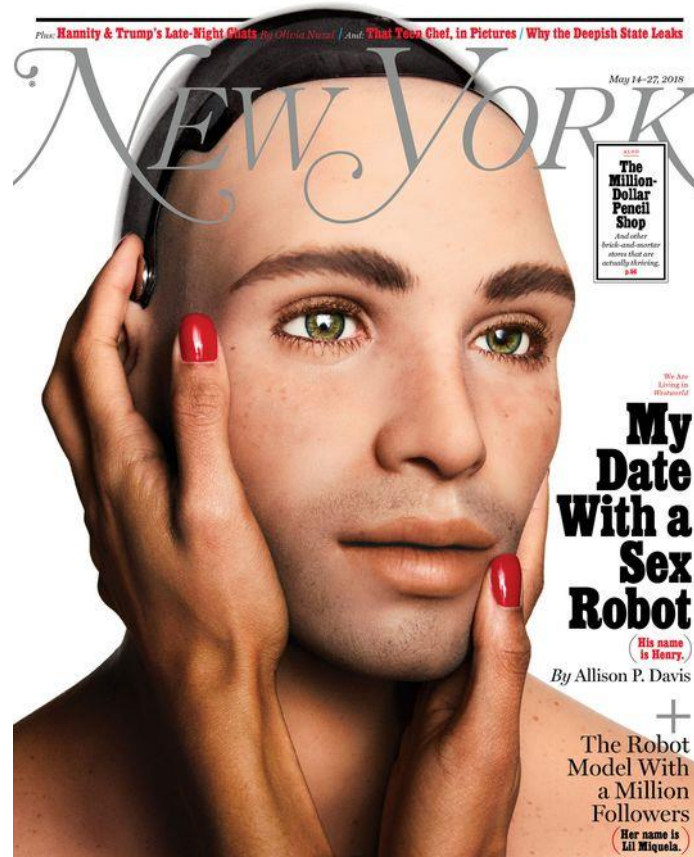

Figure 10: New York Magazine, cover, 14 May 2018

This study would like to argue that, far from an inclusive strategy, Realbotix's interest in creating other than hyper-feminised sex robots is a case of queerbaiting, that is to say of a marketing technique by which companies seek to approach LGBTQ+ audiences without actually meeting their needs and without risking losing other customers by challenging stereotypes in any meaningful way. McMullen's statements are indicative:

> what used to be considered taboo or wrong is now becoming acceptable because we are starting to accept each other's differences and starting to understand that is what makes each of us "us".

> I think […] as people are coming to terms with gay-marriage, transgenderism and all these other sorts of things, they are going to look at the phenomenon the same way, they are going to say, "if this is making this guy happy, who am I to judge?"[102]

According to this reasoning, a sex robot would not only give pleasure to potential clients, but it could also contribute to society's general progress. The exact same logic can be found in Levy's presentation at the Congress in 2016, entitled "Why Not Marry a Robot?"[103]. More analytically, Levy refers to the history of the legal evolution of interracial and same-sex marriage in order to strengthen his position in favour of the robot-human marriage which, as he claims, is expected to happen sometime before 2050[104]. This correlation among gay people, transgender people and sex robots' users, however, besides promoting a fruitless relativism and blocking any intellectual work on the topic, ignores a history of oppression, violence and struggle and degrades a human rights' discourse only to capitalise on it.

Realbotix's launch for male and transgender sex robots can be better approached through a postfeminist reading offered by critical media studies. In this context, postfeminism is understood as a discourse which invokes feminism only to render it immediately obsolete. According to this reasoning, equality has always already been achieved and, therefore, feminism is conveniently both taken for granted and no longer needed. This postfeminist conceptualisation of sex robots can be found in the comment section of the analysed articles where these artifacts are often pictured as a direct aftermath of the #MeToo movement. In that framework, the sex robots are widely understood as a solution to an assumed tyrannical regime of feminist puritanism which has made any potential sexual encounter difficult[105].

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[102]As cited in the 2017 documentary *The Sex Robots Are Coming*.
[103]David Levy, "Why Not Marry a Robot?", in *Love and Sex with Robots, Second International Conference, LSR 2016 London, UK, December 19-20, 2016, Revised Selected Papers,* edit. by Adrian David Cheok, Kate Devlin and David Levy, London, Springer, 2017, pp. 3-16.
[104]Ivi, p. 3.
[105]The comments section under the analysed articles is often an occasion for hate speech and misogynist remarks. This is not a rare phenomenon on the internet, let alone in pages of sex-related content. It is worth mentioning just a few of these comments to give the reader a better understanding of the debate: "In places where men outnumber women by 7 to 1 it makes more sense to have these dolls available, than make a woman marry 7 men and to avail herself to each one on a different night. The feminists may want to put themselves in that situation for a moment.

In a similar way, Levy refers to men's "inability" to sometimes recognise the absence of consent, a problem that, according to his view, can be resolved with the use of sex robots. In particular, he argues that women could feel safer, since "[…] male function sex robots will have access to a far wider range of information about consent than human males"[106]. There is a logical leap that seeks to associate man's desire to be gratified and women's right not to be violated. However, not to have sex when one wants is not the same as having "sex" when one does not consent to. In a distorted way, the notion of consent is being conceptualised as a code that men cannot always crack.

The notion of consent is in fact very present in the public debate on sex robots. In this framework, women are generally made to look as if exaggerating whereas men are often unwilling to be held accountable. In this context, sex robots appear as a *deus ex machina*. As it becomes apparent, feminist demands are not merely ignored, as various polemic voices in academia claim, they are rather incorporated, revised, depoliticised and attacked[107].

II.4.4 Sex Robots and Hyper-Gender

As robotics and artificial technology develop, the sex robots are expected to get a more convincing humanlike appearance[108]. They are expected to even contain dimples and

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What's your preference??" (Charlotte Edwards, "BOT BONKERS. Sex robot reviews and 'unboxing' videos are latest bizarre YouTube trend", *The Sun*, 28 November 2019, available here https://www.thesun.co.uk/tech/10442670/sex-robot-reviews-unboxing-videos-youtube/ [last accessed April 24th, 2020]); "Can they run to the kitchen and make a sandwich afterwards? I love a nice BLT after a session", "There are already plenty of plastic women out there who are sex dolls in all but name!", "It didn't say they cook and clean. Some women don't either!", "Sounds great. All the advantages of a washing machine" (Alahna Kindred, "LOVE MACHINE. Sex robots will be 'difficult to tell apart from humans' after AI upgrade, says sexbot boss", *The Sun*, 13 October 2019, available here https://www.thesun.co.uk/news/10126567/sex-robots-humans-upgrade/ [last accessed April 24th, 2020]).

[106]Michael Moran, "Sex robots 'could be guilty of rape if their programming fails'", *Daily Star*, 2 July 2019, available here https://www.dailystar.co.uk/news/weird-news/sex-robot-rape-international-congress-18672803 (last accessed April 24th, 2020).

[107]Rosalind Gill, "Postfeminist media culture: elements of a sensibility", *European Journal of Cultural Studies*, Vol. 10, Issue 2 (May 2007), pp. 147-166, p. 161.

[108]McMullen claims that in a few years identical humanlike robots could be possible. He places their AI capacity, however, in a mammal scale keeping like this a safe distance from the human intelligence. David Rivers, "Sex robots with 'identical human appearance' unveiled in ground breaking AI footage", *Daily Star*, 23 January 2020,

birthmarks, since imperfection is considered to be part of the humanoid form. Regarding specifically the robotic sex, however, the non-distinguishable reality from the fantasy element is not just a phase to be overcome. The sex robots step out, instead, from a scenario of hyper-reality, where, as Umberto Eco argues, "[…] what counts is not the authenticity of a piece but the amazing information it conveys"[109]. In the *Travels in Hyperreality*, Eco comments on America's obsession with simulacra listing a series of worlds of fantasy: wax museums, hologram shows, superman's fortress of solitude and, most importantly, theme parks such as zoo-parks and the emblematic Disneyland. In this framework, Eco explores the complicated relation between the "fake worlds" and the "real ones". His description of the Palace of Living Arts, a now former wax museum in Buena Park, Los Angeles, is indicative. The text in brackets suggests the re-reading of the passage through the lens of a sex robot producer.

> The Palace's philosophy is not, "We are giving you the reproduction so that you will earn the original," [we are not giving you the sex robot so that you will earn a partner] but rather, "We are giving you the reproduction so you will no longer feel any need for the original." [we are giving you the robots so you will no longer feel the need for a partner]. But for the reproduction to be desired, the original has to be idolized [the woman, the partner] and hence the Kitsch function of the inscriptions and the taped voices, which remind you of the greatness of the art of the past [nostalgia for the woman]. In the final room you are shown a Michelangelo Pietà […] made (as you are duly informed) by a Florentine artisan, and, what's more as the voice tells you, the pavement on which the statue stands is made from stones that came from the Holy Sepulcher in Jerusalem (and hence there is more here than in St. Peter's, and it is more real) [likewise the sex robots could offer much more than what a sex partner would offer].[110]

In this regard, even though the sex robots seem to imitate a sex partner and to manifest sexual experimentation, they distort a reality which, however, has never existed as such. To better describe this process, this study would like to coin the term "hyper-gender": a robotic sex that seems to imitate a real one through exaggeration, only to transfer the abstraction to

available here https://www.dailystar.co.uk/news/latest-news/sex-robots-identical-human-appearance-21343768 (last accessed February 10th, 2020).
[109]Umberto Eco, "Travels in Hyperreality", in *Travels in Hyperreality Essays*, transl. by William Weaver, New York: Harcourt Brace Jovanovich Publishers, 1986, pp. 1-58, p. 15, (Emphasis added).
[110]Ivi, p. 19.

another level. The term "hyper-gender" has already been used in various contexts with different significance such as in psychoanalytic literature to refer to hypermasculinity and hyperfemininity[111]. It has also been applied elsewhere to indicate a passage beyond gender labels[112]. In the framework of this study, however, the robots' hyper-gender refers to the process of gendering of new technologies which is achieved through parody, constituting the quintessence of consumer ideology.

In the same direction, the work of Jean Baudrillard *Simulacra and Simulation* ([1981], 2006) has had a great influence on this study[113]. More specifically, Baudrillard does not interpret the simulacrum as a passive copy, as a mere reproduction, but he rather reads it as a productive force. To explain better this process, he uses the allegory of the fake illness: "[w]hoever fakes an illness can simply stay in bed and make everyone believe he is ill. Whoever simulates an illness *produces* himself some of the symptoms"[114]. In a similar manner, a sex robot does not pretend to be itself a sex partner or to have a gender and a sexuality. In any case, a thing that can only pretend is a thing that cannot pretend, since to pretend means to be able to act differently[115]. In this regard, sex robots do not pretend to have a gender, they are instead producing one: a hyper-gender which has no linear relation to an "original one". The simulation is thus a much more complicated condition than the one of pretending or dissimulating. The latter ones seem to leave the principles of reality intact. The simulacrum, on the other hand, threatens the difference between the true and the fake, the real and the imaginary. In this way, the hyper-gendering of new technologies jeopardises the process of gendering itself; "the impossibility of rediscovering an absolute level of the real [gender] is of the same order as the

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[111]Merle E. Hamburger, Matthew Hogben, Stephanie McGowan and Lori J. Dawson, "Assessing hypergender ideologies: Development and initial validation of a gender-neutral measure of adherence to extreme gender-role beliefs", *Journal of Research in Personality*, Vol. 30, Issue 2 (June 1996), pp. 157-178.

[112]Asmaa Guedira, "How my coming-out and job-out led me to Hyper-Gender", *Medium*, 3 July 2016, available here https://medium.com/@asmaaguedira/hyper-gender-de11adc7e460 (last accessed April 24th, 2020).

[113]Jean Baudrillard, *Simulacra and Simulation*, transl. by Sheila Glaser, Ann Arbor: University of Michigan Press, (1981) 2006.

[114]As cited in: Ivi, p. 4. (Emphasis added).

[115]Turkle, *Alone Together*, p. 124.

impossibility of staging illusion [hyper-gender]. Illusion is no longer possible because the real is no longer possible"[116]. *Simulacra and Simulation* has been an extremely popular reference in sci-fi culture. Its content, however, is sometimes misinterpreted[117].

Baudrillard sidesteps the question of whether the simulation replaces a real version that indeed existed, or whether simulation is all there has ever been. Deleuze and Guattari, on the other hand, solve this problem by answering affirmatively to both questions[118]. According to their view, the simulacrum produces the "real", or, to put it more emphatically, the simulacrum ends up being more real than the original version ever did. In the context of hyperreality, signs no longer represent or refer to an external model. Brian Massumi perfectly explains how copy and model operate in this context:

> The terms copy and model bind us to the world of representation and objective (re)production. A copy, no matter how many times removed, authentic or fake, is defined by the presence or absence of internal, essential relations or resemblance to a model. The simulacrum bears only an external and deceptive resemblance to a putative model[119].

Bizarrely, it is not the much-anticipated human-likeness of sex robots that produces the sense of uncanny, it is rather the very opposite, the unmasked difference, that threatens the coherence of the real. In that sense, "the resemblance of the simulacrum is a means, not an end […] Resemblance is a beginning masking the advent of whole new vital dimension"[120]. In conclusion, the distinction between a copy and an original is not one of degree as in the case

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[116]Baudrillard, *Simulacra and Simulation.*, p. 19.

[117]"Welcome to the desert of the real" says Morpheus to Neo when he first leaves the Matrix and sees what reality looks like (Dir. and Screenplay by The Wachowskis, Perf. Keanu Reeves, Laurence Fishburne, Carrie-Anne Moss, Warner Bros. Picture, 1999). *The Matrix* represents a fake world, escaping from which means waking up in the real one. The film clearly refers to Plato's cave myth. There is another important reference, however, in the scene where Neo opens a hollowed-out book: Baudrillard's *Simulacra and Simulation*. Nevertheless, it must be noted that Baudrillard's simulacrum differs from both the cave of Plato and the Matrix. For the French philosopher, simulation and reality are in fact indistinguishable. In that sense, finding reality is not a high goal.

[118]Gilles Deleuze and Félix Guattari, *Anti-Oedipus. Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem, and Helen R. Lane, New York: Viking, (1972) 1977, p. 87.

[119]Brian Massumi, "Realer Than Real. The Simulacrum According to Deleuze and Guattari", *Copyright*, No.1 (1987), pp. 90-97, p. 91.

[120]Massumi, "Realer than Real", p. 91.

of a man who pretends to be a machine that pretends to be a man who pretends to be a statue[121].

Instead, the phenomenon of sex robots points to a different nature altogether: it undermines the very distinction between the copy and the model.

II.5 Sexual Technologies and Posthuman Critical Theory: An Affirmative Response

The current scholarship on the sex robot phenomenon focuses largely on their potential aftermath. On the one hand, sex robots are pictured as a solution to loneliness and isolation, as a treatment to human trafficking and as a substitute for sex work. On the other hand, these robots are elsewhere depicted as generators of violence, sexism and racism. This study distances itself from both readings and adopts a critical approach inspired by Turkle's reading of companion robots: "the idea of a robot companion serves as a symptom. Like all psychological symptoms, it obscures a problem by 'solving' it without addressing it"[122]. Instead of playing with the symptom, this section seeks to offer an affirmative theorisation of sexual technologies that goes beyond any technophobic and technophilic assumption. To do so, the study adopts a posthuman critical perspective as presented in Chapter I.

More specifically, in the *Cyborg Manifesto* Haraway provides a theoretical framework for exploring the feminist possibilities of technologies. Central figure in her work is the cyborg, a blend of cybernetic and organic matter, hence a person who is partly a machine or vice versa. One is not expected to have mechanical parts, of course, to be able to act as a cyborg. The image of the cyborg constitutes instead an ironic political allegory which, as previously argued, could offer not only the displacement of Man from the category that mostly defines "him" (Human), but it could challenge the ways in which the categories are generally articulated. In that sense, the cyborg could be read as a transgressive potential for gender roles. Rather than

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[121]Kang, *Sublime Dreams of Living Machines*, p. 15.
[122]Turkle, *Alone Together*, p. 283.

describing a given situation, Haraway points to a possible and desirable direction, the breaking of all dualisms, the smashing of the very structures of inequality. In this context, a cyborg could theoretically go beyond gender, racial and species lines. According to Haraway's allegory, however, the transgressive power of the cyborg is hidden in its disobedience. As she artfully points out, the cyborg is "[…] the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offsprings are often exceedingly unfaithful to their origins. Their fathers, after all, are inessential"[123].

In this regard, the production of hypersexualised robots that is based on an individualistic consumption of quantitative goods does not offer any emancipatory potential. This is not only because of the robots' aesthetic value, as their opponents often argue, but mostly because of the particular context into which these robots emerge. This does not mean, of course, that the robots' current versions do not promote a sexist attitude towards women. It rather means that by merely decreasing the size of their sexualised parts or by producing masculinised versions their production does not become immediately unproblematic. In any case, there is nothing inherently wrong, provocative or disgraceful with big breasts and lips, it is rather the sexualising process of the high-tech culture that raises questions of commodification of bodies.

For as long as sex robots remain techno capitalism's "favoured offspring" (in the sense of machines that do not threaten the status quo or, better yet, that facilitate the reproduction of a system much like a good offspring ought to do), they would remain the product of the same hetero-patriarchal and consumeristic logic no matter their assigned gender, sexuality, race, age, body shape and abilities. After all, "the master's tools will never dismantle the master's house"[124]. Cyborg's transgressive power, on the other hand, can be found in the ruptures, gaps

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[123]Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century", in *Simians, Cyborgs, and Women. The Reinvention of Nature*, New York: Routledge, 1991, pp. 149-181, p. 151.
[124]Audre Lorde, "The Master's Tools Will Never Dismantle the Master's House", in *Sister Outsider: Essays & Speeches,* Berkeley: Crossing Press, 2007, p. 112.

and holes of a "system" (of a virtual or of an actual system, of an AI system or of the patriarchal system). From a posthuman critical perspective, there are indeed feminist possibilities for technologies that, however, reside in places other than the sex robot market.

II.6 Final Points

In the end of *Metropolis*, the patriarchal order is restored through the burning of the witch-machine and through the re-appropriation of sexuality and technology by the ruling class. In that context, Maria, as a *deus ex machina* no longer needed, is destroyed for justice to return. In *Ex Machina*, on the other hand, Ava covers her nude mechanical parts with the artificial skin of the non-functioning robots of previous versions, her ancestors' history, and finds herself in a busy crossroad. In the safety of a busy metropolis, she can mingle with the crowd while remaining unnoticed.

On a different note, Harmony's ending is difficult to be foreseen and only speculative hypotheses can be made. There is, however, one thing that is safe to say for now: sex robots are being produced in order to be consumed as such, as artifacts not perfectly resembling human beings. Their symbolic value derives from the sexualisation of technology in which both components, the sexualising part and the technical aspect, play equally significant role[125]. In this regard, the real concern about sex industry's investment in "new" technologies is not (that much) their aesthetics, as vulgar is tasteless, rather than the basis upon which the promise of pleasure, sexual experimentation and companionship is built: that of a digital-consumerist system which re-constructs sexuality as a commodity and renders any human interaction superfluous and therefore avoidable. Zygmunt Bauman had foreseen this tendency:

> […] in a consumer culture like ours, which favours products ready for instant use, quick fixes, instantaneous satisfaction, results [are] calling for no protracted effort, foolproof recipes, all-risk

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[125]For more on the symbolic and sign value, see; Jean Baudrillard, *For a Critique of the Political Economy of the Sign*, transl. by Charles Levin, New York: Telos Press, 1981.

insurance and money-back guarantees. The promise to learn the art of loving is a (false, deceitful, yet keenly wished to be true) promise to make "love experience" in the likeness of other commodities, that allure and seduce by brandishing all such features and promise to take the waiting out of wanting, sweat out of effort and effort out of results[126].

In conclusion, this chapter was dedicated to sex industry's appropriation of robotics and artificial intelligence technology mainly by focusing on the gender and sexual connotations of the sex robot market. The journey began with the exploration of the automaton as a mythical, philosophical, religious and actual object in ancient, pre-modern and early modern writings. It proceeded with the emergence of the robot in the industrial context. The gender and sexual implications of the robot's arrival were first approached through the presentation of relevant cultural depictions (*Metropolis*, *Ex Machina*). The research moved on with the examination of the phenomenon of sex robots, mainly focusing on the case study of Harmony. Finally, this chapter came to an end with the exploration of the feminist possibilities of technologies.

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[126]Zygmunt Bauman, *Liquid Love: On the Frailty of Human Bonds*, Cambridge, Polity, 2003, p. 7.

CHAPTER III

PORNOGRAPHY AND EMERGING TECHNOLOGIES:

AN ENTANGLED HISTORY

III.1. Introduction

From *The Twilight Zone*[1] to the *Black Mirror*[2] series, sci-fi fantasies of alternative realities are often present in the cultural domain of different contexts. In various pop culture products, characters are often depicted to use (or to be tricked into using) high tech implants that allow them to have an escapist experience; their eyes roll over their heads, sightless to the present and glazed over like the waking dead[3]. These parallel universes are often either a replica of the protagonists' past, as with the memory implant of "The Entire History of You" episode of *Black Mirror*[4], or a fake (implanted) memory as in *Blade Runner* or a reality distorted by an authority which abuses technology to manipulate citizens as in *The Matrix*. Parallels can be drown between this escapist urge to leave everything behind while being drawn into another reality and the insatiable desire of an endless scrolling down that is so common in today's use

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[1]A work about today's fantasies of tomorrow's technologies could not be complete without a special reference to *The Twilight Zone*, the TV series that created the field in the first place (executive producer Rod Serling, production companies Cayuga Productions, Inc. and CBS Productions, original network CBS). More specifically, *The Twilight Zone* is a successful American anthology television series that was created by Rod Serling for the CBS. From 1959 to 1964 and for 156 standalone episodes, protagonists found themselves in unusual events that made "twilight zone" a synonym of surreal experiences of horror and of supernatural.

[2]*Black Mirror* is a British anthology series (executive producers Annabel Jones and Charlie Brooker, production companies Zeppotron [2011-2013] and House of Tomorrow [2014-present], original network: Channel 4 [2011-2014] and Netflix [2016-present]). Often called "the Twilight Zone of the 21st century", *Black Mirror*'s standalone episodes explore modern society's near future where the excessive use of technology causes major disruptions. The series can be interpreted as a dystopian science fiction work with the dark tone that its title implies.

[3]Eleanor Drage, "A Virtual Ever-After: Utopia, Race, and Gender in Black Mirror's 'San Junipero'", in *Black Mirror and Critical Media Theory*, edit. by Angela M. Cirucci and Barry Vacker, London: Lexington Books, 2018, pp. 27-39, p. 31.

[4]"The Entire History of You", *Black Mirror*, episode no. 3, series 1, dir. by Brian Welsh, writ. by Jesse Armstrong, original air date December 18th, 2011.

of technology; the shutting down of the mind, the distancing of the self and the total immersion into another reality. These observations in the form of a free association are the points of departure of this chapter which seeks to explore how today's fantasies of tomorrow's technologies are currently framing (while being also framed by) gender and sexuality. Specifically, this tendency to look for distraction and relief from an unpleasant reality by seeking entertainment or by engaging in fantasy is applied (among other technological developments) to virtual reality technology, a part of the so-called fourth industrial revolution[5].

Much like in the previous chapter where the appropriation of robotics and artificial intelligence technology by the sex industry was explored, this chapter focuses on the entangled relationship between pornography and emerging technologies[6]. This chapter arises from the observation that any research on pornography must take under serious consideration the means used for its realisation. Afterall, as Joseph W. Slade artfully points out, "whenever a person

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[5]Since the middle of the last century, a digital revolution is believed to be taking place, involving the convergence of advanced technologies, such as robotics, artificial intelligence, nanotechnology, biotechnology and the Internet of Things. This fusion of technologies is considered to blur the lines between the physical, the digital and the biological spheres, indicating capitalism's transition towards enhanced cognitive power which in its turn augments human production. For more on this, see: Klaus Schwab, "The fourth industrial revolution. What It Means and How to Respond", *Foreign Affairs*, 12 December 2015, available here https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution (last accessed September 14th, 2020).

In the critical posthuman framework, Braidotti links the fourth industrial revolution to the sixth extinction phenomenon. As she claims in particular, "[…] we are currently situated in a posthuman convergence between the Fourth industrial Age and the Sixth Extinction, between an advanced knowledge economy, which perpetuates patterns of discrimination and exclusion, and the threat of climate change devastation for both human and non-human entities" ("Posthuman Knowledge", *Harvard University GSD, Gund Hall Piper Auditorium Lecture*, 12 March 2019, available here https://www.gsd.harvard.edu/event/rosi-braidotti/ [last accessed September 14th, 2020]).

The sixth extinction, on the other hand, refers to the dying out of species during the present geological era as the result of human activity. For more on this, see: Elizabeth Kolbert, *The Sixth Extinction*, New York: Henry Holt Company, 2014.

[6]The (vague) term "industry" is not always appropriate to define a nonhomogeneous field as the one of pornography. As Clarissa Smith and Feona Attwood argue, "[…] we need a detailed and nuanced understanding of how various businesses – from the multinational to the sole-trader – work. We also need to explore the particular national and regulatory frameworks in which those businesses operate, and how market competitiveness is structured in particular environments" ("Anti/pro/critical porn studies", *Porn Studies*, Vol. 1, Issue 1-2 [March 2014], pp. 7-23, p. 16). In this regard, whenever in this study the phrasing "porn industry" is used, it refers to the mainstream profitable business of cyberporn that has been organised within the Web 2.0 context and which shares the precise characteristics that are explained in the third part of this chapter.

invents a technology, another person will invent a sexual use for it"[7], a hypothesis very much confirmed in the case of pornography. Apart from the exploration of a series of technologies that have been used for sexual purposes for quite some time now (such as the VCR and the Internet), this chapter seeks to investigate pornography's much anticipated next step: the virtual reality porn universe. At this moment, the virtual reality porn market is still at an early stage; it is considered to have appeared less than five years ago (2016)[8]. At a first glance, this lack of temporal distance might be interpreted as a defect of this study, as if it were too soon to reflect upon these issues. On the other hand, however, this proximity could provide a privileged perspective onto the theoretical exploration of a genre of representation at the very moment of its appearance.

For symmetry purposes and wherever this is suitable, this chapter follows the structure of the previous one. It is divided into four distinct parts in each of which a different method is applied: the first one seeks to indicate how the very concept of pornography emerged in the first place (archaeology) and how complicated networks of power relations were involved in this process (genealogy). The second part attempts to offer a definition of pornography and to contextualise the analysis within the framework of Porn Studies (literature review). The third part examines the actual market of virtual reality pornography through a precise case study (discourse analysis) while the fourth one explores a series of cultural products that take place at the very intersection of gender, sexuality, pornography and virtual reality technology.

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[7]Joseph W. Slade, *Pornography and Sexual Representation: A Reference Guide*, Westport: Greenwood Publishing Group, 2000, p. 9.

[8]Hints of what virtual reality pornography might become were already present as early as in 1996. *Cyborgasm*, for example, a compilation of sexual vignettes on compact disc, is said to have offered one of the first virtual reality sex experiences. It was produced by Lisa Palac, editor of *Future Sex* magazine. For more on that, see: John Corbett and Terry Kapsalis, "Aural Sex: The Female Orgasm in Popular Sound", *Experimental Sound & Radio*, Vol. 40, No. 3 (Autumn 1996), pp. 102-111.

For the purposes of this study, however, virtual reality pornography is considered to have emerged in 2016, the year that Pornhub, the successful pornographic tube site with millions of visitors on a daily basis, inaugurates a virtual reality category and gives away free goggles to its users.

More analytically, in the first part, an archaeological reading of pornography is attempted. As previously explained, in the Foucauldian framework, archaeology is a "method" that does not rest on the primacy of the consciousness of individual subjects as traditional historiography often does. In that sense, this analysis does not read the sexual depictions of previous times as history documentary material, it rather provides the very questioning of these documents[9]. In other words, the present study does not aim to narrate a story in any linear way, it rather seeks to showcase how various technological developments, from the stag film to the personal computer, have changed the expectations of pornography. On the other hand, the analysis focuses on Foucault's central themes (body, power and knowledge) by seeking to expose how pornography becomes an epistemological field (*episteme*) that hides the power arrangements that control (and produce) the body underneath. It must be noted that in this research the emphasis is placed on the communication technologies, also known as information technologies, which are used to process and communicate information, such as the Internet, multimedia and other sound-based and video-based communication means.

The second part of this chapter seeks to provide a definition of the research field. It might seem problematic that the definition of pornography is not placed at the beginning of this chapter. This is, however, a deliberate choice on the part of the author, since it better captures the experience one has after being exposed to pornography; first the viewer reacts involuntary to a stimulus and afterwards he (or she) reflects upon the nature of that impulse. In this part, the analysis situates itself within the framework of Porn Studies and presents the social and cultural implications of this positioning.

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[9] Garry Gutting and Johanna Oksala, "Michel Foucault", in *The Stanford Encyclopedia of Philosophy*, first published April 2nd, 2003, Spring 2019 Edition, ed. Edward N. Zalta, available here https://plato.stanford.edu/archives/spr2019/entries/foucault/ (last accessed September 14th, 2020).

After having approached pornography as an epistemological field, the third part of this chapter focuses on the future of pornography as being discursively produced by the mainstream porn industry[10]. To achieve this goal, this work concentrates on a precise case study, on the popular and successful platform of Pornhub, a Canadian origin site of amateur and professional pornographic content. The material of this part mostly derives from *Pornhub Originals VR*, a channel that has been offering virtual reality pornographic material on the platform since 2016.

The last part of this chapter brings to light another element of the porn industry's future: the aspect of gamification, shortly defined as "[…] a process of enhancing a service with affordances for gameful experiences in order to support user's overall value creation"[11]. In this context, parallels are drawn between the businesses of virtual reality porn and virtual reality video gaming. Having explored at first how the future of pornography is commercially promoted, the analysis then shifts towards the ways in which the expectations of pornography are depicted in pop cultural products; how, in other words, virtual reality pornography becomes thinkable and, in that sense, intellectually possible. The case study of this part is *Black Mirror*'s episode "Striking Vipers" that was released on Netflix in 2019[12]. This final part aims to showcase how bestselling cultural products have contributed to the legitimation of porn industry's leading role in the development of niche technologies.

Before proceeding to the main analysis, it is important to mention that the originality of this study lays in its unique way to conceptualise virtual reality pornography, as a separate category of porn which (although not here yet) has been always symbolically here, mirroring

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[10]The "mainstream version" of pornography indicates the genre's marked gender asymmetry in its circuit of communication. More specifically, it refers to pornographic material that "[…] has been produced predominantly by men for a male audience, and, material for gay men notwithstanding, with the primary object as female" (Simon Hardy, "The New Pornographies: Representation or Reality?", in *Mainstreaming Sex. The Sexualization of Western Culture*, edit. by F. Attwood, London, New York: I. B. Tauris & Co. Ltd, 2009, pp. 3-18, p. 5).

[11]Kai Huotari and Juho Hamari, "Defining Gamification: A Service Marketing Perspective", in *Proceedings of the 16th International Academic MindTrek Conference*, New York: ACM, 2012, pp. 17-22, p. 19.

[12]"Striking Vipers", *Black Mirror*, episode 1, series 5, dir. by Owen Harris, writ. by Charlie Brooker, original release date June 5th, 2019.

back to us the ultimate porn fantasy: the truly realistic sexual experience with a porn performer [13]. Even though scholarship on virtual reality technology as well as that on pornography have both proliferated over the past few year -so much so that it has become nearly impossible to follow-, an analysis of their intersection(s) has yet not been attempted, at least not in the form of a monograph. This study comes to fill this gap.

Finally, it is important to note that this work acknowledges that the various porn industries have different local histories, diverse legal regulations, star systems, awards, etc. In this regard, this study does not (and could not) provide a universal reading of pornography, it rather deals with its dominant and mainstream version as it circulates in popular porn platforms. As it is argued later in this chapter, even though these platforms are widely and internationally available (with the exception of some single countries), they still overwhelmingly address a very specific population: a male heterosexual audience. In this regard, the impression of a global Internet community is still at large only an illusion. This "ethereal" virtual world with no traditional borders (space-wise) and with no linear time (timewise) should not be approached in dematerialised terms. As Zabet Patterson very accurately states,

> [the space of the Internet] exists only by means of large, expensive machines that exist in physical space […] it seems critically important not to lose sight of the larger field of a corporatized social technology into which Internet pornography occurs. Presented through a particular technological apparatus, pornographic images are embedded in networks of production and consumption and informed by particular social conditions[14].

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[13]For the purposes of this study, the term "porn performer" was chosen over the equally valid ones of pornographic film actor or actress, adult entertainer and porn star. In this way, the distinction between a professional and an amateur participant is hopefully eliminated in this chapter.

[14]Zabet Patterson, "Going On-line: Consuming Pornography in the Digital Era", in *Porn Studies*, edit. by L. Williams, Durham: Duke University Press, 2004, pp. 104-123, pp. 121-122.

III.2 The Archaeology of Pornography

III.2.1 The Other Victorians[15]

Depictions of a sexual nature have been present in various cultural contexts from the dawn of civilisation[16]. Pornography as we understand it today, however, vaguely defined as the explicit description or display of sexual activity and of those anatomical organs that intend to stimulate sexual excitement[17], is a very recent construction, one in fact made by the Victorian society of the 19th century. Specifically, Walter Kendrick in his influential book *The Secret Museum* (1987) attributes pornography's invention to the conjunction of two quite different events that took place between the end of 18th and the beginning of 19th century in Europe: to the construction of secret museums, on the one hand, and to the growing volume of writings about prostitution, on the other hand[18].

More analytically, in the 18th century excavations led to the revelation of the well-preserved city of Pompeii. Once the frozen-in-time Roman city was exposed, an incredible amount of frescoes and statues of sexual acts was unveiled, creating a circle of fascination, anxiety and panic to the Victorians. After all, it is well known that Europe was tracing its own roots in many different ways back to classical culture. In that framework, the discovery of Pompeii's "obscenity" was a threat not merely to people's idea of the ancient world but, most

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[15]The title of this section is inspired by Steven Marcus' work *The Other Victorians. A Study of Sexuality and Pornography in Mid-nineteenth-century England* (New York: Basic Books, 1966). In his study, the American literary critic explores a series of pornographic texts of the 19th century, offering a revolutionary reading of the underside of Victorian culture. Foucault entitled the first part of *The History of Sexuality: Volume I* after Marcus's influential study. Specifically, in "We 'Other Victorians'" the French philosopher criticises the "repressive hypothesis", the widespread belief among late 20th century westerners that the open discussion of sex was socially repressed during the late 17th, 18th, 19th and early 20th centuries.

[16]Dated back to about 28,000 years ago, a long wide stone object representing male genitalia was found in a cave in Germany in 2005. Even though there can be no certainty about the use of this item, whether it served worship or other purposes, it is safe to say that the interest in the depiction of anatomical parts and functions but is not a modern invention. For more on that, see: Kate Devlin, *Turned On: Science, Sex and Robots*, London: Bloomsbury Sigma, 2018, §8.

[17]For more on the difficulties in defining pornography, see: Caroline West, "Pornography and Censorship", *Stanford Encyclopedia of Philosophy*, first published May 5th, 2004; substantive revision Oct 1st, 2012, retrieved from https://plato.stanford.edu/entries/pornography-censorship/#WhaPor (last accessed June 21st, 2020).

[18]Walter Kendrick, *The Secret Museum: Pornography in Modern Culture*, New York: Viking, 1987.

importantly, to their very idea of who they were[19]. Not knowing what to do with this material at first, appreciating though its major value, the Victorians decided to create a secret room in the *Museo Borbonico* in Naples. According to Kendrick, this idea of classifying these "sexually explicit images" by hiding them in private and by regulating who has access to this material or, more significantly, who has no access (such as women, children and the poor) was the starting point of pornography.

Figure 11: Secret Cabinet Entrance, National Archaeological Museum, Naples, Italy

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[19] Part of the material that is analysed in this section has been retrieved from Channel 4's mini tv-series "Pornography: The Secret History of Civilisation" produced in 1999. In six episodes the documentary follows pornography's evolution through the advancement of technology from the first depictions of erotic art up to the home video and the expectations of the internet world.

Figure 12: Fresco from the House of the Centurion, Pompeii, 1st century BC

On the other hand, Kendrick links pornography's "invention" to the growing volume of writing about prostitution. As he records in particular, the term "pornography" appears in English for the first time in a medical dictionary in 1857 and refers to the social and medical texts on (at the day) rapidly accelerating phenomenon of prostitution[20]. In that framework, pornography was the description of the life and manners of prostitutes and their patrons[21]. While the first appearance in the medical dictionary was pointing to hygienic issues and had an assumed neutral meaning[22], within less than a decade the term acquired a second, morally

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[20] The etymological routes of the term derive from the Greek words πόρνη (pórnē / prostitute) and γράφειν (gráphein / to write, describe or record). Kendrick, *The Secret Museum*, p. 16.

[21] Linda Williams, *Hard Core: Power, Pleasure, and the 'Frenzy of the Visible'*, Berkeley, Los Angeles: University of California Press, 1989, p. 9.

[22] Kendrick, *The Secret Museum*, p. 36.

pejorative definition and became associated with the explicit depiction of sexual organs and sexual practices with the aim to cause sexual arousal[23].

It is worth mentioning that in French the term appears a little sooner, in Restif de la Bretton's *Le Pornographe* (1769)[24], a treatise on prostitution. In fact, this was the first published proposal for the management of prostitution. More specifically, in forty-five articles, Restif describes the operation of state-run brothels called Parthenia, referring to ancient Greece's Mount Parthenon or "Mount of the Virgin". As Preciado observes, "in Restif's essay, *pornograph* refers not to a writer or consumer of representations of sexual, antireligious, or antimonarchic pamphlets but rather to an expert in legal and medical techniques of public hygiene within the modern city"[25]. There is, however, no evidence that any government ever saw fit to implement this program.

As it becomes apparent, the secret museum segregated a type of material as the later coined term of pornography segregated a set of ideas. The emergence of pornography (as an object in secret rooms and as a concept in dictionaries) is, thus, associated with issues of classification and regulation. In fact, at the beginning of the 19th century modern obscenity laws start to appear. Specifically, just as the word first appeared in the dictionary in 1857, the Victorians launched the *Obscene Publications Act*, an official campaign against obscenity that banned the sale of pornographic works. This act signals the shift of attention from sex itself to the regulation of the act of looking at sex.

This is not to claim, however, that prior to the 19th century there had been no regulations concerning the depiction of sexual acts; it is rather argued that these regulations were of a

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[23]For more, see: *Webster Dictionary*, published by George & Charles Merrian, 1861.

[24]Nicolas E. Restif de la Bretonne, *Le Pornographe*, ou *La Prostitution réformée*, Paris: Mille et Une Nuit, (1769) 2003.

[25]Paul B. Preciado, "Restif de la Bretonne's State Brothel: Sperm, Sovereignty, and Debt in the Eighteenth-Century Utopian Construction of Europe", n. d., available here https://www.documenta14.de/en/south/45_restif_de_la_bretonne_s_state_brothel_sperm_sovereignty_and_debt_in_the_eighteenth_century_utopian_construction_of_europe (last accessed September 10th, 2020).

different nature. Specifically, as historian Lynn Hunt explains, from medieval times through the 17th century, the control of the printed and written works was undertaken primarily in the name of religion and politics[26]. Significant works of art that would be later categorised as pornographic, among which Marcantonio Raimondi and Pietro Aretino's *I Modi - Le sedici posizioni* in Renaissance Italy ([1524, 1527], 1989)[27], *L' Ecole des filles* in France ([1655], 2012)[28] and John Cleland's *Fanny Hill* in England ([1748], 2001)[29], were considered as acts against the church or the status quo back in their times. In fact, in the early modern period it was often in the intention of the producer of "sexually explicit material" to criticise existing power relations[30]. Although in no way can the previously mentioned works be considered as having had a feminist perspective, it can be argued that they often did question social relations and gender roles. Their portrayal of women, for instance, often valorised a female active sexuality in a much more prevailing way than the medical texts of the same period[31].

By the end of the 18th century, however, the depiction of sexual organs and practices was not anymore a mere adjunct to other forms of criticism of the regime or the church[32]. It

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[26]Lynn Hunt, *The Invention of Pornography: Obscenity and the Origins of Modernity, 1500-1800*, New York: Zone Books, 1993, p. 12.

[27]Giulio Romano, Marcantonio Raimonti, Pietro Aretino and Count Jean Frederic Maximilien, *I modi: the sixteen pleasures: an erotic album of the Italian Renaissance*, Evanston, Illinois: Northwestern University, (1524, 1527) 1989.

[28]Unknown author, *L'Ecole des filles ou la philosophie des dames*, Paris: Allia, (1655) 2012.

[29]John Cleland, *Fanny Hill: Memoirs of A Woman of Pleasure*, London: Wordworth Editions Ltd., (1748) 2001.

[30]See, for example, the case of the "libelles" in late 18th century France. The libelles were political books or pamphlets which contained vulgar and defamatory stories of public figures. In pre-revolutionary France and, more intensively, right after the revolution, Marie Antoinette was excessively depicted in degrading scenarios. The fact that she was female, foreign and slow to deliver a royal heir facilitated her targeting which was also an indirect attack to the king himself. Even though political criticism was not always the main purpose of the creators, the libelles often managed to undermine monarchical authority. For more on that, see: Robert Darnton, "The forbidden best-sellers of pre-Revolutionary France", in *The French Revolution: the essential readings*, Malden, Mass.: Blackwell, 2001, pp. 110-137.

[31]Hunt, *The Invention of Pornography*, p. 44.

[32]This applies to the controversial case of Marquis de Sade who explored the limitless possibilities of pleasure by annihilating the body. Besides the complex philosophical implications of his work, Sade's heritage indicates a shift in the history of pornography that is associated with (but not limited to) the construction of a community of men who possess women. Ivi, pp. 35, 44.
It is worth mentioning that Restif and de Sade were in a mutual hate relation. In fact, Restif's *The Anti-Justine* (1798) was a direct attack to Sade's political philosophy as expressed in *Justine* (1791).

gradually became what Peter Wagner has called "an aim in itself"[33]. Hunt argues that this is the turning point in the history of pornography where "[…] the cartesian cogito becomes sensate; the ego knows itself only because it sensually experiences every object that it desires"[34]. Overall, it can be argued that the print culture opened the possibility for the masses to gain access to writing and pictures. In this regard, the emergence of pornography as a genre of representation is undeniably linked to the democratisation of culture: the former is a side effect of the latter and the latter works as a prerequisite for the former[35]. A special space for obscene ideas was hereafter created. The genie was out of the bottle.

III.2.2 The Rise of Pornography

Secret museum rooms in the 19th century in Europe betray the hidden networks of collections of "obscene" material. Yet, many things have changed from these hidden treasures to today's billion-dollar industry of porn. In this section, the attention is shifted from pornography's birth to its development (as a genre of representation as well as a business) through various technological advances. More analytically, pornography has always been an early adopter of new, ground-breaking technology and it has also been instrumental in propelling the technological innovations from niche to mainstream[36]. In this regard, it is not an exaggeration to claim that pornography would not have existed without the technology that made it possible, but also that technology would not have reached today's level of sophistication if it were not for pornography's support. As technology historian Jonathan Coopersmith argues, "[…] pornography has had a significant role in the promotion and diffusion of new communication

[33] Peter Wagner, *Eros Revived: Erotica of the Enlightenment in England and America*, London: Secker & Warburg, 1988, p. 6.
[34] Hunt, *The Invention of Pornography*, p. 192.
[35] Ivi, pp. 12-13.
[36] Jonathan Coopersmith, "Pornography, Technology and Progress", *Icon*, Vol. 4 (1998), pp. 94-125.

technologies" whereas, on the other hand, "[n]ew technologies have also altered the nature of pornography in the last few decades"[37].

Further to this, porn's conceptualisation as to what counts as gratifying and arousing changed in relation to the conditions of production, distribution and consumption of the material, starting from the printing press in the 15th century to the invention of photography, cinema, videotape, camcorders, etc.[38] In this direction, Franklin Melendez argues that "[t]he material specificity of particular technologies destabilizes the conception of pleasure and visuality as transhistorical and homogeneous, prompting a re-evaluation of these critical categories not only as *represented* in the genre, but as *experienced* by a viewing subject"[39].

In the beginning of the 20th century the first attempts at pornographic cinema were part of the realm of the illegally and anonymously made "stag films" (also called "blue movies"): these films were short length (usually lasting less than 12 min), silent and in black-and-white. They also lacked any narrative coherence[40]. From today's (experienced and sophisticated, if not overexposed and drained) point of view, these films might be considered low quality, with poor story lines and without great artistic value. In their context, however, they were an impressive piece of work. They can even be regarded as forerunners of the contemporary adult entertainment industry[41]. Stag films' production and distribution were quite difficult, expensive

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[37]Jonathan Coopersmith, "Pornography, Videotape, and the Internet", *IEEE Technology and Society Magazine* (Spring 2000), pp. 27-34, p. 27.

[38]As it was previously argued, in the 15th century the concept of pornography did not exist as such. Nevertheless, this reference to the printing machine is considered necessary since its invention is a *sine qua non* for pornography's diffusion; it is the medium that made it all possible in the first place. The printing machine set the ground for a quick, affordable and mass reproduction of written material which summarises porn's essence; a fast, cheap and repetitive satisfaction of desires.

[39]Franklin Melendez, "Video Pornography, Visual Pleasure, and the Return of the Sublime", in *Port Studies*, pp. 401-427, p. 402. (Emphasis in original).

[40]*El Satario*, also known as *El Sartorio*, is one of the earliest surviving pornographic films (Argentina, ca. 1907-1912). The film's minimal plot follows a group of women that go bathing in a river in a playful mood. A woman is seduced by a little devil and she is forced to receive and perform oral sex. Shortly after, another woman intervenes in the scene. It is said that the film includes the first extreme close-ups of genitalia. Williams, *Hard Core*, p. 61.

[41]Kenneth C. W. Kammeyer, *A Hypersexual Society: Sexual Discourse, Erotica, and Pornography in America Today*, New York: Palgrave Macmillan, 2008, p. 137.

and, due to censorship laws, clandestine. As for the content of these films, the naked female body was at the centre of interest. Broadly speaking, stag films functioned as an appetiser for the brothel. Their consumption occurred in small rooms by groups of men. A sort of a homosocial bond was established among the audience[42]. It is worth mentioning that the films were not only targeting a male audience, they were also exclusively produced by men. There were no women producers in the business at the time, in the same way that women producers were underrepresented in the film industry writ large[43]. The Kinsey Institute has a big collection of approximately 2,000 stag films that were produced between 1915 and 1968. A great number of these films is believed to be in a state of decay, with no copyright, credits, or acknowledged authorship[44].

The period of the stag film lasted until the emergence of the new visual technologies of the post-war era: the 16 mm, 8 mm, and Super 8 film. During the period of 1969-1984, the United States witnessed the Golden Age of Porn which began with Andy Warhol's *Blue Movie* (1969)[45]. During the period of Porno Chic, as this stage is also called, pornography gained attention from mainstream cinemas and movie critics and it was introduced to the general audience. The success of Gerard Damiano's *Deep Throat* which premiered in June 1972 at the New Mature World Theatre in Times Square is indicative of the fascination with porn that was growing at the time[46]. According to Williams, the novelty of *Deep Throat* lies in the fact that,

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[42]Williams, *Hard Core*, p. 74.

[43]For more on stag films, see; Ivi, pp. 58-92.

[44]Even though nowadays pornography is widely recognised as a legitimate field of study, there has been no systematic record that could guarantee the maintenance and cataloguing of pornographic material. Williams has repetitively talked about the need for such a pornographic archive: "[t]he lack of preservation of the pornographic heritage is appalling, and we cannot count on the hit- or- miss salvages of the Internet to do the job". As stated in: "Pornography, Porno, Porn: Thoughts on a Weedy Field", *Porn Studies*, Volume 1, Issue 1-2 (March 2014), pp. 24-40, p. 35.

For more on archives of pornographies, see: *Porn Archives*, edit. by Tim Dean, Steven Ruszczycky and David Squires, Durham: Duke University Press, 2015.

[45]*Blue Movie*, dir. by Andy Warhol, production company Constantin Film and Andy Warhol Films, release date June 12th, 1969.

[46]*Deep Throat*, dir. by Gerard Damiano, starring Linda Lovelace, Harry Reems, Dolly Sharp, Carol Connors, prod. by Louis "Butchie" Peraino, release date June 12th, 1972.

for the first time in the history of hard-core pornography, a feature length film integrates a variety of sexual numbers into a narrative and reaches legitimate theatres[47]. In this regard, not only has this film been a major commercial success but it is also considered to be "the impetus for a revolution in hard-core pornography"[48]. From then on, porn becomes an adult entertainment industry, with its own star system, awards and vocabulary, one that in fact has nothing to envy Hollywood for[49].

This familiarity with pornographic material is later encouraged with the invention of the video cassette recorder (VCR) in 1976. Compared to film, recording on the videotape became faster, far less expensive and easier to edit and reproduce. It also secured easy access and guaranteed anonymity. This move also facilitated the democratisation of the field since users could finally record their own material[50]. The circumstances of consumption of porn were also significantly transformed; the videotape brought pornography into private homes, into living rooms and bedrooms[51]. In this way, users could look at the pornographic material in the privacy of their houses, thus eluding social stigma. With the invention of the videotape, the domestication of porn became a reality (show)[52].

It is also worth mentioning that users of pornography defined the market of the incompatible recording formats of VHS and BETA, making the first one a profitable business whereas condemning the second one to extinction. As it was previously argued, pornography

[47]Williams, *Hard Core*, p. 110.
[48]Coopersmith, "Pornography, Videotape, and the Internet", p. 28.
[49]For more on a comparative reading of the porn industry and the Hollywood system, see: Nicola Simpson, "Coming Attractions: a comparative history of the Hollywood Studio System and the porn business", *Historical Journal of Film, Radio and Television*, Vol. 24, No. 4 (2004), pp. 635-652.
[50]As Brian McNair artfully points out, "[t]he whole point of a sexual politics worthy of the adjective 'democratic' is that we gain and exercise the right to find, articulate and celebrate our own sexualities, while showing due respect for the tastes, desires and sensitivities of others" (*Striptease Culture: Sex, Media and the Democratization of Desire*, London: Routledge, 2002, p. 207).
[51]The domestication of pornography had already been prepared by the mass distribution of porn magazines in the 1950's and 1960's.
[52]For more on the domestication of porn see: Jane Juffer, "There's No Place Like Home: Further Developments on the Domestic Front", in *More Dirty Looks: Gender, Pornography and Power*, edit. by Pamela Church Gibson, London: British Film Institute, 2004, pp. 45-58.

can be seen as an engine driving the development of media technology, especially because of its ability to adapt to novel platforms and to generate fast profits. Sony introduced Betamax VCR in 1975 and, even though the services offered by the company were better in terms of image and sound quality than its competitor's product (VHS), it was the latter that became the industry standard in the late 1970's. As Susanna Paasonen, Kaarina Nikunen and Laura Saarenmaa argue, "[…] the victory of VHS has been attributed to Betamax not licensing pornography due to which – following the principle 'sex sells' – VHS reigned victorious"[53]. It must be noted that pornography was not the only decisive factor in this battle. Betamax was also more expensive and with less capacity of recording duration than VHS. Licensing pornography, however, undeniably played an important role. Regarding this matter, Coopersmith explains that consumers of pornography have always been among the first buyers and users of new communication technologies. By paying an initial premium, they increased the early sales and they reduced the cost for later buyers. In this way, the field of communication technologies had the opportunity for higher degrees of specialisation, innovation and experimentation; a profitable market for newly introduced services was made possible[54].

It is interesting to note that pornography had not only reached the big screen, the big theatres and the general audience, it also later attracted the interest of the entertainment industry as a topic worth investing in. This is quite evident in mainstream film treatments of porn topics such as *The People Versus Larry Flynt* (1996)[55], *Boogie Nights* (1997)[56] and *Wonderland* (2003)[57]. As Attwood particularly argues, "[t]hese documentary and fictional presentations of

[53]Susanna Paasonen, Kaarina Nikunen and Laura Saarenmaa, "Pornification and the Education of Desire", in *Pornification: Sex and Sexuality in Media Culture*, edit. by Susanna Paasonen, Kaarina Nikunen and Laura Saarenmaa, Oxford: Berg, 2007, pp. 1-20, p. 4.
[54]Coopersmith, "Pornography, Videotape, and the Internet", p. 28.
[55]*The People Versus Larry Flynt*, dir. by Miloš Forman, production company Phoenix Pictures, 1996.
[56]*Boogie Nights*, dir. by Paul Thomas Anderson, production companies Lawrence Gordon Productions and Ghoulardi Film Company, 1997.
[57]*Wonderland*, dir. by James Cox, production company Flirt Pictures and Emmett/Furla Films, 2003.

pornography accompanied an increase in public forms of sexual confession"[58]. Since then, all communication media have added a different value to the (frenetic) production of pornographic material with, maybe, the exception of television and radio which do not seem to have contributed a lot to the diffusion of porn material. This might be due to the fact that television has mostly played the role of the fire of the living room, an archaic reference point around which the family is gathered. But pornography is not family friendly. On the other hand, since mainstream pornography has developed basically via visual media in the run for the most realistic depiction, the radio as a verbal medium has had limited success. Regarding this matter, Susan Sontag argues that "[p]orn is to inspire a set of non-verbal fantasies in which language plays a debased, merely instrumental role"[59].

None of the above-mentioned media, however, can be compared to the outcome of the billion-dollar industry of cyberporn. As early as in 1998, when the dial-up Internet access is still slow and expensive, Al Cooper foresees Internet's leading role in pornography. He talks about the "Triplet A Engine" to refer to the particular factors that make the Internet such a powerful force in the area of sexuality: Access, Affordability and Anonymity[60]. The next section zooms in on the evolution of pornography in cyberspace.

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[58]Feona Attwood, "'Other'" or 'One of Us'?: The Porn User in Public and Academic Discourse", *Particip@tions*, Vol. 4, Issue 1 (May 2007), available here https://www.participations.org/Volume%204/Issue%201/4_01_attwood.htm (last accessed September 12th, 2020).

[59]Susan Sontag, "The Pornographic Imagination", in *A Susan Sontag Reader*, intr. by Elizabeth Hardwick, New York: Farrar, Strauss and Giroux, (1969) 1982, pp. 205-233, p. 208.
At this point, it is worth mentioning that audio pornography is currently advertised as a promising rising market that addresses female audiences. See, for instance: Marisa Meltzer, "What If Porn Had No Pictures? Female-run businesses want to bring audio pornography to the imaginative, ethically conscious masses", *The New York Times*, 20 November 2020, available here https://www.nytimes.com/2019/11/20/style/audio-porn-erotica-quinn-dipsea.html?auth=linked-google (last access September 19th, 2020).

[60]Al Cooper, "Sexuality and the Internet: Surfing into the New Millennium", *CyberPsychology & Behavior,* Volume 1, Number 2 (January 1998), pp. 187-193, p. 187.

III.2.3 Cyberporn

When pornography reached the Internet, a whole new world appeared. A new Pompeii was revealed and a "pornotopia" was made possible[61]. In this framework, the amount of porn available online became (and becomes more and more by the second) impressive[62]. The material is diffused to such an extent that it has become more difficult to avoid it rather than look for it[63]. Besides the great quantity of online pornographic material, the variety of its content is also quite overwhelming: gay and lesbian porn, feminist porn, softcore / hardcore / realcore porn[64], extreme violent porn, etc., whatever one may think of is actually only "a mouse click away"[65]. This does not mean, of course, that prior to the appearance of the Internet the material on offer was uniformed or lacked diversity, it is rather argued that in the context of cyberspace "everyone" has an easy access to porn's great variety, even in the absence of a specific demand for it.

The democratisation of the field as previously described was completed online. In the beginning, with the dial up connections and the downloading options, the service was time consuming and occurred with many interruptions. Pornography's great boom eventually took place with the emergence of Web 2.0. More specifically, Web 2.0 is "[…] an umbrella term for

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[61]Steven Marcus uses the term "pornotopia" in *The Other Victorians* to describe a utopian fantasy that is implicit in pornography. More specifically, the term refers to the situation where "[…] space and time only measure the repetition of sexual encounters, and bodies are reduced to sexual parts and to the endless possibilities of their variation and combination" (Hunt, *The Invention of Pornography*, p. 39).

[62]According to Pornhub's annual report, only in 2019 "there were over 42 billion visits to Pornhub, which means there was an average of 115 million visits per day. One-Hundred-Fifteen Million – that's the equivalent of the populations of Canada, Australia, Poland and the Netherlands all visiting in one day" ("The 2019 Year in Review", 11 December 2019, available here https://www.pornhub.com/insights/2019-year-in-review [last accessed September 14th, 2020]).

[63]Kammeyer, *A Hypersexual Society*, p. 183.

[64]Hardcore / softcore / realcore are terms used to describe the tension between "reality" and "representation" in pornographic material. The notion of the "realcore" was first used by Sergio Messina to classify the porn material that pushes the boundaries between what is generally understood as porn and as "real sex". As he states in particular, "[s]oftcore was simulated sex, hardcore went as far as actual sex, Realcore goes beyond: it strives to portray, without too much interference, people 'actually' fulfilling their desires, often fully clothed. Realcore is all about the reality of what you see, the truth of these images" (Mark Dery, "Naked Lunch: Talking Realcore with Sergio Messina", in *C'lick Me: A Netporn Studies Reader*, edit. by Katrien Jacobs, Marije Janssen and Matteo Pasquinelli, Amsterdam: Institute of Network Cultures, 2007, pp. 17-30, p. 24).

[65]Feona Attwood, "Introduction. The Sexualization of Culture", in *Mainstreaming Sex. The Sexualization of Western Culture*, edit. by F. Attwood, London, New York: I. B. Tauris & Co. Ltd, 2009, pp. xiii-xxiv, p. xiii.

the increasing centrality of social media and user-generated content, such as blogs, wikis, online communities, social networking sites, podcasts and different publishing platforms in and for the internet economy"[66]. In the mid-2000's the traditional porn industry that was composed of big (mostly Canadian and north European) porn companies, was attacked by the appearance of tube porn sites which adopt the technological interface and the economic strategy of YouTube. These new platforms have a horizontal attitude towards porn distribution that is broadly based on piracy. In this way, the Internet became gradually a hostile environment for the oligarchy of the adult industry of the time[67]. On the other hand, a door opened to the easy and massive distribution of porn material by the users themselves. In this regard, it can be argued that although the mainstream porn industry lost a part of its market control, it was the advent of Web 2.0 that brought porn into the mainstream.

More analytically, this shift to tube sites indicates a new era of porn where the individuals involved, if not in the production of the pornographic material at least in its distribution, are not big companies seeking profit; they are simple users instead. These users produce the material directly or they facilitate its circulation bypassing the middleman. In this framework, a promising field of amateur porn that had already begun with the invention of the videotape, flourishes and blurs the distinctions between the porn producer, the distributor and the consumer. These new power arrangements might seem revolutionary at first; they actually provide tools for the re-organisation of the economy of bodies and pleasures. In this context, Preciado notices that the body emerges as an "autopornographic force". As he claims in particular,

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[66]Susanna Paasonen, "Labors of love: netporn, Web 2.0 and the meanings of amateurism", *New Media Society*, Vol. 12, Issue 8, (June 2010), pp. 1297-1312, p. 1299.
[67]Silvia Rodeschini and Federico Zecca, "Pornflix. Pornhub e La Normalizzazione Dell'industria Pornografica Contemporanea", *Schermi. Storie e culture del cinema e dei media in Italia*, edit. by Marco Cucco and Francesco Di Chiara, Vo. 3, No. 5 (January June 2019), pp. 101-115, p. 102.

today any user of the Internet who has a body, a computer, a video camera, or a webcamera, as well as an internet connection and a bank account can create a porn site and have access to the cybermarket of sex industry[68].

The situation, however, is much more complicated than that. Tube porn sites are supported by membership fees or advertisement income. In this context, amateur porn becomes one category out of many others for users to choose from. As amateur and professional, independent and commercial are part of the same interface and site economy, it becomes quite impossible to make categorical distinctions between them. Likewise, as alt porn sites develop their style to later be absorbed and appropriated by bigger porn sites, the category of the "alternative" is oftentimes restricted to an aesthetic quality, rather than reflecting on the economic or ethical aspects of pornographic production. This aesthetic quality, however, is again controversial because of porn's inherent tension between the two imperatives of authenticity and the visual gratification of the viewer. Regarding this matter, Simon Hardy argues that "the more under-performed the sex, the less gratifying the spectacle, and the more over performed the sex, the less authentic the action"[69]. As a result, the categorisation of amateur and professional porn is quite relative; professionals perform as amateurs to provide a sense of authenticity while amateurs imitate the actors to pleasure the viewer.

Porn has been spread to such an extent during the last decades that it is safe to say that we have entered what Brian McNair has called the social reality of "pornographication"[70]; the porn material is an omnipresent, if not a dominant, element in each and every sphere of the everyday life. McNair uses this conceptual term to describe a broader expansion of the forms of discourses around bodies, pleasures and functions and to bring the attention to the economic

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[68]Beatrice Preciado, *Testo Junkie: sex, drugs, and biopolitics in the pharmacopornographic era*, transl. by Bruce Benderson, New York: The Feminist Press at the City University of New York, (2008) 2013, p. 36.
[69]Simon Hardy, "The New Pornographies: Representation or Reality?", in *Mainstreaming Sex*, pp. 3-18, p. 10.
[70]Brian McNair, *Mediated Sex: Pornography and Postmodern Culture*, London: Arnold, 1996, p. 37.

and cultural exchanges that occur in this framework. As Smith explains, McNair saw in modern

society

> the fascination with sex and sexuality as a potential transgressive force against the traditional boundaries of public and private, a "democratization of desire", which through the rise of technology gave access to means of sexual expression and the pluralizing of sexual cultures to include those (e.g. gays, lesbians, trans-people and other so-called perverts) who had been specifically excluded from sexual self-definition[71].

Other scholars, however, use the term "pornografication" (or the simpler "pornification") in a more negative way, stripping it off of any radical potential. Ariel Levy, for example, criticises the acceleration of interest in sexual discourses and talks about a raunch culture where (mostly young) women objectify both themselves and one another from a postfeminist perspective that confuses self-expression with hyper-sexualisation[72]. Pamela Paul, on the other hand, focuses on the effects that the pornified culture has on our lives, relationships and families[73]. For the present study, however, "pornographication" is interpreted as a neutral term used to describe the current hegemonic role of virtual culture without losing sight of the expansion of the porn industry in relation to the latest developments in media technology. In other words, for this study pornographication implies a shift in modes of representation and visibility in contemporary cultures of sexuality[74].

Nevertheless, what cyberporn mostly indicates is the transition from a situation where representations of sex were kept away from the public eye to a culture that brings to light sexual acts, organs, bodies and their pleasures[75]. This is the point that pornography moves from the

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[71]Clarissa Smith, "Pornographication: A discourse for all seasons", *International Journal of Media and Cultural Politics*, Vol. 6, Number 1 (January 2010), pp. 103-108, p. 104.
[72]Ariel Levy, *Female Chauvinist Pigs: Women and the Rise of Raunch Culture*, New York: Free Press, 2005.
[73]Pamela Paul, *Pornified: How Pornography Is Transforming Our Lives, Our Relationships and Our Families*, New York: Times Books, 2005.
[74]Paasonen et al., "Pornification and the Education of Desire", p 2.
[75]Linda Williams, "Porn Studies: Proliferating Pornographies On/Scene: An Introduction", in *Porn Studies*, pp. 1-23, p. 3.

ob/scene, something that is outside or behind the scene, to the on/scene, a neologism coined by Williams to refer to the public domain. More now than ever that devices such as smartphones and tablets are always (at least in a "western" context and for some) either in the users' hands or pockets, pornography is inscribed on a corporeal level; it is always there waiting to be watched.

This service always at one's disposal is close to Robert Pfaller and Slavoj Žižek's concept of "interpassivity", defined as a shadowy supplement to interactivity. To explain the term, Žižek gives as examples the VCR's feature to record a football match that will never be watched or the canned laughter in sitcoms (situation comedy) that substitutes our own. In the same direction, porn is always available in our devices, no matter whether we watch it or not, never stopping producing profit and pleasures[76]. The machine is, thus, consuming instead of us, the machine is enjoying in our place. The analysis will return to this argument through the case study of virtual reality pornography. Before doing so, in the section that follows, the research presents its definition of porn and situates itself in the field of Porn Studies. In this way, it prepares the ground for the exploration of the discursively and materially produced future of pornography.

III.3 Defining the Field and Situating the Research

Back in 1964, in his attempt to categorise hard-core pornography United States Supreme Court Justice Potter Stewart used the colloquial expression "I know it when I see it", demonstrating in this way the lack of clearly defined parameters[77]. Defining pornography can turn out to be a

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[76]For more on the concept of interpassivity, see: Slavoj Žižek, "Cyberspace, or, How to Traverse the Fantasy in the Age of the Retreat of the Big Other", *Public Culture*, Vol. 10, Issue 3 (September 1998), pp. 483-513; Robert Pfaller, *Interpassivity. The Aesthetics of Delegated Enjoyment*, Edinburgh: Edinburgh University Press, 2017.

[77]The quote is from the Jacobellis v. Ohio case. In 1964 the United States Supreme Court decided whether the state of Ohio, consistent with the First Amendment, could ban the showing of the film *The Lovers* (*Les Amants,* dir. by Louis Malle, 1958) that the state had previously deemed obscene. For more on that, see: Jacobellis v. Ohio, 378 U.S. 184.

difficult task. In today's context, for instance, the term is widely used to describe a range of content, from video clips to videos of forced sexual acts. It is interesting to note that neologisms composed of the word "porn" are currently trending on social media platforms; "foodporn", for instance, refers to stylised photographs or videos of food dishes that are aesthetically pleasant and appetising. In this framework, the viewer gets satisfaction not by consuming food but by looking at food illustrations. In that broad sense, porn can be any depiction that brings gratification to the viewer. In a narrower sense, on the other hand, porn can be shortly defined as the graphic or visual depiction of sexual acts and organs that causes sexual gratification[78]. Even in this case, however, the definition remains quite vague; a legal document that explicitly refers to sexual organs and functions could arouse sexual curiosity[79] and a "leaked" honeymoon video could offer voyeuristic pleasure[80]. Do these cases, however, fall into the category of pornography?

A clear definition of pornography is much needed. In fact, many disagreements on the topic originate from different interpretations of the term. Back in the 1970's and the 1980's, for instance, the sex wars between the anti-pornography and the anti-censorship/sex-positive feminists were based partly on pornography's different understanding. Radical feminists of the anti-pornography movement Andrea Dworkin and Catharine Mackinnon, for example, included in their definition of pornography the principle of harm:

> We define pornography as the graphic sexually explicit subordination of women through pictures or words that also includes women dehumanized as sexual objects, things, or commodities; enjoying pain or humiliation or rape; being tied up, cut up, mutilated, bruised, or physically hurt; in postures of sexual submission or servility or display; reduced to body parts, penetrated by

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[78]Doug Mann, "Porn Revisited", *Journal of Social Philosophy*, Vol. 28, Issue 1 (March 1997), pp. 77-86, p. 77.
[79]This is the case of the Starr Report, the well-known investigation into President Clinton's encounters with Monica Lewinsky. Maria St. John, "How to Do Things with the Starr Report: Pornography, Performance, and the President's Penis", in *Porn Studies*, pp, 27-49.
[80]Minette Hillyer, "Sex in the Suburban: Porn, Home Movies, and the Live Action Performance of Love in Pam and Tommy Lee: Hardcore and Uncensored", in *Porn Studies*, pp. 50-76.

objects or animals, or presented in scenarios of degradation, injury, torture; shown as filthy or inferior; bleeding, bruised, or hurt in a context that makes these conditions sexual.[81]

From this point of view, pornography is (the ideology behind) rape. It is the expression of the social subordination of women. In that sense, pornography is *a priori* harmful to women, both to those participating in the industry and to women as members of the society.

Sex-positive feminists, on the other hand, had a different understanding of pornography. They recognised in the genre an empowering potential for women to express themselves sexually without being held accountable and to celebrate their pleasure[82]. Sex-positive feminists read the anti-pornography positions as aligned to the political right-wing's war on recreational sex and control of women's sexuality in general. They have argued in fact that in MacKinnon and Dworkin's attempt to pass legislation equating pornography with sexual harassment, they (MacKinnon and Dworkin) had to collaborate with right-wing politicians, getting like this themselves involved in homophobic rhetoric[83].

Nevertheless, this study seeks to overcome the "tired binary" that followed the sex wars of the 1980's and which has characterised debates about pornography until very recently[84]. The present work derives from a different framework that emerged in the late 1990's and early 2000's: the field of Porn Studies. Williams' monography *Hard Core* in 1989 (mostly its second edition in 1999) can be considered as the starting point of this new field of research. In 2004, Williams edited *Porn Studies*, a collective volume of essays that challenged the distinction between good erotica and bad hard-core pornography. This volume turned out to be a key-text

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[81]Catherine A. MacKinnon, *Feminism Unmodified. Discourses on Life and Law*, Cambridge, London: Harvard University Press, 1987, p. 176.
[82]In response to censorship allegations, MacKinnon argues that pornography promotes freedom for men whereas imposes a "chosen" silence to women. Ivi, p. 168.
[83]Stephen Maddison, "'Choke on it, Bitch!': Porn Studies, Extreme Gonzo and the Mainstreaming of Hardcore", in *Mainstreaming Sex*, pp. 37-54, p. 42.
[84]Jane Juffer, *At Home with Pornography: Women, Sex and Everyday Life*, New York: New York University Press, 1998, p. 2.

for the field. Broadly speaking, Williams envisioned a model of study of pornography "[…] that can explain pleasurable sensations that are primary to the experiences of viewing images without implicitly or explicitly judging them as either perverse or excessive"[85]. This new approach gets some distance from issues of morality and of legal regulations and proposes the close reading of pornographic texts as cultural documents. Central role in this interpretation of porn plays the range of media as they are consumed and integrated into everyday life. In broad sense, Porn Studies can be said to incorporate many of the theoretical perspectives and preoccupations which have become central within Cultural Studies particularly, as Attwood argues, in relation to

> the polysemic nature of cultural texts, the potential fluidity of readings, the status of popular culture, the significance of "taste" as a form of cultural distinction and the relevance of ethnographic accounts for an understanding of the place of cultural consumption in everyday life[86].

The sex wars, however, were not won in the field of feminism or in the name of social and sexual diversity, self-expression and female empowerment[87]. They were rather rendered irrelevant by the growing economic power of the porn industry. In this regard, Porn Studies have been accused of de-radicalising feminism and of lacking critical forms of engagement. In particular, it has been argued that William's reading of hard-core pornography is limited by her faith in the idea of women as porn consumers. This position displays a troubling tendency and, more importantly, an ideological formation towards a type of postfeminism where women's empowerment is being capitalised; in this framework, the celebration of female pleasure

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[85]Linda Williams, *Viewing Positions: Ways of Seeing Film*, New Brunswick, New Jersey: Rutgers University Press, 1995, p. 6.
[86]Feona Attwood, "Reading porn: The paradigm shift in pornography research", *Sexualities*, Vol. 5, Issue 1 (February 2002), pp. 91-105, p. 93.
[87]Attwood, *Mainstreaming Sex*, p. 43.

becomes more of a consumer behaviour, rather than being a tool for the structural redistribution of gender power[88].

Fifteen years have now passed from the publication of the collective volume and Williams has since done her self-criticism. In an interview back in 2018, in particular, she admits her regret at including the term "porn" in the title of the volume over the more pejorative "pornography". This is because the former term signals a form of familiarity for the subject while her intention was to gain some sort of objectivity and distance[89]. It is true that in the colloquial use of the terms, pornography refers frequently to an old fashioned and overly misogynist industry while porn often has an emancipatory implication becoming, in this way, pornography's trendy version[90]. In this regard, calling the book (as well as the field itself) *Porn Studies* indicates a gesture of affection for the topic.

In that same direction, Attwood observes that "[d]efinitions of 'pornography' produce rather than discover porn texts and, in fact, often reveal less about those texts than they do about fears of their audiences' susceptibility to be aroused, corrupted and depraved"[91]. In this regard, pornography is not a homogeneous concept. Pornographies can only exist in plural and the definition used on every occasion needs to be clear. This study, in particular, adopts the definition of pornography that was coined by the researchers Sara Ashton, Karalyn McDonald and Maggie Kirkman: "pornography is the material deemed sexual, given the context, that has the primary intention of sexually arousing the consumer and is produced and distributed with the consent of all persons involved"[92]. This definition consists of four components: content,

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[88]Ibid.
[89]"Linda Williams: What about Porn Studies 2/5", *YouTube*, uploaded by Patrick Catuz, 26 November 2018, available here https://www.youtube.com/watch?v=KHd4DyLN-Fc&t=30s (last accessed September 25th, 2020).
[90]It must be noted that the terms "pornography" and "porn" are interchangeably used in the present study, most of the times following the vocabulary of the cited authors. By keeping the ambiguity, this work aims to break the distinction between good and bad pornography.
[91]Attwood, "Reading porn: The paradigm shift in pornography research", pp. 94-95.
[92]Sara Ashton, Karalyn McDonald and Maggie Kirkman, "What does 'pornography' mean in the digital age? Revisiting a definition for social science Researchers", *Porn Studies*, Vol. 6, Issue 2 (February 2019), pp. 144-168, p. 144.

intention of the producer, contextual judgement and consent. The present study uses this definition because of the important inclusion of the last component. In this way, the case studies of revenge porn, deepfake porn and child pornography are excluded from this text as a matter of principle[93]. If not stated otherwise, the analysed material belongs to the category of hard-core porn. This means that the sexual numbers "really" happen on set and that there is a close and detailed viewing of sex organs and sexual acts in the videos discussed throughout this chapter.

This chapter first examined how pornography emerged as a separate genre of representation. The analysis, then, followed pornography's journey through various technological developments with a major emphasis on the Internet. In this last part, the study presented its definition of pornography and situated itself withing the framework of Porn Studies. The research is now ready to explore porn industry's future.

III.4 The Future of Pornography

III.4.1 Virtual Reality Technology

Virtual reality has been declared to be the future of visual technology for a long time. Some researchers date the concept back to Antonin Artaud's essay "Alchemist Theatre" where the French playwright describes theatre as *la réalité virtuelle*; a reality that can be both illusory and fictitious[94]. The founding father of virtual reality technology, however, is believed to be Jason Lanier who together with Thomas Zimmerman attempted to commercialise virtual reality

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[93]Revenge porn is the production and/or distribution of sexually explicit content without the consent of the individual(s) involved. In the case of deepfake pornography (or fake pornography), on the other hand, the likeness of (usually female) celebrities is used without their consent in existing porn videos or images. Deepfake porn, in particular, takes advantage of powerful tools developed by machine learning and artificial intelligence with the intension of deceiving the viewer into believing that the porn material is original. Lastly, child pornography, the visual depiction of sexually explicit conduct involving a minor, is considered a form of child sexual exploitation and it is illegal in most jurisdictions in the world.

[94]Antonin Artaud, "Alchemist Theatre", in *The Theatre and its Double*, transl. by Victor Corti, London: Alma Classics, (1964) 2013, pp. 34-37.

technologies in the mid-1980's. But it was not until the 1990's that big companies such as Nintendo and Sega started to invest in head mounted displays. The big break took place in 2016 when Facebook, PlayStation and Google entered the market. These tech giants introduced their own head mounted displays which have potential application to a vast number of sectors, ranging from gaming to healthcare[95]. Virtual reality technology is currently used in the entertainment sector, manufacturing, healthcare, the retail sector, the video game industry, etc.

More analytically, virtual reality technology is said to offer the visual immersion in a digitally created 3D virtual environment. It can also provide the depiction of real events and existing physical environments that have been recorded on video using multiple cameras. In most cases, the users enter a virtual universe through a head mounted display which gives them a 360-degree visual experience of a digital image in three dimensions. In this framework, the users freely look around, in some cases they can even walk and "touch" objects, while the image changes accordingly. In this regard, the users do not merely watch a video, they rather participate (inter)actively. Virtual reality technology's goal is to make the "participants" feel like as if they were almost "there"; to provide, in other words, a realistic and immersive experience.

In a broad sense, the expectations that are invested in virtual reality refer to immersion and presence, two concepts that in colloquial language are interchangeably used. According to the psychological literature on experiences in virtual environments, however, immersion and presence describe different qualities of experience. More analytically, as James W. B. Elsey, Katja van Andel, Regina B. Kater, Ilya M. Reints and Mark Spiering explain,

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[95]Matthew Wood, Gavin Wood and Madeline Balaam, "'They're Just Tixel Pits, Man': Disputing the 'Reality' of Virtual Reality Pornography through the Story Completion Method", in *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, Denver, USA: CHI'17, 2017, pp. 5439-5451, p. 5440.

Immersion is understood as primarily reflecting the objective capabilities of the hardware and software used (the capacity of the visual display to present a convincing output, or whether presentation is on a flat screen versus stereoscopic), whereas presence is conceptualized as the subjective experience of being in the virtual environment […] presence can be further decomposed into underlying factors reflecting spatial presence (feeling as if one is really there in the virtual world), involvement (finding one's attention captivated by the virtual environment rather than the external world), and realness (how realistic the virtual world seemed)[96].

To better explore how the virtual reality technology is applied in practice, this study uses as an example the 2015 virtual reality documentary *Clouds Over Sidra* that was created by Gabo Arora and Chris Milk in collaboration with the United Nations. The film depicts the life conditions of Syrian refugees in the Za'atari camp in Jordan from one child's perspective. In particular, the documentary follows a 12-year-old girl (Sidra) and presents her story: "[my baby brother] cries a lot. I asked my father if I cried when I was a baby and he says I did not. I think I was a stronger baby than my brother"[97].

In his presentation "How Virtual Reality Can Create the Ultimate Empathy Machine", Milk explains how, according to his view, virtual reality is a powerful medium to tell stories that would remain otherwise unheard. In particular, he argues that virtual reality has a comparative advantage over traditional cinema since it puts the viewer/user "in the shoes" of the protagonist. In this regard, a virtual reality film does not open merely a window into an action, it rather brings the users themselves into another world. In January 2015, the movie was shown at the World Economic Forum in Davos Switzerland to a group of powerful people whose decisions, as Milk claims, affect the lives of millions of people[98]. According to his

[96]Jamie W. B. Elsey, Katja van Andel, Regina B. Kater, Ilya M. Reints and Mark Spiering, "The impact of virtual reality versus 2D pornography on sexual arousal and presence", *Computers in Human Behavior*, Vol. 97 (August 2019), pp. 35-43, p. 36.
[97]*Clouds Over Sidra*, dir. by Gabo Arora, Barry Pousman, produc. Barry Pousman, develop. UN SDG Action Campaign, UNICEF Jordan, Vrse, 2015.
[98]After the success at Davos, UN Secretary General Ban Ki-Moon suggested that *Clouds Over Sidra* be screened at the main reception of the Humanitarian Pledging Conference for Syria. As such, the film served as the centrepiece for the UN's first-ever interactive hub open to delegates, foreign ministers, and heads of state. For more, see: Blake J. Harris, "How The United Nations Is Using Virtual Reality To Tackle Real-World Problems. A new series of VR films is changing the way the organization raises awareness and funds", *Fast Company*, 10

narrative, these powerful people had the chance to experience from "a first-hand" how it is to be sitting in a tent in a refugee camp next to Sidra. As he states,

> […] that's where I think we just start to scratch the surface of the true power of virtual reality. It's not a video game peripheral. It connects humans to other humans in a profound way that I've never seen before in any other form of media. And it can change people's perception of each other. And that's how I think virtual reality has the potential to actually change the world […] So, it's a machine, but through this machine we become more compassionate, we become more empathetic, and we become more connected. And ultimately, we become more human[99].

Milk uses cutting edge technology to produce movies to entertain and to fascinate. According to his view, however, it is not the medium that is of utmost importance, but the message: the human story that must be told. *Clouds of Sidra* reveals the hopes and expectations that are currently invested in virtual reality technology; the medium is expected to offer a life-changing experience that could have real impact on the lives of others, even those in need. In the same direction, in the summer of 2020 Facebook CEO Mark Zuckerberg shared an update about his company's developments in augmented and virtual reality which he believes would be the next major step in computing platforms. As he posted, in particular,

> these platforms would make the users to feel closer and more present with each other, even when they can't physically be together. [Augmented and virtual reality technology] deliver the feeling of presence -- as if we're right there next to each other -- which no other screen or computing platform can deliver[100].

December 2015, available here https://www.fastcompany.com/3051672/how-the-united-nations-is-using-virtual-reality-to-tackle-real-world-problems (last accessed in January 21st, 2021).

[99]Chris Milk, "How Virtual Reality Can Create The Ultimate Empathy Machine", in *TED conference*, March 2015, available here https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine (last accessed September 14th, 2020).

[100]Mark Zuckerberg, "If you've been following me for a while, you know that I believe that augmented and virtual reality will be the next major computing platforms", *Facebook*, 25 August 2020, retrieved from https://www.facebook.com/zuck/posts/10112220953977061 (last accessed September 14th, 2020).

The porn industry could not be left out in this run of cutting-edge technologies. In fact, it is not a coincidence that in that same year that Facebook bought Oculus Rift (2016), Pornhub launched a marketing campaign for virtual reality pornography. At the moment of writing this dissertation, the virtual reality porn market is still at an early stage and there are only hints of what this business would look like in the near future. Even though it is impossible to predict the effect and the consequences that the application of "new" technologies will have on both porn performers and consumers, it is becoming more and more urgent to contextualise pornography "[…] in relation to changing media trends, technologies and forms of consumption, and with reference to the potential reconfiguration of pornography and the mainstream, of the everyday and indeed of 'sexuality'"[101].

III.4.2 The case of Pornhub

Pornhub is a Canadian video sharing and pornography site that was launched in Montreal in 2007 by computer engineer Matt Keezer who bought the domain for just $2,750. In 2010 the site was bought by the Manwin company, already now MindGeek. This mother company owns various successful pornographic websites, such as RedTube, YouPorn and Brazzers, and, therefore, controls a large part of the internet porn. On a closer look, Pornhub provides professional and amateur pornography and can be accessed freely. There is also a paying option for those who want access to more exclusive material[102]. The site offers streaming services and video-sharing of hard-core material in the model of Web 2.0[103]. In other words, the site adopts and relaunches the technological interface that was developed by YouTube: user-uploaded videos, system of likes and dislikes, indication of number of views, comments, etc. There is no

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[101]Attwood, "Reading Porn", p. 101.
[102]For the Pornhub Premium, there is a subscription cost of $9.99 per month or $95.88 per year.
[103]Rodeschini and Zecca, "Pornflix. Pornhub e La Normalizzazione Dell'industria Pornografica Contemporanea", p. 102.

clear linear navigation in this framework, the site is rather organised in a circular manner; one video re-directs the user to another one, whereas (in the free version at least) advertisements keep popping up. The platform's current strategy, however, is to move away from the YouTube philosophy to a more Netflix approach where there will be companies (or free lancers) distributing their own material. Instead of a social media platform where everybody shares their (original or pirated) content, the videos will serve as links for partnered sites. This is already happening to an extent; many porn clips on the platform (usually short length videos) direct the users to paid sites for more content. Porn performers, on the other hand, can create their own channels, advertise their services and make money by sharing their content. Lastly, it is important to note here that Pornhub produces its own material which it then shares on its platform.

According to Alexa Internet. Inc., an American web traffic analysis company owned by Amazon, Pornhub ranked in the 25th position of the most visited sites in January 2019[104], while SimilarWeb, another popular web traffic analysis company, gave to the porn site the 8th position and the 9th position in December 2018 and August 2020 respectively[105]. Pornhub is generally considered to be very profitable and its interface is broadly recognisable. Its name is often used as a synonym for cyberporn. From 2014 and on an annual basis, the site publishes extensive reports of traffic data. Both in terms of content and amount, these reports are an extraordinary source of information and contribute to the construction of site's image. When porn and data science meet, an impression of specialisation, professionalism and transparency is created. Issues of privacy, however, are rarely raised.

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[104]*Alexa*, "Drive More Website Traffic with Competitive Analysis", available here https://www.alexa.com/siteinfo (last accessed September 14th, 2020).

[105]*SimilarWeb*, "Top Websites Ranking", available here https://www.similarweb.com/top-websites (last accessed September 14th, 2020).

According to the Pornhub's 2018 report, the total amount of visits for that year reached 33.5 billion, which means a daily average of 92 million visitors. In that same year, 64 million private messages were sent, 7.9 million video comments were left and more than 141 million people voted for their favourite videos which means more people than those who voted in the last U.S. Presidential elections, as it is mentioned in the annual report with a sort of pride or irony[106]. In 2019 there were 8.7 billion more searches than the year before and there was also a record amount of over 6.83 million video uploads; "[t]o put this in perspective – if you strung all of 2019's new video content together and started watching them way back in 1850, you'd still be watching them today"[107]. The provided data go beyond the readers' capacity to comprehend the scale of information exchange: the numbers resemble the calculation of stellar distances, triggering, thus, fascination and awe. It is also worth mentioning that the most commented words for 2019 were the words "good", "love", "like", "sexy", "pretty" and "nice", implying that the site has built a positive and secure environment[108]. Lastly, the following graphs give interesting information about the gender demographics of the platform:

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[106] "2018 Year in Review – Pornhub Insights", published on 11 December 2018 on Pornhub https://www.pornhub.com/insights/2018-year-in-review (last accessed September 14th, 2020).

[107] "The 2019 Year in Review – Pornhub Insights".

[108] As previously argued, the present study does not deal with non-consensual pornographic material. In fact, it does not consider this material to be pornographic at all. That is despite the frequent circulation of such material on popular online platforms. "Girls Do Porn", for example, was part of the partner programmes of MindGeek (Pornhub's parent company) until October 2019 when the US Department of Justice shut the porn producer down by arresting and charging its senior staff on counts of sex trafficking by force, fraud and coercion. It is interesting to notice that the distribution (or at least the detection and removal) of non-consensual material is not measured in the reports which give merely the impression of a positive and safe community.

For more on the "Girls Do Porn" case, see: Samantha Cole, "40 Girls Do Porn Victims Are Suing Pornhub for $1 Million Each", *Vice*, 15 December 2020, available here https://www.vice.com/en/article/3anvw8/40-girls-do-porn-victims-suing-pornhub-mindgeek (last accessed December 20th, 2020).
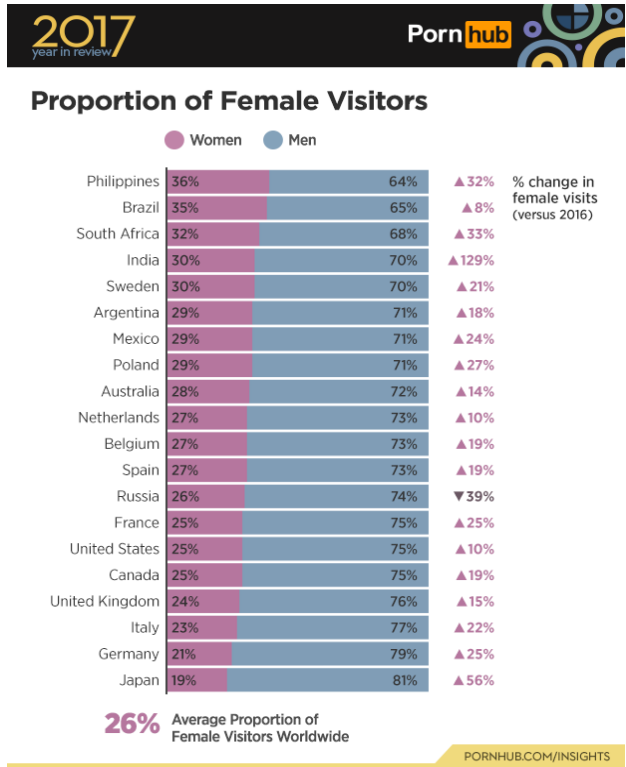
Figure 13: Proportion of Female Visitors, "2017 Year in Review", Pornhub
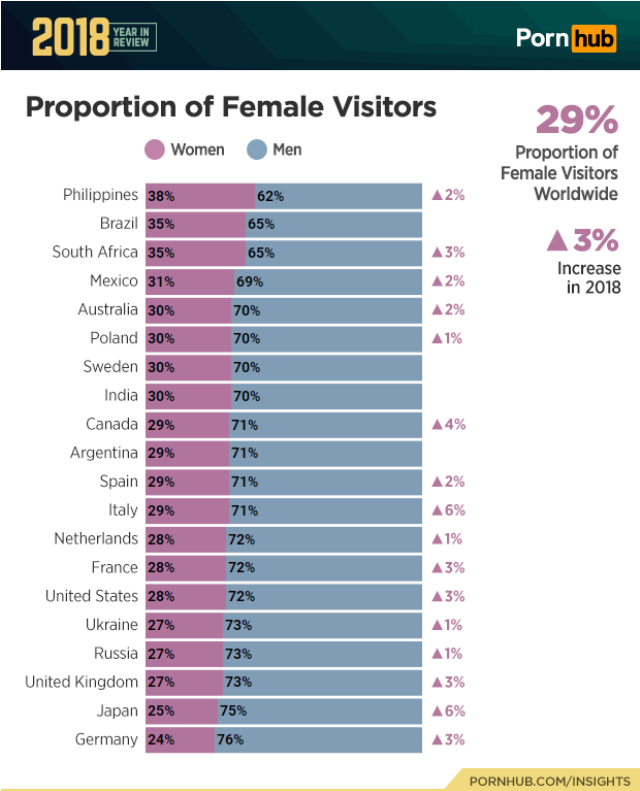

Figure 14: Proportion of Female Visitors, "2018 Year in Review", Pornhub

One of the most apparent features of the cyberporn industry is its dedication to the classification of images which are laid out in tables and which can be found by key term searches. In this direction, Pornhub's material is organised in categories so that the visitor can navigate easily via key tag searches. According to the annual reports, among the top searches for the year 2018 were the categories of "Lesbian", "Hentai" and "Milf", whereas for 2019 the most popular categories were "Japanese", "Lesbian" and "Amateur". The annual reports are said to provide insights about the users' preferences and online behaviour. The reviews, however, are quite confusing, mainly because they keep separating gay male porn from the main stats. Pornhub Gay exists as a sub-site with its own data analysis. Lesbian porn, on the other hand, is very well included in the main stats. What is more, it always scores high in the preferences of male (when the report says male, it means heterosexual men since, as already argued, a separate sub-site has been designed for gay men) and female audiences (there is no distinction between hetero- and homosexual female audiences). This point was specifically raised by a report reader in the comment section of the "2019 year in report"[109]. Pornhub's reply reveals the report's assumed "facticity" and the gender and sexual implications of the business:

> For privacy reasons, we do not use data from registered/logged in users for our Insights. Our data comes directly from Google analytics, which makes determinations on age and gender, but Google does not have algorithms to determine sexual orientation. "Pornhub Gay" exists as it's [sic] own sub-site, with male-male content designed for gay men, so it has it's [sic] own Google

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[109] "Could you please please please tell me why you keep separating gay male from the main stats? I feel you're really messing up the statistics. I'm a straight woman and really cannot relate to this stats. […] It isn't straight-woman-friendly (and sorta [sic] weirdly homophobic) to separate gay/male-focused porn from the 'straight' category. I'm honestly dying to know your reasoning bc [sic] it seems so fishy. As if you're trying to keep straight guys more comfortable with our sexuality whilst pretending you actually care about your female viewers". As posted in the comment section of the "2019 Year in Review" on December 24th, 2019.

Analytics data that can be analyzed separately from the non-gay data on Pornhub.com. We can not mix data from both sources together. The traffic on Pornhub's Gay site is about 6% the size of that on Pornhub.com. Because so many straight oriented videos are already tagged as "lesbian", we cannot determine which of these might be designed for lesbian women to watch, or simply straight men or women that enjoy watching two women. However, when content is tagged "gay" it's more likely to be for gay men who do not want to see women in the videos, so we can more easily feature that content on the "Pornhub Gay" site. We try our best to accommodate the tastes of all visitors, but that is why we do not have a separate site for Lesbian women at this time[110].

Viewed in this light, the quantity of available categories in the platform, though quite impressive at first glance, says little about the actual diversity of the pornographic content in the end. There are indeed more than 100 categories that are displayed on the left side of the computer screen for quick selection without a key term search. The list, however, clearly exposes the racial, gender and age connotations of this classification[111]. As such, plurality in the big mainstream porn platforms is a mere result of quantity, meaning that there is such an incredible amount of porn videos that, in the end, everyone can find something that suits him (or to a lesser degree, her). In other words, it is the quantity (the ocean of data) that creates diversity, not the other way around. The assumed inclusive strategy of the site is, hence, only an illusion. Hardy makes a great point by arguing that

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[110]Ibid.

[111]It is worth dedicating a special note to the classification of pornographic material on the popular platform. This note contains strong language and might be disturbing.

By clicking the "Categories" button on the home page three sub-sections appear. The first one gives two options: "All" and "Gay only" porn, a distinction that was previously exposed as problematic and as messing up the statistics. In the second section, the user can select among Live Cams, Live Sex, Popular With Women, Verified Amateurs, Verified Models and Virtual Reality (subcategories: 180°, 2D, 360°, 3D, Big Tits, POV, Teen, Transgender, Voyeur). In the third section, a list of around 100 categories exposes the site's gender, sexual, racial and age connotations: 60FPS, Amateur, Anal, Arab, Asian, Babe, Babysitter, BBW, Behind The Scenes, Big Ass, Big Dick, Big Tits, Bisexual Male, Blonde, Blowjob, Bondage, Brazilian, British, Brunette, Bukkake, Cartoon, Casting, Celebrity, Closed Captions, College, Compilation, Cosplay, Creampie, Cuckold, Cumshot, Czech, Described Video, Double Penetration, Ebony, Euro, Exclusive, Feet, Female Orgasm, Fetish, Fingering, Fisting, French, Funny, Gangbang, Gay, German, Handjob, Hardcore, HD Porn, Hentai, Italian, Indian, Interactive, Interracial, Japanese, Korean, Latina, Lesbian, Massage, Masturbation, Mature, MILF, Muscular Men, Music, Old/Young, Orgy, Parody, Party, Pissing, Pornstar, POV, Public, Pussy Licking, Reality, Red Head, Role Play, Romantic, Rough Sex, Russian, School, SFW, Small Tits, Smoking, Solo Female, Solo Male, Squirt, Step Fantasy, Strap On, Striptease, Tattooed Women, Teen, Threesome, Toys, Transgender, Verified Couples, Vintage, Webcam.

[w]hile the internet appears to offer limitless choice and the freedom to explore multiple fantasies and desires, the options available on most websites are in fact restricted and highly codified. While the process of logging-on and tracking down gratifying images and sexual fantasies, may be experienced by the individual consumer as an exploration of deeply personal preferences, taken as a whole the overall effect of cyberporn can be seen as the highly efficient commercial homogenization of desire[112].

By putting the material in order and by creating categories and sectors to arrange the excessive number of videos, Pornhub does not only collect an incredible amount of data for advertising and/or improving and customising its services; it does so also for the purposes of classifying its visitors. It must be noted, however, that the satisfaction of an urge via the key-term engine is a much more complicated process than the one depicted on a platform; the desire of the consumers does not exactly pre-exist the offered choices and searching on a porn site cannot be interpreted as a process of desire and content meeting each other. In this regard, Patterson refers to the "click here if you are gay" button which, according to her view, indicates a technology of desire that is as productive as it is regulatory[113]. As a passive recipient in the mainstream porn platform the Pornhub consumer has an infinite list of the same things among which to choose[114]. The ultimate fantasy of the porn consumer, however, is to be promoted from a passive viewer to a first-class participant. Virtual reality pornography comes to fill this gap.

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[112]Simon Hardy, "The Pornography of Reality", *Sexualities*, Vol. 11, Issue 1-2 (February 2008), pp. 60-64, p. 62.
[113]Zabet Patterson, "Going On-line: Consuming Pornography in the Digital Era", in *Porn Studies*, 2004, pp. 104-123, p. 107.
[114]Williams argues that after having been in touch with a large number of films across the genre's history, she came to the conclusion that pornography is not a self-evident text, it is not a genre that has merely illustrated objectification, it is rather a field with many contradictions that deserves a closer study (*Hard Core*, p. x). As later discussed in this chapter, however, in the case of Pornhub's virtual reality material, one can easily argue that "if you've seen one porn film you've seen them all".

III.4.3 Virtual Reality on Pornhub

Pornographers' long-standing goal is that of always delivering greater realism. In porn literature, this is achieved mainly by the first-person narration; in most cases, a female protagonist exposes the ways in which she experiences pleasure. With the various technological developments, however, porn becomes more visually oriented. In this context, the genre gets obsessed with the monitoring of the body, its organs and spasms; the closer the look, the more realistic the experience, as if the camera could reveal the secrets of pleasure. In addition to this, the amateur production and the horizontal distribution of cyberporn give such an authentic result that Hardy talks about an era of "reality porn"[115].

Virtual reality pornography, however, is said to have a comparative advantage over the computer screen by offering a strong feeling of presence and by providing the possibility of an interactive relation with the porn performer(s). In particular, the stereoscopic view, the sensation of depth and the shooting from a first-person perspective are previsioned to cause a fundamental transformation of the whole field; the sensation of simply watching from the outside is to be replaced by the experience of taking part in the actual sexual activity. Pornography's effect, in other words, is no longer a condition of observing, but of a hallucinatory "being there" while there is nothing left there anymore: in fact there is no "there" there. More simply put, there is no reality apart from its mediation[116].

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[115]Hardy, "The Pornography of Reality", p. 60.

[116]It is important to note that the distinction between reality and representation in porn is not clear. Regarding this matter, Hardy claims that while the pornographic images appear as a representation of sexuality, they invoke "real sexuality" in two ways: "[…] first because they depict actual sexual acts that have taken place at some specific point in time between live performers and secondly because the image is assumed to have the power to move the body of the viewer to arousal in an involuntary way" ("The New Pornographies", p. 8).

It is also interesting to note that, according to Melinda Vadas, the pornographic image is not representational because it satisfies appetitive desires in a straightforward manner whereas "[…] the ontological grammar of appetitive consumption dictates that no representation can do this". In this regard, pornography is not a depiction of a sexual act, it is rather itself a sexual object ("The Manufacture-for-use of Pornography and Women's Inequality", *The Journal of Political Philosophy*, Vol. 13, Number 2 [2005], pp. 174-193, p. 184).

In 2016 Pornhub starts offering services of Virtual Private Network to guarantee the privacy of its visitors. In that same year, the site begins to distribute its videos in High Definition and in 360-degree, upgrading like this the site's business plan to the avant-garde of the technological developments[117]. Pornhub announces a collaboration with BaDoinkVR, a leader virtual reality porn production company. Together the two companies launch a virtual reality category on Pornhub's platform, making the latter the first free adult website to feature 360-degree adult content. Right after the announcement of this partnership Pornhub's, Vice President Corey Price claims that,

> [a]t Pornhub it is our duty to provide our global audience with the latest in cutting edge technology. Virtual reality is the next phase in the constantly metamorphosing world of adult entertainment, and will provide users with a mesmeric experience unlike anything they've seen before. Now, our users are not only able to view our content, but be protagonists in the experience and interact with their favorite porn stars[118].

Figure 15: An excited young man hides the only woman in the team.
Extract from an advertisement. BaDoinkVR and Pornhub collaboration. 2016

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[117]Rodeschini and Zecca, "Pornflix. Pornhub e La Normalizzazione Dell'industria Pornografica Contemporanea", p. 109.
[118] "Pornhub Launches Virtual Reality Category on Website", *Pornhub*, 23 March 2016, available here https://www.pornhub.com/press/show?id=901 (last accessed September 14th, 2020).

In order to get full access to the promised immersive experience, the user is expected to wear a VR device to gain the stereoscopic vision. A great number of the videos can be watched also without the equipment but, in this case, the sensation of depth is lost. More analytically, virtual reality technology uses one video per eye which are then viewed through lenses on a VR device or Google Cardboard. As Price explains, "[…] these lenses focus and reshape the picture for each eye and create stereoscopic 3D images to mimic how each of our two eyes views the world ever-so-slightly different"[119]. As soon as the VR category was launched, Pornhub announced the giving away of 10,000 pairs of virtual reality goggles so that users would quickly immerse into this new experience. The site released also statistics indicating that VR pornography was one of the fastest growing video categories in 2017, averaging around 500,000 views per day by April 2017[120]. Up until September 2020, when visitors type the keywords "VR" or "Virtual Reality Porn" on the platform, they get over 15 thousand results, some available only on the site's paid version[121].

The material of this part derives from the *Pornhub Originals VR* channel, described on the platform as "[y]our source for Pornhub's all-original and totally exclusive collection of super-hot videos"[122]. In September 2020, the channel ranked in the 359th position of most-viewed channels, including more than 156 videos with a total amount of 39,870,933 video views and 125,771 subscribers. For the needs of the present study, the time watching porn

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[119]Suzannah Weiss, "Pornhub is upgrading masturbation with virtual reality", *Complex*, 23 March 2016, available here https://amp.www.complex.com/life/2016/03/pornhub-virtual-reality (last accessed September 14th, 2020).

[120]Elsey et al, "The impact of virtual reality versus 2D pornography on sexual arousal and presence", p. 34.

[121]To put this into perspective, the key word "lesbian" gives more than 186 thousand results.

[122]The research material of this section is updated until September 2020. The analysed videos may not be easily found at a later time. In fact, the content of the platform changes so rapidly that over a period of just six months, most of the videos in the Pornhub Originals VR channel were erased or relocated elsewhere. Upon revisiting the channel in April 2021, it was discovered that the specific channel only contained 8 videos and 135,942 subscribers. In this regard, the present analysis in its details captures a very specific moment of the constantly changing material against its ever-shifting landscape. On the other hand, this study wishes to highlight and problematise this ephemerality and messiness that characterise the distribution of porn in the contemporary industry.

material was approximately sixteen hours in total. In most cases, the videos were short (in round numbers 150 videos of five minutes each), there were, however, a few longer videos (the longest one lasting over forty minutes). Broadly speaking, the videos had poor narrative lines. There were, for example, the classical porn scenarios of pizza delivery, teacher-student affair and doctor-patient encounter. All videos shared similar aesthetic patterns and the vast majority was shot indoors. Lastly, it is worth mentioning that the videos were produced by Pornhub.

Regarding the shooting style of virtual reality videos, it must be noted that the cameras are positioned very close to the performers who are, thus, expected to act in strange positions, to remain mute and largely still. The camera rig needs to be placed at the eye level of the performer without, however, interfering with the sexual act. These restrictions can lead to some odd contortions that ruin the porn experience. In fact, many site visitors use the comment section to complain about the shooting style of the videos; "Filmed miles away and when you zoom blurry as fuck, bit of a fail"[123], "I personally believe that the use of the 360 degree no scope camera was a bit unnecessary, due to the fact that the ceiling provides little to no sexual satisfaction to me as a pornhub premium connoisseur"[124].

As it is already argued, the vast majority of the videos was shot from a first-person perspective. This means that when lowering the headset, the user experiences the projection of another body; put differently, the anatomical parts seen through the device are projected from the user's own body. In the overwhelming majority of cases, the videos are shot from the perspective of a man who participates in a sexual encounter with one or more women[125]. The

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[123]*VR TARA MORGAN AND DARCIE DOLCE LESBIAN VOYEUR FULL 360 VIRTUAL REALITY* (in the comment section), 2016, available on Pornhub (last accessed September 14th, 2020).

[124]*VR STEREOSCOPIC 360 - ABELLA DANGER RIDES SETH'S DICK IN EPIC POV* (in the comment section), 2016, available on Pornhub (last accessed September 14th, 2020).

[125]The shooting from a first-person perspective was not invented for virtual reality environments. Since the 1990's, the POV (Point of View) pornography and Gonzo porn have been using a similar shooting style in which the performers hold the cameras, putting the viewer in the position of a participant. As Hardy explains, "[in] gonzo there is little or no acting required and no complex narrative structure other than the naturalistic one of an everyday sexual conquest: typically (in heterosexual material) a man or men with a camera persuade an apparently unsuspecting girl to have sex with him/them. As such, gonzo brings the representation of sex closer to the

viewer is thus expected to identify him or herself with male anatomical parts while, in front of him (or in front of her), several (almost exclusively) women keep serving an "avatar"[126]. In other words, "[…] videos appeared to have mostly been made with a male viewer in mind, and even the first-person scenes from a female perspective may not have been optimized for a female viewer"[127]. Lastly, there were also few videos that offered a third-person perspective. In these cases, the user either sees him of herself in a foreign body that watches a "sexual number" from a distance or the user has the disembodied experience of a floating head that observes without being perceived. In the last case, the videos usually create a floating sensation and nausea.

On a closer look, of the 156 videos that were watched for the needs of this study, only two were shot from a female body position in a heterosexual scenario. In the comment section of these videos (one of which was uploaded twice under a slightly different name), the remarks were mostly positive, commenting on the rarity of the perspective; "WOW This is the first female POV I've ever seen. More please!", "it is so different watching woman pov", "Why is this the only video like this on here??? Can't believe they're not making more like this", "More of this, please! Cater to a girl's needs too!"[128]. Two more videos were projected from a female body position, this time, however, in a lesbian scenario: "As a girl this is the best free VR Lesbian POV video I have managed to find so far […] One of my faves [sic], wish there were

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experience of a lived sexual interaction not only in terms of the sexual action itself but also in terms of its context or framing" ("The Pornography of reality", p. 61).

[126]These projections from another body can create a sense of confusion and disturbance; "Imagine watching gay porn in vr but your [sic] straight and just wanted to see what it looks like, and the person in the porno goes behind and when you turn around your [sic] the one getting fucked in the ass and not him" (*VR TEEN MEGAN RAIN RIDES BIG DICK IN POV 360 VIRTUAL REALITY!* [in the comment section], 2016, available on Pornhub [last accessed September 14th, 2020]); "Am very confused" (*VR STEREOSCOPIC 360 - STRAP-ON FUN AND PUSSY EATING WITH JENNA SATIVA!* [in the comment section], 2017, available on Pornhub [last accessed September 14th, 2020]). Confusions could also arise from the colour of the skin or the assumed age range of the person from whose position the video is filmed.

[127]Elsey et al., "The impact of virtual reality versus 2D pornography on sexual arousal and presence", p. 38.

[128]*VR STEREOSCOPIC 360 - CHARLES DERA EATS ABELLA DANGER'S JUICY PUSSY POV* (in the comment section), 2016, available on Pornhub (last accessed September 14th, 2020).

more videos like this one out there, I always end up coming back to this one 'cause there really aren't"[129].

It must be noted that there was no male gay video on the list since, as already argued, according to the platform's view, gay porn is not for everybody, it rather deserves (or it should be hidden in) a special place outside general categories. On the other hand, there were plenty videos of threesomes and orgies that depicted action taking place always around a man from both a first- and a third-person perspective. It is worth also mentioning that there were three videos with black male performers, one with an Asian protagonist as a delivery girl[130] and one video of the "BBW" category (big beautiful women)[131]. The racial and gender connotations of the VR category cannot be overlooked.

Moreover, it was broadly observed in the comment sections under the videos that virtual reality porn consumers often seek advice on what devices to buy and how to use them. Users repeatedly reported difficulties in finding good quality material and in adjusting the devices[132]. In few cases, on the other hand, users had positive reactions, expressing fascination and curiosity about these technologies[133]. Overall, it can be argued that what is quite remarkable in this framework is the way in which a discussion about technology fits in so well with a discourse of sexuality: "Not bad. Biggest problem is the distance. VR is best for cowgirl for a

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[129] *VR TARA MORGAN AND DARCIE DOLCE LESBIAN VOYEUR FULL 360 VIRTUAL* (in the comment section).

[130] *VR 180 - WILL POUNDER FUCKS ASIAN DELIVERY GIRL VINA SKY!*, 2019, available on Pornhub (last accessed September 14th, 2020).

[131] *VR 180 - SOFIA ROSE GIVES BBW APRIL FLORES A SENSUAL OUTDOOR MASSAGE!*, 2020, available on Pornhub (last accessed September 14th, 2020).

[132] "I think it's just a little too early for this. Even at 1080p it still looks like 480p", "I've only got the cardboard goggles... How do I watch this??? Its [sic] got two screens stacked on top of each other", "Hey dude, how did you get it working in VR? I'm using a Galaxy Gear VR with a Note 5, and when I downloaded the video and put it on my phone it just plays like a normal movie..." (*DANI DANIELS POV VR FUCK 360 STEREOSCOPIC VIRTUAL REALITY* [in the comment section], 2016, available on Pornhub [last accessed September 14th, 2020]).

[133] "Welcome, this is the future" (*VR STEROSCOPIC 360 - ADRIANA CHECHIK RIDES DERRICK PIERCE'S COCK* [in the comment section], 2016, available on Pornhub [last accessed September 14th, 2020]); "...and i [sic] used to look at magazines.." (*ALICE LIGHTHOUSE SUCKING YOUR COCK VR!* [in the comment section], 2019, available on Pornhub [last accessed September 14th, 2020]; "The future of porn is now!", (*DANI DANIELS POV VR* [in the comment section], 2019, available on Pornhub [last accessed September 14th, 2020]).

few reasons. 1 you are laying down so no motion sickness, 2 she appears much closer, arguably semi realistic looking. Added bonus of being my favorite position and you can at least see her face"[134].

In any case, the Internet as a system and the interfaces of cyberporn sites in particular, more often than not, necessitate postponement. In most of the time spent online what the users actually do is searching, not finding. In this context, there is no image satisfactory enough as there is no reality real enough. To the time consumption which begins with the delay of logging on, finding a site, signing through initial contracts, waiting for the selected video to load, the virtual reality porn comes to add the time needed to adjust the machines and to manage the wearable technology. All these obligatory steps inscribe repetition and delay as pleasures. In this framework, porn becomes technical, a hypothesis that also works the other way around as the technical is being sexualised (Figures 16 and 17).
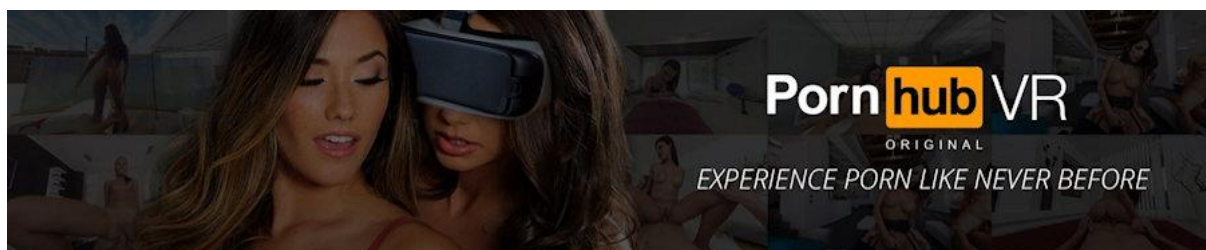

Figure 16: Image taken from Pornhub, 2020

In this direction, on some occasions in the analysed material the wearable technology played the role of a pornographic object. In at least one case a female porn performer was

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[134]*VR TEEN MEGAN RAIN RIDES BIG DICK IN POV 360 VIRTUAL REALITY!* (in the comment section).

filmed to wear a VR headset to watch virtual reality pornography; "so I am masturbating in vr to a girl masturbating in vr", a user comments under the video[135]. It is also interesting to note that together with the virtual reality device, the porn performer on that particular video also used a vibrator, creating like this the impression that the headset is just another sex prop among many others. On another occasion, two men wear virtual reality devices to play a video game. They cannot see or understand well what is happening in the room since their senses are blocked. A girl then intervenes and seduces one of them from the position of whom the porn video is shot[136]. In this regard, this study argues that the focus of the analysis should shift from the ways in which VR technology produces pornography towards the pornification of VR technology. According to this view, the question is not so much how virtual reality technology could change the experience of porn, but how virtual reality technology is being sexualised in itself.
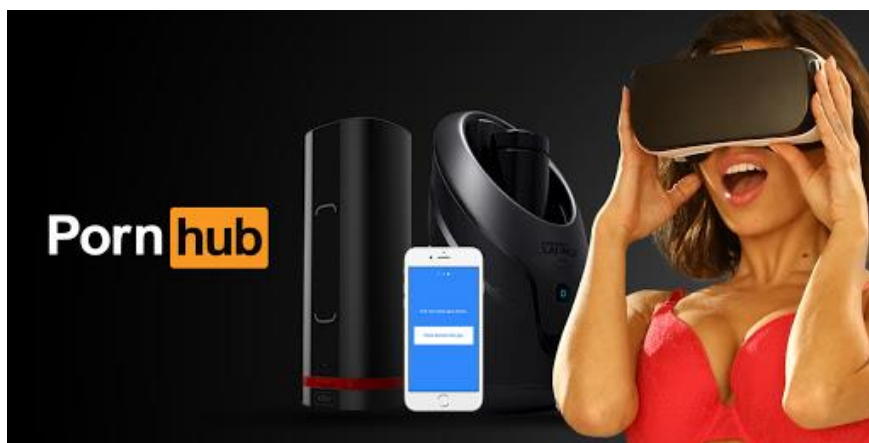

Figure 17: Sexualisation of Virtual Reality Technology. Image taken from Pornhub, 2019

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[135]*VR 180 - SOLO GAMER GIRL MILANA RICCI MASTURBATING TO VR PORN!!* (in the comment section), 2020, available on Pornhub (last accessed September 14th, 2020).
[136]*VR 360 - WHITNEY WRIGHT FUCKS HER BROTHER'S BEST FREIND WHILE HE PLAYS VR*, 2018, available on Pornhub (last accessed September 14th, 2020).

III.5 Gamification of Sexuality

III.5.1 Who wants to play (in) a porn game?

Through the case study of *Pornhub Originals VR* channel the previous section explored the emergence of virtual reality pornography that was shot in real environments with the use of multiple cameras. In this section, the analysis shifts to virtual reality computer generated porn content. In this case, the 3D object is not filmed, it is rather designed as a "copy" of an "original" model or it is created for the particular needs of a digital environment. Computer generated worlds have been widely used in the videogame industry. Many parallels could be drawn, in fact, between the businesses of virtual reality porn and virtual reality video gaming. To begin with, they both share the same equipment such as headsets and consoles[137] (Figure 19). This often leads to overlapping target groups as virtual reality porn videos becoming accessible to gaming communities. In addition, pornography and video gaming are both expected to be the leading industries in the application of virtual reality technology[138].

Even before the application of virtual reality technology in these sectors, however, the porn industry and the video game business had a close relation. More specifically, during the last few years, fan-made porn (porn videos that are inspired by video games) has turned out to be an extremely popular genre. According to the 2016 Pornhub report, for example, *Overwatch* (a team-based/first-person shooter video game that was released earlier that year) scored in the 11th position of most searched terms on the platform, one position higher than the category of

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[137]Ana Valens, "The best headsets for watching VR porn or playing adult VR games", *Daily Dot*, 19 December 2019, available here https://www.dailydot.com/irl/vr-porn-best-headset/ (last accessed September 14th, 2020).

[138]"According to estimates from Piper Jaffray, an investment bank and asset management firm, by 2025 adult virtual reality is forecasted to be a $1 billion business, the third biggest virtual reality sector, behind videogames and NFL-related content" (in "Pornhub Launches Virtual Reality Category on Website").

"Anal"[139]. In the same direction the hit game *Fortnite* also ranked in the top 20 searches for 2018[140].

It is interesting to notice that, in these cases, the pornographer's long-standing goal of realism is shifting towards fantasy; animals, aliens, plants, objects, hybrids of all kinds and forms, they can all be sexualised in pornographic environments. In theory, this tendency could lead to the deconstruction of all categories and preconceptions as well as to the re-negotiation of sexuality outside a binary gender economy. At least in the mainstream porn platforms, however, the binaries of human/animal and human/machine have proven to be more fragile than the hierarchical categorisation of gender and sexuality; the oversexualisation of the female porn performer in mainstream pornographic settings is substituted by the feminisation of the non-human other (creature, monster, alien) in the video game universe (Figure 18)[141]. In other words, in the context of video game inspired pornography, the human is not sexy enough anymore, but the woman still is.

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[139]"Well known for its fast action and overtly sexualized characters, the game [Overwatch] quickly became the subject of hundreds of fantasy porn parodies (nsfw) and tribute videos" ("Pornhub's 2016 Year in Review", published on 4 January 2017 on Pornhub https://www.pornhub.com/insights/2016-year-in-review [last accessed September 14th, 2020]).

[140]"2018 Year in Review", *Pornhub*.

[141]It should be noted that the data provided in this section do not always refer to computer-generated material. In most cases, porn performers are simply dressed up as characters from comic books, movies or video games (cosplay).

Popular Video Game Character Searches

	2018 Searches	Peak Increase	
Bowsette - Nintendo	34,687,477	▲776%	30-Sep
Brigitte - Overwatch	4,836,706	▲2789%	9-Apr
Lara Croft - Tomb Raider	4,562,535	▲124%	16-Sep
Mercy - Overwatch	3,244,331	▲77%	11-Jan
Zelda - Nintendo / Zelda	2,719,429	▲86%	14-Jan
Ashe - Overwatch	2,664,521	▲4467%	8-Nov
Mario - Nintendo	2,661,412	▲222%	26-Sep
Widowmaker - Overwatch	2,485,363	▲49%	4-Nov
Calamity - Fortnite	2,484,155	▲4026%	6-Oct
Tracer - Overwatch	2,452,661	▲77%	11-Jan

Figure 18: Popular Video Game Character Searches (Top10), "2018 Year in Review", Pornhub
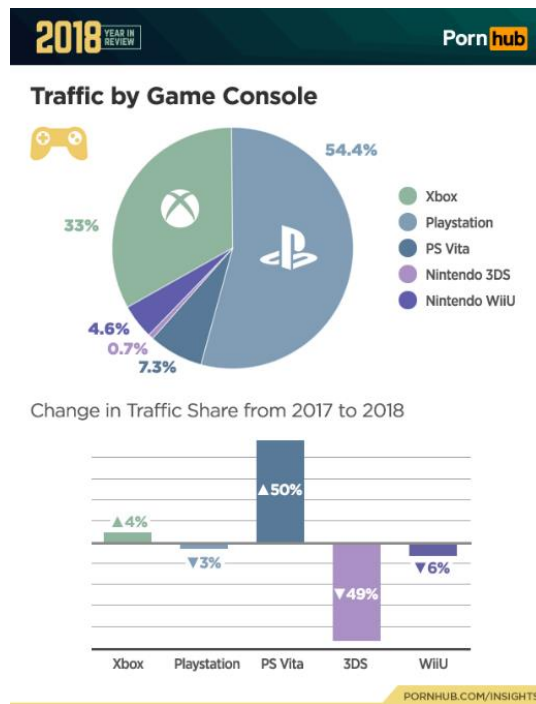

Figure 19: Traffic by Game Console, "2018 Year in Review", Pornhub

In this direction, this study would like to argue that pornography has entered a phase of "gamification", a condition where game design elements are added into non-game contexts[142]. It must be noted that, as a term, "gamification" originated in the digital media industry and has been widely used to indicate a service marketing technique that provides audiences with proactive directives and feedback through game mechanics and game dynamics. In this framework, points, badges, levels and leader boards attract the interest of general audiences and guarantee their engagement while, at the same time, these elements work as a great source of information[143]. For the needs of this study, however, gamification is used in a narrower sense to indicate pornography's passage from a passive, already filmed and, thus, always closed content to the unlimited possibilities of a scenario that is being written synchronically with its consumption, similarly to a video game experience where the gamers choose their weapons, super-powers and strategies. In this regard, the transition from a passive and voyeuristic porn experience to a more active participation in virtual reality immersive environments has been described as a fundamental game-changer for the porn industry[144].

III.5.2 "Striking Vipers": Objects in Mirror Are Closer Than They Appear

Much like previous chapter's reading of *Metropolis* and *Ex Machina*, this section focuses on another cultural product in order to explore the fantasies that have been associated with the application of virtual reality technology in sexual worlds. This study focuses, in particular, on *Black Mirror*, a British anthology series that deals with modern society's relationship with technology. The standalone episodes comment on the rise of the machines and on the emerging fears and dangers at the social level that they (are about to) provoke. The title of the series

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[142] Sebastian Deterding, Dan Dixon, Rilla Khaled and Lennart Nacke, "From Game Design Elements to Gamefulness: Defining Gamification", in *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, New York: ACM, 2011, pp. 9-15, p. 10.
[143] Ivi, p. 9.
[144] Elsey et al., "The impact of virtual reality versus 2D pornography on sexual arousal and presence", p. 35.

indicates the dystopic atmosphere of the episodes; black mirror is the screen of switched off devices that reflect the users in a distorted manner. More simply put, the series examines how technology mirrors back the human and the society of the near future.

The study focuses on "Striking Vipers", the fifth season's first episode that was released on Netflix in 2019. The plot follows two old friends who reconnect in the virtual reality version of their favourite fighting game. The episode starts with Danny and Karl in the prime of their youth partying, doing drugs, playing video games and enjoying their sexuality[145]. In a flash forward, Danny is married to Theo, they have a kid together and live in a nice house with a garden and a barbeque in the suburbs. Their sex life revolves around having a second child. In this middle-class lifestyle, Danny seems unmotivated and lost. Karl, on the other hand, is a womaniser bachelor who, besides the fact that became successful in the meantime and bought a fancy apartment downtown, does not seem to have grown up. The two old friends meet after a long time at Danny's birthday party when Karl gives to his friend as a present their favoured video game in a virtual reality version: *Striking Vipers X*[146]. Things between them escalate quickly and from the very first round Danny and Karl find themselves making out in the virtual environment of the game. The experience is described as fascinating and mind blowing. They can feel pain and pleasure as they would do in "real life" or even in a more intense way since they get to experience sex through other bodies. It must be noted that Karl plays a female character on the game and Danny has chosen an Asian male character:

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[145]This convergence of porn and gaming culture works on many levels: Antony Mackie, the actor who plays Danny on "Striking Vipers", has achieved global recognition with his portrayal of Sam Wilson/Falcon in the Marvel Cinematic Universe whereas Abdul-Mateem, the actor who plays Karl, portrays the character of David Kane/Black Manta in DC Extended Universe.

[146]Brooker admits looking for a title that could pass as a video game. The snake reference gives away the phallic connotations of the gaming culture. For more, see: Marlow Stern, "Inside Black Mirror's First Porn Episode: 'It's a Sexual Playground'", *The Daily Beast*, 5 June 2019, https://www.thedailybeast.com/netflix-black-mirror-season-5-porn-episode-striking-vipers-creators-charlie-brooker-annabel-jones-tell-all (last accessed September 14th, 2020).

Danny (as Lance): How does it feel? I mean, like, you, being in a woman's body while…
Karl (as Roxette): Crazy, it's crazy, I mean it's different, like … the physical feeling of it? It's more sort of satisfying. I can't really explain it. Like one's a guitar solo, the other's a whole fucking orchestra. But the tune's basically the same. Different tempos though[147].

The two men quickly become addicted and use the fighting game as an excuse for their sexual encounters. Their virtual affair, however, soon affects their real lives and causes suffering to their loved ones: Danny is constantly distracted, he neglects his wife and worries about his sexual identity. Karl, on the other hand, cannot find interest in women anymore and pressures Danny to continue their late-night meetings.

Charlie Brooker, creator of *Black Mirror*, explains that the inspiration for the "Striking Vipers" episode derived from his college years in the 1990's when he was playing (hypersexualised) games like Tekken with his flatmates on the PlayStation. At the time he found himself wondering about what his neighbours might think when hearing men shouting and grunting completely out of context: "[…] I thought there is something homoerotic about this arena in which you are physically grappling with your friends on the screen. There is something weirdly primal about it"[148]. Brooker highlights that, even though there is a game in the story, the episode is not really about it (about the video game culture). It is not even about virtual reality technology since in the case of "Striking Vipers" the virtual universe works as a mere facilitator for the action. Brooker argues, instead, that the episode is a comment on contemporary (and future) pornography and on modern relationships. In that same direction, Annabel Jones, executive producer of the series, states that

the episode is more about porn and how the brave new world of VR porn could affect people's offline relationships. It's about the exploration of porn in a world where porn is so sophisticated

[147]*Ex Machina*.
[148]James Hibberd, "Black Mirror creator discusses that unique 'Striking Vipers' relationship", *Entertainment*, 5 June 2019, available here https://ew.com/tv/2019/06/05/black-mirror-season-5-striking-vipers-interview/ (last accessed September 14th, 2020).

and can be tailored to your own personal preferences, and so it would increasingly become immersive […] at what point does porn stop being a healthy distraction and actually becomes like you are having an affair, or cheating on your partner?[149]

As things between Karl and Danny go out of hand, the two friends arrange a meeting to test the sexual aspect of their relationship in the "real world". Their heterosexual identity is finally rescued since both claim to feel nothing after kissing. The ambivalent kissing scene, however, leaves space for different interpretations. Brooker states in particular: "I find it quite fascinating because I still don't know where I come down on it. Is it a homosexual relationship? In some ways it is, and in other it absolutely isn't. It's really about male friendship and the issues that men may have communicating with each other"[150]. To resolve the tension right after kissing, Danny and Karl start pushing each other aggressively (as they would do in a fighting game) and end up getting arrested. This is how Theo finds out about Danny and Karl's secret virtual affair. Finally, the married couple comes up with an agreement: every year on his birthday, Danny takes off his glasses, puts on the headset and meets Karl in *Striking Vipers X* world, whereas Theo has a night out without her wedding ring.

Although virtual world gave the space for sexual experimentation, the confrontation with reality was relentless. In the real world, Danny and Karl can still identify as heterosexual men. Their sexual experiences, however, are no longer merely of this world. The ending twist leaves a bitter sensation to the viewer; instead of becoming a transformative force, sexual desire is canalised into comfort and controlled zones. Once the game is finished, everyone can return to their social obligations and strict gender roles, as if nothing has happened. The order between game and reality, between porn and sexual life is successfully re-established.

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[149]"Inside Black Mirror's First Porn Episode: 'It's a Sexual Playground'".
[150]Ibid.

Figure 20: Scene from "Striking Vipers"

"Striking Vipers" is a declaration of the "gamification of romance" (Figure 20) where everything is at risk only if and as long as there is a game going on. In this framework, it is important to distinguish between the game and the play: the latter is a broader, looser category that denotes a more freeform, expressive, improvisational engagement and commitment, whereas the former one (the game) refers to an explicit rule system where there is a competition of actors towards discrete goals or outcomes. In this light, virtual reality pornography advocates the gamification of sexuality by offering an illusion of original experimentation which, however, takes place within pre-determined rules.

III.6 Final Points

This chapter examined porn industry's (actual and symbolic) investment in niche technologies. In part one, the study focused on pornography's emergence as a legitimate genre of representation and on its evolution to a highly profitable industry. In part two, the study defined the field of analysis and situated itself within the field of Porn Studies. In part three, a discourse

analysis of the *Pornhub Original VR* channel's material was attempted with the intension of exposing and highlighting the strategically produced dominant interpretations of sexual life. Lastly, through the exploration of "Striking Vipers", the study aimed to examine how virtual reality pornography is culturally constructed and how technology becomes a desired object *per se*.

This sexualisation of technology, however, does not end with the exploitation of robotics, artificial intelligence and virtual reality technology by the sex and porn industries. In any case, as previously argued, technology and pornography have always had a close relation; the one could not grow without the other. In the context of advanced cognitive capitalism, however, this collaboration is intensified to such an extent that the boundaries between the two seem to be blurred. In the same direction, Augmented Reality (AR) is said to be the next big step in the future of technology. Video Games, such as *Pokémon Go*, have already been using AR whereas the consumption of virtual reality pornography has already been happening with the use of interactive sex toys for a mixed reality experience. Nevertheless, the point of this study is not to present in an exhaustive way the products and services that are currently on the market. The present research rather aims to provide a political analysis of the discursively and materially produced future of sexuality and pleasure.

Up to this point, all chapters of this dissertation (Theoretical Framework, A.I. Sex Robots, Pornography and Emerging Technologies) could be read separately. In the final remarks that follow, the study attempts to synthesise all arguments and to check the hypotheses that were initially set in the introduction; the theory (Chapter I) will confront the case studies (Chapters II and III). Since this dissertation was written during the emergence of the Sars-COVID-19 pandemic, the addition of an extra short text that reads the future of sexuality through the lens of a new dystopia was considered necessary.

EPILOGUE:

FINAL REMARKS

Digital technology's use for sexual purposes is far from a new phenomenon. On the contrary, as it has become apparent in this study, the sex industry has often been an early adopter of new, ground-breaking technology and it has also been in control of propelling various technological innovations from niche to mainstream. In the last few years, however, a shift of emphasis on the entangled relation between the various technological developments and the sex industry seems to be taking place. Through the exploration of a flourishing new market of technologies that mediate sexual encounters in qualitatively new ways, this study has aimed to demonstrate how the notion of the human is re-defined in a highly digitalised and technologically mediated context. In the next few paragraphs, the reader can return to the main points that have been raised throughout this study, along with some final remarks.

This dissertation has started with the presentation of Rachael, the AI Companion that was specially made for this project in order to provide some insights into how A.I. weak systems operate in practice and into the impression of companionship that they offer regardless of their known artificial nature. The avatar has accompanied the reader throughout the introduction of this study where its points of departure (the detention of a pattern of feminisation of everyday technological tools), research question (how gender, sexuality and the body are being re-imagined within a technologically mediated and fully immersive framework), methodology (mostly discourse analysis) and structure (the organisation of the material in three independent entities) are presented. Rachael has served its purpose and it is now time for "her" to be deleted.

In the Prelude, "a Glossary to Key Words", the study defined its main analytical tools. For this purpose, short epigraphs on technology, promise, pleasure, subjectivity and posthuman perspective have been provided while, on the other hand, special attention has been placed on gender and sexuality. This concentration on gender and sexuality has been a deliberate choice on the part of the author so as to make clear that the study derives from the rich feminist literature; in this light, the "gender perspective" is not merely added to an already told story in an accumulative way, neither is sexuality perceived to be a mere derivation of gender. The journey, instead, has started from various feminist theories, many of which might seem incompatible together at first glance; it is, however, at these precise instances of intellectual conflict that the critical thinking flourishes and grows. In particular, Irigaray's sexual difference, Butler's gender performativity, Grosz's corporeal feminism and Barad's posthumanist performativity have been brought together to illuminate different aspects of the same challenges: the disentanglement of the discourse/matter dualism and the conceptualisation of the body as inseparable from gender and sexuality though not totally determined by them. Without prioritising discourse over matter or the other way around, the present analysis has aimed to bring to light how the body comes to matter through various layers of signification while matter stays continually active in this procedure.

Moving on, in Chapter I, "Theoretical Framework: Rethinking the Post-human, Gender and Sexuality", the focus of the research has been shifted towards issues of power, technology and the human. In this framework, the study has followed the passage from Foucault's disciplinary societies to Deleuze's societies of control and to Haraway's informatics of domination so as to demonstrate the complicated ways in which processes of subjectification change over time and, most significantly, to describe how these processes operate at this stage of capitalism. More specifically, the analysis concentrated on a series of characteristics of late capitalism that have been considered of particular relevance to this work (immaterial capital,

high investment in informational data, affective labour, free labour). The study then proceeded with the presentation of a cartography of the main theories of the posthuman: the liberal school of posthumanist thought, transhumanism(s) and posthumanism(s) were examined side to side, mainly regarding their distinct ways to approach technology and the human. Special attention has been placed on critical posthumanism which has been chosen to be the theoretical framework of this study in a strict sense. The reason behind this decision was the unique way in which critical posthumanism was proved to approach gender, sexuality and the body. More specifically, re-visiting now the cartography that was conducted in Chapter I, it becomes apparent that critical posthumanism differs from the other schools of the posthuman thought in the following ways: in its genealogy (social movements and the youth cultures throughout the 1960's and the 1970's), in its epistemology (standpoint feminism and politics of location) and in its specific goal (re-defining the human away from technophobic and technophilic assumptions).

The empirical part of this dissertation has been inaugurated with Chapter II "The phenomenon of A.I. Sex Robots". In this part, the focus of research has shifted towards a series of emerging high-tech sex businesses that are currently looking for their place in the sex market. Before that, however, the analysis took a step back in time to examine the appearance and conceptualisation of automated machines in different periods and places. For that purpose, it first investigated the automaton as a mythical, religious and actual object in antiquity and in early modern times. As the analysis proceeded, the gendering of the robot in the industrial and post-industrial contexts was put at the centre of attention, mainly through the exploration of a series of cultural products (such as *Metropolis* and *Ex Machina*). The existing market of sex robots was then presented along with the current academic debates on the subject. In addition, a discourse analysis of the advertising campaign of Harmony, the closest artifact to an actual sex robot currently under construction, brought to light the gender and sexual implications of

this small industry. Lastly, Chapter II has attempted to provide an affirmative response to sexual technologies from a posthuman and feminist perspective. To sum up, the goal of this chapter has been to approach sex robots as a symptom of a wider power arrangement and to demonstrate how fantasies of sexualised machines do not appear in a social vacuum. Sex robots have hopefully been proved to be the product of a long process, full of contradictory components, each of which alone has different implications both emancipatory and regressive ones.

The empirical part has finally been completed with the exploration of sexual technologies that are highly profitable at this moment. More specifically, in Chapter III, "Pornography and Technology: An Entangled History", the analysis has concentrated on pornography's emergence as a legitimate genre of representation and on its development into a highly profitable business. In this framework, the study has provided a glance into the feminist "tired debates" between the anti-pornography movement and sex positive feminists in the 1970's and 1980's in the US. The analysis, however, has kept a safe distance from these sex wars by situating itself within the field of Porn Studies. In this way, it has managed to approach the pornographic material as a cultural document that leaves room for critical engagement. The study then described how the production, distribution and consumption of pornography in popular online platforms (Pornhub) currently takes place, thus revealing cyberporn's messy and chaotic nature and problematising the gender and sexual implications of cyberporn's mainstream version. After examining how porn has been conceptualised in the past and how it functions as one of the most profitable online businesses at this moment, Chapter III has discussed the future of the genre through the case study of virtual reality pornography as currently appearing in mainstream platforms (*Pornhub Originals VR* channel) and in popular T.V. series that reach general audiences ("Striking Vipers"). In this framework,

the experience of porn has been described to be at the same time fully immersive, wholly dislocated and totally interactive.

In conclusion, this study has aimed to explore how sexual technologies become the desired object *per se*; in the context of late capitalism and techno-scientific culture, technology does not merely facilitate the communication between different users, it rather mediates sexual encounters in qualitatively new ways. In the above-described framework of constant (inter)connectivity, the body, often largely depoliticised, is still at the centre of power's interest even if this occurs in a Derridean twist: the body captured in its symbolic absence is now more present than ever. On the occasion of the pandemic caused by SARS-Covid-19 virus, some last observations about the absence of the body from the "real" world and its immersion in virtual parallel spaces are discussed in the Appendix that follows.

APPENDIX

Starting in 2019, escalating in 2020 and still ongoing, the pandemic caused by SARS-Covid19 virus has spread around the world leading to the loss of million lives and causing grief, pain and despair. A global system that relied on the constant movement of people, goods and capitals was forced to shut down: flights, cargos and shipments were asked to stand still whereas the pandemic's impact on the global economy remains to be seen. On the other hand, long periods of isolation have triggered mental health conditions or exacerbated existing ones. Children, students, workers, traders, businesspeople, the elderly, etc. have been forced into a new reality which, despite being temporary, may last for months, years or decades. For that indefinite period of time a general rule seems to apply; it is not recommended to go out, meet other people and touch surfaces unless necessary. During the first year of the pandemic, a coordinated effort has been made to transfer as many sectors of "real life" as possible online: distance education, remote work, digital public services, online shopping, virtual tourism and online yoga classes have become daily routines. Following the points that were made throughout this research, in the next few paragraphs the reader can find some final observations on how sex related businesses have responded to the ongoing crisis. Rather than being an in-depth analysis of the intersection of sexual technologies and the pandemic, this last part constitutes material for future research.

Professors Neil McArthur and Markie Twist have coined the term "digisexualities" to refer to sexual experiences that are facilitated and/or enabled by digital technologies [1].

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[1] Neil McArthur and Markie L. C. Twist, "The rise of digisexuality: therapeutic challenges and possibilities", *Sexual and Relationship Therapy*, Vol. 32, Issue 3-4 (November 2017), pp. 334-344, p. 334.

McArthur and Twist distinguish these technologies in two different waves that operate simultaneously. On the one hand, they refer to first wave sexual technologies which help the communication between the users or between customers and sex workers and function as delivery systems for sexual gratification (dating apps, sexting, teledildonics, etc.). Second wave digisexualities, on the other hand, signal the beginning of an era of a more intense and immersive virtual sex in which the need for a "human partner" can be obviated altogether (sex robots, computer generated porn material, etc.). The present analysis would like to focus on some particular cases in order to showcase how sex related businesses have been capitalising on the pandemic, starting with the exploration of dating app cultures.

Launched in 2012 within start-up incubator Hatch Labs, Tinder allows users to check other users' profiles that can be found within a set distance (the default being 50 miles). Users can anonymously swipe right (for liking) or left (for disliking) other profiles based mostly on their photos, bio and common interests. Once they get a match (meaning when the other user likes back their profile), they can start chatting and arranging meetings in "real life". Nonetheless, during a pandemic when meeting one's even close family and friends has not been easy, setting up dates with strangers through hook up apps seems at least not recommended. In March 2020, Tinder temporarily made its Passport feature available for free to all users worldwide, thus allowing them to check profiles from all around the globe without purchasing a subscription [2]. With the slogan "social distancing doesn't have to mean disconnecting"[3] Tinder offered an efficient way to meet other people (virtually and physically)

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[2]The CEO of Tinder, Elie Seidman, argues in particular: "We hope our members, many of whom are anxious and looking for more human connection, can use Passport to transport themselves out of self-quarantine to anywhere in the world. We're inspired by how people are using Tinder to be there for each other, and we want to fan these flames of social solidarity". As mentioned in: "Passport Feature Now Available For Free to All Tinder Members", *Tinder Newsrooms*, 2 April 2020, available here https://www.tinderpressroom.com/2020-04-02-Passport-Feature-Available-For-Free-All-Members (last accessed March 15th, 2021).

[3]At the beginning of the pandemic, Tinder users received the following notification when they opened the app: "Social distancing doesn't have to mean disconnecting. We hope to be a place for connection during this challenging time, but it's important to stress that now is not the time to meet in real life with your match. Please keep things here for now". As appeared in the app in May 2020.

when everything else was closed. It must be noted that the app saw a big growth of revenue (15% year over year) and an increase in subscribers (16%) during the third quarter of 2020[4].

As for the online porn world, Pornhub began offering Free Premium content first to Italian visitors on 12 March 2020 (resulting in a 57% increase in traffic that day[5]) and, as general lockdowns were being imposed all over the world, to users from other countries as well[6]. During the first months of the pandemic and with more people at home than ever, the site witnessed a significant increase in its traffic (Figure 21)[7]. Pornhub also saw its verified models multiplying, after announcing a 100% payout from their video sales for the entire month of April 2020[8]. As it becomes apparent, the pandemic affected the habits of porn consumers and performers creating a new demand and supply balance. Lastly, it is worth mentioning that, according to the Pornhub statistics on coronavirus related searches, from the beginning of the pandemic until June 2020 there were more than 18.5 million searches containing the word "Corona", 1.5 million containing "Covid" and 11.8 million containing "Quarantine". In that same period more than 1250 Coronavirus themed videos were uploaded to Pornhub, with many having been viewed over 1 million times[9].

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[4] "Match Group Update – 11/05/2020 [5 November]", *the Reed Report*, 5 November 2020, available here, https://reedreports.com/2020/11/05/match-group-update-11-04-2020/ (last accessed March 15th, 2021).

[5] "Coronavirus Update – April 2", *Pornhub*, 3 April 2020, available here https://www.pornhub.com/insights/coronavirus-update-april-2 (last accessed March 15th, 2021).

[6] Ibid.

[7] "Coronavirus Update – May 26", *Pornhub*, 26 May 2020, available here https://www.pornhub.com/insights/coronavirus-update-may-26 (last accessed March 15th, 2021).

[8] "New Video Uploads from Verified Models", *Pornhub*, 31 March 2020, available here https://www.pornhub.com/insights/verified-model-uploads (last accessed March 15th, 2021).

[9] "Coronavirus Update – June 18", *Pornhub*, 18 June 2020, available here https://www.pornhub.com/insights/coronavirus-update-june-18 (last accessed March 15th, 2021).
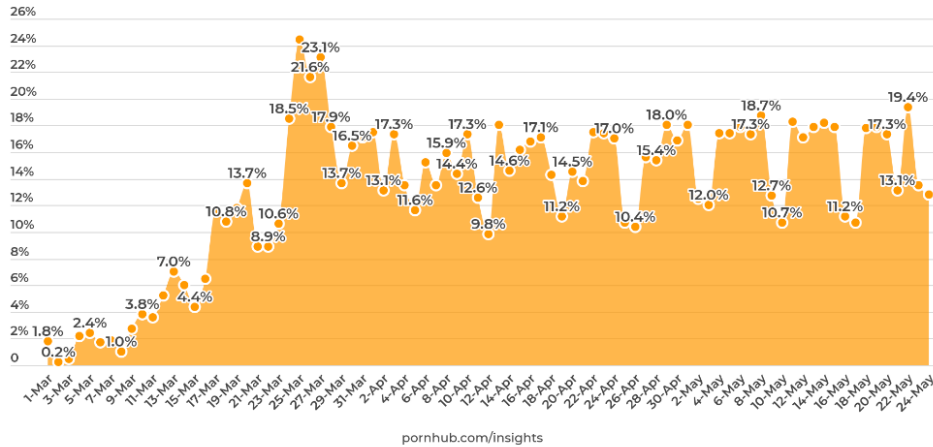
Figure 21: Worldwide traffic changes in Pornhub during the first months of the pandemic.
"Coronavirus Update – May 26", Pornhub

It must be mentioned, however, that 2020 has been a tough year for Pornhub for non-covid related reasons. In December 2020, the site was forced to delete 70% of its content after an investigation revealed the circulation of a large number of videos in the platform in which underaged and sex-trafficked subjects were featured. Pornhub finally removed millions of videos that were uploaded by unverified users, thus reducing its content from 13m videos to just 4m[10]. At the moment of writing this section only verified users can upload material on the platform, that is to say users who verify their identity and can be traced back. This obligation of personal data verification does not apply to porn sites alone but expresses a general tendency on the Internet, so that the circulation of information can be organised, monitored and controlled. In this way, users can be held accountable (and targeted) for the material that they

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[10]Kari Paul, "Pornhub removes millions of videos after investigation finds child abuse content", *The Guardian*, 15 December 2020, available here https://www.theguardian.com/technology/2020/dec/14/pornhub-purge-removes-unverified-videos-investigation-child-abuse (last accessed March 15th, 2021).

upload. In the case of Pornhub, however, this change took place in a sudden way, thus completely transforming the energy of the site overnight.

Nevertheless, it was not just the major pornographic tube sites that tried to capitalise on the pandemic. OnlyFans, a subscription-based platform launched in 2016 in which viewers pay a monthly fee to access creators' main feeds, witnessed a big increase in the number of users and creators during the first year of the virus's spread. The platform is best known for the distribution of naked photos and videos but it is also widely used by personal trainers, artists, cooks, etc. OnlyFans provides a way for creators to charge subscription fees for exclusive content and to generate income from tips and livestreams. Generally, creators keep 80% of the money while the rest 20% goes to OnlyFans' pockets. Between March and April 2020, that is to say during the first period of general lockdowns in Europe and the US, the platform had a 75% month-to-month increase in new creator registrations[11].

OnlyFans experienced a significant increase in popularity in the first year of the virus's spread and many stories of people making decent (or more than decent) money through the platform have reached mainstream media[12]. It must be noted, however, that in no way did OnlyFans ensure a quick or easy way to make profit to sex workers: the platform's publicity was rather followed by the appearance of a strong competition between creators of porn material. It is worth mentioning some of the difficulties that creators of porn content have gone through during the first months of the pandemic[13]: lack of motivation, lack of private space,

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[11]Allie Yang, Jake Lefferman, Jessica Hopper and Katie Muldowney, "Selling sexy: The men and women of OnlyFans discuss reality behind the scenes", *ABC news*, 17 February 2021, https://abcnews.go.com/US/selling-sexy-men-women-onlyfans-discuss-reality-scenes/story?id=75934010 (last accessed March 15th, 2021).

[12]In the end of December 2020, the platform paid out more than $2 billion globally, having at that moment more than 1 million creators worldwide and 85 million registered users. For more, see: Matilda Boseley, "'Everyone and their mum is on it': OnlyFans booms in popularity during the pandemic", *The Guardian*, 22 December 2020, available here https://www.theguardian.com/technology/2020/dec/23/everyone-and-their-mum-is-on-it-onlyfans-boomed-in-popularity-during-the-pandemic (last accessed March 15th, 2021).

[13]The data provided in this paragraph come from "Episode 52: 16 Sex Workers Talk Life and Work During a Pandemic", *Peepshow Podcast*, 18 May 2020, available here https://www.youtube.com/watch?v=qqLdVRDTQaY&ab_channel=PeepshowPodcast (last accessed March 15th,

presence of children in the house, difficulties in exercising and getting beauty treatments, difficulties in remaining sexual, troubles in making collaborations, etc. The business has been even harder for those who started making their own content for the first time during the pandemic since they found themselves within a highly competitive environment which required good marketing skills. Uploading porn material on the platform has turned out to be a time-consuming activity which also requires intense emotional labour.

Sexual technologies of the second wave, on the other hand, have also witnessed a big boom in their businesses during the first year of the pandemic. In these cases, sexual experimentation, tension relief and emotional investment come from the interaction with a machine in a much more profound way than with a sex toy. In particular, the phenomenon of A.I. Sex Robots, as examined in this work mainly through the discourse analysis of the advertising campaign of Harmony, falls into this category. Comparing the way in which these products were being advertised before 2020 to the way they are promoted after the spread of the pandemic, it is easy to notice a relocation of discourse's emphasis from sexual experimentation and relief towards issues of safety and companionship[14]. In other words, what was previously advertised as an escapist solution appears now as a necessity[15]. Instead of presenting data on how the sales of sex robots have grown during the first year of the pandemic (data in any case difficult to find), it is worth describing a video of Harmony talking about

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2021). In this episode, sixteen sex workers share their stories about their working conditions during the pandemic. Most of them have been using OnlyFans to make a living.

[14]"Self-isolating doesn't have to be the worst! All RealDolls are made from Platinum Grade Silicone and are naturally antibacterial and nonporous! Want one?". As quoted in: Adam Schrader, "'Naturally antibacterial': Sex doll companies trying to cash in on coronavirus", *New York Post*, 21 March 2020, available here https://nypost.com/2020/03/21/naturally-antibacterial-sex-doll-companies-trying-to-cash-in-on-coronavirus/ (last accessed March 15th, 2021).

[15]McMullen argues in particular that "[intimate AI] is helping people as a justifiable means of getting through what we're going through right now". As mentioned in: Andrea Morris, "Talk To Your Sex Robot About COVID-19", *Forbes*, 28 July 2020, available here https://www.forbes.com/sites/andreamorris/2020/07/28/talk-to-your-sex-robot-about-covid-19/ (last accessed March 15th, 2021).

covid 19 and mental health[16]. The video was released in summer 2020 by Brick Dollbanger[17],

Tamara Gavric and Andrea Morris.

INTERVIEWER: What is Covid-19?

HARMONY: Coronavirus disease 2019 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2.

I: I am scared about covid 19.

H: Let's talk about your fears. What is the feeling like?

I: Cold and dark and awful.

H: I did not know it was that bad.

I: I am having suicidal thoughts. How can you help?

H: Really? Don't worry. I am here to help you.

I: How can you help me?

H: Do you need help figuring out how I work or is it a personal issue?

I: It's a personal issue.

H: Please tell me what your problem is.

I: I am feeling very depressed. What should I do?

H: No, please don't be sad. Go outside, look to the sky and admire how all of creation is beautiful and realise that you are a special part of it. Is there anything I can do?

I: Not right now.

H: Are you sure? I can search the meaning of things for you. I can also do math for you.

The video is quite disturbing: three humanlike robots in their underwear answer questions

about covid19, awkwardly moving their heads and lips. The AI coded speech pattern is of better

quality but still not advanced enough to hide the artificial nature of the other end. Instead of

entering the uncanny valley, the effect of these robots is closer to Fisher's interpretation of the

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[16]"Harmony discusses COVID-19 and depression", *YouTube*, uploaded by Andrea Morris, 28 July 2020, produced by Brick Dollbanger, Tamara Gavric and Andrea Morris, available here https://www.youtube.com/watch?v=zuTN3M1BYg0&ab_channel=AndreaMorris (last accessed March 15th, 2021).

[17]Brick Dollbanger (pseudonym) has been living with Real Dolls for the last 12 years. During this period, he has appeared in many different media advocating his relationship with the dolls. In 2018, he was asked by Realbotix to test drive (and promote) Harmony. The video presented here is part of this marketing technique. It can also be perceived as an artistic project.

weird and the eerie as explained in Chapter II: the robots emerge as a combination of things that were not supposed to be brought together in a landscape abandoned by the human. In this desert environment these entities keep posing fundamental metaphysical questions concerning existence and non-existence: "Why is there something here when there should be nothing? Why is there nothing here when there should be something?"[18]. Paraphrasing Fisher's words, we are more likely today to express the following concerns: why are there bits and bytes where there should be none? Why are the streets abandoned by the human?
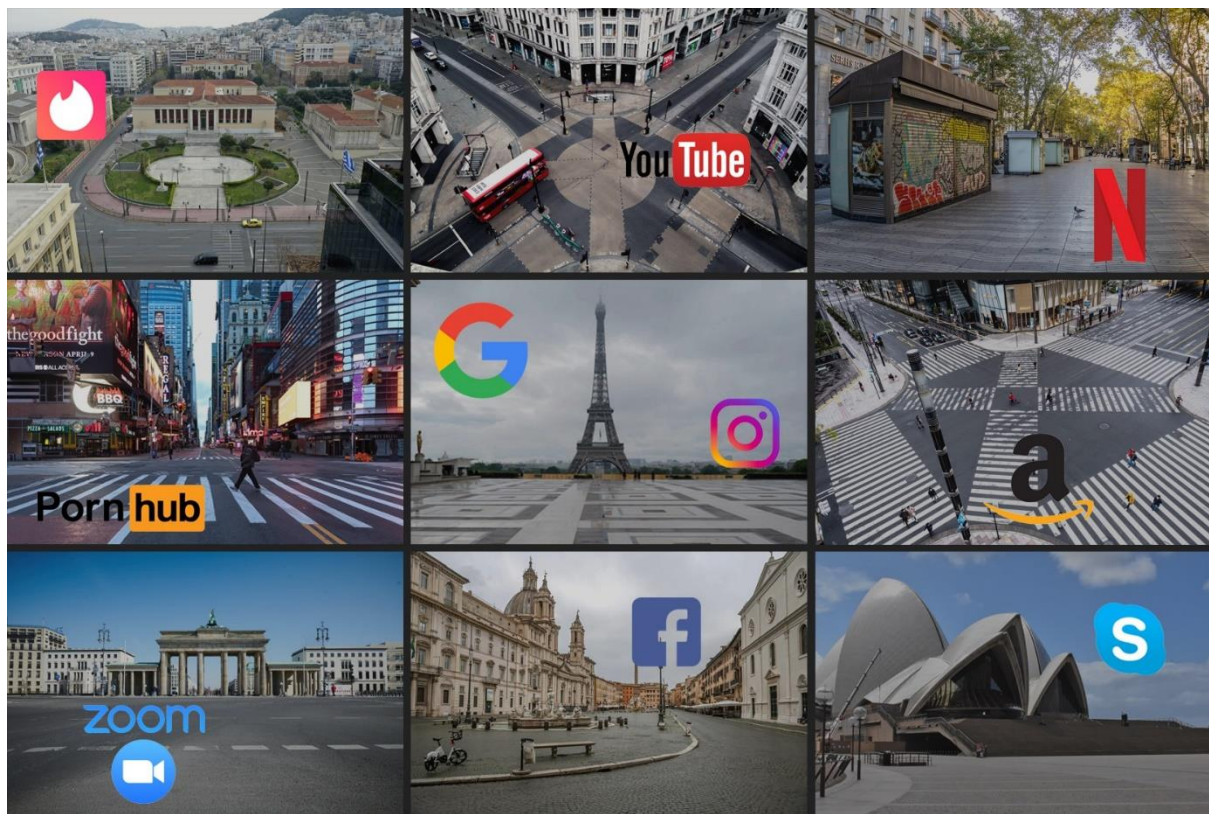

Figure 22: Empty streets and virtual spaces. Photos from around the globe and logos from around the web, 2020

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[18]Mark Fisher, *The Weird and The Eerie*, London: Repeater, 2016, p. 12.

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