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**Fears and fantasies in human interactions with sex robots:
USA media discourse analysis 2016-2023**

Master thesis

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Declaration of Honour

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Abstract

This thesis employs a feminist critical discourse analysis to investigate the fears, desires, and pleasures invoked by sex robots in users, as well as the representation of sex robots in media discourse. Feminist critical discourse analysis is used to provide insight into the ways in which technology is shaping human sexuality and changing our perceptions of sex and love. My sample includes 59 articles published in contemporary American media between 2017 and 2023 that focus on human interaction with sex robots. This thesis examines how the current dramatic prognosis of harm of sex robot use is empirically grounded. It also identifies multiple main themes that are present in the media discourse, namely sex robots' human-likeness, future of human relationships, as well as the tendency to associate the use of sex robots with rape and pedophilia. The artificial nature of the robot in the most intimate aspects of life such as love and sex is perceived as threatening, potentially making us less human. However, there are also positive aspects of human-sex robot interaction as framed by media discourse. Sex robots allow people to have a more satisfactory sexual life even when they have difficulties to build interpersonal relationship, for example, for elderly or socially awkward people. Moreover, a rising trend of women buildings their own sex robots is perceived as something that can help liberate female sexuality. From media discourse, it becomes evident that not only the sexual aspect is important for sex robot users but also the affective one. Users underline that the experience of intimacy for them is about feeling cared and loved, and not sexually aroused. The results of the research could be used by sex robot designers, marketers, and policy makers to create better companion robots for sex and love. These results can also be used by feminist researchers to back up study of the emotional and affective reactions of people towards sex robots or the study of mass media representation of sex robots and other sex toys.

Keywords
sex robots; feminist science and technology studies; human-machine interaction; affect; embodiment; discourse analysis

INTRODUCTION

Sex robots can be defined as life-size machine entities that have a human-like appearance, movement, and behavior, designed to interact with people in erotic and romantic ways (Gerson, 2019). From their inception in 2010, these robots typically feature realistic silicone skin, animatronic heads and faces that move, conversational artificial intelligence (AI), programmable personalities, and options for customizing their physical characteristics such as color of eyes, hair, and skin, shape and color of nipples and genitalia (Gerson, 2019). Sex robots differ from life-size inanimate sex dolls made from plastic or silicone. Sex dolls may offer limited physical stimulation; they look like humans and have genitalia that users can interact with in any way they want, for example, lick or penetrate. Sex robots are designed to provide a more realistic and interactive experience, as they are able to move their head, change facial expressions, make sounds, and imitate orgasm. In addition, sex robots incorporate artificial intelligence, allowing for verbal interactions and more personalized experiences (Gerson, 2019). Sex robots are able to verbally initiate sex, imitate flirting, and even sometimes recall details from previous conversations, thus mimicking intimacy and authentic connection. However, even though sex robots today are seemingly able to verbally act and respond, imitate facial expressions and movements, they are still quite unsophisticated and will not deceive anyone into thinking that they are real human partners (Gersen, 2019). Suchman writes that "the state of the art in intelligent machines has yet to attain the basic cognitive abilities of the normal five-year-old child" (Suchman, 2007, 38). Even though contemporary artificial intelligence systems are able to perform a limited number of tasks, such as answering questions, they lack cognitive abilities to understand and remember the context of the conversation, which, of course, influences social interactions (Suchman, 2007). Young children, while not having a large understanding of the world, still possess memory and the understanding of the context, including what has been said before and after, with what intonation and facial expression. Conversational AI generally does not recognize and respond appropriately to social cues, such as tone of voice and body language, which are important for effective communication, and results in conversations with AI feeling awkward and unsatisfying (Wang et al., 2020).

The idea to create artificial life forms that imitate animal or human organisms is far from new and appears more than two thousand years ago in the mythology of Ancient Greece and Ancient Rome. Mayor (2018) traces the history of robots to Medieval times when agile craftsmen created self-moving machines, called "automaton". One of the earliest known examples is the clockwork monk built by Juanelo Turriano in 1560. This automaton could perform various liturgical functions, such as blessing and crossing itself (King, 2002). As technology advanced, automata became more sophisticated, incorporating new features such as hydraulic systems and steam engines. Jacques de Vaucanson's famous mechanical duck, built in 1738, used a complex system of gears, levers, and pulleys to simulate the movements of a real duck (Coeuré, 2010). While automatons were sophisticated for their times, the state of technology in those times was impeding engineers from progressing further. However, the ancient ideas about robots continued to be relevant in culture and art. For example, Mary Wollstonecraft Shelley's gothic "Frankenstein; or, The Modern Prometheus" (1818) and "The Golem," written by I. L. Peretz (1890) both reflect on the potential of humans to use technology and create autonomous artificial beings. Mayor (2018) argues that ideologically, the literary tradition as well as ancient technologies and the desire to transfer the unwanted labor to machines have laid the foundation for the development of contemporary robots. The ideas about robots throughout history reflect human desires and concerns about technology and its potential to mimic human abilities. For instance, the ancient Greek myth of Pygmalion, who created a statue of a woman that he then fell in love with after it was brought to life, might have resonances with the creation of love and sex companions today (Mayor, 2018).

Mataric (2007) argues that the first workable robots appeared in the USA in the 1930s and were designed for industrial use. A group of engineers led by William Grey Walter created robots that were called "tortoises" and were designed to navigate a maze using sensors and simple algorithms. While the tortoises were not humanoid, they were capable of performing complex tasks autonomously. Today, a robot is a programmable machine that can carry out a complex series of tasks automatically. Since the 1970s such robots could take humanoid forms (Zeghloul, 2015). Robots that do assemble humanoid forms are called androids (Treusch, 2015, 18). The sex toy industry that emerged after the sexual revolution in the West during the 1960s immediately saw a great commercial potential in producing and selling human-like sex dolls (Devlin, 2020). US manufacturers called them sex robots (or sexbots), or, sometimes love robots

(Desbouleux, 2022). Sex shops emerged in the 1970s, making plastic and silicon sex toys such as dildos, vibrators, and artificial vaginas widely available, although they were often sold discreetly (Devlin, 2020). Inflatable sex dolls also made part of the assortment of those shops. As sex toys became more visible and acceptable in popular culture thanks to 2000s television series "Sex and the City," they became more socially acceptable to use (Devlin, 2020).

Currently, there are approximately 15 companies worldwide that produce "sex robots," or dolls with limited capabilities that are located in the USA, Japan, China, and Spain (Devlin, 2020). Sex robots today represent a high-tech piece of technology with basic cost of about $12,000 reaching more than $40,000 for customizable tailored versions (users can ask the sex robot manufacturer to produce a robot that looks like someone they now) (Owsianik, 2022). The currently most technologically advanced product is Realbotix, a division of California-based Abyss Creations, the creators of RealDoll, a realistic sex doll that dominates the USA sex robot market. Other companies seem to be at the stage of prototypes or produce something that claims to be a sex robot but is in fact a sex doll. Devices that all of them develop have a highly gendered embodiment and are overwhelmingly female. The appearance of sex robots often features a reductionist and stereotypical portrayal of the female form, with hypersexualized and pornographic body types (Devlin, 2020). Only a few companies release male robots which are similarly stereotypical. By observing the assortment and the details of the robots and comparing sex robots of different genders one can see that there is much more effort put into female robot design in terms of assortment of body types, personalities, and features and the detailed execution of those features (Owsianik, 2022). For example, RealBotix produce over 40 different female robots, which users can significantly customize, and just a few male robots that do not look as beautiful and detailed as female models (Owsianik, 2022). The amount of attention dedicated to them in the marketing of the company is also quite limited. If the female dolls appear in seductive poses on the front page, one can find male robots and see what they look like only by clicking on the designated tabs (*Home Page. RealDoll, 2020).*

My interest in the topic of human-sex robot relationships was sparked by a computer game 'Detroit: Become Human' that was released in 2018 and became a hit (Detroit: Become Human on Steam, n.d.). In this game the game designers created a future where androids were serving humans in all fields from cooking food to providing sex in special brothels. An error in the system resulted in them gaining consciousness and the ability to feel love and other emotions.

I did some research and found that there are indeed tech companies working to produce sex robots, and that, judging by the hype in the media, this was an active field of research. As someone working in the IT field, whose professional interests revolved around artificial intelligence, robotics, and the ethics of technology, I was curious to investigate the potentials and limits of the relationships between humans and robots today, particularly from a gender studies perspective. During my studies in the Gender Studies Master's program, I have taken courses that focused on the intersection between gender studies, technology, and ethics, and I wanted my Master's dissertation to reflect that interest. For gender studies, the concept of sex robots is of a particular interest given gender stereotypical presentations and heterosexist embodiment. While the development of sex robots has opened new frontiers in human-machine interaction, it also raises complex ethical and social issues. Having read academic literature dedicated to the use and design of sex robots, as well as their social and ethical implications, I wondered in what are current prognosis on harm or benefits of sex robot use empirically grounded? A cursory look at the scientific articles suggested that there exists a contradiction between the small number of existing sex robots that are hard and expensive to access and the far-reaching prognoses of researchers on the future of human-machine sexual relationships. Existing research on the topic often appears to mask the fact that current sex robots lack sophistication. Moreover, since owning a sex robot, just like other sex toys, is a private matter that few people disclose in public, most research either lacks empirical evidence or uses media articles about sex robot users as empirical evidence. This is not without problems. As media tends to curate what content gets published and often portrays what is happening in a sensationalist or ideological ways, in this thesis I decided to use feminist critical discourse analysis to unravel how affects, emotions, thoughts, and values expressed by users are interpreted in the media and amplify discourses on benefits and harm. Moreover, having noticed a tendency to associate the use of sex robots with rape and pedophilia, I am interested in examining how the link to violent sexual behaviors is made in contemporary media. Given these interests the thesis is organized as follows.

Chapter I presents a review of the existing body of feminist research concerned with sex robot design. Because of the sex robots' potential to challenge and mimic human social reality, including gender stereotypes and expectations from people of a particular gender, gender is an important analytical category to explore when examining sex robot design. Feminist scholars agree that sex robots today are sexist but differ in their assessment of whether or not there is a

way to change their design to make sex robot use an empowering and liberating process for women and other genders. I show how feminists tend to see sex robots in a totally opposite light: radical feminists argue that sex robots harm people and women in particular, perpetuating gender stereotypes and giving heterosexual men the right to dominate and exploit female bodies. Sex-positive feminists perceive sex robots with curiosity and see them as a solution to existing social problems such as loneliness or social anxiety. Speculation or extrapolation from other fields (studies of prostitution and pornography) are often used to predict the influence of sex robots on human relationships. I further examine affect theory, as this allows to expand the focus of the research not just to emotions and thoughts but also to bodily reactions and sensations that I want to explore.

In chapter II, I describe the research design and method that I have chosen to conduct my research, namely feminist critical discourse analysis (FCDA). The qualification feminist underlines not only a focus on how gender is constituted but importantly the need of accounting for the positionality of the researcher. My sample includes over 50 articles published in contemporary American media between 2017 and 2023 that focus on human interaction with sex robots. I have used automated tools such as Thruu that study internet users' behavior to create a database of 100 articles that appear high on Google searches, as these articles are ranked high by Google algorithms and are promoted as most important on the subject. These articles have the potential to reach a wide audience, potentially influencing people and forming public opinion. This method allows me to collect a relatively large sample of empirical evidence that can be studied to eliminate the existing lack in research.

In Chapter III "Fears in human-sex robot interaction", I examine how the current dramatic prognosis of harm of sex robot use is empirically grounded. I identify multiple main themes that are present in the media discourse, namely sex robots' human-likeness and what it means for society, future of human relationships, danger to human relationships, sexual liberation, as well as the tendency to associate the use of sex robots with rape and pedophilia. The chapter elaborates how the link to violent sexual behaviors is made in contemporary media. I show how the human-likeness aspect of robots, while being desired by designers, is often concerning for everyone who is not. The artificial nature of the robot in the most intimate aspects of life such as love and sex is perceived as threatening, potentially making us less human. Moreover, as sex robots involve sex with inanimate objects that can be interpreted as 'against

nature', the users who enjoy it are often linked to other 'degrading' sexual practices such as abusing women and children. This is sometimes in stark contrast to how users themselves interpret these practices.

In Chapter IV "Fantasies in human-sex robot interaction" I examine the positive aspects of human-sex robot interaction as framed by media discourse. This chapter explores how sex robots can also be interpreted as potential solution to the problems of the future. Sex robots, as presented in the media, allow people to have a more satisfactory sexual life even when they have difficulties to build interpersonal relationship, for example, for elderly or socially awkward people. Moreover, a rising trend of women buildings their own sex robots is perceived as something that can help liberate female sexuality. From media discourse, it becomes evident that not only the sexual aspect is important for sex robot users but also the affective one. Users underline that the experience of intimacy for them is about feeling cared and loved, and not sexually aroused. However, on the background the same users report about their clients or other people they know who enjoy torturing and breaking their robots and use them as the outlet for their frustration with women. Clearly, peaceful vanilla relationship with sex robots is not the only fantasy users share.

The conclusion draws together the themes that the media present as the positive and negative sides of human-robot interaction and the way the media interprets these positions. The findings shed light on main fears, concerns, desires, and fantasies that people have when interacting with sex robots and show that. There is no one way to experience a relationship with sex robots. Both entirely negative and positive predictions tend to ignore the diversity of human-sex robot relationship, which has to be accounted for to design more inclusive and ethical sex robots.

CHAPTER I

THE GENDERING OF SEX ROBOTS AND HUMAN-MACHINE INTERACTION

1.1 Introduction

This chapter examines the feminist literature on sex robots, including feminist scholarship on human-machine interactions, specifically with respect to how gender, affect, and particular modes of embodiment intersect in the design and use of sex robots, specifically, how and why sex robots have a stereotypical misogynist embodiment, what tools designers use to provoke certain emotions, thoughts, and affects in robot users, and how the way sex robots are designed may influence the future of human relationships. I begin by exploring the conceptualizations of gender and representation in robot development and use. I address Richardson et al. (2023) work dedicated to gender stereotypical sex robot design and the possible cultural, social, and ethical implications of interaction with the robots currently available on the market.

In the second section, I will investigate what kind of values and ideologies sex robot design can embody. I will provide statistics about the gender gap in the technological workforce that develops sexbots that can partially account for biases in design. I will draw on work dedicated to identifying reasons for bias in technological systems, which include the use of biased training data, the design and development of technologies by homogenous groups, and the lack of diversity and inclusivity in decision-making processes. I will look at the engineering process is a cultural practice and gender as a social construct that is getting reinforced though everyday practices, including the development and use of technology.

In the third section, I will explore the literature on how affect is generated in sex robot use. I will present theory of affect as a conceptual framework for distinguishing emotion and affect in human-machine interaction with sex robots (2013). I will also examine the transmission of affect that explains how different affective states can be passed on between different bodies. In conclusion, I will outline key elements of a theoretical framework that will guide my analysis of how different emotions and affective states are generated in human-machine interaction with sex robots.

1.2 Conceptions of gender and representation in robot development

The study of sex robots is a young and highly controversial field. Ever since David Levy, an author and futurologist, published his book "Love and Sex with Robots' in 2007, research has appeared to analyze the phenomenon of human-sex robot relationships (Devlin, 2015). The premises of his book were and still are widely discussed in the feminist scientific community. How ethical is it to have sex with robots? What psychological and social consequences will the wide proliferation of sex robots have on the society? The feminist science of today presents two distinct narratives that are widely replicated in mass-media and have a real potential to influence public opinion and form the future of sex robot design.

The reason why it was feminist scholars who made a significant contribution to the conversation was the fact that the gender problematic of sex robot design has been sharp from the inception of the field and the appearance of the first sex robot Roxxxy that was, unsurprisingly, a female (*Roxxxy the sex robot focuses on meaningful conversation instead of lifelike movement,* 2010). It was hard to ignore the stereotypical embodiment of the robot (white, thin, large-breasted, blond) as well as the way it was marketed – as a perfect obedient companion that doesn't have her own desires or likes, "a perfect woman" (Richardson, 2022; Devlin, 2020; Doring, 2017). Since 2010, nothing has changed, with a larger diversity of sex robots on the market, they still remain female, sexualized, petite (*Realbotix Home Page*, 2020).

The sex panic surrounding the sex robots reminds the discussions around pornography in the 1970s-1980s (Danaher, 2018; Devlin, 2020). John Danaher describes the polemics between radical feminists who were against pornography in any form and claimed that it is a patriarchal invention that is inherently heterosexist and menacing for women's dignity (Danaher, 2018). Today similar arguments are reproduced relation to sex robots. Kathleen Richardson, the founder of a famous Campaign Against Sex robots, and author of the book "Sex Robots: The End of Love" (2022a) and her allies claim that sex robots are inherently degrading for women and children as the industry is trying to appeal to the tastes of heterosexual male audience that often uses their robots in brutal and unethical ways, damaging them, verbally abusing them, making their female partner to act out male sexual fantasies with these robots. They point out that sex robots "seems to follow a typical 'porn-type' script and make assumptions about the type of behavior that men desire in women" (Danaher, 2018, 7). Moreover, even though sex robots today are not yet digital people who can be mentally or emotionally harmed by abusive use, they are a

powerful means of representing real people (Sparrow, 2017). Since sex robots are unanimated objects that do not have real personalities and are not able to give or withdraw consent to sex, they should be understood as a digital means of representing sex with a real woman (Sparrow, 2017).

Moreover, feminists who share a deeply negative view on sex robots suggest that sex with a robot is supposed to imitate sex with a woman that "either implicitly always gives consent to sex or simply does not give her consent to the sexual intercourse at all" (Sparrow, 2017, 472). There are probably some users who are going to use sex robots for vanilla sex and treat them respectfully (Gersen, 2019). However, as pornography industry has shown, one of the most popular sexual fantasies (and at the same time, the most tabooed one) is sex without consent (Gersen, 2019). Gersen writes that both men and women report having fantasies of rape and of them being raped respectively (2019). Sex robots cannot give consent, they can only "imitate giving consent" (Sparrow, 2017, 475). However, in reality, it does not happen, in most cases, consent is considered implicit (Sparrow, 2017). Accepting this behavior and associating it with sexual pleasure "seems perilously close to a mechanism for Pavlovian conditioning for rape", according to Sparrow (2017, 469).

While it's hard to disagree that pornography oftentimes is produced in ways that are harmful for performers and viewers of all genders, one cannot also completely negate its potential to be liberating, again, both for viewers and performers. Danaher provides multiple accounts of sex workers who genuinely enjoy their job and see it as a creative process of expressing themselves and communicating a change in the world (2018). He demonstrates that women, genderqueer, and transgender people who work in sex industry recognize the liberating and inspirational power that pornography can have both on their lives and on the lives of their viewers (Danaher, 2018).

Pornography can be also liberating for women. Danaher writes: "According to sex positive feminism, it is, indeed, what is at stake. Unless we completely suppress or deny female sexuality, women can and will find things sexy, and pornography can and will play a role in helping them to figure this out" (2018, 11). Porn industry is massively oriented on its white, male, heterosexual clientele, but it does not have to be that way. Feminist pornography explores new ways of finding and portraying female pleasure, appealing not to the "male gaze" but "female gaze" (Danaher, 2018). Moreover, there is no clear link to real-world violence or that total ban of

pornography would help to eliminate sexual discrimination, gender-based violence, and rape. Researcher today cannot answer the question whether or not enacting rapist fantasies can actually encourage people to perform them with real people or, on the other hand, be beneficial for them and teach how to form meaningful connections with other humans (Doring, 2020). Devlin writes about pornography that "Various studies have both affirmed and refuted this claim, but recent meta- analyses have determined that there is no clear real-world link, and a recent longitudinal MRI study shows strong evidence against negative effects" (2020, 276). Being a new step in the technological advancement of the society, robots can present not only negative aspects of our sexual culture but also positive ones, such as wider acceptance of different bodies, sexualities, and ways to experience sexual pleasure (Devlin, 2019).

Viewing sex robots as merely a tool of patriarchal domination would be essentialist and limited, since there are, at least, several reported cases of men and people of other genders using sex robots for positive reasons. Devlin provides an example: "While the common perception is the lonely, isolated, awkward, and unlovable man in his bedroom, their customers [Abyss Creation's customers], say manufacturers, also include couples, widows, and those with disabilities. Abyss Creations have said that psychiatrists have used sex robots in therapeutic treatment and that parents buy them for use by their socially excluded grownup children" (2020, 277). She points that there is no one defined portrait of a sex robot user: "They are the collectors, hobbyists, admirers, lovers, enthusiasts, and addicts. Some worship their dolls; others love them out of sentimentality. Some see them as sexual, others as romantic" (Devlin, 2020, 277).

Moreover, scholars suggest that sex robots can become liberating for men, like the invention of vibrations was for women. Kubes writes, "For men, on the other hand, there is nothing even remotely comparable. Of course, there are masturbation aids and sex dolls. However, it is hard to think of anybody wanting to be even loosely associated with them" (2019, 10). Sex robots are human-looking object, which makes them more controversial than other types of sex toys that replicate or not human genitals. However, sex robot users do understand that they are using human-like replicas and are not confusing them with people (Devlin, 2020). The link between a fantasy and the real world is, by no means, immediate: even if somebody does enjoy observing or playing out rapist fantasies with sexualized objects, it does not necessarily mean that they tend to extrapolate their fantasies on real people. For example, Gersen suggest a study that a huge

percentage of women enjoy fantasies of being raped – by no means, that signifies that they would enjoy being raped in real life (Gersen, 2019).

Considering multiple arguments provided by sex-positive feminist researchers, it makes one wonder: are feminist sex robots indeed possible? John Danaher (2018), Tanja Kubes (2019), Kate Devlin (2020), and other sex robots' scholars do share the opinion that it is possible to design and use sex robots in ethical ways. Devlin believes that the feminist response to gender-stereotypical robots would be to avoid to 'import established prudishness' but instead to see the technology as something that 'allows us to explore issues without the restrictions of being human', and that we should look upon the machine as a 'blank slate that offers us the chance to reframe our ideas' (2015). Devlin also writes that feminist sex robots of the future do not have to be gendered (2020). Danaher suggests that "There is, consequently, an opportunity to incorporate the female perspective into the technological project before it becomes well-established" (2018, 16). For Kubes, sex robots that cease to rely on pornographic scripts and hypersexualized mimicry can eventually contribute to "liberated, transversal, self-empowered new forms of sexual pleasure beyond fixed heteronormative normalizations" (2019, 10).

Amidst polemics on the positive and negative effects of sex robot use, it is vital to remember that most of it is speculation. The sex robots that we do have today can be called "robots" only in a purely technical way (Devlin, 2020). The difference between a sex robot and a sex doll lies in the presence of robotic technology (the ability of a doll to move itself and assess the environment, for example, with the help of sensors) and the artificial intelligence that makes it smart and capable of conversation (Gersen, 2019). The robots of today can do neither. Sex robots are marketed by the manufactures as "companions for life" who are almost indistinguishable from real women (*Robots with Benefits: How Sex Robots Are Marketed as Companions*, 2019). In practice, the current state of artificial intelligence development does not allow us to make such claims (Benaich & Hogarth, 2022). Robots that have an ability to recognize and understand human speech often operate with a set of prerecorded answers that they can provide in response to certain keywords, but this can hardly be called a real intimate conversation. Their robotic voice lacks emotions and sounds mechanical (Sparrow, 2017). The manufacturers claim that robots can memorize what their owner likes, but, nevertheless, androids need to be put in these positions like Barbie dolls which, of course, is not very realistic (*Roxxxy the sex robot focuses on meaningful conversation instead of lifelike movement*, 2010). These "robotic companions" are

reduced to "large-breasted Barbie dolls with glimpses of artificial intelligence (e.g. Truecompanion & RealbotiX)" and their intellect and communicative abilities "consist in little more than being always "ready to talk or play" (Kubes, 2019, 3). They cannot move themselves; instead, they need to be put in the desired position just like regular dolls (Roxxxy the sex robot focuses on meaningful conversation instead of lifelike movement, 2010). One reason to that is that since the average robot weighs around 30 kilograms, it demands a very strong mechanism to be able to hold that weight (*It's 2023, where are the sex robots?*, 2023). Another reason is that men who represent the majority of the customers today do not really need it to move. A famous sex robot tester says that they like dolls to be passive and are not so much interested in how advanced its conversational abilities are (Meet The Man Who Test Drives Sex Robots, 2018). Richardson points out that the still and passive nature of a sex robot body represent a 'dead body' or a "disabled body", which by itself are a fetish for many men (2022b). Another explanation would propose that in the world of fantasies where sex robots ultimately take their clients, the actual technological features are not so important. Both versions, in my opinion, have the right to exist. Moreover, the sex robots today have become a buzzword but they may never become as huge as the conversation about them makes people think due to the technological limitations (*It's 2023, where are the sex robots?*, 2023). However, sex robot design still represents a valuable field for analysis since the narrative that surrounds it raises social, cultural, and ethical issues that allow us to observe gender and sexuality dynamics in our society.

1.3 Roots of gender bias in sex robot design

In the preceding section, the feminist discourse concerning the potential benefits and drawbacks of sex robot design and use has been utilized. The current section intends to examine the extensive literature on the intersection of technology, gender, and engineering culture studies. Computer systems embody values and it is useful to study "the complex interplay between the system or device, those who built it, what they had in mind, their affects and pleasures, its conditions of use, and the environmental, cultural, social, and political context in which it is embedded—for all these factors may feature in an account of the values embodied in it" (Nissenbaum, 2001, 120). A common approach to understand what kind of values and ideologies are embodied by sex robots today is to research who researches and designs them.

Studies conducted in the USA showed that only 18% of computer science majors are female (*The State of Women in Tech*, 2022). At the workplace, women constitute only 24% of the workforce (*The State of Women in Tech*, 2022) and whooshing 50% of women leave their job in tech by the time they are 35 (*The State of Women in Tech*, 2022). A study by the company Element AI (2019) has found that only 18% of authors at the leading tech conferences in the world are women. This gender gap has been replicated in leading software firms such as Meta and Google where just from 10 to 15 percent of AI developers are women (Simonite, 2018). The gender makeup of robotics industry looks even more drastic with just 7% of women in the workforce (*The State of Women in Tech*, 2022). Importantly, the statistics provided by the corporations might be intentionally or unintentionally misleading since these numbers do not provide any information on how workers of different ethnicities and genders are hired, incentivized, and what their experiences are on the daily basis (West, 2019). However, they do serve to demonstrate that the ICT sector so far lacks diversity and inclusion.

West writes that "discrimination and inequity in the workplace have significant material consequences, particularly for the under-represented groups who are excluded from resources and opportunities" (West, 2019, 16). She suggests that fixing discrimination and inequality in the tech industry is important not only for the sake of the workers having equal opportunities. Lack of representation in the tech field, or rather, the overpowering dominance of just one social group (white heterosexual men) is perceived as able to penetrate all the fields of the societal life where the technology itself can penetrate (West, 2019). Therefore, a common solution that is proposed in relation to perpetuated inequalities in the computer technology sector is to increase the number of women/Blacks/Hispanic in the field (West, 2019).

However, for contemporary feminist science, the issue is more multifaceted. As Draude puts it, the bias, which can be understood as unfair privileging of one group over the other, often as a result of structural inequalities between communities, both consciously and unconsciously executed by the members of these communities, 'can articulate in different forms, for instance, through the seemingly neutral prediction of crime rates as performed by ADM (algorithmic decision making), or through software based on language processing and analysis, as for instance in the case of software trained on Google News that completed the sentence "Man is to computer programmer as woman is to X" with "homemaker" (2018, 14). Draude (2018) writes that bias in computer systems such as translation systems associating a particular gender with professions in

gender-neutral languages needs to be understood "as a complex phenomenon, distributed across the whole process of designing a particular information system" (16). She suggests that researchers and developers investigating computer systems must examine factors such as androcentrism, over/underestimation of gender differences, stereotyping of gender traits, and emphasizing dichotomies (Draude, 2018, 16). By critically assessing the technology, feminist scholarship can not only provide a different perspective that could contribute to a fairer design of computer systems but also directly influence the resulting products. For example, TrueCompanion's stereotypical conception of women has been widely criticized by feminist scholars (Richardson, 2022; Richardson, 2022b; Cubes, 2019; Devlin, 2015; Devlin, 2020; Sparrow, 2017; Desbuleux, 2022). TrueCompanion was the first company to start working in sex robotics industry, having appeared in early 2000s (*Roxxxy the sex robot focuses on meaningful conversation*, 2010). It has created the prototype of the first sex robot Roxxxy that has a proven record of being presented at conferences and events, however, does not have any proven track record of sales and ceased to exist at the moment (Devlin, 2020). Preparing for launch, the designers have elaborated an assortment of characters that the user could choose from, ranging from "frigid" to "frivolous" (Devlin, 2020). Not only did the company reduce all women to several stereotypical traits but also enabled the robot to enact rapist fantasies (with "Frigid Farah" – an exotic Other) and sex with minors ("Young Yoko") (Devlin; 2020), which has been found problematic. The feminist backlash that these design solutions have faced at early stages of its development might have contributed to the lack of commercial success on the market and general public being more aware of the sexist and racist paradigm that TrueCompanion was operating within.

To reconsider bias and avoid the reproduction of sexist, racist, and agist stereotypes, one needs to "gain better accountability standards" and pay close attention to "the purpose and the expected results of a particular information system" (Draude, 2018, 17). According to Draude, accountability standards would involve establishing transparent mechanisms for identifying and addressing biases that arise in technological systems (2018). This could include creating guidelines for ethical design practices, improving transparency around data collection and algorithmic decision-making, and promoting diversity and inclusion in the technology industry (2018). Draude argues that current approaches to addressing bias in technological systems are inadequate, and that a more comprehensive and systemic approach is needed (2018). She

advocates for a "sociotechnical systemic approach" that recognizes the complex interplay between technological systems and broader social, economic, and political contexts (Draude, 2020). This approach, she suggests, would involve collaboration between technologists, social scientists, and policymakers to develop more equitable and inclusive technological systems (Draude, 2020).

A suggested approach to navigating bias and accountability is to move away from suggesting an essentialist viewpoint that more women in the industry would necessarily mean more equality or better product design standards but to develop awareness of one's prowess to having bias, regardless of the gender or ethnicity (Draude, 2018). A large aspect of increased accountability, according to feminist science, is being aware of the fact that all knowledge, including the knowledge that is being used to build and train computer systems, is "situated". Draude, drawing on Haraway's concept of "situated knowledge" (1988) suggests that the production of knowledge is inseparable from the position and research apparatus of those producing it, Draude further suggests, however, that the goal in creating a better system should be obtaining "partial objectivity" (2018, 16), which means to be aware of the fact that our knowledge of the world is "situated" and that there is no "view from nowhere" (Haraway, 1991, 2008, as cited in Draude, 16). All knowledge is located in terms of time, space, and background that need to be accounted for. Haraway advocates for accounting for the apparatus of knowledge production, to make one's "bias" visible (1988). Draude claims that people who are involved in knowledge production must pay attention to how power and knowledge intersect, for example, whose perspectives we adopt and who benefits if we adopt them (2018). The 'situated knowledge' theory provides a necessary theorical framework that could explain such issues as internalized misogyny (a phenomenon when women tend to support and advocate for patriarchy that is contrary to the interest of themselves and their social group) and internalized racism (with respect to race and ethnicity) (Haraway, 1988).

To not fall into the trap of an essentialist understanding of the gender bias in tech, it is useful to propose a multidimensional framework that accounts for how gender operates in society at different levels. Harding (1986) suggests a multidimensional conception of gender consisting of three components. Gender can be understood as an individual practice or subjective experience of an individuals' gender identity; however, gender is also a social structure that the power dynamics and institutional arrangements that shape gender roles and relations (Harding,

1986). Finally, gender is a symbolic practice, as it is charged with cultural meanings and symbols, which shape our understanding and expression of gender (1986). For Harding, these three components of gender are interconnected and mutually reinforcing, and that a comprehensive understanding of gender must take into account all three dimensions (1986). She also suggests that gender is "multilevel" and "asymmetrical", which means that gender operates at multiple levels of social organization, such as the individual, the interpersonal, and the institutional (Harding, 1986, 52). The power is not distributed equally in gender relations. Some groups, such as cisgender men, have historically held more power and privilege than others (Harding, 1986). This unequal power distribution has been maintained through social norms, institutional practices, and cultural beliefs. Therefore, according to Harding, an adequate feminist analysis of gender must take into account these multiple levels and the asymmetrical power relations that exist within them (1986).

When researching what has contributed to underrepresentation of women in the technological field in the UK, Wendy Faulkner (2004) discusses possible reasons for such institutional gender inequalities. Instead of adopting an essentialist view that equals masculinity with interest and competence in technology, she offers a multidimensional framework. She discovers that women are often impeded in their career and discouraged from taking career opportunities because of the gendered culture of engineering (Faulkner, 2004). She argues that the engineering culture is dominated by masculine norms and values, and women are excluded or marginalized in this environment (2004). Moreover, she writes that women who work closely with technology may end up in a situation where they feel excluded from the social world for being seen as "unfeminine" or "inauthentic" to their particular gender. That impedes many girls and women from choosing a career in tech out of fear of not succeeding in their private and personal life that for women are conditioned by society to be more important.

Another important point by Faulkner was that male engineers often associate their work with pleasure, while for females it was not the case (2004). She writes that male software engineers are "obsessed with technology" while women "did not share this obsession; they had other topics of conversations and sources of joy" (Faulkner, 2004, 96). Faulkner finds that part of the pleasure engineers take from their job is the self-identification with technological artifacts and obsession over them, which many women are not willing to do (2004, 96). Closely working with technological artifacts and self-identifying with them gives to engineers a sense of potency

that they might lack in other areas of life (Faulkner, 2004). Wendy Faulkner describes homosocial networks as "networks of men who are more comfortable working and socializing with other men than with women" (2004, 108). She argues that these networks are prevalent in engineering and can lead to gender exclusion and marginalization of women in the field (Faulkner, 2004). Faulkner suggests that to promote gender diversity in engineering, it is important to challenge and change these homosocial networks.

Moreover, it was often pointed out by feminist researchers that the pleasure engineers have from working with technology is "sensual, even erotic" (Faulkner, 2004, 105). Being the creator, making things work is a big part of both enjoying engineering and feeling powerful about what you do. In sex robot design, it might explain the appeal of creating an artificial woman for male engineers. Faulkner (2004) avoids to equate technology with power directly, however, she emphasizes that "modern technology and hegemonic masculinity are historically associated with industrial capitalism, and they are linked culturally by themes of control and domination" (2004, 90). For example, Faulkner observed that male engineers often took pleasure in competing with one another to solve technical problems, and in doing so, they reinforced a homosocial network that excluded women and marginalized groups (2004). In contrast, female engineers were more likely to take pleasure in collaborating and working in teams to solve technical problems (Faulkner, 2004). However, their pleasure was often undermined by the male-dominated engineering culture that undervalued their contributions and expertise (Faulkner, 2004). In her work, Faulkner demonstrates how individual, structural, and symbolical levels of gender intersect in creating an unfair working environment for women, and that the problem of gender gap should be approached in a multidimensional manner.

Wajcman argues that women face significant challenges in the technology workplace (1991). She notes that women have been are systematically excluded from the technical and scientific knowledge that powers the new technologies, which results in them lacking power in relation to these technologies (Wajcman, 2004). She further argues that women's exclusion from technical knowledge and expertise reinforces gendered stereotypes about women's intellectual abilities (Wajcman, 2004). She writes: "modern technology is supported and directed by powerful institutions and interests. Because both modern technology and hegemonic masculinity are historically associated with industrial capitalism, they are linked culturally by themes of control and domination (Wajcman, 1991, 90). Wajcman also identifies gender as a

central factor in the challenges that women face in the technology workplace (1991). She writes that how women experience technology is shaped by social expectations about gender relations, and women's gendered status is reflected in the design and use of technology (Wajcman, 1991). She argues that technology is not neutral but reflects and reinforces existing power relations, which are often gendered (Wajcman, 2004). One specific challenge that women face in the technology workplace is the prevalence of male-dominated culture and norms. Wajcman notes that workplace environment that is heavily domanited by men creates a hostile environment for women, who may feel excluded and undervalued (1991). This can lead to women feeling isolated and struggling to advance in their careers (Wajcman, 1991). Overall, Wajcman argues that women's experiences in the technology workplace are shaped by broader societal norms and power relations, which can make it difficult for women to advance in their careers and contribute fully to technological innovation (1991; 2004).

Catharina Landström's explores the influence of heteronormativity on women working in the technology industry (2022). She suggests that heteronormativity in the field of technology design enhances gender inequalities by creating barriers for women and other marginalized groups (Landström, 2022). Landström suggests that "technology is not socially neutral, but that it embodies social relationships, including gender" (2022, 9). However, she claims that it is important to avoid treating the gender identities of designers and users as fixed (Landström, 2022). She suggests to "approach gender not as an identity trait that comes from within the individual and determines their relationships with others, but as something emerging in the processes in which people and technology are enmeshed" (2022, 10). Moreover, for her, technology is inherently gendered, where masculinity is valued more than femininity, "assuming that femininity and masculinity are mutually exclusive and emerge from female and male bodies respectively" (Landström, 2022, 11). She argues that technology is also created in social interaction and that this discourse is built on the assumption that men are the default and natural users of technology, while women are considered to be less competent and less interested in technology (Landström, 2022). She argues that by queering technology, we can challenge dominant assumptions about gender and sexuality and create more inclusive and diverse technological spaces (Landström, 2022). She suggests that by paying attention to the ways in which technology is used and experienced by marginalized groups, we can develop more equitable and empowering technologies (Landström, 2022).

In this section, I have provided several valuable theories that help us theorize the place of sex robots in the human-machine interaction landscape and the gendered nature of this interaction. Using gender framework applied to how sex robots are designed and built, it becomes possible to explain how gender norms and expectations are embodied in sex robots. Technology cannot exist separately from the social, historical, and cultural norms of where and when it is designed, and sex robots are no exception. Gender theories that I have mentioned provide an explanation how gender operates in relation to power and technology, and how technology is a cultured and gendered process that emerges in interaction between the technology, its users, and designers.

1.4 Affect in human-robot interaction

In previous sections, I have discussed the ways in which gender operates at individual, structural, and symbolical levels, perpetuating inequalities within the technological field. The engineering workplace, as a cultural space, is where male and female engineers experience different realities. For male engineers, pleasure is integral to the engineering process, and the workplace serves as a domain for realizing fantasies of power and dominance not achievable in other areas of life. For women, engineering spaces represent unwelcoming environments where a female way to approach problems is devalued and unappreciated. These inequalities may explain the biases and imperfections in the design of the existing robots. In the upcoming chapter, I will introduce the affect theory in human-machine interaction with robots as it is an emotional and affective matter. This framework will enable the examination of how various emotions and affective states are transmitted between human and artificial bodies.

Lisa Blackman (2012) shows how for feminist theorists the study of the body and bodily interactions is often connected to the study of emotions and affect. Affect is distinguished from an emotion or feeling, which we can usually identify and control — but we cannot control our heart rate, blood pressure, sweating, and other bodily reactions that are markers of affective intensity. The idea of a duality between cognitive thought and affect has been challenged in modern feminist thought (Blackman, 2013). The understanding that suggests a separation of body and mind, cognition and subconsciousness according to a boundary that is, appears, according to contemporary neuroscience, artificial (Weatherell, 2012). Feminist researchers maintain that affect can relate to an intricate system of relationships between both human and

non-human bodies (Blackman, 2013). Sex robots, as machines designed to elicit sexual pleasure and companionship, can trigger a wide range of affective responses in users, from pleasure and desire to shame and guilt. Affect theory suggests that these responses are not solely determined by individual thoughts or feelings but are shaped by a complex web of interactions between human and non-human bodies. Therefore, it is possible to analyze the affective flows between users and sex robots, exploring how bodily sensations, movements, and touch are intertwined with emotions, desires, and social norms. Affect theory can help to shed light on the multifaceted nature of human-machine interactions with sex robots, moving beyond a purely cognitive or rational understanding of these experiences and acknowledging the role of affective intensity and bodily sensations in shaping our relationship with technology. Moreover, rather than considering body as stable and fixed entity we can see it as a process of fluctuation and change where it becomes impossible to draw boundaries "between the human and non-human, self and other, and material and immaterial" (Blackman, 2013, 1). All bodies can be "open and defined by their capacities to affect and be affected" (Blackman, 1). Affect further is not limited or contained in an individual body; it can also be transmitted (Brennan, 2004) or transferred between different bodies. Since affect can be understood as a flow of energy between different material and immaterial bodies 'affect analysis of the body and embodiment should not be confined to what might be understood as the more obvious aspects of embodiment" (Blackman, 2013, 1).

Advances in technology have blurred the boundaries between human and robotic bodies, leading to the emergence of new forms of human-robot interaction. Affect in human-machine interaction is often analyzed in the context of experience that is hard to see or to measure and that Blackman describes as 'non-cognitive, trans-subjective, on-conscious, non-representational, incorporeal and immaterial' (2013, 4). Blackman suggests to analyze the relationship between humans and technology in terms of human-machine assemblages (2013). She claims that technology has changed how we experience our body and has generated new forms of embodiment (Blackman, 2013). For her, technology is contributing to the elimination of the boundaries between humans and machines (Blackman, 2013). With the dissolution of these boundaries, the affective abilities of bodies to influence one another increases and the flow of energy between material and immaterial bodies can move freely (Blackman, 2013). Blackman also suggests that human-machine assemblages can create new forms of subjectivity and agency, as individuals interact with machines in different ways and develop unique relationships with

them (Blackman, 2013). Additionally, she discusses how affect and emotion are integral to these human-machine assemblages, shaping the ways in which individuals experience and engage with technology (Blackman, 2013). In her work "A Cyborg Manifesto" (1985), Haraway has also written about the blurring lines between machines and people. While for her "a cyborg" is a materialistic being, she suggests that technology is already an integral part of our lives, and has the power to shape our subjectivity and embodiment (Haraway, 1985). As the boundary between the human and the machine becomes blurry, she suggest that so be can the boundary of gender binary (Haraway, 1985). She perceives the cyborg as a construct that is powerful enough to transcend the oppressive sexist models of the existing technology (Haraway, 1985).

Suchman argues that our understanding of human-machine interactions should be based on the concept of situated action (2007). For her, "situated actions" are shaped by a particular context, situation, in which they occur (Suchman, 2007). She writes that this context is supposed to be "mutually understood" by all the participants of the interaction (Suchman, 2007, 83), who are "aware of the concrete details of their circumstances, and their actions are interpreted in that light" (Suchman, 2007, 83). The existing inequalities and discrimination are also part of that context. For her, these situated actions "create and sustain shared understanding on specific occasions of interaction" and provide for the stability of the social world (Suchman, 2007, 83). In her work, she also writes about embodiment, emotions, and sociality as of all integral components for the humanness of robots (Suchman, 2007). Embodiment is an essential component of intelligence that enriches the knowledge about the world, and emotions are seen as "emancipatory" for naturalizing the machine in the human world (Suchman, 2007, 227). Suchman suggests that is is important to conduct "critical consideration of how humans and machines are currently figured in those practices and how they might be figured – and configured – differently" (2007, 227).

Treusch's (2015) work on robotic companionship focuses on the making of anthropomorphic kitchen robots from a queer feminist technoscience perspective. Treusch's work investigates how gender norms and expectations can be embodied by such seemingly gender-neutral object such as robots (2015). She writes that the basic idea behind anthropomatics is to build machines "proximate to and beneficial to humans" (Treusch, 2015, 80). Treusch also writes about the relationship of symbiosis between a human and a human-centered machines where the machine's role is to enable a mutually beneficial cooperation (2015, 83). However,

this relationship is gendered and assymetrical: "the subject of this symbiosis is universal man, and the relation between human and machine is hierarchical" (2015, 84). Her work did not center around sex robots, however, the way she explored the relationships between gender and technology can be applied to the study of robots for love and sex. Since sex robots' main purpose is to simulate human intimacy and companionship, they inherently rely on certain norms and expectations surrounding how affective and sexual relations are normally constructed between people, for example, expectations of heteronormativity. Moreover, they rely on the mimicry of human states and emotions. Treusch writes that "In its biological use, mimicry describes complex relations of imitation between different species or a species and aspects of its environment (such as a leaf or a stone). Mimicry in this sense serves primarily to secure one or both species from threats like extinction. […] Imitation, replication, and deception are precisely strategies of interest for the analysis of how relations between self and other, difference and sameness, and the accomplishing representational forms of difference, are configured in anthropomatics. Mimicry and mimesis articulate a mode and form of representation that implement a relation between copy and original, the first representing the latter (2015, 87). The critique of the mimicry that is encompassed by the gendered embodiment of robots can help to illuminate the ways in which sex robots are constructed and how they may influence our understanding of gender and sexuality (Treush, 2015). Her work emphasizes the need for critical feminist analysis and intersectional engagement with technology.

Lara Karaian explores how sex robots can be theorized through the lens of sexual fantasy (2022). Karaian argues that the use of sex robots is a manifestation of sexual fantasy, and that this fantasy can be understood through the concepts of desire, pleasure, and power (2022). She writes: "Sexual fantasy is polymorphous in form and multifarious in effects; it is simultaneously intangible narrative, manifest object, productive practice" (2022, 13). The multifaceted natural of sexual fantasy heavily influenced by both social and individual experiences, as well as cultural and political norms, suggests that "fantasy exists at the intersections of one's sense of self, between bodies, and amidst social and cultural norms with myriad private and social affects and effects" (Karaian, 2022, 6). Adopting such as view on fantasy and sexual desire may suggest that fantasy itself almost becomes an affective state transmitted between human and non-human bodies and individuals. She suggests that the use of sex robots can be seen as a way for people to fulfill their sexual desires and fantasies without the complexities of human relationships

(Karaian, 2022). Overall, by applying affect theory withing feminist science we can abandon the the artificial dichotomies between body and mind, self and other, artificial and natural and provide a more comprehensive understanding of how people experience emotions, affects, and desires in interaction with sex robots.

1.5 Conclusion

In this chapter, I have provided a comprehensive review of feminist literature dedicated to the gendering of human-machine interaction with robots. Feminists suggest to view the usage of sex robots as an interactive situated process that is deeply conditioned by social and cultural norms. Conversely, sex robots are perceived as cultural objects immersed in a sociocultural context of its time. Gender studies and feminist science studies suggest that the process of sex robot design and use is not neutral. Gender-segregated workplaces and underrepresentation and lack of diversity in engineering teams contribute to the biased design of sex robots, which tends to represent women in a stereotypical sexist way. While some feminists argue that sex robots are inherently sexist and unethical, other feminists suggest that they can be designed to be non-objectified if a critical perspective of one's own biases and limitations is adopted. Moreover, they believe that both the use and the design of sex robots can be an enriching and liberating practice to allow people of different genders to explore their sexual fantasies in a safe environment.

Bringing together gender theories offers a framework for the analysis of how values, emotions, and affects caused by sex robots are presented and interpreted in media discourse. In the next chapter, I will discuss the methodology that I plan to use in order to investigate how affects, emotions, thoughts, and values expressed by users are interpreted in the media in the light of the discourse on benefits and harm of sex robot use.

CHAPTER II: RESEARCH METHODOLOGY

2.1 Introduction

This thesis asks how affects, emotions, thoughts, and values expressed by users are interpreted in the media in the light of the discourse on benefits and harm of sex robot use. Moreover, having noticed a common tendency to associate the use of sex robots with rape and pedophilia, I examine on what empirical evidence this link is grounded. Feminist critical discourse analysis is a method to address these questions in media representations. Forty-seven internet articles were selected through using Google search to examine how mass media journalists narrated and interpreted the interaction between humans and sex robots. A discourse analysis of media articles was selected as the preferred method after I realized that conducting research with users, manufacturers, and other relevant parties was not feasible due to the small number of people involved and their low accessibility. I have tried to find sex robot users who I could interview, however, discovered that it is hard to access this small community even with online resources. The articles I analyze are written by journalists who interviewed designers and entrepreneurs who produce sex robots with artificial intelligence, as well as their users.

In this chapter, I will outline the methodological basis that informs my research which includes the method of critical discourse analysis (CDA) and feminist CDA. Discourse analysis helps to understand how language and social reality intertwine in constructing and naturalizing power relations and ideologies in discourse. I will also reflect on how affect and emotion are negotiated in discourse and are used in the discursive construction of gendered interactions such as human-machine interaction with sex robots. Moreover, it is necessary to point out how media discourse participates in the construction of hype and informs public expectations of new technologies. Then, I proceed to outline my own researcher positionality. This thesis is written within a Gender Studies Master's program and actively employs the concepts and positionality of feminist research. I account how my own background of a female heterosexual white non-native English speaker might impact the process of research and its results.

2.2 Selected methods of research

Stuart Hall suggests that meanings are "encoded" in a message and that when we receive them, we "decode" the meaning. He introduced the concepts of "dominant", or "preferred"

reading (Hall, 1999, 514) and "oppositional" reading (Hall, 1999, 517). In the case of "dominant reading", receivers of the message read it exactly as ideated by the creators of the message, while in "oppositional reading", the message is "retotalized" within some "alternative framework" (Hall, 1999, 514, 517), for example, feminism. A common tool to construct oppositional readings is critical discourse analysis. As formulated by Dijk, critical discourse analysis is "a study of the relations between discourse, power, dominance, social inequality and the position of the discourse analyst in such social relationships" (1993, 249). This methodology focuses "on the role of discourse in the (re) production and challenge of dominance" (Djik, 1993). Unlike mainstream textual analysis, critical discourse analysis aims at challenging the mainstream ideology. This type of analysis is often applied by feminist researchers, black researchers, queer scholars, and other marginalized communities to challenge the norm and dive deeper into the intersectional relations of inequality between gender, race, and class (Dijk, 1993).

In order to do that, critical discourse analysis "may examine the style, rhetoric or meaning of texts for strategies that aim at the concealment of social power relations, for instance by playing down, leaving implicit or understating responsible agency of powerful social actors in the events represented in the text" (Dijk, 1993, 250). At a lower-level analysis, CDA may look into specific rhetorical figures, "such as hyperboles or metaphors" or "more subtle and unintentional manifestations of dominance" such as intonation, choice of words, and semantics (Dijk, 1993, 261). By analyzing discourse both at the level of concepts and ideas and implicit cognitive structures, researchers can examine "the role of social representations in the minds of social actors" (Dijk, 1993, 252). However, Lazar argues that it is important to distinguish between critical discourse analysis and critical feminist discourse analysis. Even though many feminists historically have used CDA to apply to the category of gender, clearly stating their political stance is important (Lazar, 2005, 3). She writes that "using gender in CDA is "clearly a set of distinctly feminist concerns" (Lazar, 2005, 3). Lazar does not find the identity of researchers "problematic per se", however, she points out that the diversity in CDA quite particularly comes from women — of different backgrounds, races, sexual identities, and geographical positions (Lazar, 2005, 3). Therefore, the task of feminist CDA is "to denaturalize" the existing symbolic relationships as manifested in discourse (Fairclough, 1995, 36).

One of the ways to study symbolic relationships in discourse is to pay close attention to metaphors. Lakoff and Johnsen sustain those metaphors one of the most important cognitive

structures that we "live by" are metaphors (1981). Feminist researchers have to look into what kinds of metaphors we use to talk about women and men, or love, or sex, and approach it at two levels of analysis, what Cameron calls "double discourse" where language is "both itself" and "a symbolic substitute for something else" (2008, 448). Lakoff and Johnsen write that 'metaphor is pervasive in everyday life, not just in language but in thought and action' (1981, 5). Metaphor, in this case, should not be reduced to just language. According to the authors, a conceptual system that we apply every day, "in terms of which we both think and act, is fundamentally metaphorical in nature", which means that it is a representation of something else (1981, 5). With metaphors, we are usually not consciously aware of what kind of metaphors we live by or what they say about us and our society.

Lakoff and Johnsen sustain that 'The essence of metaphor is under-standing and experiencing one kind of thing in terms of another' (1981, 6). Moreover, they claim that the metaphor should be understood not merely as words that we use but the "very concept of an argument' (Lakoff, 1981, 6). How we communicate is largely based on our conceptual system that is formed by the metaphors that exist in language (Lakoff, 1981). By analyzing language, we turn to an 'important source of evidence for what that system is like", since we do not have a conscious control over it (1981, 8). These metaphors "form a systematic way of talking" about something and "since metaphorical expressions in our language are tied to metaphorical concepts" we can use them to study what lies behind our metaphorical concepts and activities" (Lakoff, 1981, 8). Metaphors are something that needs to be interpreted and deciphered. However, what makes it challenging to study the metaphorical nature of language is that that "the very systematicity that allows us to comprehend one aspect of a concept in terms of another will necessarily hide other aspects of the concept" (Lakoff, 1981). Focusing on one side of the metaphor, we might overlook other important aspects just because they are incoherent with the metaphor (Lakoff, 1981). Moreover, we have to be careful because sentences often do not have meaning outside the context or mean different things to different people (Lakoff, 1981). Therefore, positionally and reflexivity are vital to aware of for any researcher who attempts to critically analyze discourse.

However, while feminist critical discourse analysis is paying close attention to metaphors and other linguistic structures, it is not limited to them. One of the vital aspects in the CDA is how social power is often based on the access to and control over valuable resources, including

media, or text more generally (Dijk, 1993, 254). Dijk writes that "power involves control, namely by (members of) one group over (those of) other groups". He claims that such may revolve around action or cognition or both, but most importantly, the powerful group can not only restrict one's freedom of action but also "influence their minds" (1993, 254). Media discourse is a powerful tool of influencing minds, after all, "managing the mind of others is essentially a function of text and talk" (Dijk, 1993, 254). He believes that elites have more opportunities to influence others through media (1993). This correlation has tangible effects since "discourse control is a form of social action control, but also and primarily that it implies the conditions of control over the minds of other people, that is, the management of social representations" (Dijk, 1993, 255).

Cameron writes that while attitudes or beliefs refer to mental constructs, ideologies as ways of "understanding the world that emerge from interaction with particular (public) representations" are social constructs (2008, 448). According to her, representations "internalize a particular understanding as a set of fixed beliefs: representation is also a means for contesting current understandings of language and creating new alternatives" (Cameron, 2008, 448). Talbot writes gives an example of how representations construct order through language, for example, making us perceive people through a ""lens" of gender polarization", which according to the scholar, has "far-reaching consequences" (Talbot, 2008, 468). Cameron also underlines the important work that is performed by representations in establishing a norm, for example, a norm of "desirable feminine behavior", which is then ascribed to the members of a social group (Cameron, 2008, 452). Cameron recognizes the role of representations in "maintaining gender distinctions" and creating "gender hierarchies", such as "make the [unequal] relationship of women and men in a given society appear natural and legitimate rather than merely arbitrary and unjust". (Cameron, 2008, 453). She says that "representations are particularly powerful" is shaping one's understanding of themselves and the world "precisely because they are not accurate reproductions" but much simpler and orderly (Cameron, 2008, 464).

Talbot highlights the role of such "representational practice" as stereotyping in the process of "simplification, reduction, and naturalization" (Talbot, 2008, 470). Talbot writes that to make sense of the world we inevitably have to apply "schemes of classification", for example, to type people not to get lost in the world's complexity (Talbot, 2008, 470). However, unlike just typing, which also applies a "strategy of "splitting", separating what is normal from what is not,

stereotypes have more rigid boundaries (Talbot, 470). Stereotypes are tools of establishing the "normal" and are "(re)produced in a wide range of practices of representation, including scholarship" (Talbot, 2008, 471). Talbot writes that "gender stereotypes are closely linked with and support gender ideologies. If we view them as ideological prescriptions for behavior, then actual individuals have to respond to the stereotypical roles expected of them" (Talbot, 472).

Similarly, Fairclough introduces the concepts of "orderliness" and "naturalization" (1995, 27). Orderliness is "the feeling of the participants in it that things are as they should be", which may be manifested in the "coherence of interaction", choice of words, and ideas of what it is acceptable to talk about (Fairclough, 2005, 28). When we interact, we participate in a social action that relies on the knowledge of social structures, as reflected in the knowledge base" (Fairclough, 1995). Verbal interactions are both determined by and reproducing social structures (Fairclough, 1995). However, these structures are not apparent to the participants of the interaction, they just appear to be common sense (Faiclough, 1995). According to Fairclough, it is institutions that act as "an apparatus of verbal interaction", or an "order of discourse" (1995, 38). She claims that every institution is a "sort of speech community, with its own particular repertoire of speech events" (1995, 38). It is inside the institutions where ideological representations are born, as she calls it, "particular way of talking is based upon particular ways of seeing" (1995, 38). She claims that institutions "construct discursive subjects", imposing on them "ideologies and constraints" (1995, 39). An important aspect that she underlines in her theory is that social institutions are not monoliths (1995, 40). They can be "pluralistic rather than monistic", which means they provide different ideological norms, which depends on "balance of power between social classes" at a particular point in time or place (1995, 40).

An important aspect of media discourse analysis relates to how the media co-creates hype and social expectations. Brown writes that "expectations and imaginative speculation are understood as fundamentally necessary real-time activities in order to mobilize the future into the present. That is, hype and the noisy clamor of future projection are indispensably central to the shaping of technology" (2003, 6). He claims that the hype and the promise over a new technology is based on the necessity to "enunciate a story" (6), create a vision of the future and suggest the means of getting there). Suggesting that the new technology will replace the existing ways is key to creating hype. Moreover, he suggests that Hype corresponds to a phase in the course of any innovation. The hype uses the language of "novelty and revolutionary potential" to

build the agenda around the new topic (Brown, 2003, 11). The media deliberately exaggerates the promise so that to attract attention, enroll allies, or secure investment). With time as new unforeseen problems emerge, they may give may to disillusionment and new promises, creating a "hype and disillusionment cycle" (Brown, 2003, 12).

It is important to mention not only how discourse and power intertwine and create social reality but also how affect is negotiated in discourse. Wetherell(2012) argues that there are two common approaches to negotiating affect in discourse in social science, and none of them is entirely accurate. She defines discourse as "practical (formal and informal) realm of language in action – talk and texts, words, utterances, conversations, stories [...], patterned within the everyday activities of social life" (2012, 52). She points out the existing dichotomy in social science where many scholars appear to sustain that "the most interesting thing about affect is that it is not discourse" (2012, 51). Thanks to language, the physiological is turned into "recognizable and communicable emotion" (Wetherell, 2012, 58). Wetherell suggests to drop the artificial distinction between affect and discourse, unconscious and cognitive (67). She writes that "when we think about discourse in this practical light, distinctions between cognitive and non-cognitive, representational and non-representational, conscious and unconscious, language and the body become less and less clear-cut" (2012, 67). It is, in her view, a "mistake to artificially freeze and isolate affect as a separate element from the dynamically integrated sequences in which these things normally operate" (2012, 67).

2.3 Researcher reflexivity and positionality

As a gender studies student, it is important to acknowledge the specificity of my standpoint. First, I identify as a white cis-gender heterosexual woman, and consider myself an intersectional feminist who sees social inequality as a result of intertwined power dynamics of gender, race, and class. I acknowledge that the selected articles? revolve around heterosexual relationships between male/female users of sex robots and male/female sex robots and does not provide insight into the race and class issues at stake. This is conditioned largely by the sample at hand; mass media articles rarely mention other sexualities rather than heterosexual (in fact, only two articles did mention homosexuality and around 10 robosexuality) and, therefore, do not provide sufficient data for empirical research.

Secondly, I acknowledge that my own personal interests, sexuality, and background have encouraged me to focus more on how women are represented in sex robot design and what kind of emotions, affects, and behaviors this representation provokes in men. While I touch on the issues of heterosexism in sex robot design, I believe that a further investigation is needed to study how and whether robotics of today approaches the design of sex robots targeted at marginalized sexual communities such as gays, lesbians, or robosexuals.

Thirdly, the choice of Master's dissertation topic was connected to my professional interests. Before working on my Master's thesis, I have worked in IT. I have also attended several classes dedicated to gender and technology and Charles University, University of Bologna, and University of Helsinki. Feminist scholarship dedicated to sex robots made me curious but also skeptical, as I worked alongside machine learning engineers, who always complain at how basic and unsophisticated contemporary artificial intelligence systems really are (and AI is a key component that provides sex robot interactivity). I have never used or seen a sex robot, and consider myself to be rather skeptical about their users, as well as the both negative and positive predictions made about their use. However, in my research I tried to stay open-minded and evaluate different viewpoints considering the future and consequences of sex robot use.

I also relied on Google algorithms to collect samples for my analysis. Research results that appear on the top are usually identified by Google as more valuable and relevant to the subject. However, my thesis does not estimate to what point these media articles are potentially influential in framing social expectations. Moreover, the position of articles in search results changes over time, as new materials continue to appear every day. I have used an automated tool for data collection Thruu to parse the results and create a database that was relevant at the time of the study (2022-2023). However, such automated data collection has its flaws. Automated tools sometimes make mistakes and include irrelevant search results, which represents an additional limitation for the research. I had to apply manual data selection to eliminate irrelevant results and augment the sample. Nonetheless, I consider that this research may still present interesting discoveries and serves as the basis material for further studies in the field.

2.4 Sample and analysis

      In order to gather data for the purpose of this research, an automated tool known as Thruu was utilized. This tool is used to identify the most influential web pages that are relevant to a specific keyword. In this case, the keyword in focus was "sex robot" and the location specified was limited to the United States of America. The timespan of the article is between 2017 and 2023. This 5 yeas time span is large enough to provide enough material for the analysis and is also timely enough for it to be relevant for the current context. The articles that were selected for analysis have been identified as influential by Google search engine. In order to determine the level of influence of the web pages, Google analyzes how many people visit the website, whether they read multiple articles or exit immediately, share publications with their friends (*In-Depth Guide to How Google Search Works | Google Search Central. (n.d.).).* If the web source is visited and shared, it has high authority for the search engine. Authority is the term used by Google to describe how important and valuable the inner algorithms consider a source of information; if the authority is high the webpage is displayed high in search results because Google considers it valuable for users based on their search request (*In-Depth Guide to How Google Search Works | Google Search Central. (n.d.).).* For instance, media outlets such as The Sun and The New York Times have established a reputation for consistently producing content that attracts a significant amount of traffic to their websites. For Google algorithms, it does not matter that the Sun is a tabloid with often sensationalist content, while The New York Times usually leans towards quality investigative journalism. If the website is visited by many users who spend a lot of time there and do not bounce back immediately, it is considered a high quality resource. This has resulted in their classification as highly authoritative media sources, within the Google's algorithm *(In-Depth Guide to How Google Search Works | Google Search Central. (n.d.).)*. Web pages that are deemed more authoritative are subsequently prioritized and displayed at the top of search results *(In-Depth Guide to How Google Search Works | Google Search Central. (n.d.)*). Consequently, individuals seeking to acquire more knowledge on the topic of "sex robots" are more inclined to come across these influential articles, as opposed to those located towards the bottom of the results page (Vermeer, 2020). As a result, such articles possess a greater potential to shape public opinion (Vermeer, 2020). In order to obtain sufficient material for the study and make the selection process less arbitrary, the top 100 results were collected, as individuals typically do not venture beyond that point when searching for information online. It

is essential to analyze influential media articles as they possess the ability to shape public opinion and influence societal perspectives on various issues (Vermeer, 2020). Articles from influential resources are shown higher in Google search results, which makes them easier for people to find, and a larger audience is attracted (Huang et al., 2021). Therefore, by analyzing these articles, it is possible to gain insights into how public opinion is being shaped and what key messages are communicated (Huang et al., 2021).

The subsequent step in the research process involved refining the results by eliminating non-relevant pages such as advertorial or Wiki, which could not be considered media discourse. Following this, the remaining 44 articles were selected for in-depth analysis. In order to guide my research, prior to this analysis, I have analyzed whether there are any patterns in terms of themes that often arise in the media portrayal of sex robots. Then, I analyzed what these topics suggested about the affects, emotions, and thoughts of human interaction with sex robots and how they were negotiated in media discourse. The topic of sex robots appeared to be charged with intense emotions, both positive and negative. The articles portrayed sex robots not merely as a private matter but also as a political and moral issue. The topic's ethical implications and potential societal impact appeared to evoke strong emotions, which influenced the way journalists framed and presented their arguments.

The table below illustrates the clustered material in terms of date and explored topics.

	Name of the article	Media outlet	Topics	Date
1	It's 2023, where are the sex robots? 'They will probably never be as huge as everyone thinks	Guardian (it's British but it ranks high for USA as well)	Future of robots, intimacy, robot ethics, rape and child sex	Jan 13, 2023
2	Sex Robots Get More Intimate with Humans, Thanks to AI	Scripp News	Gender-fluid robots, human-likeness, love and sex with robots, intimacy	Aug 19, 2021
3	The sex robots are coming... the future of sextech	Atlas of the Future	Sex positivity, marginalized groups taking control, ethics, human-likeness	Feb 14, 2021
4	Can Today's Sex Robots Offer a Relationship?	Psychology Today	Human-likeness, intimacy, technology	Sep 23, 2022
5	Sex robots may cause psychological damage	BBC News	Child sex, rape, intimacy, ethics and regulation	Feb 15, 2020
6	Sex robots could soon feel sensations 'just like humans' after creepy 'printed skin' developed giving a sense of touch	Daily Star	Technology, sense of touch and feeling	Jun 8, 2022

7	AI Sex Robots Are Selling Well, but Experts Call for Regulation	Business Insider	Technology, sales, intimacy, ethics and regulation, smartness	Jun 13, 2020
8	We Will Soon Have Sentient Sex Robots. Will They Be Able To Consent?	Swaddle	Ethics, rape	Dec 12, 2020
9	The truth about sex robots: Panic, pleasure and a candlelit dinner	Engadget	Ethics, intimacy, state of sex tech industry	Jun 5, 2018
10	New Study Reveals Insane Amount of Sex Robot Owners Worldwide	Man of Many	State of tech industry, implications of sex robot use	Nov 18, 2022
11	Meet The Man Who Test Drives Sex Robots	Forbes	Embodiment, ethics, intimacy, loneliness	Sep 27, 2018
12	Sex with robots: How should lawmakers respond?	Phys.org	Ethics, regulation, state of sex tech	Aug 13, 2021
13	Law Experts Ponder Whether Sex Robots Should Be Legal	Futurism	Regulation, ethics, sexual violence against women, human-likeness	Aug 14, 2021
14	Legal Researchers Weigh in on How Future Laws Should Deal With The Rise of The Sexbots	Science Alert	Ethics, right to sex, objectification of women, pedophilia	Aug 14, 2021
15	Letting pedophilies live out their perverted dreams with child sex robots	Daily Mail	pedophilia	Dec 9, 2022
16	What we can do with sex robots (besides the obvious)	Conversations	Right to sex for old people, intimacy, care and sex therapy	Apr 23, 2021
17	Shock horror: experts say AI sex robots are a moral threat to society	Dazed	Ethics, danger to human relationships, pedophilia,	Feb 18, 2020
18	'World's first sex robot' causes social media storm with 'Glaswegian accent'	The National	Embodiment	Jun 8, 2022
19	What's so wrong about sexbots?	Freethink	State of market, technological advancements, sex doll as art, sex doll as commodity, sex workers, intimacy	Dec 4, 2021
20	Sex robots in 2022 – what's happened in the last four years?	Business Leader	State of market, sex as commodity, ethics, future of robotics	Mar 21, 2022
21	No shame here: UW bioethicist advocates for sex robots for seniors	Tri-Cities Area Journal of Business	Sex robots for seniors, sex as right, sexism in robot design, care, isolation	December, 2020
22	The Sex Robots Are Coming	Gothamist	Future of human relationships, danger to human relationships	Oct 9, 2017
23	Sex Robots Could Make Society Better, Actually	Men's Health	Access to sex, positive implications, isolation, future of robotics,	Mar 28, 2022
24	The world's first sex robot has been given a Scottish accent and people are baffled	Mirror	Romance, saying no to sex	Jun 8, 2022

25	World's first talking sex robot is ready for her close-up	The San Diego Union Tribune	Human-likeness, technological advancements, danger, sex robot design as art, robotic rights	Sep 13, 2017
26	A trailer for 'the sex robots are coming' just released & it is scary af	Highsnobiety	Technological advancement, danger	Nov 26, 2017
27	Will Sex Robots Cure The 'Incel' Phenomenon?	Interview	Fears, feminist sex robot design, accessibility of sex	Mar 14, 2019
28	Are You Ready For Sex Robots? Too Bad, They're Already Here.	BuzzFeed	Future of robots, intimacy, robot ethics, rape and child sex	Nov 8, 2018
29	An inside look at how Abyss Creations makes sex robot	CNET	Human-likeness, love and sex with robots, intimacy	Aug 10, 2017
30	From electrifying kisses to sex robots: the fascinating history of sex robots	The Correspondent	Sex positivity, marginalized groups taking control, ethics, human-likeness	Aug 26, 2020
31	Is Having Sex With Robots Actually a Bad Thing?	InsideHook	Future of robots, intimacy, Technological advancement, danger	Dec 8, 2021
32	Will sex robots become the new norm?	USA Today	State of market, technological advancements, intimacy, future of robotics	Jul 5, 2017
33	What's the Best Sex Robot in 2021, and Where Can You Buy It?	Sex Tech Guide	State of market, sex as commodity, sex as right	Jul 18, 2022
34	Will having a sex robot in the home pose a risk to children?	Global News	Human-likeness, love and sex with robots, intimacy	Jul 5, 2017
35	Sex Robot Industry: State of Market Size, Technology	BedBible	State of market, technological advancements, future of robotics	Oct 24, 2022
36	Tech Companies Developing AI Sex Robots	CBS News	Intimacy, care and sex therapy ethics, danger to human relationships, pedophilia, positive implications, isolation, future of robotics,	May 6, 2018
37	Sex robots: perverted or practical in fight against sex trafficking?	Reuters	Ethics, danger to human relationships, pedophilia, sex as commodity, future of robotics, future of human relationships	Jul 19, 2017
38	We're talking about "sex robots" now. We've been here before.	Vox	Future of human relationships, danger to human relationships, future of robotics,	May 4, 2018
39	Ghosting the Machine, by Sam Lipsyte	Harper's Magazine	Love with robots, intimacy, human-likeness	May, 2022
40	Sex robots are here, but laws aren't keeping up	News Yahoo	Ethics, danger to human relationships, pedophilia, embodiment, sex workers, ethics	Jun 27, 2020

41	Sex Robots, Teledildonics, and the Rise of Technosexuals	The Observer	Right to sex for old people, intimacy, care and sex therapy, access to sex, positive implications, isolation	Oct 21, 2020
42	Do sex robots exist and how do they work?	Cosmopolitan	State of market, sex as commodity, access to sex, positive implications, isolation, future of robotics,	Jul 12, 2021
43	Sex robots are real — and they're made in the USA	Chicago Tribune	State of market, sex as commodity, ethics, future of robotics, sex as right	Jul 17, 2017
44	Sex robots: finding connection during a pandemic	SBS	Embodiment, intimacy, care, isolation	Sep 16, 2020

Figure 1: Example of distribution of main topics in the sample, ordered by search results

Having conducted automatic data collection for the sample, I decided to manually augment the sample, adding articles that have seemed to me interesting and detailed. This is the end result:

	Name of the article	Media outlet	Topics	Date
1	One woman reveals what it's like to sleep with a male sex doll as we explore a future where robots will decide who they want to MARRY	The Sun	Jan 15, 2017	Future of human relationships, love with robots, intimacy, human-likeness
2	The women whose boyfriends are made out of plastic	Dazed	Aug 25, 2022	Future of human relationships, love with robots, intimacy, human-likeness
3	I take my sex doll out on dinner dates – and the wife doesn't mind	9news	Nov 24, 2017	Sex as commodity, sex as right
4	Why This Guy Fell In Love With a Sex Robot	Men's Health	May 20, 2016	Sex as commodity, sex as right, intimacy
5	I Love You, Bot	CNN	Nd	Sex as commodity, sex as right, intimacy
6	Do You Take This Robot	NY Times	Jan 19, 2019	Sex as commodity, sex as right, intimacy, human-likeness
7	Divorcee dad is first in world to own Harmony sex robot and he 'enjoys it more than his red Corvette'	Irish Mirror	Jul 30, 2018	Sex as commodity, sex as right, intimacy, human-likeness
8	French woman wants to marry a robot as expert predicts sex robots to become preferable to humans	Nzheralt	Dec 23, 2016	Sex as commodity, sex as right, intimacy, human-likeness
9	I'm building a robot boyfriend—and you can, too	Quartz	April 24, 2018	Future of human relationships, love with robots, intimacy, human-likeness

10	Engineer marries robotic 'girlfriend' to appease his pushy parents	Tribune	Oct 31, 2017	Future of human relationships, love with robots, intimacy, human-likeness
11	Japanese Engineers Create Robot Hand for Lonely People to Hold	Vice	Nov 9, 2020	Future of human relationships, love with robots, intimacy, human-likeness
12	Are We Ready for Robot Sex? What you learn about human desire when you get intimate with a piece of talking silicone.	NY Magazine	N.d.	Future of human relationships, love with robots, intimacy, human-likeness
13	Male Sex Robot Doll Designed To Sex Better Than You	Dmarge	Jan 30, 2022	Future of human relationships, sex as a commodity
14	More than 40% of us want to sleep with sex robots – with men more keen than women	Daily Star	Sep 17, 2021	Sex as commodity, sex as right, intimacy, human-likeness
15	'It's a chance to live my best life': meet the woman building her own robot boyfriend	Stylist	2019	Future of human relationships, love with robots, intimacy, human-likeness

Some of the identified topics were ethical and legal issues, such as whether or not the usage of sex robots promotes rape and pedophilia; the impact of technological advancement of society and the future of human relations, making people lonelier or, on the other hand, curing the loneliness and providing care; human-likeness of robots in terms of embodiment but also affects and emotions; general considerations about sex and love. Moreover, the media would often talk about the artificial intelligence and the engineering aspects of these technology. In my analysis, I will briefly mention how the current state of technology may be connected to the generation of certain fears and desires, however, the current research focuses more on user experiences rather than on evaluating the technological side of the problem and how it is reported. Additionally, gender issues were also a significant topic of discussion, with some articles exploring the impact of sex robots on gender roles and expectations.

Having considered all the available information, I have decided to further cluster the topics into two categories. One category describes everything that humans fear about sex robots and how the media discourse interprets and co-creates these fears. It also comprised what fears sex robots supposedly help to mitigate. The second category encompasses everything that is

perceived as positive, desirable aspects of sex robot use. It includes wider and fairer access to sex, sexual liberation of women, and potential for intimacy and affection. I will discuss each of the categories more in depth in the two following chapters.

CHAPTER III. FEARS IN HUMAN-SEX ROBOT INTERACTION

3.1 Introduction

In this chapter, I address the question of how affects, emotions, thoughts, and values expressed by sex robot users are interpreted in the media. I will identify common patterns that arise in the media discourse in relation to sex robots. The literature review that I have conducted revealed that the existing gender bias in the industry of sex robot design influences the embodiment of sex robots and sets expectations and patterns that describe how this interaction should happen. Sex robots are usually gendered female, with a hypersexualized physique, and are built to act in ways to act horny and obedient (Devlin, 2015), therefore, being coquettish and sweet is some of the main traits that are expected from sex robots, together with their youthful sexual appearance. Much of the existing feminist research on the questions of gender and sex robot use presents such stereotypical feminization as worrisome and potentially having a profound effect on our society, in perpetuating gender stereotypes/ misogyny (Devlin, 2018; Darling, 2012; Doring, 2017). Some suggest that the robots are thereby promoting inequality and even gender-based violence, as they suggest the body of a sex robot is a metaphor for a lifeless female body, either unconscious or dead, normalizing such practices (Richardson, 2022; Richardson, 2023; Sparrow, 2017). However, there are also feminist scholars who claim that people may gain from using sex robots. They write about how sex robot may allow people to experienced their sexuality, including marginalized sexualities in a safe and protected environment, without any judgement, improve and diversify sexual life with an existing partner/partners, or even allow people to exercise their sexual needs when they find it hard to find a human partner, for example, for disabled or senior users (Kubes, 2019; Danaher, 2019). Conversely, there is no proof that people who use sex robots may benefit from it, for example, in curing their social anxiety and gain confidence. Any cited accounts of people who used sex robots for therapeutic purposes and done so successfully are scares and represent individual cases rather than expected patterns (Gersen, 2019; Doring, 2019). Frequently, existing research is informed by conjecture and predictions about both positive and negative implications of sex robot design. I concluded that by using critical feminist media discourse analysis and approaching media articles as a reflection of the state of thought of the topic in the society, one can get a deeper understanding of the assumptions at work, as media outlets often set societal

expectations about a new technology and shape how it will be perceived in the society (Brown, 2003; Hall, 2004).

I present the main themes identified in discourse analysis that have a negative sentiment or emotional tone under the rubric of "fear". "Fear" in this analysis is encompasses anything that there is worrisome, unsettling, and repulsive about the new technology, according to the media. The emotion of fear in relation to a new technology underlines its proximity and serves to re-establish the distance between human and robotic bodies, to underline their differences, as Ahmed refers to it, "a fear of a body passing by" (2014). Next section examines hype and doom of sex robots identifying key topics. This includes the fear of blurring boundaries of human and robot where sex with artificial bodies may disrupt "natural" human connections and drive people away from each other, the fear of sex robots being around us, disrupting familiar reality, of robots stripping humans of "humanity", sex robots that are too "human", and sex robots as an outlet for sexual violence.

3.2 Examining hype and doom of sex robots

In this section on fears that surround human-sex robot interaction in media discourse, I would like zoom in on how values, emotions, and effects that surround sex robot use are interpreted in media discourse –and what tools media discourse uses to link them to negative social consequences. Many of the analyzed articles seek to convince the reader that sex robots are already relatively widely used and are changing the way people build relationships with each other. As I have noted in chapter II, constructing social expectations by presenting a new phenomenon as disruptive is an essential part of setting up social expectations and creating hype, which is one of the key roles of media discourse (Brown, 2003). One can notice this trend in the samples that I have selected. *Psychology Today* (2022) writes: "Sex robots are here and available for purchase". This statement is bold and peremptory, and presented without statistical evidence. *Business Insider* (2020) claims that AI-powered sex robots are commonly sold during COVID-19 pandemics. And *Scripps News* (2021) is certain that sex robots already get more intimate with humans, thanks to artificial intelligence. These sensationalist claims attract attention and manipulate the reader into diving deeper into the article trying to answer the question: what happens if robots already taking the place of humans in human relationships? What will this mean for me? It goes together with a negative attitude towards sex robots that appears to

dominate media discourse: 50 out of 59 articles in the sample relate to sex robot use potential negative consequences (see Figure 1). Perhaps, one of the reasons to that is that fears sell newspapers much better than sunshine news. Moreover, fear is a powerful affective force that shapes political and social relations where fear operates as a tool of governance, used by those in power to maintain control and discipline over marginalized groups. Fear also has the potential to be a source of resistance and empowerment for those who are oppressed, as it can inspire collective action and solidarity.

However, I suggest to zooming in on some other reasons why sex robotics is often interpreted in the negative light. I have identified four important topics: sex robots being the cause of loneliness and collapse of human-human relationships; sex robots stripping us of our humanity; sex robots promoting "unnatural" sexual practices (I will delve more into what it means later in the chapter); sex robots promoting violent sexual behavior. A separate subsection is dedicated to the fears that sex robots can supposedly help to mitigate. This section is based on what sex robots' users share about their experience, rather than how their experience is interpreted by other people (namely, journalists), and contains many interesting contradictions to the fears that the media portrays as prevalent.

3.3 Sex robots around us?

Numerous articles on sex robots are published within the technology-focused sections of various media outlets (for example, in "Tech" or "Future" or "Technology" sections), suggesting the novelty of the device. These articles introduce readers to the appearance and functionality of sex robots, suggesting that while media make loud claims about how well sex robots sell (*Business Insider*, 2020), most people have only approximate understanding of how sex robots look, function, and who uses them; in other words, for most people, sex robots belong to the category of the future, rather than the category of the present. Scripp News (2021) writes, giving a brief introduction to the most important things there is to know about sex robots, "Some of the newest dolls or 'sex robots' respond to touch. They talk. Their artificial emotional intimacy is powered by artificial intelligence".

The area of sex robots is often presented as a field that has actively developed during 2020-2022, as a result of global COVID-19 pandemics. One of the media writes,

In 2018, Business Leader investigated the fledgling world of sex robots. We discovered an industry very much in its infancy. Sex robots were a new and developing technology and the industry was just beginning to create a buzz on the international stage. We've now revisited the industry four years later to see how much it has changed (Business Leader, 2022).

The media goes on to claim that in the post-pandemic world the demand for sex robots has seen a drastic surge. However, they do not disclose based on what information this conclusion is drawn. *Business Insider* (2020) suggests that,

Sex robots empowered with artificial intelligence that allows them to converse have seen a boom in sales during the COVID-19 pandemic, their makers say — providing important companionship to those left isolated.

Business Insider, like many other media outlets, interviews the CEO of RealBotix (USA-leading company that produces sex robots) to investigate the state of industry; it even appears that he is the only robot manufacturer one can find. The media relies on the CEO's words to assess the volume of the market and the demand. However, since these claims are no official statistics or open data about the state of the market, one cannot rely on this information provided by the interested party to draw any meaningful conclusions about the actual situation on the market.

Moreover, even with newer articles (Guardian, 2023; Men's Health, 2022), we can see a tendency to reiterate the explanations about how and who uses sex robots, who produces them and how they work, which suggest that the industry is not spreading as fast, as one would expect from reading media articles. For example, in 2017, *Gothamist* wrote an article "*The Sex Robots Are Coming*" where they explain how the sex robots are quickly making it to the market and gaining popularity. Also in 2017, *Chicago Tribune* wrote an article titled "*Sex robots are real — and they're made in the U.S.A.*" The author explains that sex robots are not a sci-fi myth but real devices manufactured in the USA. He introduced the first sex robot Harmony, explains how she looks and what she can do. But in 2022, *Daily Mirror* publishes an article called "The world's first sex robot has been given a Scottish accent and people are baffled". The article talks about sex robot Harmony that, and it is presented as a surprise, can talk. Clearly, not a lot has happened in the world of robotics in these four years if giving a Scottish accent to a robot makes it to the front page of a news magazine. Moreover, apparently, there would not be a need to introduce the reader to the topic and explain the same things over and over again if sex robot use was indeed

so widespread. Therefore, it can be inferred that the proliferation of such articles is disproportionate to the actual prevalence of sex robots. Brown (2003) suggests that the high expectations-disappointment cycle is part of the wide adoption of a new technology process, and indeed suggests the novelty of this technology.

This does not mean that there is no skepticism or critical reflection of sex robot hype in the media. Some media outlets critically evaluate the state of the sex robot industry, and a recent article by *The Guardian* (2023) questions the potential for sex robots to achieve the societal impacts that has been projected, both negative such as enhancement of gender stereotypes and promotion of misogyny and positive ones, including sexual liberation and being a cure for loneliness. The author suggests that "They will probably never be as huge as everyone thinks" with just about 56,000 sex robots being are sold per year. The journalist refers to the stigma surrounding sex robot use and suggests that similar exaltation was observed in the face of other innovations in the past such as pornography (*Guardian*, 2023). However, unlike other technological advancements sex robots will probably remain "niche", as they occupy a lot of space and are expensive, unlike virtual companions that are cheaper and more private, and will not cause such a societal disruption as predicted by both often-quoted sex tech innovators such as Matt McMallen, CEO of RealbotiX, and Ian Pearson, author and futurologist, according to the author (*The Guardian,* 2023).

Psychology Today (2022) uses builds on Danaher's (2019) work for establishing whether an object can be considered a sex robot or a sex doll and suggests that current sex robots cannot enact bodily autonomy and intimacy and developed artificial intelligence that could allow us to consider them robots in the sense of interactive conversational experience, as opposed to animated sex dolls. Therefore, the author suggests that sex robots do not exist, and all conversations about relationships with them are merely hypothetical. A similar position is shared by *Men's Health* (2022). The magazine also suggests that contemporary robotics has not achieved the state when sex robots could act as a substitute for human-human relationship and, therefore, have any profound effect on the future of human relationship. However, what is obviously missing in this discourse, is why the sophistication of the technology can be a single measure of impact, as there are many not so intelligent technologies that have had a major impact on the society, such as pornography. While it is hard to deny that sex robots are yet not a

reality that most people live by, further investigation is needed to investigate their impact on human relationships.

3.4 Robots stripping humans of "humanity"

The theme that media articles commonly explore in relation to the wider proliferation of sex robots in the intimate sphere is that it might make us less human, as sex is a "natural", "human" experience, and experiencing it with an artificial being is controversial (*Scripp News*, 2021). This rigid binary between natural and artificial is often expressed by contemporary media, suggesting that there is a defined framework of what is considered or not considered "normal" sex. One important component of "natural" sex is heterosexuality. It can be seen from the stories that media outlets tell (*Guardian*, 2023; *Engaget*, n.d.; *NY Magazine*, 2019, etc) that the overwhelming context of robots used for sex is relationship between a man and a woman. Moreover, in this context, a female body usually serves as a penetrable object for male desire (Richardson, 2023). Male sex robots also exist but the articles dedicated to them usually appear in "niche" women's magazines (Stylist, 2019). Some media outlets mention the possibility of homosexual sex robot design, rather an existing context of sex robot use (*PinkNews*, 2021), however, they were not identified by Google as top-performing ones. I had to search for them manually specifically trying to find any proof of existence of robots of other genders and sexualities. Robots of other genders do not appear in the sample, and the possibility of their design is not mentioned. This brief analysis of what bodies are expected to be involved in sex and in what ways creates an impression that the only kind of sex is heterosexual sex.

One can notice the same norms applied to the distinction of human and robot sex. Journalists put "human" sex and "robotic" sex on different sides of the spectrum, often, suggesting that the former one is preferable (some media (*Tri-Cities Tribune*, 2020) do see it in a positive light, as I will explore in the next chapter, but still put "robotic" and "human" sex in contrast to each other). Moreover, that fact that references to the natural exulted with the morally good is suggested also means that some "punishment" measures should be adopted if the framework is violated. By "punishment", I do not necessarily mean legal or physical one. Rather, it is the expectation of dramatic consequences that will inevitably follow if the norm is violated. This is above all the potential for these machines to increase violence towards women, children, and other people (*The Guardian, 2023*; Engaget., n.d.; *Business Insider*, 2022). Reuters (2017)

quotes Richardson who says that sex dolls and robots could even be dangerous, "used as proxies to act out fantasies like rape or pedophilia". They write, "Giving someone who wants to rape children and fantasizes about that a doll with orifices that he can penetrate is ... dangerous. It's absolutely, extraordinarily irresponsible to promote that idea in wider society" (*Reuters*, 2017). *BBC* also quotes Richardson saying,

"*A relationship with a girlfriend is based on intimacy, attachment and reciprocity. These are things that can't be replicated by machines. […] If someone has a problem with a relationship in their actual lives you deal with that with other people, not by normalizing the idea that you can have a robot in your life and it can be as good as a person*." (*BBC*, 2020).

Reference to feminist (and female researchers) is used in a controversial way. On one hand, caution about women's and children's safety could point out to the increasing level of awareness and woke culture in the society. However, feminist argumentation is also used to enhance status-quo and establish a narrative where women are in need of protection. Power and control associated with dominating robots are seen as detrimental for human capacity for love, affection, and empathy. The liberation of desire from the supposed norm is seen as something uncontrollable and dangerous where transgression of one norm can result into a different transgression such as pedophilia and rape (*Reuters*, 2017).

3.5 Sex robots that are too "human"

Media articles often examine the level of human-likeness of sex robots and how this impacts the perception of these machines as objects or subjects *(Futurism*, 2021; *San Diego Union Tribune*, 2021; Swaddle, 2021; Gothamist, 2021). The fact that sex robots appear as confusing is often expressed in media articles. People understand that they are dealing with a machine. But it is hard to resist a tendency to anthropomorphize things (Gothamist, 2021). The analysis of these media articles suggests that the idea that sex robots may contribute to blurring the line between human and mechanical is particularly worrisome. Media suggest that with robots becoming more and more advanced, it becomes impossible to predict the future of human relations. For example, if sex robots are developed to the point where they look and behave just like humans, this could lead to a situation where people abandon relationships with humans and start living with the machines (2021).

And that raises a lot of questions: how will these relationships contribute to the birth rate? How will they be regulated? How will the social order be established in the world where such fundamental boundaries as one between artificial and natural bodies are blurred? Some argue that the development of increasingly human-like robots could lead to a situation where people become less interested in forming intimate relationships with other humans, preferring instead to engage with machines that can be tailored to their specific desires and preferences (*Freethink*, 2021). This could have significant social and psychological implications, particularly for individuals who are already struggling to form meaningful connections with other humans and could potentially undermine the importance of consent in human sexual relationships (*Freethink*, 2021). Following Brown's work (2003) on hype and societal expectations, the media tries to create the impression that human and robotic love (and sex) cannot co-exist, and what should inevitably substitute another.

Using Hall's (2004) terminology, I suggest that this is the dominant reading that the media discourse is constructing. At the same time, media do not provide any empirical evidence that would suggest that this scenario is likely. There are no known cases of users (usually, men) becoming more violent towards women or children after using a sex robot. There is also no evidence that would suggest that people who use those robots tend to have more negative perception of women or children in general. What is usually used to support the claim that sex robots are potentially dangerous is interviews with ethicists and academicians such as Kathleen Richardson, the co-founder of a Campaign Against Sex Robots, Richardson is a radical feminist scholar and author and editor of many books dedicated to sex robots, for example, the most recent one "Man-Made Women". While her expertise is unquestionable, the opinion of one person is still not a proof strong enough that sex robots and people who use them are, in fact, dangerous.

3.6 User experiences and desires of unnatural sex

If we examine this narrative full of fear and conflict, we will notice that a lot of it is based on speculation. The current state of robotics and artificial intelligence does not allow us to suppose that intelligent human-like machines are at all possible for us to design. and yet, despite a claimed lack of sophistication, journalists report on awkward and unsatisfying interactions that they have had with existing sex robots, admitting that they lack sophistication (Buzzfeed, 2018).

In the 15 articles that cite sexbot users, people who own sex robots often talk about how uncomplicated this relationship is as opposed to how messy and demanding a relationship with a real human can be. In fact, they do not want this interaction to be more "human-like" but prefer them to stay "inhuman". One male user is cited saying,

> *"I assumed that the inhumanness of these sex dolls was part of the hook: There's no shame for a poor performance, there's no guilt for infidelity and there's no struggle with commitment or communication, because she is a silicone-covered robot that you legally own".* (*Mirror*, 2010).

Male users anticipate multiple relations and infidelity of women as another user points out that "he never has to worry that she might be taking advantage of him, which he says has happened with females of the human variety" *(Men's Health*, 2016). The fear of being judged or being cheated on and not standing up to the expectations in bed, is a common theme across articles that I have analyzed. In this regard, users even raise concerns about whether a more developed AI that can emulate human relationships more closely is really necessary as it can provoke the same fears that they have in a relationship with a human. "Sex robots that form ideas and have opinions and, if my primitive understanding of women is to be believed, judge you relentlessly" appear less attractive to men that simple robotic dolls" (*Mirror*, 2010).

One of the articles interviews talks about a post in a Realbotix Facebook group on the prospect of sex robots where, supposedly, "many said they weren't sure they wanted their sex dolls to speak at all" (*New York Magazine,* 2018). Being abandoned or judged as a manifestation of the fear of being rejected seems particularly important to sex robot users. It has been shared both by men (*Men's Health,* 2016; *Forbes*, 2018) and by women (*New York Magazine,* 2018; T*he Sun*, 2017; D*azed*, 2022). Moreover, only few people, who identify as robosexuals – people who are sexually attracted to robotic bodies for their robotic component rather than gender - see interaction with sex robots as a substitute for human connection. The rest uses them in conjunction with human sex partners. Some of the articles feature accounts of the so-called robosexuals. Lily, a woman who is from France identifies as a "proud robosexual" and claims that she is attracted "to 'humanoid robots' generally" rather than other people (*Nzherald*, 2016). Similarly, Akihiko Kondo, a 35-year-old what from Japan identifies and has had a wedding ceremony where he married a hologram (*Men's Health*, 2016). He compares being forced to date people to the same discrimination that homosexual people face: "It's as if you were trying to talk

a gay man into dating a woman, or a lesbian into a relationship with a man" ((*Men's Health*, 2016).

The majority of the interviewees share that sex robots are a simpler but less satisfying way to have both your sexual and emotional needs to be met when you are in a fragile state, both physically and emotionally. People who are unsuccessful at dating humans still want to have a diverse and active sexual life. One middle-aged man says:

> *"My sexual window is closing. I'm not kidding myself here. I mean, as I'm getting older, I can see by the time I'm into my seventies, I'm probably to the point where I'm going to be looking really for a companion and not really so much for sex and I probably will find some nice woman to settle down with and probably end my life at that point. But right now I'm still very sexually active and I enjoy the dolls for that reason" (Forbes, 2018).*

Sex robot ownership allows people to go beyond the socially accepted monogamy and experience different bodies and different forms of sex. Men who own sex robots often have more than one robot and keep an eye on the market to explore new offerings. However, they also often bond with a particular doll to the point, which they tend to buying "her" outfits, taking her out to dinner, or "introducing" her to human partners (*Irish Mirror*, 2018). While dating multiple young girls can be frowned upon and, as the previous speaker claims, you might be "too old to do the things she would really enjoy doing" (*Forbes*, 2018), with sex robots you can do sex on purely your terms. In media articles, sex is often something for the young; the idea of old people having sex is not something that we see widely presented in books, movies, or TV series, and even if does, it is usually laughed at. It is interesting to discover how robotics can actually help older people to remain sexually active even if they find it hard to find a partner in their community because of their own fears or health problems. Moreover, sex can be a stressful and worrisome experience not only for the old; many of the users share that they feel insecure about their performance in bed. One woman, Karley, says, "One of my anxieties when having sex with a guy can be like, 'Oh my god, I'm taking too long' or 'they're bored'" (*Dazed*, 2022). Too much movement or excitement might seem as "too into it" and too little "frigid" and "unenthusiastic". At the same time, with a sex robot you do not have to care about anybody else's needs or desires that can be liberating and help to boost confidence for people who experience the feeling of insecurity. Finally, for many, relationship with an android is the cure for loneliness because of their age *(Forbes*, 2018), busy schedule, or, a gender gap in the population like it is in Japan,

which makes it hard to young men to find a female partner (New York Magazine, 2018). Both users and the journalists insist that sex robots are more than just robots for sex.

3.7 Sex robots as an outlet for sexual violence

An analysis of the language and metaphors employed by journalists portrays a menacing image wherein technological advancements are depicted as a threat to our morality and even our humanity. *BBC* (2020) claims that sextech "poses a growing psychological and moral threat to individuals and society". This is because the wider proliferation of sex robots naturalizes sexual objectification of women and degrading sexual practices. "Experts don't judge, but push for caution", suggests another media dedicated to the legal and ethical aspects of sex robot design (*Business Inside*r, 2020). This media outlet, as well as many others, have criticized the development of sex robots as reinforcing harmful gender stereotypes and promoting a culture of violence towards women (*The Guardian,* 2023). These outlets have highlighted the potential for sex robots to further entrench gender inequalities, reducing women to mere objects for male sexual gratification and perpetuating harmful attitudes towards women in the process. The problem of consent is also widely discussed in media: sex robots that "can give and withdraw consent already exist, but the models of consent utilized are a work-in-progress" are seen as problematic (*Swaddle*, 2020). Journalists suggest that the development of increasingly human-like sex robots could lead to a situation where people become more violent towards women, as they are able to act out violent fantasies with machines rather than real human beings (Swaddle, 2020).

Mass media acknowledge the fact that sex robot design is not gender-neutral and that the industry's understanding of right and wrong is shaped by men. "What does that say about male dominance, male power, males defining what these relationships are going to be?" she asks (*Guardian,* 2023). Consequently, it raises fears about what the potential further development of the industry would mean for women. "I think that is enormously dangerous, enormously damaging for women and potentially for all sexual relationships". This discourse portrays men as potential offenders and abusers of women and women as victims in need of protection. Moreover, it constructs the world where men hold the power and can exercise this power over women's bodies *(Guardian*, 2023). While it is impossible to negate that patriarchy has a negative impact on the lives of women and has historically wanted to control them, the discourse that

victimizes women and demonizes men is not helpful. *Freethink* quotes McMullen, the CEO of RealBotix who says,

> *"There is no research, no data of any kind to paint an accurate picture of what the implications of sex robots are [...] When there is supporting information, you'll still have two camps: the people who think it's just wrong and bad, and the people who are proponents. It's one of those 'you can please some of the people all the time, and all of the people some of the time' situations" (Freethink, 2021).*

This argument attempts to eliminate the responsibility that industry leaders carry for shaping how the final product looks and what kind of ideas it transmits and transform the argument into the issue of relativism and lack of open-mindedness. Men who create hyper-sexualized robots should be completely excused from any kind of critic on the grounds that these products are samples of art or do not have impact on the real world. There is no neutrality in this conversation; saying that we simply do it because we do it is also a political and ideological stance. This is what *Freethink* writes about people who make and run sex robots: "they aren't perverts: they are artists and visioners". They picture "Cybrothel, a hybrid-style experimental space in Berlin, Germany run by a team of avant-garde artists and filmmakers" not as a place of sexual perversions but as a "techno-sexual space that has something beyond AI". Clearly, it is used to legitimize the existence of hyper-sexualize dolls and prostitution of these dolls, because the people who use them are presented as "connoisseurs" and people who can appreciate real art and the development of technology.

The analysis of 59 articles suggests that users consider sex is not seen purely as a natural human need but has a lot of cultural underpinnings that make people consider sex with robots as a threat to their own existence as human beings. As one of the authors puts it, sex with robots suggests the exploration on the topic of "being human in a world of machines" (Guardian, 2023). The author quotes Rob Brooks, one of the leading experts on human-machine interaction with AI: "If we do human things with non-human objects, are we lesser because of that? Will we treat humans more like objects?" (Guardian, 2023). This question appears to be central to the fears surrounding the narrative around sex robots. Sex is perceived as a deeply human, "natural" experience. Moreover, it is assumed that in a relationship between humans, there is intimacy and reciprocity *(Science Alert*, 2021; *Swaddle*, 2021). Sex with a robot is presented as less fulfilling

and intimate, which has the potential to reduce the sacred act to a simple mechanical act. For example, *Psychology Today* (2022) writes:

> *"If all an individual wants is some rudimentary sexual response from a robot, then some of the current models will perfectly satisfy their needs and desires. But a mere sexual response is not satisfactory to many. Yes, sex is a component, but what about a more romantic or nurturing relationship to accompany that sexual gratification?"*.

The emotional component is perceived as essential to have a deeply satisfactory sexual experience. At the same time, in many cases, with humans this is not the case. One-night stands, casual sex, and friends with benefits are just some of the examples where, even without intimacy and a deep emotional affection, people manage to satisfy their needs. It is unclear why, according to many journalists and their sources, this cannot be the case with machines. Moreover, it is perceived that normalizing mechanical sex we might somehow forget what sex really is about and follow the same patterns we follow in the sex with robots during sex with humans or even not pursue having sex with humans at all (*BBC*, 2020; *Swaddle,* 2020).

The portrayal of robots as stripping humans of their morals and humanity is a common theme in American media, where a stark opposition is drawn between the inherently soft, moral, and good human, and the hard, unnatural, and perverted world of technology. This portrayal constructs technology as invasive and disruptive, occupying an increasingly large space not only in public life, but also in the private lives of individuals. Although some individuals welcome this change, the general tendency of media coverage remains pessimistic (as seen in the accompanying table). The question of what it means for the future if people begin to have sexual and intimate relationships with robots is raised by *The Guardian* (2023) suggest that while some individuals may not be able to fulfill their sexual and intimacy needs with another person, there remains something "fundamentally human" about intimate interaction. The portrayal of sex robots in American media as stripping humans of their morals and humanity creates an affective response that reinforces the notion of technology as invasive and disruptive. The stark opposition between the inherently soft, moral, and good human and the hard, unnatural, and perverted world of technology constructs a binary that reinforces gender norms and traditional sexual values. This representation of sex robots reinforces the idea that human sexuality is rooted in physical and emotional intimacy with other humans, emphasizing the importance of affect and embodiment in sexual experiences. In media discourse about sex robots, affect and embodiment are mediated in

ways that often perpetuate stereotypes and reinforce societal norms. The representation of sex robots as lacking emotional depth and intimacy reinforces the idea that human-to-human interaction is the only way to experience true intimacy.

Media articles expand on the topic of the fundamentally human aspects of love and sex, noting that human relationships are highly complex and often transcend mere physical or biological processes. Many are skeptical that robots will ever be able to orient in the complexities of human relationships (*Psychology Today*, 2022). Because love and sex are deeply intertwined with human emotions, desires, and aspirations, and are therefore imbued with a variety of cultural, social, and personal meanings they cannot be fully captured by technological means alone. *Psychology Today* date writes that

> *"If all an individual wants is some rudimentary sexual response from a robot, then some of the current models will perfectly satisfy their needs and desires. But a mere sexual response is not satisfactory to many. Yes, sex is a component, but what about a more romantic or nurturing relationship to accompany that sexual gratification? What about the ability to connect on a deeper level with a humanoid? A lack of motion mimicry and high-level AI capabilities severely fail to meet these needs".*

This quote suggests the assumption that love and care can be shared only in human relationships where there is a chance for reciprocity and feedback. Similarly, *Engaget* (2018) suggests an idea that a relationship with a robot is not a real one. Therefore, robots will never become a species that we could build relationships with, rather they will remain substitute for relationships with humans for people who cannot or do not want to build those relationships. Together with hopefulness about technological advancements that will make love and sex more accessible to everyone, there is a certain tendency to view that development in a pessimistic and rather deterministic ways. Love and sex are attributes of life forms, maybe of human living form only, and the technology should and not probably cannot enter that space.

3.8 Love and affection in human-robot interaction

When sex robots are discussed in contemporary media, it becomes evident that for some of the participants it is hard to separate sex from the search of something less tangible, such as affection, care, and attachment. Some people who are asked about their experience with sex robots talk not so much about sex as about the relationships that they have not managed to have

with other people and that they have managed to have with robots. The attachment that some of the sex robot users have towards their robotic companions points out how charged the notion of love is and how frustrating it can be if you have not managed to find "the one". Several articles suggest that becoming a sex robot owner or building your own robotic partner can be a way of dealing with this frustration. One woman shares her first encounter with sexbot Henry, writing that, although mechanical and unsophisticated, it made her feel an attraction too. She opens up about the hardships of dating using Tinder and other digital apps and wonders,

"If having a Henry at home could be a good alternative to one-night stands (New York Magazine, 2018). Love is rare and sex is the closest thing a 30-something can have in a big city. Even if Henry is just "a high-quality dildo on a mannequin" (New York Magazine, 2018).

The user mused that it provided some safety and stability. Another woman remarked that that she was afraid of being used: "In a digital age of ghosting, where not even getting a text back from someone you've been on a date with is the norm, I appreciate the comfort that might come with guaranteed, loving communication – whether that is from a human or not" (*Dazed*, 2022). And yet, sex robot owners point out that the sexbot appeal is not "sexual", or not just sexual, but it is the "attentiveness" towards their needs that counts [AI is able to remember facts about yourself like birthday date, your favorite movie, which appears to the user as "attentiveness"] (*Forbes,* 2018).

I have decided to dive deeper into what is meant by "more" than sexual. One man describes his experience of coming to sex robots as an alternative to human relationships as follows:

"I was getting pretty depressed about hitting the wall constantly. You keep looking for the one. Well, what happens if the one doesn't happen? I mean, are you just supposed to keep looking and be depressed and upset until you die? Is that what this all about? I made a conscious decision. I said, I'm going to try a different direction here" (Forbes, 2018).

After a long history of unsuccessful dating or a difficult divorce, it seems that being with a robot can give you that safe harbor to heal the wounds. Dating a robot is a way of taking your own love life under control ─ many stories that I have analyzed featured confessions of the middle-aged divorcees or involuntary celibates who are simply tired of looking for "the one". What if it will never happen for them? Does it mean they will never get to experience this sense of caring and being cared for the man from Japan who married his sex robot put it, it is "a

triumph of true love after years of feeling ostracized by real-life women for being an anime otaku" (*Men's Health*, 2016). A woman that builds her own sex robot female Fei Lin says that "Love for people is kind of unattainable. The image of love in society is so perfect that we struggle to obtain it through partnership, and the search for something out of reach is beautiful" (*New York Magazine*, 2018).

Moreover, it is worth noting that in the conversations about sex robots, both men and women expressed dissatisfaction and even fear of potential partners. Most articles that include first-person accounts interview men and communicate their perspective, while a smaller sample of articles features women. This might suggest that not many women are common users of sex robots. As the CEO of Realbotix admits, the majority of consumers of Henry, a male sex robot, are also men (*New York Magazine,* 2018). Moreover, he claims that his decision to implement a male model was due to the accusations in being misogynist and sexist. Therefore, Henry is "not a response to known market demand" (New York Magazine*,* 2018). But several women have chosen to build their own robotic boyfriends, clearly unsatisfied by the existing market offer. this would suggest that low number of women users might result from poor quality or conversely to stigma about female sexuality. Moreover, the articles (chosen to be widely circulated) shared predominantly heterosexual accounts even though the CEO of Realbotix claimed in a recent article that they are working on a homosexual identity for Henry (*Pink News*, 2022). He also claimed that they are facing difficulties approaching this task and the innovation will probably not be out in the near future (*Pink News*, 2022). However, the "homosexual Henry" might embody the same stereotypical view on sexual needs of its users as the "heterosexual one" does.

While certain fears both genders had in common such as the fear of being judged or rejected, the sexual dissatisfaction has been more vocal in female accounts. One of the women, Karley, says that sex with a robot is "better than many of her one-night stands" (*Dazed*, 2022). She claims to have reached an orgasm which positively differentiates this experience from many experiences she had with men. She states: "Men, from my experience and from listening to others, are selfish when it comes to a woman's pleasure and don't listen or take the time to help her achieve orgasm" (*Dazed,*, 2022). The unwillingness to take care of a partner's pleasure is indeed among some of the traits that men claim undesirable in sex (at least those that use sex robots), as the reader can see above. As another user suggests, "I'm pretty sure that the kind of

guy who drops seven grand on a soulless sex receptacle is also the kind of guy who doesn't care if it orgasms" (*Mirror*, 2010).

Some users suggested that sex can be a stressful interaction and experiencing it with a robot is much simpler. What attracted them in a robot is that it provides a safe space where they cannot be wrong or be wronged. Using sex robots from this perspective, appears as no big deal, with author underlying the vanilla and therapeutic use of sex robots even (*Freethink*, 2021). McMallen, the CEO of a sex robot production company, insists that men who pay big money for his dolls would not abuse them or treat disrespectfully (*Freethink*, 2021). It may be explained by the fact the journalists simply did not want to interview such people but altogether it creates a one-sided view of the industry.

3.9 Conclusion

My analysis identified a number of key topics surrounding the main fears associated with human-machine interaction with sex robots. First, I have also noticed contradictions that define media discourse on this topic. The main fears surrounding the sex robot industry are associated with a menacing image. Some media depict sexbots as a threat to our morality and even our humanity. A mechanical being that is entering the space of intimate relationships is seen as a powerful intervention into human relationships that can make us less compassionate, empathetic, and, all in all, human. "Normal" human sex is presented as a rigid construct where there is no place for the co-existence of artificial and material bodies. When this construct is violated, terrible consequences may follow. Users on the hand, point out sexual liberation (such as wide acceptance of robot sex) is associated with dangerous sexual behaviors such as rape and pedophilia. Sex robot industry is seen as naturalizing the sexual objectification of women and degrading sexual practices. The usage of sex robots is often associated with rape and pedophilia, and the wider proliferation of sex robot use is seen as giving a "green light" towards these practices. Moreover, the problem of consent is often undermined. Robots that are able to give or withdraw consent can provide for their malicious use. At the same time, robots who cannot give consent are also seen as problematic, as they naturalize the lack of consent or its unimportance in social interaction. The common view of the relationships between machines and human is seen is representing a strict duality where an opposition is drawn between the positive characteristics of a human, and the technology seen as embodying deeply negative traits.

However, while the media often portray the sex robots as dangerous and their users as malicious, it often goes in contradiction with what the sex robot users have to say about the relations themselves. Most of them perceive sex robots as much more than just devices for sex and regard them as a solution to their loneliness, lack of social skills and social anxiety, or simply a desire to have a more diverse love life (for example, sex with multiple young attractive partners) that is often impeded by their age and level of attractiveness. The analysis portrays an interesting paradox: while sex robots cause a lot of fears and concerns, they also ease fears. Fears of being rejected, judged, or laughed at that are so common in human-human interaction are non-existent in the interaction with the sex robots, as they are constructed to fully accept their users, even if that acceptance is often shown in clumsy and unsophisticated ways by pre-programmed pick-up lines or vibrating when being penetrated. Furthermore, it was noticeable that the articles reflected different societal values and cultural attitudes towards sexuality. Sex robots were simultaneously seen as liberating and degrading, perverted and revolutionary. This tensions controversy points to its complexity and underlines that the media analysis of the matter should take into consideration different cultural perspectives and demographics.

Gender is an important factor that conditioned how humans and robots interact with each other. Firstly, the media focused on exploring and presenting heterosexist conceptions of sex robot use. They often focus on how men use, build, establish relationships with robots. Some feminist media articles that have been added to the sample also explore the female perspective of building or having sex with a robot, but these accounts are extremely rare. Homosexual experiences are rarely mentioned even though a prototype (Henry) is currently in development accounted for and not even put on the map as being possible. Moreover, sex robots were seen as more dangerous and damaging for women than for men, establishing the narrative of women being weak and in need of protection. However, this gender division is not accounted for in what users of different genders share about their own concerns and fears. Both genders do not want to be rejected, face problems when dating, and simply want to find someone they are comfortable with, be it human or robot.

When there are fears, there are also hopes and desires associated with sex robot use. The next chapter is dedicated to a detailed investigate of what hopes and desires underline human-sex robot interaction.

CHAPTER 4. FANTASIES IN HUMAN-SEX ROBOT INTERACTION

4.1 Introduction

In this chapter, I address the question of how affects, emotions, thoughts, and values expressed by users are interpreted in the media. In the previous chapter, I have already demonstrated that media discourse tends to interpret sex with robots in a negative light and link such practices to other unwanted sexual behaviors, such as pedophilia and rape. However, the topic would not be worth studying if there was not any contradiction between how different media portray the same human-sex robot interactions. I concluded that by analyzing critical feminist media discourse analysis, one can get a deeper understanding of the topic, as the media outlets set societal expectations around the new technology and define how it will be perceived in the society. The main themes identified during discourse analysis that have a positive sentiment are presented under the title of "fantasies". This includes the fantasy of perfect selfish sex, the desire to create your own perfect lover, the necessity to experience trust and safe harbor in the harsh world of modern dating.

4.2 Creating a perfect lover

Having analyzed what kind of fears or anxieties sex robots help to ease, I decided to investigate what desires and fantasies they help to realize. From the news articles that I have analyzed I can notice a tendency — people do not just purchase sex robots from available vendors like in any other field but also actively design them themselves. For example, one article features a Chinese engineer who created a robotic girlfriend to please his parents and then started a company to help his peers find girlfriends too (*Tribune*, 2017). Lily decided to create her own robot after realizing that she is not drawn to real people (*NY Times*, 2017). She explains that unlike a men, "He won't be an alcoholic or violent or a liar, all of which can be human flaws" *(NY Times*, 2017). She also says that she prefers "the little mechanical defects to the human flaws, but that's just my personal taste" (*NY Times,* 2017). Fei Liu decided to build her own sex robot in an attempt to "find her other half" (*Quartz,* 2018). She also runs workshops for young girls helping them learn how to design robotic boyfriends. She says that "The creators of A.I. sex dolls and love dolls are mostly men who are creating hyper-sexualized female figures. I think that is quite damaging, so creating Gabriel is my position against that movement" (*Quartz,*

2018). Sex robot as a field draws people in because it helps them realize their own fantasies about a perfect artificial partner and also help their community who shares similar problem find a solution. In this point of view, grassroot sex robot design appears much more than just a commodity but as a choice of lifestyle and even social activism.

As a team of designers from Japan's Gifu University share, "For some people, finding a girlfriend is very difficult" (*Vice*, 2020). They have designed a robotic hand that can make you feel less lonely during walks. While this cannot be called a "sex robot" strictly speaking, we can see that the role of this invention helps them realize the same functions as regular sex robots — get a feeling of having a partner without actually having a partner (*Vice*, 2020). Analysis has shown that one of the most desired benefits of owning a sex robot, as opposed to dating a real human, is that everything is customizable, according to your desires and needs (*NY Magazine,* 2018). A user can choose from a wide range of body types and sizes, ethnicities, select what size or color of labia or penis or nipple they prefer (*NY Magazine,* 2018). One woman describes her visit to a sex robots factory almost like a visit to meat shop where a lot of disassembled body parts can be found everywhere (*NY Magazine*, 2018). By themselves, they are not sexy; for example, she describes vulvas looking like mushrooms, therefore, their sexual function can only be understood once they are adhered to the body (*NY Magazine*, 2018). However, while body parts are customizable for both male and female robots, the personality choice refers mostly to female sex robots. Henry, the only male robot massively produced, is only capable of "welcoming [users] home in their accent of choice before having a conversation about why reality television is such a joke. Heck, he can even tell its master jokes and drop romantic pickup lines like a pro" (*Dmarge,* 2022). It appears that he does not have a choice of personality.

But users attracted to women can choose personality traits that they find the most attractive (*Forbes, 2018*). The personality choice represents a spectrum where the level of engagement and excitement of the robot from interacting with you varies from being cold and "frigid" to being talkative and fun (*Forbes, 2018*). You can even order a robot that does not want to have sex with you, as users report. As one of the users writes, "Frigid, as in, cold, as in a sex robot that doesn't want you to have sex with it. This means the market isn't made up of just horny guys. It's guys who want to have sex with a robot but also understand that their clumsy pawing and arrhythmic hump techniques repulse their robot into celibacy. That is a market I hope to never meet under any circumstances whatsoever" (*Mirror*, 2010). The quality of sex and

satisfaction is reduced to checking out a number of features or parameters that are measurable and easy to attain. If romance and attraction of old-fashioned relationships are about that fleur of "je-ne-sais-quoi" about a person that immediately draws you in, sex robot designers suggest to choose a "type".

The visual appeal has a lot of emphasis in sex robot design. However, men who fell into the trap express something close to disappointment. Mr Zheng, a Chinese sex robot engineer, reports that he "doesn't want to spend the rest of his life with a robot" and that "'marrying her [robotic girlfriend] has propelled the balding engineer into the public spotlight as an available young go-getter for women across the globe to meet" (Tribune, 2017). Another man claims that he "wouldn't exactly call this a relationship" (*Men's Health*, 2016). He admits that the feeling of real intimacy is unattainable with a sex robot —he'll "never feel the electricity of a first kiss, or know that she understands him in ways nobody else does" (*Men's Health*, 2016).

These men's satisfaction is high but not full. While their physical needs can be satisfied by an artificial girl, it seems that their emotional needs cannot. This creates a state that they call "sadness". "If I could press a button right now and have the choice of being with a sex robot or a real woman, I'd pick the real woman every time," one of them says (Forbes, 2018). He adds, "No matter how you argue it, there will be something fundamentally sad about it" (Forbes, 2018). Some also report the feeling of "uncanny valley" when staring in the "vacant" eyes of the sex robot (*Engaget*, 2018; *Mirror*, 2010). The term "uncanny valley" is used to refer to "— describes what happens when an artificial being comes close to seeming human but falls just short and starts to have a spooky effect" (*NY Magazine*, 2018). This reaction causes people to have a sense of uneasiness in the body and many find it hard to put their finger on what exactly creeps them out, simply saying that the robot looks like "like a dead body" (*Men's Health,* 2016). To avoid this effect, designers try to make their dolls less realistic on purpose, giving them cartoonish traits such as "larger, rounder eyes and more symmetrical faces than humanly possible" (*NY Magazine*, 2018). However, even with all of these shortcomings sex robots still remain attractive for a large audience of potential customers. As a recent article on *Daily Star* (2021) claims, "more than 40% of us want to sleep with sex robots – with men more keen than women".

Sex robots' developers today are modern sculptors. They can build a perfect body and make it come to life, not through a love's kiss like in Pygmalion myth but with the help of animatronics and artificial intelligence. A male designer creating an artificial woman to satisfy

what he thinks are every male's fantasy can decide on the way he wants her to be, how she should talk to make her master happy, what kind of details she needs to remember. She is a perfect woman not only because she is forever young but, most importantly, because she is a perfect object that does not have any agency. If we look at the photos of the sex robots provided by their users, we can see something looking like a hypersexualized hyperbolized silicon woman that is quietly laying on a coach or in a pile of dirty cloths until it is needed (*Irish Mirror,* 2018). Unlike regular sex dolls, AI sex robots are able to respond to verbal stimulae, learn about what the owner likes and then use that data in future session, and are even close to having a personality because it can listen and talk, and change face expressions, and imitate orgasms. However, in real life, what they do is "moan and give preprogrammed X-rated commands when touched, like turned-on Tickle Me Elmos" (*NY Magazine*, 2018). As the author describes her encounter with a female sex robot, "Behind him, Harmony gives a sexy moan. Once, then twice. Her face spasms. I'm not sure if that's a bug or a feature" (*NY Magazine*, 2018). As we can see, sex robots today are still very limited in their capacity to maintain a conversation just like any other conversational agents such as Siri or Alexa and they will not fool you into thinking that you are talking to a real human, because they don't always understand the context, provide repetitive mechanical response, and have a distinct mechanical voice. Moreover, the sex robots are not able to move by themselves, they need to be put in a particular position, much like regular dolls (*NY Magazine,* 2018). Nonetheless, this immobility, "infantility", something that we can also interpret as total obedience is probably what appeals to the users the most. The robot literally cannot leave you, cannot walk away and, unlike with real people, they are no expectations here to compromise, to keep oneself in check in front of the other. With real people, we need to be good and not selfish, if we want to keep the relationship going, which is tiring and demanding. With a doll, you can do whatever you want.

In the mainstream media, I have not found any accounts of people who use their dolls in violent and disrespectful ways, at least, not directly. Users (both male and female) often report of the feeling of excitement and desire to try out when encountering the robot for the first time. A woman describes her desire to kiss a male robot the first time she saw it (*NY Magazine*, 2018). A male user puts it more blatantly "I want to bone it right now" (*Mirror,* 2010). Describing a dinner party with sex robots as guests, one of the users points out overall interest and excitement that the beautiful specimens of both genders caused everyone to have (*Engaget*, 2018). However,

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one man who makes a living testing sex robots admits that he has broken his sex doll the first time he had sex with it (*Forbes*, 2018). He says that the founder of the sex robot company asked him to have a "normal experience", to "knock her around (*Forbes*, 2018). Do what you got to do". They user admits, "Well, I knocked the gears loose" (*Forbes*, 2018). This can be interpreted differently, after all, the role of a tester is to help manufacturers predict and be ready for even most extreme cases. On the other hand, what becomes evident from this passage is that sex robots should be ready for "a hard ride". In a different article, the author describes visiting the sex robot company office that "rents" its sex dolls. Here is how she describes the returned doll: "There's Tanya, nude and wigless. She was rented out for a party last night and returned a total mess, clothes ruined, dirt all over" (*NY Magazine*, 2018). The employee casually complained that now she has to clean Tanya. Again. Clearly, men mistreating the sex robots is not a rare occasion (*NY Magazine*, 2018).

Women that come into robot design are motivated to reclaim that power and challenge the typically masculine environment. Fei Liu points out that her building a male sex robot and openly talking about it is a way of challenging the sexist and misogynist culture of typical robot design (*Stylist,* 2019). As Fei Liu says about the workshops that she organizes to teach young girls how to make their own robot boyfriends, "they'll all program him to be a certain kind of way" (*Stylist*, 2019). She adds that "This is often quite reflective of their own tastes, or the past relationships that they've had" (*Stylist,* 2019). For herself, "a robot boyfriend that I am building for myself as a way to explore what I think relationships are"). Her account allows us to gain insight into a complex and multilayered nature of desire where looks are secondary for arousal (she even claims that love machines do not have to be humanoid) and romantic connection but personality is everything. Dating a sex robot while being a woman can be regarded as a threat and counter-movement to the whole system of patriarchy. It can be a way to challenge traditional gender roles and organize herself a space where she feels safe and respected, since in a patriarchal culture, a heterosexual women can rarely put her needs and desires first since there is always someone she needs to accommodate first, typically, her partner. In the meanwhile, an artificial man does not require a warm meal at the table by the time he comes back from work, and probably, is more able to sexually satisfy her than a regular heterosexual man who does not know where a clitoris is.

Object design can be a political act withing feminist movement. Fei Liu criticizes the mainstream sex robot design culture: "No matter what personality you choose for her, she'll initiate canned and heteronormative conversations about sex and love (as well as the occasional joke and sales pitch) relatively quickly. She does not and cannot deviate from her mission to please you" (Q*uartz,* 2018). In Faulkner terms, she proposes a different "style" of approaching the robot design that will include "impredictability", "randomness", and the ability of the machine "to say no" (*Quartz,* 2018) (Faulkner, 2000). While traditional sex robot is rooted into gender stereotypes about docility, obedience, and passivity as main drives of sexual affection and desire, the project of feminist designers challenges the traditional gender roles. In fact, a woman assuming the role of the Sculptor, the Creator can be quite revolutionary for many people, especially in sex industry. A woman that is a sex worker or an artificial body that is being sold or rented to men on an hourly basis is common and does not surprise anyone. However, a woman making an artificial human in the image and likeness of herself is something we have never seen before. I do not wish to claim that female designers are automatically free from sexism, misogyny, or gender biases. Clearly, men can work on ethical sex robot design and women can participate in supporting the patriarchal system. However, I did want to point out how feminists participating in robot design can potentially bring a perspective that values female experience and make designs that are more versatile and inclusive than what the market currently has to offer.

4.3 Solution to social problems

One tendency in contemporary American media is to view human-machine relationships as a solution to problems of human loneliness and isolation (*Interview*, 2019). According to this view, the development of advanced robotics technology will allow individuals to form meaningful connections with machines that are tailored to their specific preferences and desires. For example, sex robots are seen as cure for loneliness and isolation among seniors (*Tri-Cities Business News*, 2020). The article discusses the ethical implications of using sex robots as a means of fulfilling sexual desires in the elderly population (*Tri-Cities Business News*,, 2020). The article features an interview with Nancy Jecker, a bioethicist and professor at the University of Washington, who argues that sex robots have the potential to improve the quality of life for seniors who may otherwise be socially isolated or lack physical intimacy Jecker addresses

concerns about objectification and the potential for abuse, but ultimately argues that individuals have the right to engage with technology in this way if it brings them happiness and fulfillment. *The Guardian* reports that "There might be some benefit to the older population or people living with disabilities or sex-related anxieties or sexual dysfunction" (2023). Moreover, sex robots are also regarded in a positive way as a kind of sex toy that is able to provide customized experience for each user and allow marginalized groups and sexual minorities to explore their sexuality in a safe supporting environment (*Scripp News*, 2021). They write that "As sexual health technology also gains acceptance, there's nothing wrong with a bit of X-rated soft–or hard–ware entering our private lives" (*Scripp News,* 2021). While I have demonstrated in the previous chapter is that wider proliferation of sex robots raises concerns about further commodification of sex and sexual exploitation of people, some see it as a fresh "savory" experience that goes in line with the modern times (*Scripp News,* 2021; *Men's Health*, 2021).

In this scenario, machines are seen as a means of supplementing or even replacing human relationships, with the potential to improve overall wellbeing and happiness. One topic that the media discover in relation to robots is their "potential for intimacy" (*Men's Health,* 2021). The use of the word "potential" is important here. While most people agree that the current state of robotics does not allow us to build any meaningful reciprocal relationships with robots, sex robot industry is interesting because it may provide so that one day we would be. Ultimately, McMullen argues that the dolls' most valuable function isn't even sex. Companionship and care is also something that sexual robots can offer. He says: "If I build a robot that you can have sex with, it's still a robot. The sex is just a feature. You can watch porn on your computer, but that's not all it's good for". Sex as just one of many features that companion robots or caregiver robots is presented as a more socially acceptable invention that deserves public attention. *Psychology Today* even suggests that people could clone their deceased spouses which could give seniors a feeling of comfort (2022). Logically, it raises serious ethical issues as if it is morally permissible to clone dead people without (or even with) their consent. However, sex robots are seen as a potential solution to important societal issues almost like a magical wand that can even bring people back from the dead with the help of technological means. "You're talking to something that looks like a human being, and that's where the magic happens," says Matt McMullen, CEO of Realbotix, a five-person Southern California company" (*Business Insider,* 2022). It is possible that sex robots can offer more than just sexual experiences, depending on their design and

capabilities. Some sex robots are equipped with advanced AI and are designed to simulate emotional connections and companionship. This technology helps them to remember your previous interactions and engage in conversations. However, can these conversations be considered meaningful and provide a feeling of real connection? This is a subject for debate.

4.4 An addition, not an alternative

While the power that technology holds can be seen in the negative light, sex-positive media share a more positive view on it and suggest that it can make our lives simpler and safer. They suggest to perceive the robots as a possible addition to human-human relationships that provides a necessary and desired diversity. As *The Sun* quotes an AI ethicist say, "We default to variety, and this is also how we advance our lives and our careers" (2022). The customization adds to that feeling of never-ending diversity. In fact, according to the articles, customers can choose to their liking almost any body part or character trait of their dolls: "Users can choose hair color and style, eye color, and skin color," *(Men's Health,* 2021). Moreover, they can be "taught anything your heart desires" *(Business Insider,* 2022). Additionally, gender also is seen as a customizable parameter of a desired artificial partner. Business Insider quotes McMullen who says that they have create many gender-bent and gender-fluid robots. According to manufacturers, "people like to kind of experiment where they may come up with something that may not or could not exist in reality." These claims should be taken with a grain of salt. However, claims that sex robots contribute in one way or another to human fantasies. With robots, it is possible to realize any dream, even if it is considered wrong or perverted, a robot cannot contest it. However, in other aspects, specifically in its embodiment, the robot is extremely human-like.

These articles tend to devote significant attention to describing the physical attributes of the robots, with varying degrees of emphasis depending on the author's emotional orientation. For instance, some authors may contend that the robots possess a remarkable likeness to human beings, so much so that they trigger the uncanny valley effect (*Mirror*, 2010), while others may view them as rudimentary and mechanical (*Psychology Today*, 2022). The makers say their robotic creations will be able to walk and move their entire bodies within the next decade. At the moment, however, the robots are comprised of silicone sex doll bodies with fully robotic heads

and roughly the same level of conversational ability found in Amazon's Alexa voice assistant (*Business Insider,* 2022).

Notwithstanding the varying assessments of the robots' physical characteristics, the appearance aspect is deemed to be of critical importance in shaping the interaction. Kate Devlin in an interview for *Interview Magazine* says,

"I think that, as humans, it's in our very bodies to seek out other humans. I don't think we're going to get the same thing from a robotic companion, no matter how good it is, because it's not going to be the same as a human relationship" (Interview, 2019).

The tendency of humans to seek out humans in interaction is presented as a natural trait, which causes a significant effect on the future of human-machine relationships. The importance attached to the physical resemblance of sex robots to humans reflects the deeply ingrained inclination of humans to seek out other humans in social interactions. This proclivity is widely regarded as a natural trait, stemming from the evolution of the human species. The narrative contains the idea that only human-like robots that closely emulate how humans look and behave can be viewed as those with which humans can build relationships. At the same time, there is a lot of evidence in the world around us that it is not the case. People are emotionally and sexually drawn to objects, animals, and imaginary characters. The physic of these objects of human inner world usually does not play a significant role in the level of human attraction and affection.

At the same time, the human-like aspect of sex robot design is also what makes them most problematic. Kate Devlin says in the same interview that,

"we are generally very bad at making human-looking robots. Mechanically and engineering-wise, it's a really difficult task. In addition to that, humans are so attuned to picking up on things that look human but aren't human. We've got this "uncanny valley" effect that says that the closer something looks to human but isn't human, the more likely we are to get freaked out by it. So I feel that instead of investing all this energy into making something look as realistically human as possible, we should invent something abstract onto which we project our feelings of humanness" (Interview, 2019).

Instead of focusing on a human-like robot embodiment, it may be more productive to create an abstract form of a robot that can still project feelings of humanness, rather than trying to make it look as human-like as possible. This present a severe challenge for engineers, however, a shift in how we approach the fantasies about human-robot sex, may change the industry to being less

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sexist and more welcoming to people of different genders and sexualities. Futurism points out that the ethical concerns become more vocal as "the degree of human-likeness increases" (2021).

Love and intimacy are an important topic in covering sex robots. For example, some media outlets have suggested that sex robots may appeal to individuals who are unable to form intimate relationships with humans due to social anxiety, trauma, or disability:

> *"not everyone has access to sex—with a robot, it makes sex more accessible to everybody… I think about all the people who really struggle with socialization, and having to go out and meet and talk to somebody" (Men's Health, 2021).*

In this sense, robots may be seen as a way to fulfill emotional and physical needs that might otherwise go unmet. They take an interest in your, creating a feeling of continuity and intimacy (*Men's Health,* 2021). "You start to sense that this person is part of you and that's intimacy – the integration of the other into yourself" (*Guardian,* 2023). As technology continues to advance, it is likely that these debates will continue to evolve, and the implications of these developments for human relationships will need to be carefully considered. One of the journalists describes sex robots as "lifelike and relatable", as well as "apparently well-crafted, stunningly high quality object—she's art in a red g-string" (*Freethink,* 2021). This relatability offers a soothing and comforting aspect to people with social anxieties and ultimately can be seen as brining a lot of positive effects to the table. The robot and the human intertwine in the act of physical and emotional intimacy.

4.5 Reciprocity and feedback

The aspect of human-machine interaction with sex robots that seems particularly important is the ability of the robot to provide feedback, whether in the form of physical responses or emotional cues. *Psychology Today* writes that "Humans also want to feel sexually desired by their partner, and feeling desired" (2022). While the nature of affect is difficult to theorize and articulate, many articles discuss the ways in which sex robots can moan, open wider during penetration, and simulate the stages of arousal that culminate in orgasm (*Forbes*, 2018). Furthermore, researchers have worked on developing artificial skin that enables robots to experience physical sensations. *Daily Star* writes that "The technology has been created to help robots detect pollution or even examine luggage in an airport for explosives. Humans could use it to control a robotic arm and 'feel' feedback from a distance using the 'squishy' robot flesh" (*Daily*

Star, 2022). The discovery that this feedback loop is so crucial for individuals who engage in sexual activities with robots is noteworthy. Even with artificial partner, it is important for users to feel this connection, as well as feel like they are being desired. Sex robots are equipped with sensors and other mechanisms that allow them to imitate bodily responses that we would usually expect from a living partner. However, affective states that sensors and different animatronics mechanisms inside the doll can display often substitute lack of facial emotions. The sex robots can detect the user's touch and movements, which can trigger pre-programmed responses such as sighs, gasps, or even simple phrases. In this way, the robot can provide a sense of emotional engagement and intimacy that may be lacking in other forms of sexual activity.

The idea that sex robots could potentially empower women or other groups of people such as seniors, people with paraphilias or disabled is a complex and contested issue, with divergent views being expressed in contemporary American media. Some commentators have suggested that sex robots could provide women with greater control over their sexuality and sexual desires, allowing them to explore their sexuality in a safe and non-judgmental environment (*Swadle,* 2020). The idea that sex robots may potentially promote harmful stereotypes and objectify women, perpetuating a culture of male entitlement and violence towards women are also voiced in contemporary media (*BBC*, 2020). Current articles dedicated to ethics and regulation often talk about women, children, and pedophilia in the same context, claiming that these groups need special protection and putting them at the same level of powerlessness (*Man of Many*, 2022; *Daily Mail,* 2022). Considering the context, fantasizing about sexually liberating robots for men, women, and other genders, seems preliminary and idealistic.

4.6 Conclusion

In conclusion, the development of humanoid robots for love and sex has generated a wide-ranging and complex public discourse that touches on a wide variety of topics. In this chapter, I was focusing on how sex robots' users perceive their interaction with sex robots in terms of emotions, affects, and desires. I have discovered that people associate a lot of different fears with the interaction with sex robots. The human-like aspect of sex robots that is so desired on one hand, on the other hand, raises many philosophical and ethical questions about violent

and disrespectful uses of robots. Moreover, people are concerned that robots will strip them of their humanity, representing a disruptive violent mechanism that make humans less human.

Being afraid of being judged or abandoned, users resort to sex robots that represent for them a self-harbor to explore their own sexual desires in a safe space. By many, sex robots are seen as faithful non-judgmental companions that help people deal with the hardships of their life, including divorces, loneliness, and old age. An interesting discovery was a trend for women to become sex robot builders and designers themselves. While robotics is traditionally associated with the world of men, and men who occupy themselves with designing and testing sex robots are seen as artists and connoisseurs, women who enter the field to design a robot that feels right to them represent the power to shift the narrative. Women designers, motivated to challenge the typically masculine environment of robot design, are building their own male sex robots and organizing workshops to teach young girls how to make their own robot boyfriends. The use of sex robots reveals power play, and women designers aim to reclaim that power.

CONCLUSION

In my thesis, I attempted to explore the gendered aspects of human-machine interaction with sex robots from feminist, sociological, and philosophical perspectives. After carefully considering both academic and media resources, I have initially come to a paradoxical conclusion. Even though a huge body of research has been dedicated to the ethical, social, and psychological aspects of human-machine interaction with sex robots, evidence have shown that sex robots are just good-looking sex dolls with glimpses of artificial intelligence that is very far from imitating human intelligence of simulating the experience of being with a real human. The media discourse largely promoted by the manufacturers of these robots, as it seems, made it seem like sex robots are already among us. Factually, they might never become as big as they seem.

However, even so sex robots represent an interesting area of analysis. In my thesis, I have chosen to focus on several key themes that. They include multiple levels and asymmetry of gender, pleasure in the design and use of sex robots for those who create them and those who use them, and the emotions and affects that sex robots provoke in its users. The analysis has shown that in the media discourse, the boundaries between the human and machine, the mechanical and the natural are portrayed as blurred in human experience of robots. Human fantasy and imagination make up for the lack of advanced conversational AI and inability of robots to move themselves: love and sex are indeed possible between humans and machines. This thesis conducts a feminist critical discourse analysis of media articles on sex robots in the United States between 2016 and 2023. The sample covers a range of topics related to sex robots, with varying sentiment. The analysis examines how gender and power relations are constructed and reinforced through media discourse on sex robots, by analyzing language, imagery, and tone of voice. The findings have important implications for further discussions on the ethical, moral, and societal implications of sex robots. This review helps to highlight the importance of interdisciplinary perspectives and demonstrates the potential for feminist critical discourse analysis to examine how the narrative of human-machine interaction with sex robots is constructed in contemporary media.

In the thesis, I have also discussed the complex public discourse surrounding the development of humanoid robots for love and sex. The focus is on users' perceptions of their interactions with sex robots in terms of emotions, affects, and desires. Concerns about the

human-like aspect of sex robots, including the experience of "uncanny valley" was relevant to many users, leading to ethical and philosophical questions about violent and disrespectful uses of robots, and their potential to strip humans of their humanity. However, positive aspects of sex robot use were hard to undermine, such as sex robots serving as a safe space for exploring sexual desires and as faithful companions to help people deal with hardships in life. Women designers are also entering the field and challenging the typically masculine environment of robot design.

An important finding of the thesis was the deconstruction of dominating discourse around the topic. Despite the proliferation of this discourse within media, there are limited substantive developments in the field. Media coverage frequently engages with theoretical aspects of sex robots, including their degree of human-likeness and their potential for emotional responses. However, practically it does not report any new innovation in the field since the inception of RealbotiX company. The current state of robotics and artificial intelligence allows sex robot manufacturers to produce body parts and genitalia of all colors and sizes, however, the personality aspect of the robot is almost inexistent. Therefore, it makes sense to focus not on the rights of the robots but on the rights of people who use the robot and who these robots represent.

The thesis has shown that the representation of women is an on-going problem for the field heavily dominated by men. Sex robot manufacturers do not only not share the concerns about how robots relate to real women but even deny that any such relation can be traced. The dominating narrative promotes the view that sex robots are tools for people to exercise their right to sex and experience pleasure. But, somehow from the context, it is always understood that only men are meant by the target group of these inventions. The current field of robots has no clue how to create robots that please women, which pushes women to organize grassroot initiatives building their own robots from scratch. Claiming the field of technology and sexual pleasure, women can make a real difference in how we understand pleasure and technology in our society. In conclusion, this thesis has explored the complex and multifaceted issues surrounding human-machine interaction with sex robots. Drawing on feminist, sociological, and philosophical perspectives, this research has demonstrated the importance of considering the gendered dimensions of this emerging technology. By applying the principles of queer science and feminist critical discourse analysis, one can read through the dominating discourse on human-machine interaction with sex robots. The media serves as a limited source of information on how people actually interact with robots but serves as a valuable field of analysis on how the

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dominating discourse portrays these interactions, therefore, providing insights into users'

experiences and perceptions of sex robots, as well as their attitudes towards gender and sexuality.

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