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ARTÍCULO

In love with Machines: The bioethical debate about sexual automation

Enamorados de las máquinas: el debate bioético sobre la automatización sexual

Enamorats de les màquines: el debat bioètic sobre l'automatització sexual

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Abstract

A few companies around the world are now developing and selling sex robots. Questions such as "how will relationships with robots' impact human relations in the future" emerge when technologies are used to meet the social and emotional needs of individuals. Considering that technology and design have embedded values and biases, this article surveys the use of sex robots from a bioethical perspective. Relationships with robots and computational systems, like Artificial Intelligence, are a possibility for many people around the world. We present questions raised by the voices in favor of robot sex, and against it. Beyond a binary polarization, the bioethical perspective recalls the Foucaultian concepts of biopolitics and biopower to situate the problems with the mechanization of intimate relationships. We argue that sex robots offer the opportunity to review old patterns regarding gender, inequality, and health.

Keywords: Sexuality; bioethics; biopolitics; robotics; artificial intelligence.

Resumen

Empresas de todo el mundo están desarrollando y vendiendo robots sexuales. Preguntas sobre "¿Cómo afectarán las relaciones con los robots a las relaciones humanas en el futuro?" surgen cuando las tecnologías se utilizan para satisfacer las necesidades sociales y emocionales de las personas. Este artículo analiza el uso de robots sexuales desde una perspectiva bioética, considerando que las tecnologías y los diseños tienen valores intrínsecos que hay que tener en cuenta. Las relaciones con robots y sistemas informáticos, como la inteligencia artificial, son una posibilidad para muchas personas en todo el mundo. Presentamos preguntas planteadas por voces a favor y en contra del sexo con robots. Además de la polarización binaria, la perspectiva bioética recuerda los conceptos de biopolítica y biopoder de Foucault para situar problemas como la mecanización de las relaciones íntimas. Sostenemos que el debate sobre los robots sexuales ofrece la oportunidad de revisar viejos patrones en relación con el género, desigualdad y la salud.

Palabras clave: sexualidad; bioética; biopolítica; robótica; inteligencia artificial.

Resum

Empreses de tot el món estan desenvolupant i venent robots sexuals. Preguntes sobre "Com afectaran les relacions amb els robots a les relacions humanes en el futur?" sorgeixen quan les tecnologies s'utilitzen per a satisfer les necessitats socials i emocionals de les persones. Aquest article analitza l'ús de robots sexuals des d'una perspectiva bioètica, considerant que les tecnologies i els dissenys tenen valors intrínsecs que cal tenir en compte. Les relacions amb robots i sistemes informàtics, com la intel·ligència artificial, són una possibilitat per a moltes persones a tot el món. Presentem preguntes plantejades per veus a favor i en contra del sexe amb robots. A més de la polarització binària, la perspectiva bioètica recorda els conceptes de biopolítica i biopoder de Foucault per a situar problemes com la mecanització de les relacions íntimes. Sostenim que el debat sobre els robots sexuals ofereix l'oportunitat de revisar vells patrons en relació amb el gènere, desigualtat i la salut.

Paraules clau: sexualitat; bioètica; biopolítica; robòtica; intel·ligència artificial.

1. Introduction

> *"The robot will provide companionship and mask our fears of too-risky intimacies"* (Turkle, 2017, online)

Robot sex is a product designed for the experience of intimacy with a user. Robots are technologies endowed with automation, built to accomplish specific tasks. "Sex robots are realistic mannequins with variable appearances and textures, with oral, vaginal and anal openings which can be customisable. The medical profession needs to be prepared for inevitable questions about the impact of sex robots on health." (Cox-George & Bewley, 2018, p.161).

In 2010, the first doll with robotic features for the 'adult market' appeared. Since then, models with embedded Artificial Intelligence (AI), have been developed such as Harmony. Yet, the number of sold and manufactured robots is still unclear (Nascimento et al., 2018).

Sex dolls are looking more realistic by the day, benefiting from research of materials that imitates human skin and other human features. The additions of (bio)technology innovations, robotics, and AI opens a call to a bioethical debate (Nascimento, Siqueira-Batista, 2018). We argue that sex robots are new devices that demand an understanding of the possible impacts in terms of culture and health.

Taking minority needs into account, we can ask who wants sex robots and why? Also, why do engineers wish to build sex robots? Therefore, we are presenting the discussion on the theoretical level. For that, we can argue that their positive aspects are to give a chance to understand why they are an attractive device, which problems they are supposed to solve, and what are the problems they may create.

Michel Foucault (1926–1984) was a French historian and philosopher, with also academic formation in psychology, who argued that the control of the bodies makes them disciplined, docile and productive (Foucault, 1998; 1995). In analogy, robots are anthropomorphized entities that represent biopolitics, which is politics over the body. What Foucault denominates the political anatomy of the body, we understand as different forms of control through projects that do not consider individual and collective well-being. Robots are a previously programmed set-up controls, now represented by Artificial Intelligence (AI). Several classifications rule AI and sex dolls. Although the models can be designed with different characteristics chosen by the user, those bodies tend to suffer a lack of creativity when their most available choices are the standards of beauty. Therefore, they stimulate particular desires related to scenarios that do not fit healthy human relationships, giving a false impression of freedom and autonomy. When considering that relationships always have a different 'other' with needs and desires out of one's control, those

solutions may be reinforcing less friendly and empathetic human behavior. That is, instead of providing solutions for loneliness, as one of the claims of projects such as sex robots, the question is if they are exacerbating the problem with their intent to fulfill an individual need where negotiation with another human being is not necessary.

Ethically speaking, a significant concern presented by critics of sex robots is that the relationship with such entities, using technological developments to represent the human body robotically, tends to reinforce and sharpen several contemporary problems, especially those related with different manifestations of violence – racism, sexism, and speciesism, among others (Nascimento, 2018).

Many companies are now selling sex-robots. Several authors have recently argued that such robots might play a useful – and ethical – role in solving problems of loneliness, feelings of inadequacy, and relationship difficulties present in those suffering from pathological shyness (Noel Sharkey, Aimee van Wynsberghe, Scott Robins, 2017) by replacing a real person with a robot.

Sexual Robots have the potential to change our relations to, and perceptions about, the body and sexuality. According to some critics like Kathleen Richardson, the founder of Campaign Against Sex Robots, they intensify existing cultural dynamics.

Theorists dedicated to the discussion of Philosophy and History of Technology, such as Melvin Kranzberg (1986), Martin Heidegger (2007), and Peter Paul Verbeek (2015), suggest that technology is not neutral. Programs and devices have ideas and desires embedded in them. In order to understand the bioethical implications of new technologies, it is necessary to think about how those technological developments are changing our lives and the way we relate to each other.

Differently than an inflatable doll, a sex robot has science embedded with its robotic features and AI. Even if those features are not as advanced as expected for a "perfect companion", the project represents the fascination of making a vision from science fiction become a reality. Besides that, these robotic and AI features are not value-free; they represent a particular vision of 'perfection'.

Questions as if it is ethical to use a robot for sexual purposes, or if it is ethical to produce those robots, have been inspiring discussions in the academic field and society in recent years; key issues will be outlined below. Some authors ask if there would be any restrictions for the use and manufacture of sex robots or if they should be available in the market for anyone that wants and can afford one. Moreover, we ask which ethical perspective would be accepting the use of sex robots and which one would disapprove them?

From the principlism of ethical and bioethical approach, if it causes no harm to others, there would be no reason to police sexual fantasies. However, even if we are not discussing 'robot rights' in this paper, it is crucial that thinking of robots as an entity that should have rights, and not merely as a product available on the market, changes this ethical perception completely. But, by now, instead of discussing if those "relationships" could cause harm to the sex robots, we may divert attention to the person who wants to use them: is there a choice or manipulation? Are the ways those robots are available symbolically toxic, or they just represent users' desires?

Part of the discussion in recent years is whether there should be some restrictions on sex robot production, and if so, what they should be, and why.

However, as we argue in this text, the debate about human-robot sex turns out to be about human relationships. While it appears to address the role of emerging technologies in human lives, the debate turns out to be about the belief systems embedded in these technologies. As those beliefs systems are not "innovation" - as robot sex is supposed to be - we must go back to analyzing the old patterns of the beliefs expressed in the technologies and designs.

Arguments in favor of and against robot sex consider their possible beneficence or maleficence. Yet, from this polarized discussion, we argue that the concept of biopolitics by Michel Foucault stretches both sides. Although it is more likely to oppose robot sex projects as presented in the market, it also opens the door to think if it would be possible to reassemble it with a different approach.

We compare biopower and biopolitics perspectives with the arguments claimed for and against robot sex. Of particular interest to the politics of the body, Foucault presents how those concepts are related to a control system that undermines the spontaneity and autonomy of the body.

2. Arguments in favor

> *"Without intimate sexual companionship, people with disabilities could suffer loneliness and unhappiness. These are a target group that proponents of sex robots say would benefit from them."* (Noel Sharkey, Aimee van Wynsberghe, Scott Robins, 2017, p. 24)

Arguments in favor of sex robots imply utilitarian claims as sex robots can be used for therapeutic purposes to achieve specific results.

Kate Devlin, Archaeologist, Computer Scientist, and Senior Lecturer at Department of Computing at Goldsmiths, asks: people are "making love to simulacra because they want the living person, or because they are attracted to the sex dolls in their own right?" (Devlin, 2018, online), suggesting the robot overflows to other meanings besides being merely a tool.

She emphasizes the rights of those who enjoy having mechanized sex with robot dolls. (Devlin, 2015; NDC Conferences, 2017) and defends a right of "sexual diversity" more generally.

Defenses of the 'use' of sexual robots are often founded in the benefits that sex robots could bring, in terms of pleasure to the users by allowing the fulfillment of sexual fantasies, and in a reluctance to criticize the fantasies of others (Arkin, 2016).

Sex robots enthusiasts claim that they "help people reach fun and satisfaction through stimulation or penetration. Some have natural language skills and arousing voices, and one should not forget that verbal eroticism is very popular in chats, and phone sex was in high demand for a long time and still is in existence." (Bendel, 2016, p.18).

The fact is sex robots are a good option when it is necessary to avoid human contact for various reasons, such as to prevent disease transmission. Also, their sex availability around the clock and the lack of psychological impact on the sex partner are a clear advantage for its defense (Scheutz & Arnold, 2016).

Factories and creators of sex robots argue that they are 'just' robots and have no feelings, thus offering their users the opportunity to fulfill their sexual desires, however outré, without the risk of harming other people. David Levy, the author of Love and Sex with robots (2009), argues that a relationship with robot dolls could facilitate the realization of many sexual fantasies without the need to share it with another human being.

He explains that the robot dolls "do not complain" (Levy, 2017, online). With a similar position, the engineer Sergi Santos, creator of a sex doll model called "Samantha" jokes: "she talks too much, doesn't she? So I will turn it off. That is the beauty of it" (Maloney, 2017, online). With the robot doll, they can be in control.

Shin Takagi – a pedophile who markets child dolls for use by those who are sexually attracted to children – claims that it is not possible to change someone's fetish. "I am helping people to express their desires legally and ethically." (Morin, 2016, online).

Some advocates point to the therapeutic benefits, saying that sex robots might even help people who feel the need to direct violence and abuse against others. They argue that offenders could satisfy their needs with a robot and not with a human being. Ron Arkin, a professor of robotics at Georgia Institute of Technology, believes that physicians could prescribe such devices as a therapeutic strategy for those who have sexual abuse impulses towards women and children

(Rutkin, 2016). Others have suggested that robots could be used for the treatment of other modalities of sexual disorders, such as erection problems, premature ejaculation, and anxiety symptoms related to the first intimate encounters (Noel Sharkey, Aimee van Wynsberghe, Scott Robins, 2017). Researcher Kate Devlin suggests that it might be worth developing this technology for the elderly, in order to facilitate the satisfaction of their sexual needs like any other adult person (Noel Sharkey, Aimee van Wynsberghe, Scott Robins, 2017).

The Real Dolls company claims to have been on the market for nearly 20 years, helping many people – who cannot establish traditional relationships with other people – to deal with social and emotional blockades (Noel Sharkey, Aimee van Wynsberghe, Scott Robins, 2017).

Apparently, it "only takes a silicone love doll with modest mechatronics to enamor some users." (Sullins, 2012, p.398). And that shouldn't be a surprise given the notorious success of kid's toys, which are companions through adulthood, decorating their shelves and bedrooms. From this perspective, those objects (toys, machines, devices) don't need to show reciprocal affection, as long as we own them.

3. Arguments against

> *"women and robots are blended together as an ethereal entity, manifested through voice and language. Sex robots—whether they are in the movies or those that are being manufactured—cater mainly to male fantasies."* (Nascimento et al., 2018, p. 233)

In this section, we will discuss why, as Kate Devlin puts it, "Not everyone is happy about a future of mechanized pleasure." (Devlin, 2017, online).

Comparing the arguments against or in favor of robot sex, the "against" analysis is more complex, and it is the one calling for regulation regarding ethical concerns. The complexity resides in a combination of factors related to the impact of new technologies on human perceptions, which is not easy to measure. A call for ethical reflections, suggesting the need for regulation, is a call for moral education. Law and education commonly need to balance individual freedom through restrictions, in consideration of a better environment for the societal majority.

Kathleen Richardson, the spokesperson for the Campaign Against Sexual Robots, draws attention to factors such as the objectification of women and the standardization of beauty. These elements are already present in the consumer society,and are embedded in these types of robot

'products'. These products amplify and tend to affect intimate and social relationships, undermining human relations that 'should be' based on principles of equanimity and respect.

She suggests that sex dolls are 'another option on the menu' that cater to a belief that a woman is a property in a unilateral relationship to serve male purposes. Sex dolls and sex robots reinforce the idea of woman as an object of possession or consumption, as these robot dolls symbolize the relations between the genders in patriarchy. (Richardson, 2015). In Richardson's book "An Anthropology of Robots and AI: Annihilation Anxiety and Machines," she goes back to Karl Marx's "Capital" to highlight how the capitalist industrial system materializes human relations and creates social relations between things. If capitalist society believes that everything is a commodity, she concludes: "A human-robot attachment is only possible because of this mechanistic sociality that underscores contemporary sociality. Mechanical sociality is an outcome of an attachment crisis in how humans' bond with others." (Richardson, 2015, 131).

The Campaign Against Sex Robots claims that sex robots are artifacts that evoke grounded dreams and perceptions of patriarchy domination over feelings, sensitivity, and respect to lives. They argue that the focus on the female robot sex developments - and the way those dolls look - represents relations established with distorted images of relationships, imposed by male desires.

Sex dolls are a representation of the understanding that intimate relationships function with one part using the other part. That is to say, sex robots, embedded with the most recent technological developments available, tend to naturalize (and emphasize) what was already objectionable. The naturalization came first from the idea of neutrality in technology and science, confusing the perception about the values embedded in such technological devices like robot sex as they would be representing how relationships are supposed to be.

In most societies today, feelings are understood as weakness and a female attribute. However, war, a mainly male territory, is made of feelings of rage, resentment, and frustration. Richardson asks which beliefs come embedded with the robots, and what these practices can tell us about gender, power, inequality, ethnicity, and class. She then proposes that "extending relations of prostitution into machines is neither ethical nor is it safe" (Richardson, 2015, p. 292). It is not ethical when the use of such artifacts may stimulate more violence, social isolation, and loss of empathy. In her presentations she mentions cases of ex-prostitutes' narratives against the sexual market, as many of them were raped from a young age, obliged, and trained to work as prostitutes. They run campaigns to change the demand for paid sex, believing that would decrease the risk of violence and exploitation of young girls, and boys, who already suffer from prejudice because of ethnicity and precarious economic conditions.

From the arguments presented in this session, it is essential to note that using robots as substitutes in those circumstances will not decrease the demand and is more likely to stimulate this type of market where humans are cheaper than robots.

When advocating the use of child sex robots to treat pedophiles, Shin Takagi claims to be helping people like him, enabling them to perform their fantasies without causing harm to children (Tran, 2016). The critics of the perspective that dolls can serve as therapy points that the existence of such toys legitimates the sexual fetish, and, if socially accepted, how would, for instance, children feel about knowing that children dolls exist to satisfy adults sexually?

The idea that robots imitating children could aid in the treatment of pedophilia is refuted by researchers in Bioethics and Applied Ethics (Nascimento et al., 2018). Patrick Lin – Professor of Philosophy and Ethicist at California Polytechnic – suggests that treating pedophiles with child robots for sexual use is as dubious as it is repulsive: imagine giving racists brown puppets to be insulted or beaten! He further states that if the act of expressing racist sentiments contributed to the healing of the offenders, there would be no more racism in the world. Rather than preventing abusers from materializing their fantasies with humans, the creation of robot dolls to be raped is like an advertising campaign in favor of such behavior (Sparrow, 2017).

This debate would, therefore, extend to the fact that other categories of robots designed for work – from receptionists to soldiers – are at the service of their owners. From the first robots emerged as characters (Richardson, 2015), at the play R.U.R. (Rossum Universal Robots), (Capek, 1920), which inaugurated the science fiction style, to the actual productions as Westworld series, robots play the role of disposable beings.

To have machines as slaves is being a very seductive 'trap' where exploitation becomes acceptable and natural. In the same way, sexism can be seductive to poor workers: despite the condition that makes their life miserable, they can still exercise some power over women, treating them as property, requiring from them the submission they also have to accept from the hierarchical system.

The analogy is also explanatorily productive if we compare how people express their frustrations with objects that are at their service, from cars to employees. As a chain of relations, where one controls many things and, at the same time, feels controlled by a system: it works as if they are pieces of the same machine.

Interestingly enough, the word robot in its original Czech means forced labor or servitude (Nascimento et al., 2018). Therefore, it is not surprising that the notion that a slave will have their own slave – their own machine that can be used against the master- works to secretly comfort the slave (Chude-Sokei, 2015). That is, the way hierarchic systems operate in a "consumer society"

creates possibilities of escape for all oppressed beings. In this sense, everyone can have something below themselves upon which to express power. This is the case whether it pertains to people because of their gender or race, or to objects such as robots.

In addition to the concern that sex robots only exacerbate disrespectful behaviors in terms of sexual relations, there are a few other ethical considerations. For instance, the use of sex robots also intersects with cultural and religious issues. A group of Islamic researchers signed an article claiming that "having intercourse with a robot is an unethical, immoral, uncultured, slap to the marriage institution and disrespect for the human being" (Tijanil, 2012, p. 21). The authors of this article suggest that according to Islamic law, sex with a robot would be considered adultery for married people, or unacceptable promiscuity for singles, with possible punishments ranging from a hundred lashes to stoning to death. In the same way, marriage with a robot would be forbidden, just as it is not possible to marry a person of the same sex or an animal (Tijanil, 2012).

Privacy is another important ethical topic that is raised by the discussion of sex robots, as the smarter the devices, the more risk their users will be of having their privacy violated. With sex robots built to function with AI, they may record sounds and images of the human-robot interaction.

The lack of privacy posed by the use of companion robots presents similar problems to use of robots designed for health care, such as automated nurses, as well as many other devices in Internet Of Things. In order to get the benefits such devices offer, users need to give up their privacy and accept the risks that come with doing so. Because the aim of the machine's constant learning is to improve the AI, it needs access to sensitive data. Also, using devices to trigger emergency assistance in Health Care would need communication with the external world, through the internet, continuous data exchange through cameras, biosensors, lights, and sounds. However, the flow of communication with the external world remains a problem, as, despite the best efforts of cyber-security researchers, smart devices still pose significant risks to privacy. One example is what happened to a vibrator that communicates with a mobile app. The product, with more than two million sales, was hacked, and its private information collected. This data including information about the frequency of use and body temperature was accessed by third parties, who could also activate the device by themselves (Hem, 2016) (Ghosal, 2016).

Finally, for the arguments against sex robots, those artifacts make evident societal problems related to gender, labor, privacy, among other characteristics of an industrial way of living. The possible consequences raise questions to secular ethics, religious morals, and many different claims, from safety to the potential impacts on the reduction of human reproduction.

4. Discussion

> *"Sex robots are likely to play an important role in shaping public understandings of sex and of relations between the sexes in the future."* (Sparrow, 2017, p. 1)

Despite the potential symbolic force present in the establishment of intimate relationships with robots, sex with these beings will hardly represent something close to what could happen between people. Robots as 'beings' recall their process of individuation as technical objects (Simondon, 1958). Still, if the goal of AI is to replace humans because of existing difficulties and frustrations in the art of relating to one another, its effects will not be as expected, as its development – able to meet the wishes and whims of the 'user' – still has a long way to go. "Robots with humanlike motor skills are under development, but we are still some distance away from a robot that integrates these movement features with a humanlike appearance and touch" (Danaher, 2017, online).

Thus, interaction and response in situations created by science fiction – for example, in old or recent films like "Her" – is still illusory, since it has not been possible to make robots respond with emotions related to their context.

We propose to give special attention to author Michel Foucault on this discussion, because of his concepts of biopolitics and biopower.

The publishing of Les mots and les choses (translated to English as The Order of Things, 1966/1970) made Foucault well known for questioning representations from classical philosophy to the use of language itself. (Gutting et al., 2019).

According to Foucault, "systems of thought and knowledge are governed by rules, beyond those of grammar and logic, that operate beneath the consciousness of individual subjects and define a system of conceptual possibilities." (Gutting et al., 2019, online).

In Discipline and Punishment (1975), Foucault pointed out the surveillance technique used to produce "docile bodies" to control them easily, resulting in a mechanized system. A docile body is, therefore, a mechanized body that meets given positions according to power relations.

Biopolitics is a term by which Foucault denominates the politics of the modern state. A combination of constraints represents it as a force upon imagination, capable of changing the senses, views, and perspectives of the body. Foucault argues that biopower is a result of the biopolitics run by institutions, top to bottom. Eventually, it starts to work from the bottom-up when people begin to police each other's behavior.

From the biopolitical perspective, we could speculate that people have the right to express themselves in many different ways,and having a robot with AI for sex and companionship is a possible relationship in our times.

Marrying a robot is performative: it conveys a message that those who are against sex robots criticize. However, before going on to evaluate the arguments against sex robots and its affinities with Foucault's views, let us remember that developers and researchers have also been using technology for sexual education purposes, as demonstrated by the App Lickster (Leelo, 2017) or the 3D printed clitoris by Odile Fillod (Theobald, 2016). In that sense, could sex robots be a tool for sexual understanding and training purposes? From the perspective of the "campaign against sex robots," those devices are anti-education.

Assigning to sex robots the responsibility of helping cases of hate, pedophilia, misogyny, or pathologic shyness overrates its capacities. It may look good, but it is still a product poorly designed to address these issues; there is not much research, quantitative or either qualitative, to prove that this is the case.

In History of Madness in the Classical Age (1961), Foucault points out that the "discovery" of madness as mental illness was combined with questionable social and ethical commitments by modern clinical medicine. He goes on to further analyze these issues in The Birth of the Clinic (1963). For him, deviant behaviors that potentially cause harm to others are not there to be analyzed separately—saying that, presenting solutions where the individual will have the freedom to cause harm to others (through a symbolic medium such as sex robot dolls) shows itself to be problematic as will be further discussed. Because the sex robot dolls follow cannot give consent, they offer a different context from engaging in sadomasochism as, in that case, individuals give consent and there is complicity in the eccentric attitude towards sex acts. Moreover, the sex robots are designed as 'normal girls' and normalize the roles of the individuals involved (including the robots). Therefore, as the prefabricated relation involves the logic of domestication of the bodies, in a Foucaultian sense, the use of sex robots is not to be praised.

If deviants find acceptance with the help of robots, would that be a way of surrendering to normativity? In that case, the biopower is manifested through a way to fit society. On the other hand, when fucking a robot become a public statement, what is happening between the lines?

Defense of sex robots is troubled with conservative arguments. The full project and its design appear to ratify male dominance, where women's thoughts, feelings, and perceptions are anti-erotic, that is, something to be fixed by technology.

To be an owner of its own body is a cultural capital that not everyone possesses (does a robot?). Foucault shows how sexuality becomes an essential construct in determining not only moral worth, but also health, desire, and identity. (Gutting et al., 2019).

A robot is not an owner of its own body; therefore, its identity is compromised. In order to have a culture, the robot would need to use its robotic language to exchange perceptions and information with other robots. It would need to know how to ask for help in the case of abusive behavior from his/her partner. The list of needs to make a human-robot sexual interaction a safe act goes on.

Thus, to discuss devices designed for sexual purposes is not to discuss the freedom of using them or not, but how they are related to our identity, how they represent our desires and interact with them. The question remains if sex robots can potentially help us to free our bodies from suppressed desires, or if they are devices that are more likely to numb our actions and perceptions.

How do we understand the impacts and harm caused by new technologies on the quality of life in terms of mental health, relationships, and sociability? Physical and mental disorders, if evaluated separately, may lead to uncertain or mistaken conclusions. Often the problem cannot be attributed entirely to new technologies, but more to the way they are designed and used.

Artifacts have politics embedded in them. Gender and objectification of the other represent 'games of power' grounded in prejudice.

Researcher Kate Devlin suggests that the gender problem can be solved if we understand that the robot, as a machine, has no gender.

For the FRR report, manufacturing a unisex robot with the possibility to change the genitalia could be a possible solution to concerns about robots constituting sexist representations (Sharkey et al., 2017).

The idea of an open design where sex robots could be assembled like a puzzle would give more freedom for the imagination.

Nevertheless, the body separated in pieces is a confusing image, similar to the discussion of (Cartesian) mind and body separation. However, if we can pretend that seeing the body disassembled in separate pieces is not a problem, yes, sex robots as a puzzle could be fun.

The purposes of having a design distinctive from the simple copy of humans intend to be a solution for objectification. But if they still have genitals and body structures as the human, they are sex robots designed to function humanlike. The question remains if it would be morally acceptable to use and abuse a robot sexually.

The rise of real sex robots, analyzed by the concepts of biopolitics and biopower, suggests a reinforcement of a distorted idea of sex and sexuality. By reducing such idea to a mechanized perception, sex robots are a piece of culture and science. They could be just one more device to serve domestication, or express freedom from the boundaries of civilization's repressive forces. On the other hand, relationships in the age of AI and digital revolutions are already troubled enough without people feeding their fantasies with sex robots.

In summary, if a sex robot is a seductive strange 'other', which we should embrace, it does not mean that having sex with robots would represent freedom of pleasure and expression. As suggested by the critics, it can enact problematic practices of rape and pedophilia, or it could just be a conformity to the whole ideal produced by consumers society. In that sense, the bodies who are copulating with sex robots may be under domestication and control, as the robots are also. Moreover, if those artifacts are just another option in the menu of the porn industry, as Kathleen Richardson argues, they also can coexist with human couples inside their houses or in a brothel. In that sense, they also represent the anxiety produced by the biopower of a technologically ubiquitous society, where individuals are continuously manipulated by the stimuli presented to them.

5. Conclusions

> *"The realm of intimate robotics, as mentioned previously, is not just about sexual devices; it is about a broad category of technology with which human users might form strong emotional attachments."* (Borenstein, Arkin, 2019, p. 299)

A life mediated by emerging technologies compose a scenario of a vast number of stimuli. They are changing our sense of being human. Robots and AI designed to play the role of flesh and blood companions are an attractive option for the busy and confused human in contemporary solitude.

According to Sherry Turkle (2017), rather than reducing loneliness, such devices are increasing it by further estranging people from each other. Turkle argues that robots cannot feel empathy and that lack of human connection in an anthropomorphized machine is likely to increase loneliness.

Indeed, it is hard not to wonder whether the desire for a robot companion is itself a symptom of alienation as the result of many hours spent online; this tendency has the potential to damage people's capacity to deal with real and daily relationships.

Sex robots and all virtual realities in the realm of AI play an ambiguous role in resolving the problem of solitude by reinforcing one's indifference to human relations. If the impacts and possible harm of explicit contents on human-computer interaction depend, mainly, on age (Wonderly, 2008), sex robots may give different perceptions of relationships to those without experience in human-to-human contact. In that case, they may be incentivizing insularity when a robot's role is to please the owner and attend to its fantasies.

As sex toys are products with little or no regulation (McMullen, 2014), the advancement of robot sex from regular sex dolls shows that we need to discuss the ethical issues they raise. Because robot sex is a technological innovation, and sex dolls are considered a sex toy, the call to discuss their possible impacts can appear an antiquated idea of ethical control.

However, sex robots become an issue for bioethical analysis when objectifying female bodies. It may encourage disrespectful relations, reinforcing different types of prejudice and violence.

Instead of thinking that culture is a closed package that does not change and does not move, the criticism of the sexual robot design appears to believe that culture and human behavior arechangeable and those sex robots are related to old-fashion beliefs, despite the fact they are a piece of innovation.

We still do not have enough empirical evidence, in significant numbers, to say that they are bringing benefits to their users or if they are causing men to treat women worse. As their manufacturing companies are not supposed to expose buyers' privacy, it is hard for a researcher to find them and investigate their real motivations, needs, and experiences. Until now, only a few buyers are opening their experiences to journalists, and the reports are on a superficial, and possibly sensationalistic, level.

The question of robot sex is problematic only when they are anthropomorphized to look like a woman, man, child, or animal remains inconclusive in the discussions from the sources presented. Moreover, if artificial life is a simulacrum of human behavior, it is a step further from other sex toys.

Although the research on the impact of technological developments has been increasing in the last decades - from historical, sociological, public health, and many different perspectives - we still cannot find a significant number of studies regarding the impact of technology on the bodies and ethical concerns about it. That indicates a long way ahead for a better understanding of those impacts.

It took a while for researchers in psychology to focus on the radical transformations operated by digital revolutions to understand better how the human body and relationships are

changing. Nevertheless, if the research has been increasing in the last years, it is still more to find out. If scholars do not give attention to those transformations, the academy may lose the ability to interpret, understand, and prepare professionals to help individuals to understand their anxiety and sufferings. Moreover, the winds of technological change generate intense nostalgic resistance and much fear of the unknown (Nicolaci-da-Costa, 2002), which tends to motivate people to seek peace and comfort on conservative beliefs and measures. That would explain that the speed of technological revolutions goes faster than research and development about its impacts.

We have been in a cyborg life for a while. Perhaps an optimistic view of those technologies would be the hybridization concept of human-robot interaction as a reassembly composed of humans, cyborgs, and machines. That would mean, whether sex robots create tensions, those potentially hides new answers. Hybrids are cyborgs: a post-human subject (Braidotti, 2013) (Donna J. Haraway, 1991). The empowerment through these technologies requires taking action to reshape them. The tensions resulting from such entities as robot sex represent intersubjective communication: a technological design (product or project) hard to ignore. It is an answer or a question calling for other questions and answers through diverse designs (Flusser, 2007).

In conclusion, a bioethical call for regulation is always about presenting questions about how technologies should be applied and considered among their development.

Social technology creates new forms of loneliness, and if sex robots are a way to respond to it, it appears to be like the vicious circle of 'sickness' treated by medicine that gives an isolated solution, creating new problems to be sorted by adding many other pills.

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