Research Article

Eleanor Hancock*

Should society accept sex robots?

Changing my perspective on sex robots through researching the future of intimacy

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Abstract: In early 2015, Kathleen Richardson announced the arrival of the world's largest, organised resistance group against the production of sex robots in society: The Campaign Against Sex Robots (CASR). Since the birth of the CASR, Richardson and other feminists have manipulated a combination of radical feminist rhetoric and sex industry abolitionist narratives, in order to promote the criminalisation of sex robots. Moreover, the CASR and Richardson have also made some rather unique claims regarding the “similarities” between sex workers and sex robots, which have not previously surfaced within the narratives of radical feminists in recent years. This article seeks to analyse if their analogous reference to sex workers and sex robots has credibility and viability in the context of the digitalised sex industry and in the wider teledildonic and sex robot market. Furthermore, this article will also formulate solutions for the ethical and social contentions surrounding the merge of sex dolls and robots within the contemporary sex industry. In order to disentangle the radical feminist arguments surrounding sex robots and the sex industry, the following contentions will be addressed:

Is moral objection to female sex robots using client-sex worker analogies from feminists justified?

Is opposition to sex robots based on informed opinion about the digitalised sex industry?

To what extent are the positive considerations around sex robots/dolls and sex-technology ignored in the narratives of radical feminists and the CASR?

What practical applications recommendations can be made to the sex robot industry from the stipulations of the CASR and the current state of sex dolls/robots in the sex industry?

Keywords: sex-tech, sex robot, prostitution, feminism, radfem, objectification, virtual intimacy

* **Corresponding author: Eleanor Hancock**, Department of Ethics & Communications, University of Liverpool, Liverpool, United Kingdom, e-mail: eleanorhancock@outlook.com

1 Defining sex workers and radical feminists

I would like to set the parameters of this debate accordingly by drawing focus to the definition of the terminology: “sex worker” and “sex work.” This article takes a neo-liberalist and feminist view on sex work, defining it as an exchange of sexual services between two (or multiple) beneficiaries for financial payment. In this report, the words sex worker and prostitution may be used interchangeably with the same meaning and expression. In relation to the definition of the sex industry within the parameters of this debate, this article takes a post-modernist view on the sex industry and only references sex work within the parameters of the digitalised sex industry. However, this can also include brothels that use the internet for marketing and advertising. This article focuses on the digitalised sex industry because all sociologists researching the Westernised sex industry have acknowledged the prevalence of the internet in the contemporary sex market.

Throughout this article, the terms “radical feminist” and “abolitionist” will also be frequented, as they are central concepts in the Campaign Against Sex Robots’s (CASR’s) objectives and advocacy. It is worth presenting in full what is meant by these terms in the framework of this argument, as the definition of a radical feminist can be somewhat subjective. To some people, radical feminism could be a reference to any sort of political or social movement led by feminists for radical change to promote gender inequality or eradicate violence or oppression. Whilst I am not denying that this definition is not true, in the context of this article, the definition of a radical feminist and the abolitionist movement is more specific. In this article, radical feminists can be described as people who seek to criminalise the sex industry due to the sex industry’s inexplicable involvement with gender politics, patriarchal oppression and violence against women. This report does not seek to discredit critics of the sex industry explicitly, as the sex industry is riddled with ample ethical qualms and many valid reasons for

moral outrage. Rather, it draws focus to the complexities within the sex industry and considers how sex workers may consider the merge of their own industry with that of sex robots.

2 Introduction

As much as my reasoning for writing this article is to advocate for the potential benefits of future sex-technology and sex robots, it is also been composed in order to justify some of the considerations that surround sex workers in the debate around sex robots and their morality. Whilst I do not agree with some of the stipulations made about sex robots and sex workers from the CASR or other academics in the field, my disagreement with their objectives was not the primary reason for writing this article. It occurred to me that there needed to be a pragmatic voice that was considering sex robots in the adult industry. The aim of this article is to evaluate the arguments made against sex robots by the CASR and “debunk” some of the claims, as well as shining light on some of the issues in sex-technology, which will no doubt impact the future of sex robots. Although I argue that the CASR makes some valuable considerations, it is evident that there are many inaccurate and/or exaggerated claims made about sex robots that stem from misunderstandings about the sex industry. By using a literary review of current ethical and sociological literature surrounding sex workers and evaluating my own experiences and knowledge about the sex industry from working in grassroots and social organisations, I have compiled the four main problems with the CASR’s argument into four themes:

- (i) Misrepresentation of the sex industry;
- (ii) Failure to legitimise sex work;
- (iii) Objectification; and
- (iv) Developments in sex-tech.

This essay will unpack the issues in each theme and consider whether the claims are justified in the context of both the adult industry and the sex robot sphere. Whilst my own experiences working within the sex industry have obviously shaped my conclusions on this contentious ethical debate, it is also worth noting that the availability of literature is sometimes limited due to the nature of this topic. There is little empirical research about sex robots and sex-technology, and the availability of credible evidence surrounding the sex industry has also been limited, despite more intensive research efforts in this area.

2.1 Misrepresentation of the sex industry

The CASR is the world’s largest organised resistance group against sex robots that has ever surfaced. Richardson has been the most vocal and outspoken critic to lead discussion on the dangers of sex robots. As such, her opinion and point of view have been featured in nearly every moral and ethical debate about sex robots to date. The rhetoric of the campaign has been reported on in nearly every continent of the globe. However, it is worth noting that some of the views and opinions that Richardson employs about sex workers are not entirely original, nor are they unsupported by similar schools of thought. In fact, Richardson’s views against the sex industry are synonymous with abolitionist and radical feminist narratives that seek to criminalise the sex industry to protect women and reduce patriarchal oppression of women. The basis for such moral objection is largely rooted in radical feminism; however, the concerns that revolve around the sex industry and sex workers alongside sex robots also evoke abolitionist rhetoric. The abolitionist movement has always been concerned with criminalising the sex industry. Whilst I will not deny there are many reasons that sex work can be considered unethical, the narratives of abolitionist movements tend to manipulate and exaggerate the many complex power dynamics of the sex industry in order to advance their ideology. To accentuate this viewpoint further, it is worth looking at some of the leading publications on abolitionist sex work in Westernised, contemporary frameworks.

Julie Bindel is an abolitionist who has published multiple works on the sex industry. By her own accounts, she acknowledges she has never interviewed any sex worker who does not agree with her about the criminalisation of the sex industry [1]. Clearly, she has not looked very far. Bindel’s 2008 “Big Brothel Report” received widespread backlash from sociologists, critics and sex workers alike. It was condemned as being inaccurate and misleading, with Bindel’s own abolitionist preoccupation even coming into the fray:

The report builds a damning picture of indoor sex work on the basis of data whose reliability and representativeness is extremely doubtful and a methodological approach that would be considered unethical by most professional social researchers [...] It makes claims about trafficking, exploitation and the current working conditions of women and men employed in the indoor sex industry on the basis of that data [1].

In a similar effort by abolitionist advocate Kat Banyard, she attempts to dispel the “five myths of prostitution.” Interestingly, throughout the book, instead of focusing on examples of consensual sex work to solve the so-called

“myth,” she makes numerous links to sex-trafficking and forced or coerced sexual violence, including using the experiences of trafficked victims to portray all examples of sex work. Banyard concludes: “The fact that the sex trade is founded on the absence of mutual sexual desire means that the principal predicament becomes how to endure ‘repeated sexual abuse’ [2, p. 34].” Banyard is not alone in her preoccupations with trafficked victims. It seems that for most radical feminists, there is an inability to make explicit distinctions between trafficked victims and sex workers, conflating the two parties despite the obvious absence of free-will in one demographic. This “inability” to recognise the difference between consensual and non-consensual sex within the industry from radfems and abolitionists often results in more sensationalised and graphic representations of sex work. Her 2017 keynote at LSR detailed the “similarities” between slavery and prostitution and the historical and cultural affiliations between the two practices [3]. Her belief reaffirms that it is hard to separate the abolitionist movement and sex-trafficking rhetoric. Such as refusal highlights their inability to view the other forms of sex-work, which take place outside of the sex-trafficking industry. They are around. The whole world seems to know they exist. For some reason the abolitionist advocates do not.

Dr J. Doezema is a sociologist who has spent many years studying both the sex industry and human and sex-trafficking. She wrote a book *Sex, Slavery and Discourse Matters*, which focused on the misrepresentation of trafficked victims in academia. Doezema’s research concluded that the prescribed “difficulties” in defining trafficked-persons in academic literature were linked to the abolitionist narratives:

These difficulties [...] are not primarily caused by differences in empirical evidence; rather, they are the result of divergent ideological positions regarding women’s sexuality and the gendered meaning of “consent.” [4, p. 115].

Thus, the mixed conceptual arrangement of slavery, prostitution, forced sex, sexual abuse and sex-trafficking has resulted in an overall emphasis of sex-trafficking within sex work narratives across the board. The inability to separate trafficking and sex work means that most abolitionist narratives are heavily reliant on “survivor-reporting,” whereby many of the voices and insights used from the sex industry are examples of forced or coerced sex, or human-trafficking and child exploitation. The essence of “victim-reporting” allows for the maximisation of, as well as blurring of, the lines between examples of forced sex and human-trafficking with examples of

consensual sex between two mutual parties. It is hard to find a radfem researching or writing about the sex industry that fails *not to use forced-sex or sex-trafficking*. Whilst I do not attempt to deny there are some sociological “cross-overs” between trafficking and sex work, it is morally refutable to consider all sex workers as synonymous with abused, victims of crime. However, there are too many examples of consensual sex work to refute the notion that all sex workers are victims. As such, there have been distinct efforts in sociology by leaders in the field of sex industry research, such as Teela Sanders, Jane Scoular, Scott Cunningham and Ronald Weitzer, all of whom have commented on the highly diversified and fluid nature of sex work. Weitzer has committed his research efforts to building sociological distinctions of sex work and evaluating the occupational characteristics of varying levels of sex work [5]. Sanders has also considered the hyper-fluidity of online sex work, including that of webcam work and online escorting. She has considered the different variations of sex work via digital mediums; defining “indirect” and “direct” sex work as being central to the digital framework of the sex industry. In 2017, a collective of sociologists released a report, *Beyond The Gaze*, which is now the largest report that has ever been conducted about the online sex industry. Whilst the report did not consider sex-trafficking, it certainly evidenced the many avenues of sex work that were prominent through the internet. To put it simply, there are quite simply too many classifications, variations and fluctuations present within sex work that make it viable for absolutely all sex workers to be trafficked and exploited “victims.”

It is worth noting that the reliance on sex-trafficking narratives in debates about the sex industry has also impacted the emergence of sex robot brothels. In the United States, sex robot/doll brothels in Houston Texas were recently banned, after Christian groups advocated against their arrival in the Southern city. Whoopi Goldberg even reported on the issue on popular American chat show *The View*, much to the amusement of the audience. She appeared to be implored by the movement and the puritanical beliefs of the religious lobbying group, laughing as she concluded: “I have no idea what they were worried about” [6]. One of the reasons stated by the lobbying movement against sex robot brothels was that of “sex-trafficking” [7]. As such, there has been no empirical evidence to suggest that human-trafficking increases when sex robot and/or doll brothels are opened in one geographical area. One could argue that this long-standing association between sex-trafficking and sex work, which percolates in the literature of abolitionist and radical feminism rhetoric, is already having an impact on how sex robots are evaluated by policymakers. This is an example of how conflated sex-trafficking

and sex work can be. There must be more efforts from those within academia to make sure the arguments that surround sex robots are justified and accurate and do not fall into line with sensationalised, puritanical schools of thought which suppress sex worker rights, freedoms and choices.

2.2 Failure to legitimise sex work

Sex workers have always had a bad reputation in society. Throughout history, they have been subjected to oppression from legal, religious, conservative and missionary groups. However, in more recent times, discrimination against sex workers has been reignited by a combination of radical feminist or “equality” groups, who struggle to accept the autonomy of many sex workers actively choosing to participate in the sex industry. As this article has so far mentioned, sex workers are often systematically discriminated against and their experiences are misconstrued in order to advance radfem and abolitionist theory. In the last section of this article, it is demonstrated how the infatuation with victimising sex workers paints them as weak and dispensable actors. We know this is simply not always the case for all sex workers. However, one of the more unique claims that the CASR has maintained in recent years is that sex robots and sex workers share an analogous association with each other. Indeed, Richardson herself has composed two papers detailing the so-called “similarities” between sex workers and sex robots. The basic presumptions of her argument that consider sex robots and sex workers to be similar is through two means.

The first “similarity” between sex workers and sex robots, according to the narrative of the CASR and Richardson, is through the perceived lack of empathy involved in buying sex. In her first paper “The Asymmetrical Relationship: Parallels Between Prostitution and the Development of Sex Robots,” Richardson considers the perceived “lack” of empathy involved in the buying of sex as comparable to the motivations of individuals who would also use sex robots. Richardson considers the lack of empathy apparent in sex work as central to the adoption and use of sex robots. In order to exemplify this issue, she uses some quotations from a study about sex work and considers them to be representative of the feelings that all buyers of sex may engage in during the purchase of sexual services. Richardson concludes:

In the sex exchange in prostitution, the subjectivity of the seller of sex is diminished and the subjectivity of the buyer is the only privileged perspective and viewpoint. As robots are programmable

entities with no autonomous (or very limited) capabilities, it seems logical then that prostitution becomes the model for Levy’s human-robot sex relations. [8]

Her article ascertains that the same lack of empathy involved in the sex industry will also constitute the sex doll and sex robot industry. Thus, the asymmetrical power balance between buyers and sellers of sex, and the perceived “lack” of empathy towards sex workers from their clients/buyers of sex, is manipulated in order to portray sex-robot production as being inherently harmful due to the perceived lack of empathy towards people and the sex robot. However, the idea that Richardson attempts to perpetuate here actually goes further, in that she considers the desires of all clients to constitute of unemotional and disconnected encounters with sex workers, where the sex workers are unable to override any form of intersectional, patriarchal oppression, nor are they able to respond effectively to violence, degradation or abusive behaviour. In my opinion, this paints the illusion that sex workers are weak and unaware victims – powerless and complacent in harmful and degrading encounters with their clients. Unfortunately, this point of view is not convincing because it disregards many elements of sex work that refute the asymmetrical power balance she speaks of. This view of sex work completely undermines large demographics of sex workers, who far beyond being powerless victims, actively advocate for their legal and political rights, and maintain positive and healthy relationships with their clients. One interesting case I will draw focus too here was the recent protest in Sheffield for the Rhino Strip Club. Undercover abolitionists and feminist group coalition “Not Buying It” commissioned the investigated, infiltrating the nightclub as “clients” and secretly recording footage of the women [9]. The footage was used as “evidence” that the club regularly engaged in illicit activity such as selling sexual services or engaging in physical contact with clients [10]. However, in a surprise ruling by the council, they decided to keep the club open and renew the sexual entertainment license. This decision was largely influenced by the political and social action demonstrated by dancers and sex workers in Sheffield, many of whom marched from the Spearmint Rhino to the Sheffield Town Hall to advocate on this issue. Some of the women even held signs saying: “Rights Not Rescue” [11]. Whilst I commend all the political and social actions of the individuals involved in the Spearmint Rhino case, unfortunately it is just another example of abolitionists and radical feminists attempting to speak “for” sex workers, when sex workers would rather they stay quiet and have the autonomy to voice

their own concerns. The desperation to highlight violence in the sex industry is clearly starting to become an abysmal failure for many abolitionist groups. Time and time again they are failing to understand the true nature of sex work and sensationalising the links between violence, obscenity and prostitution. Morality does not need to be the focal point of legitimising work. There are many occupations that are morally problematic, but the fact that sex workers engage and manage their business in the same way other self-employed individuals' do must be recognised.

I will not refrain from the truth when I admit, I was once associated with the sex worker/sex robot analogy during my work with the CASR.¹ However, my initial views on sex work were perpetuated by my empirical research and experience with outdoor sex work, which certainly did evoke associations of lack of empathy from clients. One may infer with almost certainty that there is a lack of empathy involved in soliciting sexual services from street-based sex workers engaging in survival sex. Thus, my own empirical research studying outdoor sex workers painted similarities between the abolitionist interpretation of the sex industry, which curtailed some of the horrifying working conditions and harsh realities that outdoor sex workers are subjected to and that I witnessed first-hand. However, as I began to understand and research indoor sex workers (as opposed to outdoor sex workers), it became apparent that there were many variations of sex work and sex worker. I quickly realised that the work and experiences that were understood and practiced by sex workers operating from an agency were overwhelmingly different to that of outdoor sex workers. The ability to view the different strains of sex work as varying and diversified roles within a highly complex and fluid industry, suggested that the association between sex workers and sex robots is not always justified in the context of the CASR's analogy. This is because the analogy is reliant on violence and oppression of sex workers by their clients, which is simply not always the case. As John Dahanaer notes in his essay: "Should We Campaign Against Sex Robots," the preoccupation with painting a misleading view of sex work also fails to highlight the many other avenues from which violent and abusive relationships can take place. He concludes: "much more work would be needed to show that there is something unique to an exchange based sexual relationship that strictly entails the undesirable qualities being discussed"

¹ I published an article on this issue which has since been removed by the CASR website.

[12, p. 52]. If we are not able to show that the view of sex work acknowledged by abolitionists and the CASR is reflective of the sex industry, there is no reason why we should project these concerns towards sex robots.

It is also worth noting that there has been no such evidence yet to suggest there is a link between abusive or violent relationships between sex doll and sex robots with their users. In fact, in Devlin's recent book, *Turned On*, she describes how communities of sex doll owners have not demonstrated any violent or aggressive tendencies towards their dolls. On the contrary, she found that many people invested in "relationships" with their sex dolls were highly invested in the emotional and cognitive aspects of such a relationship, rather than the physical or sexual aspects of the dolls. Indeed, there has been a YouTube sensation of "Davecat," which represents Kate's findings. By all accounts, Davecat adores his collection of love dolls, whom he cares for tenderly and would never consider intentionally harming his prized possessions.² Clearly it seems that the misrepresentations of violence in Richardson's considerations of sex work have been translated into premature and incorrect assumptions about sex doll owners too. One example that is often pointed to in violence towards sex dolls was the reported "molestation" of "Samantha" the sex robot at an electronics show in Las Vegas. However, it has now been acknowledged that the accounts alluring to "molestation" and "sexual assault" were somewhat sensationalised for the benefit of the media. Indeed, even the BBC reported on the incident, although they did offer a pragmatic view from Sergi Santos, developer of Samantha, who claimed "people did not understand the technology" [13]. Since this event, there have been eyewitness accounts that suggest the damage to the doll was purely accidental, and came as a consequence of "unruly" members of the audience, and was not an example of violence at all. Devlin recently reaffirmed this with eye-witness testimony accounts from people who were at the show and viewed the robot.³ As such, we cannot assert that there are links between violence and sex robots that have surfaced in society to date. Nor has there been any empirical evidence to suggest that the motivations to purchase a sex robot are

² There are a selection of YouTube videos online about Davecat and the relationship he has with his dolls. In Dr Devlin's recent book, *Turned On*, she also notes the abundance of material online documenting Davecat's relationship with dolls. One video can be viewed at: <https://www.youtube.com/watch?v=LiVgrHIXOwg>.

³ I was at a conference in London where Devlin met an audience member who attended the fair. She tweeted about it later at her twitter account, which can be reached @katedevlin. The specific tweet in question has also been included in the references.

embedded in violence. On the contrary, most research that has so far been conducted regarding motivations to purchase a sex robot have not alluded to any sort of preoccupation between violence and desire to own a sex robot.

The second reason that Richardson considers sex workers to be like sex robots is much more ambiguous. According to the perpetuation of the CASR's narratives, the similarities of sex robots and sex workers are set in their purpose and intent. Sex robots are crafted for sexual gratification alone. In the eyes of abolitionists, radical feminists and the CASR, sex workers are also viewed as mere sexual objects and their primary purpose lies in physical and sexual gratification, too. As such, they have drawn parallels between sex robots and sex workers using the idea of intent and purpose. As this report has so far noted, there are many varying examples of sex work. Thus, the proponent of the sex-robot and sex-worker analogy is heavily reliant on the physical and sexual services that constitute large parts of the digitalised sex industry. From my own experience as a researcher, it is clear that the remits of their job do not end at physical and sexual satisfaction alone. On the contrary, many sex workers are more reliant on their cognitive and emotional skills to maximise their income and provide services to clients. As one webcam worker noted in a BBC interview: "It's about selling your brain, not your body" [14]. Indeed, some clients are only searching for sexual gratification or physical intimacy but there are many clients who seek the other services that sex workers provide, such as counselling, friendship, therapy or just emotional companionship. There are many sex workers who do not have sex or any sort of physical interaction with their clients. In fact, some webcam workers never even have to see their clients in the flesh, and many of them develop and invest enormous emotional and cognitive labour into maintaining their client and/or fan base. As such, the emotional labour involved in webcamming has become acknowledged in the academic world, despite the lack of empirical research in this area. In a 2017 research paper about webcamming published by the Women's Studies Association of New Zealand, the conclusion notes: "Given the extent to which, if they want to be successful, webcam models must entertain and establish lasting relationships with their clientele (without the aid of physical touch), emotional labour in camming is an important aspect that should be explored further" [15, p. 124]. The changing face of prostitution alongside the internet has also become focus of many television documentaries and investigative journalism efforts. Channel 4 once followed the lives of two online sex workers operating from Mayfair in London, one of whom was an ex-private school

student. Both girls were utilising popular escorting website "<http://adultwork.com>." The emotional and cognitive labour that both sex workers invest in their online communities, engagement and promotion is highlighted through the working patterns of both girls. Indeed, one of the sex workers even comments on how emotionally invested the interactions with her clients are. Both their depictions of the industry were far-removed from violent or exclusively physical encounters.⁴

We may also assume that these different areas of sex work may also require special services, such as sexual surrogacy for the disabled, and highly emotional and cognitive experiences, which may require very limited physical/sexual stimulation. These highly versatile and diversified experiences and working patterns not only refute the idea that "all" sex-workers are powerless victims in their work relationships but also provide evidence for the diversified roles and services present in the adult industry, which go far beyond the simplistic view of client-sex worker relationship and actually highlight the complexities involved in sex-industry relationships. If we consider the many mediums that sex work is offered in, their work can be compared with that of therapists, digital content creators, bloggers and freelancers, counsellors, psychologists and even teachers. When we take a deeper look at some of the occupations that involve sex work, such as sexual surrogacy, it becomes somewhat impossible to suggest that a sex robot could be held in comparison. The complex work of Cheryl Greene that was portrayed in the 2012 film 'The Sessions,' portrays the emotional and cognitive dexterity needed to teach other humans about their bodies and intimacy. Her work is also documented in her book, 'An Intimate Life: Sex, Love, and My Journey as a Surrogate Partner' and was another insight into the realms of sex work which I strongly believe cannot be quantified. I assert that it is simply not true that the sex workers can be compared to sex robots at this time of writing. In fact, there have been many examples of sex workers offering relationship advice, coaching and sexuality education that goes beyond the capability of any current artificial intelligence (AI) functioning. Charlotte Rose and Lianne Young are two examples of online sex workers based in the UK, who have also

⁴ The documentary in question was first produced and broadcasted by Channel 4 in 2015, London England. It was then also featured on Netflix as a documentary called *High Class Call Girls*. It can still be viewed online at time of writing. ITV This Morning also reported on the documentary, and it features on their website: <https://www.itv.com/thismorning/articles/meet-the-high-class-call-girls-cookie-jane-emily-b>.

capitalised on their interpersonal skills outside of the adult industry. They offer relationship coaching, dating advice and sexuality education, clearly highlighting the many complex and cognitive skills that are needed in the sex industry. Rather than being the unemotional and disconnected place that abolitionists and radical feminists suggest, the sex industry is equally reliant on emotional intimacy as it is sexual gratification. For this reason, it is too reliant on individuals who are able to communicate and empathise to a high proficiency. AI will struggle to do this in the same way humans do.

By reducing the work of sex workers to that which constitutes only their physical functions and their flesh, it actually fails to validate and legitimise what defines a sex worker and how highly functional sex robots will need to be in order to truly replace them in all adult industry settings. The CASR draws “similarities” between sex workers and sex robots simply because they do not like the sex industry, it is nothing to do with the way real sex workers interact, conduct business and provide services for their clients. The truth is that in trying to “compare” sex workers and sex robots, one can see how far removed the two concepts are at this present time. Ironically, from learning about sex robots and sex workers alongside one another, it became apparent that the latter was irreplaceable in society through AI and robotics at this time. I conclude that it will be a very long and complicated process to truly build the ultimate sex robot, which is able to adequately function in the human adult industry. Working in the sex industry is incredibly multi-faceted, and not only would sex robots struggle to reciprocate their working patterns of human sex workers, they will have to be incredibly advanced to compete with the social and cognitive abilities of many of today’s sex workers. Whilst I will not deny that sex robots will appeal to organised sex work venues, and the desire to replace human sex workers with sex robots has already been widely reported [16], it will be hard to replace the individual branches of sex workers in the industry who are heavily reliant on advanced cognitive and emotional skills.

With that in mind, it is not just the CASR who have underestimated the occupational capacities of sex work. The analogy that CASR draws between sex workers and sex robots has been perpetuated in other narratives. There have been many schools of thought from within the sex robot academic sphere, which have sometimes fallen short regarding their considerations about the sex industry. Levy has argued in his book that sex robots could replace sex workers in the future [17, p. 177]. Whilst he has not stipulated exactly what setting these sex robots might work in, it is inconceivable that sex robots will

always be able to offer an alternative to human sex workers. Of course, sometimes this might be due to personal preference, but in the context of the digitalised sex industry, sex robots will not quite make the cut – especially for high-class escorts and sexual surrogacy treatments. It is worth noting that an inability to understand the complexities of sex work and the industry has also led to some in factual reports about sex robots. Yeoman and Mars famously claimed that sex robots would be an alternative to sex robots by providing an experience free from Sexually Transmitted Infections (STI’s) in Amsterdam’s Red Light District [18, p. 370]. However, there has been no such evidence as of yet to suggest that sex robots would not be free from STIs in organised sex work venues, especially if there were not regulated and standardised hygiene standards. Even with the adoption of such sanitary and health frameworks, there is no guarantee they will be enforced properly. If we look at the current examples of sex toys and sex-tech, the cleaning process for any sort of sex toy that comes into contact with bodily fluid becomes somewhat complicated. The abundance of male masturbators and strokers will testify for the rigorous cleaning protocol needed for any devices dealing with male ejaculation. It is obvious that closer attention to the sex industry and the framework of sex robots would call for a more thought-out and validated approach, not just from the CASR but also from people advocating for their use in the sex industry. It seems that when people speak about sex workers and sex robots, sometimes their considerations fall short of the actual reality of how these ideas or concepts might be applied in the context of the sex industry. Richardson fails to consider how much more organised, validated and mobilised sex workers have become in the context of the digitalised sex industry, and how this has diversified the services on offer. It is just simply untrue that sex workers can be compared to sex robots at this current time. Even in the distant future, sex robots may have a hard time replacing all forms of indirect and direct sex work and replicating the behaviour of sex workers.

2.3 Sexual objectification

Outside the confines of the CASR’s rhetoric, the issue of sexual objectification in sex robots has been considered widely; from opinion pieces in newspaper editorials to television series considering the implications of sex robots and AI. It is one of the most controversial issues that surround sex robots. By and large, the sexual objectification

argument against sex robots curtails to the view that sex that sex robots and sex dolls will embody patriarchal exploitation of the female body and reinforce negative gender stereotypes against women. It is not hard to see why the current examples of sex robots and dolls encompass the sexual objectification debate. Many sex dolls that are currently on the consumer market resemble exaggerated, pornographic representations of women. Many of the sex robots in the commercial sphere look like real-life Barbie dolls, with feminised aesthetics, blown-up unrealistic, breasts and tiny waists that look like silicone corsets. They are charismatic of the exaggerated, feminised beauty ideals that perpetuate sexual objectification in society. By encouraging the representation of unrealistic body proportions, sex robots meet at the intersection of body dysmorphia and sexual objectification in popular culture and society. Thus, the hyper-pornographic materialisation of sex robots and dolls provides uncomfortable viewing because they equate to representations of women in society that are more pornographic than they are realistic. To see the manifestation of female objectification in the design of sex robots reflects an ugly truth about our relationship with gender in culture. In a society that is starting to move away from the misogynistic shadows that Hugh Hefner's infamous Playboy Mansion once dwelled in – and where topless "Page Three Girls" are not even yesterday's news; sex robots are fuelling the pornographic representations of women in society that are now being frowned upon with disdain.

I will not deny there is significant weight in the arguments *vis-à-vis* sexual objectification, when the sex robots in question resemble pornographic representations of women that are not reflective of bodily norms. However, my issues against the CASR's objections and that of radical feminists are twofold. First, the prevalence of male sex robots is often ignored in the narratives of CASR and radical feminists. On the CASR's website, the issue of sexual objectification is curtailed to women and children alone. In other circles of criticism against sex robots, Deborah Orr has labelled sex robots dangerous to women and believes that they should only be available with the permission of a qualified medical professional. Orr argues that the sexual objectification in sex robots is only dangerous towards women:

The sex trade is huge, as is the use of sexually attractive women to sell absolutely anything possible. At last, the most egregious examples of such cynical and divisive marketing are being abandoned. Many men now understand what this kind of relentless cultural assault does to women and to relationships between women and men. This supposed technological advance runs counter to the progressive spirit. If the sale of sex

robots is to be allowed at all, it must be highly regulated [...] [Or] maybe out of respect for women, this technology should just be rejected. [19]

These viewpoints overwhelmingly ignore the adoption of male sex robots. For example, VICE journalist and "sex-pert," Karley Sciortino documented her experience with a male sex robot in an online video, which has been viewed over 45 million times. Indeed, the sex robot in question does seem to prescribe to some masculine aesthetic features and gender norms. The doll has toned, defined abs, and Sciortino describes the experience as: "absolutely indistinguishable from a real person, except I'm completely in-control" [20]. The male sex doll used by Sciortino and the corresponding documentation of the experience could easily be viewed as sexually objectifying to men and the perception of masculinity, which is an equally problematic epidemic as female objectification in society. Furthermore, the demand for male sex dolls has been considered on equal footing with that of their female counterparts, which suggests that there are equal numbers of female and male sex dolls being produced in some instances. This means that two forms of gender objectification should be considered. There are aspects of male masculinity, aesthetics and gender bias that are weaved into male sex dolls in the same way that hyperfeminised qualities have been reflected in female sex dolls and robots. However, the idea of objectifying males and male masculinity is rarely considered, despite its obvious prevalence. For instance, in the 2001 film *A.I.*, Jude Law plays the attractive and alluring male escort, who seduces women with his wit, charm and good looks. He is the "ideal," man – his character prescribing to chivalry, charm and playful humour. But he also had a darker side, which is blended with a cutting edge that defines him as mysterious and intriguing – the textbook "Bad Boy." It is hard to deny that Jude Law does not subscribe to the notion of masculinity. The issue of sexual objectification on females clearly needs to draw more focus to the sexual objectification of gender across the whole board, and not only that of females. The potential to embed stereotypical, gender-bias within sex robots has the potential to be harmful to both sexes. It is inescapable that some elements of the sexual objectification argument are true, but a truly feminist interpretation means that there must be a focus on both genders in the sexual objectification narratives, and not just females. Whilst sexual objectification and the commodification and perception of male masculinity, or "toxic masculinity," are two separate problems, the idea that sex robots may perpetuate both of them should certainly be explored in any debate about gender bias in sex robots. The fact that there is little consideration towards male

sex robots, or masculinity, in the anti-sex robot narratives ultimately means that the argument is falling short of representing gender equality. The fact that there is little consideration regarding sex robots or masculinity suggests that the arguments of the CASR are falling short of representing gender equality.

The second issue that I take with the opposition to sex robots on the basis of their appearance is that even such a stance does little to extinguish the moral qualms posed by sexual objectification in society as a whole. Whilst pornographic representations of women in sex dolls and sex robots may be seen as distasteful or obscene, for some people throughout the world these artefacts resemble mere fantasy and erotic stimulation. They cater for one of our most biological and primal needs. Whilst I will not disagree with some arguments that speak out against the harmful effects of pornography for viewers, and for some operating within the industry, it seems futile to campaign against sex robots because of their objectifying and pornographic principles, without trying to tackle the issue of objectification in actual pornography first. It seems rather illogical to propose campaigning against sex robots for resembling humans who look like people in the sex industry, without having a valid position on pornography itself. I do not deny that there are elements of the pornography industry that must be changed and reformed to improve the working conditions for pornography actors. The truth is that we cannot police the aesthetics of pornography in the same way that we cannot change our sexual desires. It seems that the issue that anti-sex robot activists take with sex robots is less about sex robots themselves, but more about the effects of capitalism on the adult industry and the pornography sector as a whole. Until the objectification arguments can be fully separated from the current debates about pornography and morality, there can be no clarity on some of our judgements against sex robots. We must accept that human sexual desire and imagination may sometimes meet at the intersection of sexual objectification and obscenity when developing sex robots, but this is not to say that they are morally repugnant to everyone in society nor harmful to society.

Another contention that I have against the CASR's stance on sexual objectification is that the basic proponents of the argument are totally reliant on humanistic, beauty ideals that compose contemporary heteronormative sexuality norms. Thus, the issue with sexual objectification in sex robots is *not the sex doll or sex robot as artefacts in their own right*, but the *form of which they are taking*. In present day, this form is regurgitating conventional norms and beauty ideals. However, the key

proponents of the sexual objectification argument become somewhat skewed, when one considers that sex robots may *not* perpetuate the same sexual, beauty standards that sexual objectification currently adheres to. In fact, sex robots may not resemble either gender or is evidence to suggest that sex robots will *always* resemble humans. There is a possibility that robots will one day take the form of more abstract, animalistic or mechanical and futuristic designs evokes the rejection of conventional humanistic ideals and sexualities. If sex robots are propelled and elevated by advancements in other robotic and animatronic fields that will be developing simultaneously, there will be numerous creative aesthetic possibilities for sex robots. There are already pockets of sex doll culture that highlights the potential for the industry to move beyond human conceptualisations of beauty and sexuality. The Barcelona sex doll brothel "LumiDolls" has advertised "anime" style sex dolls, which could be viewed as a step away from the traditional, feminised view of sex robots. There were also a whole host of male sex bots available, with equally exaggerated genitalia as the female sex dolls. In similar online rent-a-doll schemes, there have been instances of cartoon, fantasy, sci-fi style sex dolls that have been available for purchase. On one website, there were options for vampire style sex dolls and intersex dolls, some of which have add-on parts.⁵ These clearly show there are appetites for broader human sexualities in our society that can be catered for with sex dolls and sex robots.

Although these pockets of sex doll culture are not representative of the whole industry at time of writing, I am of the belief that the current sex robot industry does not do justice for the opportunity for human creativity and imagination through the development of sex robots. This is for two reasons that are also largely ignored in anti-sex robot rhetoric. First, we cannot really say that there is any *genuine* sex robot on the commercial market that is available to date. This means that the market is in the absolute earliest stages of development. Most of the sex "robots" currently available are not more than motorised dolls. They are not representative of the sex *robot* industry. Furthermore, even the current sex robot market is dominated by sex dolls. The world's leader in sex robots still has their business firmly rooted in the sex doll market, which speaks volumes for the sex robot industry. Despite their promotion of Harmony in the media, the tagline for RealDoll is still: "The World's finest Love Dolls."⁶ Whilst the sex doll and sex robot industry may

⁵ Just like sex toys, sex dolls are commercialised alongside fan fiction and fantasy themes. Lumidolls brothel even featured an animedoll sex doll in their brothel.

be intertwined now, sex robots in the future will have the potential to represent more abstract and imaginative forms, due to their ability to move, talk and interact with users. This means that it is inferable they will take more varied and diversified forms than current sex dolls, and the current examples of sex dolls should not erode the possibility of future sex robots. Furthermore, RealDoll clearly generates much more revenue from selling their sex dolls than it does with the development of counterpart “Harmony,” who is still only an animatronic head so far. For this reason, they must remain committed to crafting sex dolls which appeal to their current marketing audience and fit with the narrative of their marketing and advertising strategy. The other sex doll retailers will no doubt be limited under similar circumstances. When the advent of sex dolls and sex robots becomes more popular, there will be significantly more retailers and designs that will come to market. Even if human creativity runs short of ideas, the power of competition in capitalism will no doubt pedal the diversification and customisation of sex robots.

In academia, Trudy Barber has drawn focus to the future of sex robots and their aesthetics. She has proposed interesting counterarguments against the criminalisation of sex robots. Her recent considerations have defended sex robots based on their “empowering,” “liberating” and “hedonistic” qualities. She also believes they can reshape the way individuals can experiment and relate to their gender. In her 2018 article “Gendered Sextertainment,” Barber applies the term gender fluidity to the debate:

In the future there could also be design and development opportunities to create new concepts of gender including multiple and interchangeable body parts along with gender fluidity through AI, movement, and novel genital design. This context allows people to play with notions of gender as performance. [21, p. 54]

Barber goes on to consider the possibility for gender play through interchangeable body parts and intersex dolls. She considers the idea for sex robots to become gender neutral through their aesthetic form; they can be a “blank canvas” from which sexual expression can be painted upon. The idea that sex robots may have both sets of genitals, or interchangeable genitals, suggests that sex robots in the future may not be representative of humans at all, thereby bypassing the sexual objectification debate completely. Indeed, there are already some limited examples

of intersex dolls that have removable/changeable body parts. If sex robots can be representative of both genders in their design and sexual performance, to what extent can we consider them as sexually objectifying one gender to the point of genuine harm in society? If, as Barber suggests, people would use sex robots for gender play and gender fluidity, surely this removes some of the harm posed by sexual objectification. If sex robots are not built in the image of gendered humans, they will be unable to sexually objectify them. Sex robots would offer people the possibility to broaden the scope of their sexuality by experimenting with artificial sexualities. The ability of sex robots to expand the possibilities of human sexuality and act as a catalyst for creativity and expression is thus ignored in the sexual objectification debate. The breadth of human sexuality would be expanded by infinite possibilities. The remits of the CASR do not allow room for creative possibilities within sex robots that factor into the production of such sex robots. This seems a little short-sighted considering how broad and diverse the representation of human sexuality and attraction may be in robots.

2.4 Sex-technology

Sex-technology has never been publicly acknowledged by the CASR. There has been little attention drawn towards the developments in sex-technology on their website, and Richardson has remained quiet on the subject in all her publications on sex robots. Human sexuality is evolving alongside technology outside the boundaries of sex robots is an idea that has so far been ignored in anti-sex robot rhetoric. In my opinion, the developments in the sphere of sex-tech will be of incredible importance to the sex robot industry, not only from technological perspectives but also because sex-tech will increase the affluence of human sexuality and technology. This will normalise the occurrence of technology in human relationships and sex. In my opinion, sex-technology will be the “bridge” between sex robots and humans. Over time, we will become ever-more connected with sex and technology that one day sex with robots will be viewed as simply another step in our evolution alongside technology. McArthur is an academic who has considered the evolution of human sexuality alongside technology. He describes digisexuality as a sexuality that evolves from technology itself [12]. Rather than viewing sex robots as inherently dangerous to the future of human intimacy, McArthur views such a relationship as part of the

⁶ For more information on RealDoll and to view this tagline, which is still visible, visit their official website.

evolution of human sexuality. In order to conceptualise the future of human sexuality and the various avenues of cybersexuality which can evolve through technology, McArthur has coined the phrase “digisexuality” to describe people who are having intimate relationships with technology and AI. The “concept of digisexuality” is particularly interesting to consider alongside the progression of sex robots, as it provides a framework from which sexuality can be aligned alongside sex robots. It is much easier to view the possible future of sex robots with humans, if one views the occurrence of sex with robots as being emblematic of sexuality and technology evolving interchangeably.

Whilst digisexuality may certainly be used to conceptualise individuals seeking intimate relationships with sex robots, the rise of digisexuality is also embedded in the sex-tech industry, which runs parallel to the sex doll and sex robot market, respectively. McArthur’s conceptualisations highlight that the current developments in the sex robot industry are not occurring because of patriarchal exploitation, they are occurring because the breadth of human sexuality is diversifying alongside technology. In sex-tech, the idea of digisexuality can be evidenced through the increasing desire from some individuals to forge their sexualities through technological mediums. The prevalence of interactive dildos and male masturbators has increased over the years and the sex-tech industry is valued at over 6 billion US dollars. The prevalence of sex-tech also draws focus to the ways in which digisexuality may be used to provide therapy, well-being or self-care principles to individual sexuality. For example, there have been efforts by sex-tech start-up’s and Hackathons to consider the potential benefits for sex-technology and disabled sexuality. Sex-technology would have the power to provide physical and therapeutic stimulation for disabled individuals, as well as building platforms and communities via mobile communications and applications. There have even been efforts to merge sex-technology with disabled sexuality and the sex industry, by providing communities and applications which can act as mediums between sex workers, sex surrogates and disabled individuals [22]. There have also been many popular reviewing blogs for disabled individuals who promote the powers of sex-technology and sex toys.⁷ This clearly shows that digisexuality has the power to empower and liberate minority communities using sex-technology. Furthermore,

⁷ There are several blogs available online which discuss sex toys for disabled people, including bloggers who discuss sex toys for those with a range of mobility issues. One that comes to mind is Erika Lynae, and there are now incentives such as Handi.com that have been designed and developed by Andrew Gurza, a sex and disability activist.

the idea of digisexuality can be viewed in parallel to sex-technology and sex robots. Rather than viewing the adoption of sex robots in society as harmful to women and perpetuating patriarchal oppression on women through sexual objectification, the idea of digisexuality will embrace sex robots alongside the therapeutic contexts for sex-technology that are already in development.

The concept of digisexuality can also be fleshed out in the aesthetics of sex-technology and add another viewpoint to the sexual objectification debate. Indeed, some of the previous stipulations that were made by Barber and Devlin *vis-à-vis* the creative possibilities of sex-robots can also be considered alongside the developments in the sex-tech and sex toy industry. For example, there are many abstract designs of sex toys that reject conventional beauty standards. In fact, some of these designs do not resemble human genitalia. Included in these are the sale of Pokémon themed sex toys⁸ and fantasy-style sex toy designs.⁹ In Japanese sex toy designs, tentacles are often frequented and have even been reflected in some Japanese pornography videos.¹⁰ Even Fleshlight, the world’s most popular “pocket-pussy,” has incorporated more futuristic or “abstract” designs, including that of an “alien” design,¹¹ which can be used in conjunction with affiliated sex-technology.¹² Ingo Niernan comments on the similarities between the current sex toy industry and the future of sex-tech and sex robots:

The playful diversity in which the shapes and colors of vibrators, dildos and other sex toys have developed in recent years, no longer attempting to be naturalistic, could serve as an example of how mechanical robots might develop in the future [...] [21].

⁸ To view this range of sex toys, please visit: geekysextoys.com. However, there are several sex toy sellers which can be bought up with an easy Google search, using the keywords sex toys and Pokémon.

⁹ Fantasy designs tend to draw on imagery from fantasy-based fiction and media, such as dragons, creatures and mythical creatures. There are several retailers and sellers that supply fantasy-themed sex toys, some of which have become quite large, such as Bad Dragon (www.baddragon.com).

¹⁰ Japanese tentacle porn is an interesting and diverse phenomenon.

¹¹ For a full view of the toys available visit the official website Fleshlight.com. They have several designs, textures and ranges that are updated and discontinued throughout the year.

¹² The Fleshlight Launch was developed by KIROO. It was able to combine sex-tech with conventional Fleshlight strokers, some of which are available in more futuristic design patterns/sleeves.

Nierman draws parallels between the creative possibilities of sex toys with that of sex robots, thereby highlighting the idea that technology can break the boundaries of conventional, human sexuality. Moreover, Nierman's conceptions draw focus to the pockets of cyber and technofetishisms which have so far manifested themselves through technological means. The demand for abstract designs that reject conventional humans reflects there are individuals seeking to express their sexuality through imaginative and unique sex toys and sex-technology. These cyber-fetishes and cultures will no doubt surface in the sex robot industry. In fact, in an article by VICE journalist Sofia Barrett-Ibarria, she considered how the current trends in the sex toy industry will have the power to shape the future through empowering people to diversify and expand their sexual expression and pleasure.

[...] even for those who do identify on the gender binary, genderfluid-friendly toys can open up new worlds of possibilities around sexual expression [...] By removing gender, folk are given permission to explore sex toys with less limitations, and that can lead to people making discoveries and choices they previously wouldn't have considered [...] Take for example the humble bullet vibrator. For so many years, bullet vibes have been marketed as a woman's toy for use on the clitoris, but you needn't be a woman or have a clitoris to use one. They're [also] great for stimulating the perineum, the frenulum, inguinal canals, and nipples [23].

The bedroom is a private sphere where diversity, fluidity and expression can play out away from private eyes or judgmental concern. Sex toys have become tools from which people can express their fantasies, even if they divert from traditional or conventional human sexuality. As Barrett reminds us, sex toys have been alluring "even if you don't identify as gender binary or gender-fluid" [23]. Whatever side one may stand on the debate of gender fluidity or binary sexuality, there are many opportunities for individuals to experience sexuality in new ways that could be alluring for all. By opening up the idea that gender-play may become more realistic through sex-technology, one could offer new possibilities for individuals to experience pleasure through the eyes of another gender. This could provide people with the tools to understand and feel sexuality in new ways or improve their own love-making abilities by experiencing what sex feels like through the "eyes" of another. There is not a person in the planet who would not be allured or intrigued by the power to feel sex or masturbation through the eyes of an oppositional gender. The ability to experience your own love-making skills as another person would most certainly be appealing, too. Whoever designs the technology that allows one to experience sexual pleasure through the eyes of

another will no doubt be a millionaire, and this technology will be a sex-technology. If there are so many limitless possibilities in the not-so-distant "cousin" of sex robots, it is futile to suggest that we totally criminalise any sort of technology which may broaden the scope of human sexuality, unless there is absolute concrete evidence that the technology is dangerous.

Virtual reality is also a huge part of sex-technology. The powers for VR and sexuality were even recently explored in a recent *Black Mirror* episode, where two friends become involved in a relationship through virtual reality gaming. Whilst both players are (cis)male, one player embodies a female avatar during gameplay. After one evening gaming session, the players engage in virtual sex, even though they are both supposedly heteronormative males in heterosexual relationships. This results in one of the players questioning their sexuality, and their attraction to their friend in the virtual world. Subsequently, the rest of the episode explores the difficulties and dramas that follow both players as they grapple with their sexuality in traditional *Black Mirror* style. However, the episode certainly draws focus to the new possibilities that will occur for sexual expression through sex-technology. Interestingly, the idea of sexuality expression and gender fluidity in technology had already been listed under the umbrella of "computer cross-dressing," which was the name coined by Sandy Stone in 1990 to conceptualise the power for identity fluidity in cyberspace [24, p. 117]. The idea of computer-cross dressing has also been confirmed by some of Barber's own research. Whilst Barber has discussed the future possibilities of sex robots and the idea of gender fluidity and sexual expression, her considerations are embedded in her research around sex-technology. As well as having a voice in the sex robot debate, Barber's PHD research project was one of the first research projects in the world to seriously consider the possibility to explore gender and sexuality through technology. She found that people were already experimenting with the idea that they could "become" other people and experience pleasure in unique ways through technology and cyberspace, long before the advent of VR. She recorded some of the earliest user experiences of individuals using sex-technology to play with gender fluidity. In the current scope of sex-technology, immersive entertainment is allowing for interactive sex games in virtual reality, and these sorts of experiences and games may become more common as the industry advances. Barber's PHD research findings are being amplified alongside the advancements in sex-technology and this will no doubt continue to become more prevalent, as VR and sex-tech become more popular in the consumer sphere. Whatever side one may stand on the idea of

gender fluidity and non-binary expression, it cannot be denied that the possibilities for people to express their sexuality in virtual or augmented realities, or using immersive entertainment, will certainly be alluring for many people. The idea that one may be able to experience sex in a different way is clearly going to appeal to people who may not be interested in any form of gender expression outside of sexual frameworks. It may be used for couples to experiment with role-play or power dynamics, or for individuals to improve their techniques in the bedroom. There is no doubt that sex-tech will fall into an “endless well of creativity when catalysing love” [21].

Some critics have commented on the idea that sex robots may not be so different from sex toys. This point of view has largely focused on the commodification of male genitalia in sex toys being likened to that of sexual objectification in fully fledged sex robots. For example, the world’s best-selling dildo and vibrator, “the Ramping Rabbit,” clearly accentuates the male penis in the design, albeit with a few alterations and rotating additions. Whilst one can acknowledge there are clear differences between the embodiment and design of sex robots and sex toys, the sexual organ of males is symbolic of the current sex toy industry, and it is not always possible to separate the embodied male from the inanimate vibrator. In Chuck Palahniuk’s 2014 novel *Beautiful You*, he describes a dystopian world where women have traded in their husbands for extravagant vibrators and become obsessed with pertaining the perfect orgasm. The commodification of male genitalia in sex toys clearly draws parallels with the conceptual features of the sexual objectification debate used by the CASR. Furthermore, the arguments that surround the pornographic embodiment of females can also be likened to the enlarged representation of male genitalia that constitute large volumes of sex toy sales. There are many sex toys for women that go beyond the average male size in their design, thereby aligning with the exaggerated representations of female genitalia in sex robots. Whilst there has been no such evidence as of yet which proves there are negative or dangerous side effects from sexual objectification in sex robots, the objectification of males in female-centric sex toys has been quantified in sociological and psychological research and has suggested they can be limiting in some contexts. In a 2016 study measuring the impact of a couple’s vibrator on men’s perceptions of their sexual performance and their partners pleasure, they found that men did harness anxiety about sexual performance when compared to that of a vibrator [25]. As the report noted: “As men may experience this performance pressure, their partners’ reactions to sexual stimuli are very important for them because they serve as a marker

of their sexual skill” [25]. In 2015, Tracy Clark-Flory described her husband’s reaction to her vibrator in an online article, acknowledging that he had defeatedly admitted: “I could never compete with that” [26]. Despite these concerns and experiments that nod towards body dysphoria and psychological strain, it has been widely accepted that sex toys are beneficial to society at large. They have diversified in the consumer sphere two-fold. What once started as a “naughty secret” has spawned into an everyday object, available as a budget-buy or luxurious, investment. Lovehoney published a sex toy consensus in 2017, using a statistical analysis of their own sales. They confirmed that people in the UK were more likely to own a sex toy than a pet cat.¹³ Sex toys are undoubtedly popular and generate billions of pounds each year for the global economy, but there are no campaign groups seeking to ban them, or imploring society to consider the negative effects that stem from their use, even though they have been proved possible by research. In the 2018 article “Sex toys, sex dolls, sex robots: Our under-researched bed-fellows,” researchers Nicola Doring and S. Polsch, they touch on the idea of sex toys and sex dolls and their use in society, concluding that “In [the] literature, some negative outcomes of sex toy use are discussed: e.g. negative impact on self-image because of the partner’s sex toy use. However, research also identifies greater sexual pleasure, sexual satisfaction and safer sex as positive effects of sex toy use, moreover far outweighing the negative effects” [27, p. 53]. It seems that many of the issues explored in the criminalisation of sex robots, such as objectification, are also explored in the remits of sex-technology. However, it appears that they have been overcome a long time ago.

3 Conclusion

In conclusion, the arguments against sex robots are heavily entwined within the moral discussions about the sex industry and the ethical dilemmas which have evolved from sex work over the years. Sex robots should not be a platform for which the moral and ethical dilemmas of the adult industry can be debated. They deserve their own debate in their own ethical and moral right. Whilst I will commend the CASR for providing a strong opposition against sex robots and providing a platform for some thought-provoking debate, I would

¹³ This was published in the 2017 LoveHoney.com sex toy consensus, which is available on their website.

advise caution from criminalising sex robots on the basis of their objections. Moreover, I would certainly prescribe caution when advocating against sex robots without any sort of evidence for such claims. The idea that sex robots perpetuate violence is largely inherited from the sex industry, and as this article has explained, there are too many variations of sex work for one to consider all sex work to be violent. The amplified regurgitation of abolitionist rhetoric is not justified in their considerations towards sex workers; therefore, it is not convincing when one attempts to apply the same framework to the sex robot argument. In my opinion, the CASR has a problem with capitalism more so than sex robots. After all, capitalism is the driving force behind the evils of the sex industry – and it is capitalism which fuels the intersectional and structural force of sexual objectification in society. These seem to be the propositions which Kathleen and the CASR take most issue with. As a feminist myself, I admit that the fight is not over for some women around the world. Alas, I do not believe that those battles belong in the realm of sex robots. Instead, I would rather focus my attention elsewhere.

What this report has also demonstrated is that it is not just the CASR who “underestimate” sex workers or fail to account for realistic representations of sex work, when considering the future possibilities of sex robots. It is obvious from the current literature surrounding sex robots and sex workers that more research is needed to consider the future possibilities of sex robots in the sex industry, and this research must strive to include the thoughts and opinions of sex workers currently operating in the adult industry. The shortfalls of failing to understand the parameters of sex work have already been accentuated through false information about sex robots and STIs. If we fail to understand the complexities of sex workers, there will be little hope of being able to integrate sex robots within the current adult industry successfully. To build the ultimate sex robot which can compete with online escorts, or function accordingly within a brothel, would require serious sex workers in sex robot narratives, we also underestimate the complexities of love, lust, attraction and sexuality. They are not alone in this mistake though. Many people are not adding enough value to the imperfections that can be considered attractive, erotic, alluring – desirable – loveable. Sex workers are not machines, nor can they be likened to them.

There are many recommendations that can be born from this article for the future of sex robots, namely that more empirical research is needed to consider how sex robots can be safely deployed in the sex industry. As such, the clouded judgements and confusion of anti-sex

robot rhetoric have so far misled current sex robot policy, such as the instance of the Texas brothel. There must also be some serious thought about the moral and ethical implications from using sex robots and/or dolls in brothels. In a rush to consider how sex robots might be better placed, it is evident that there have been short-sighted evaluations or recommendations made about sex robots, such as how hygienic or safe they might be in the context of the adult industry. However, I do believe sex robots can shine some light on understanding the dark and misunderstood world of sex work and the adult industry, providing that these debates can move beyond puritanical and sex abolitionist contentions.

References

- [1] A. Lipsett, “‘Big Brothel’ Research Seriously Flawed,” *The Guardian*, 2008 [online]. Available at: <https://www.theguardian.com/education/2008/oct/03/research.women> [Accessed on 1st Oct. 2019].
- [2] K. Banyard, *Pimp State: Sex, Money, and the Future of Equality*, 1st edition, Faber & Faber, London, 2016.
- [3] K. Richardson, “Sex Robots, Slavery and the Prostituted,” *Annual Love and Sex with Robots Conference*, 2017, Presentation.
- [4] J. Doezeema, *Sex Slaves and Discourse Masters: The Construction of Trafficking*, 1st edition, London: Zed Books, 2010.
- [5] R. Weitzer, “Resistance to sex work stigma,” *Sexualities*, vol. 21, no. 5–6, pp. 729, 2017, DOI: 10.1177/1363460716684509.
- [6] YouTube, “Houston Protesting Opening of a Brothel Featuring Sex Robots,” *The View*, 2018 [video]. Available at: https://www.youtube.com/watch?v=3xtg7FTRjCE&feature=youtu.be&fbclid=IwAR2xIUgBX4Lx-VG_yKK2oIYYbbj74l2y3WgJr7LHy2F0j-002ZkRO-3LFUQ [Accessed on 1st Oct. 2019].
- [7] F. Martin, “Is This the End for A Sex Robot Brothel in Houston?” *Houston Public Media*, 2018. Available at: <https://www.houstonpublicmedia.org/articles/news/in-depth/2018/10/17/308292/is-this-the-end-for-a-sex-robot-brothel-in-houston/> [Accessed on 1st Oct. 2019].
- [8] K. Richardson, “The asymmetrical ‘relationship’: parallels between prostitution and the development of sex robots,” *ACM SIGCAS Computers and Society*, vol. 45, no. 3, pp. 290–293, 2016, DOI: 10.1145/2874239.2874281.
- [9] M. Wolfe-Robinson, “Sheffield strip club keeps license despite opposition by feminist coalition,” *The Guardian*, 2019. Available at: <https://www.theguardian.com/uk-news/2019/sep/17/sheffield-strip-club-keeps-licence-despite-opposition-by-feminist-coalition> [Accessed on 1st Oct. 2019].
- [10] BBC News, “Strip club license renewed despite complaints,” 2019 [online]. Available at: <https://www.bbc.com/news/uk-england-south-yorkshire-49719199> [Accessed on 1st Oct. 2019].
- [11] BBC News, “Dancers march to defend strip club,” 2019. Available at: <https://www.bbc.com/news/uk-england-south-yorkshire-48599542> [Accessed on 1st Oct. 2019].
- [12] J. Danaher and N. McArthur, *Robot Sex: Social and Ethical Implications*, 1st edition, MIT Press, 2017.

- [13] T. Frymorgen, "Sex robot sent for repairs after being molested at tech fair," *BBC News*, 2017. Available at: <https://www.bbc.co.uk/bbcthree/article/610ec648-b348-423a-bd3c-04dc701b2985>.
- [14] L. Pressly, "Inside Europe's sexcam capital," *BBC News*, 2017. Available at: <https://www.bbc.co.uk/news/magazine-40829230> [Accessed on 1st Oct. 2019].
- [15] V. M. Henry and P. Farvid, "'Always hot, always live:' Computer-mediated sex work in the era of 'camming,'" *Women's Studies Journal*, vol. 31, no. 2, pp. 113–128, 2017.
- [16] L. Dunphy, "UK's first SEX DOLL brothel owner claims real life escorts are 'scared' he will put them out of business," *The Mirror*, 2017 [online]. Available at: <https://www.mirror.co.uk/news/uk-news/uks-first-sex-doll-brothel-11906928> [Accessed on 1st Oct. 2019].
- [17] D. Levy, *Love and Sex with Robots*, Duckworth Overlook, London, 2007.
- [18] I. Yeoman and M. Mars, "Robots, men, and sex tourism," *Futures*, vol. 44, no. 4, pp. 365–371, 2012, DOI: 10.1016/j.futures.2011.11.004.
- [19] D. Orr, "At last, a cure for feminism: sex robots," *The Guardian*, 2016. Available at: <https://www.theguardian.com/commentisfree/2016/jun/10/feminism-sex-robots-women-technology-objectify> [Accessed on 1st Oct. 2019].
- [20] YouTube, *Making the World's First Male Sex Doll: Slutever*, 2016 [video]. Available at: <https://www.youtube.com/watch?v=GKFHZuCvvS4> [Accessed 1st Oct. 2019].
- [21] I. Gevers, D. Kerckhoffs, K. Kuitenbrouwer, L. Lobo-Guerrero, M. Smits, and I. van der Tuin, *Robot Love: Can we learn from robots about love? (1st edition)*, Houten: Terra Lannoo, 2018.
- [22] B. Cole, "Why we're producing Australia's first Sextech Hackathon," [online] *FutureofSex*, 2017. Available at: <https://blog.futureofsex.org/why-im-producing-australia-s-first-sextech-hackathon-cb7e6efd32e9> [Accessed on 1st Oct. 2019].
- [23] S. Barrett-Ibarria, "Why the Future of Sex Toys is Non-Binary," [online] *VICE*, 2019. Available at: https://www.vice.com/en_au/article/ywqnk7/why-the-future-of-sex-toys-is-non-binary-sexrated2018 [Accessed on 1st Oct. 2019].
- [24] S. Hesse-Biber, *The Handbook of Emergent Technologies in Social Research*, Oxford: Oxford University Press, 2017.
- [25] E. D. Watson, L. J. Séguin, R. R. Milhausen, and S. H. Murray, "The Impact of a Couple's vibrator on men's perceptions of their own and their Partner's Sexual Pleasure and Satisfaction," *Men and Masculinities*, vol. 19, no. 4, pp. 370–383, 2016, DOI: 10.1177/1097184X15595082.
- [26] T. Flory, "A vibrator is not a substitute for a partner. But how do you tell men that?," *The Guardian*, 2015 [online]. Available at: <https://www.theguardian.com/commentisfree/2015/mar/21/vibrator-not-a-substitute-for-a-man> [Accessed on 1st Oct. 2019].
- [27] N. Döring and S. Pöschl, "Sex Toys, Sex Dolls, Sex Robots: Our under-researched bed-fellows," *Sexologies*, vol. 27, no. 3, pp. e51–e55, 2018.