

A Plea for Integrated Empirical and Philosophical Research on the Impacts of Feminised AI Workers

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Abstract

Feminist philosophers have long emphasised the various ways that women’s oppression takes a variety of forms depending on complex combinations of factors. These include women’s objectification, dehumanisation, and unjust gendered divisions of labour caused in part by sexist ideologies regarding women’s social role. This paper argues that feminised artificial intelligence (feminised AI) poses new and important challenges to these perennial feminist philosophical issues. Despite the recent surge in theoretical and empirical attention paid to the ethics of AI in general, a strikingly small portion of this work has considered the impact of feminised AI in particular. Our aim is thus to draw attention to the new and pressing ethical challenges posed by feminised AI. Doing so is crucial not just to understanding the impact of these increasingly ubiquitous technologies, but also to our understanding of longstanding feminist philosophical concerns and efforts to ameliorate them.

1 Introduction

Feminist philosophers have long emphasised the ways that women’s oppression takes different forms depending on complex combinations of factors. These include women’s objectification (Langton, 2009; Nussbaum, 1995)—which may contribute to their dehumanisation (Mikkola, 2016)—and unjust gendered divisions of labour stemming from sexist ideologies regarding women’s social role, especially in care-giving domains (Kittay, 2019). We argue that feminised artificial intelligence (henceforth “feminised AI”)—e.g., Apple’s Siri, Amazon’s Alexa, Microsoft’s Cortana, and Google’s Home—poses new and important challenges to these perennial feminist philosophical issues. In particular, we argue for the following two claims—the first empirical and the second theoretical:

1. Feminising AI poses the risks of dehumanising women workers and reinforcing a sexist division of labour.
2. Feminising AI introduces important implications for existing conceptual paradigms regarding these issues.

Strikingly little attention has been paid to *feminised* AI in particular.¹ This is despite longstanding feminist concerns about the relation between gender and technology, broadly construed (Wajcman, 2010), as well as the recent surge in theoretical and empirical attention paid to the ethics of AI in general. Yet, consideration of the new ethical challenges posed by feminised AI is crucial not just to understanding the impact of these increasingly ubiquitous technologies, but also to our understanding of longstanding feminist philosophical concerns and efforts to ameliorate them. Indeed, as we will show, insofar as the risks posed by feminised AI are real, they have important implications for existing conceptual paradigms in feminist philosophy. Mitigating these risks requires a closer theoretical and empirical examination of the impacts of feminised AI. In turn, this work amplifies our understanding of the nature and scope of women’s oppression in an increasingly technologically mediated world.

The paper proceeds as follows. We start in Section 2 by reviewing the gendered social dynamics that AIs are becoming increasingly integrated into. Then, in Section 3 we argue that feminised AIs pose new challenges to these longstanding feminist philosophical issues. Section 4 concludes by discussing how this nuanced perspective on feminised AI helps us better understand the scope of women’s oppression, and in doing so, counteract the perpetuation of unjust gender stereotypes and social structures.

2 Context

Feminist philosophical discussions of women’s oppression have emphasised the harms of women’s objectification and gendered divisions of labour. Consider, first, women’s objectification. While the bounds of objectification may be difficult to specify (Bauer, 2015), Nussbaum (1995) proposes several different forms that objectification can take.² These include:

1. Instrumentality: Treating a person as a tool for one’s purposes.
2. Denial of autonomy: Treating someone as though they lack the capacity to act in accordance with their own reasons and desires.
3. Inertness: Treating someone as though they lack agency.
4. Fungibility: Treating someone as fundamentally interchangeable.
5. Violability: Treating someone as having boundaries that are permissibly violated.
6. Ownership: Treating someone as one’s property.

¹A notable exception is Strengers and Kennedy (2020), who provide a helpful analysis of ways that feminised AIs are designed to meet, and thereby perpetuate, idealised expectations of women and wives, in keeping with stereotypes of the 1950s American housewife.

²See Langton (2009) for additional forms of objectification that arise especially in the context of pornography.

7. Denial of subjectivity: Treating someone as having feelings and thoughts that need not be considered.

Objectification can thus manifest in different ways, including by mutually reinforcing one another (Bartky, 1990; Bordo, 1993). For instance, women may be expected to regularly demonstrate traits such as submissiveness (*denial of autonomy*), which in turn reinforces views about their permissible *violability* and even dehumanisation *vis-à-vis* the denial of these basic human traits (MacKinnon, 1987).

As these examples demonstrate, gender stereotypes are both (1) continuously reproduced and reinforced through human action within communities (Butler 1990; Ochs 1992) and (2) prescriptive (Bicchieri & McNally, 2018; Prentice & Carranza, 2002). For example, women in the U.S. are stereotypically expected to exhibit traits such as warmth and kindness, politeness, attentiveness, cheerfulness, and cooperativeness, but they are not expected to exhibit stereotypically masculine traits, such as having a strong personality and self esteem, or a tendency to defend one’s beliefs (Prentice & Carranza, 2002). This, combined with the real risk of backlash for failure to conform to gender norms, means that expectations that women exhibit certain traits and adhere to gender norms and stereotypes may thus reinforce the tendency for women to do so.³

Gender stereotypes associated with femininity manifest in both public behaviours and private domains. For instance, in the case of human women, ongoing work on gender inequality in labour markets indicates that women are relatively more prone to take on additional, often menial work-related tasks, as compared with their male colleagues (Babcock, Recalde, & Vesterlund, 2017; Babcock, Recalde, Vesterlund, & Weingart, 2017; De Pater, Van Vianen, & Bechtoldt, 2010). Moreover, women, as compared with men, have higher rates of employment in people- and service-oriented work, and are expected to have greater workplace flexibility—plausibly due to their increased responsibility to perform childcare and other domestic duties for which they are typically uncompensated (Cortes & Pan, 2018).⁴

In the following section, we show how feminised AI fit into and challenge these existing paradigms.

3 Feminised AI: New Challenges

Feminised AIs often reproduce gender stereotypes commonly associated with women. As Gebru (2020) points out, Siri and Alexa are designed to “obey a customer’s every whim” and therefore adhere to stereotypical gender roles for women, including those associated with helping, serving, and caring, as described above (Chambers, 2021). Indeed, feminised AI reinforce what Manne

³See, for instance, Amanatullah and Morris (2010) for helpful discussion of women’s legitimate fear of backlash in salary negotiation contexts.

⁴See Federici’s (1975) canonical argument for adopting a political perspective on the importance of compensation for women’s domestic labour.

(2017) has described as the tendency for women to be viewed as “human givers” as opposed to human *beings*: givers whose primary role is to provide (for men) a slew of valuable moral goods, including “attention, care, sympathy, respect, admiration, and nurturing” (22). A human giver’s agency, autonomy, and other distinctly human traits are recognised contingent on their providing these goods, for Manne. Similarly, as we discuss below, feminised AIs are endowed with enough capabilities to provide their users with the sense that they have sufficient personality to engage and help the user satisfy their ends, but not so much as to be perceived as driving the interaction or resulting in desires or behaviours that conflict with the users’ aims. Feminised AIs thus reinforce a harmful link between femininity and giving.

For example, a commercial for Amazon’s Echo depicts a new dad tasked with caring for his baby by himself for the first time. A feminine-voiced Echo issues helpful reminders, left by the mom, to aid him: He is reminded that “Laura says the teething ring is in the freezer” just in time to soothe the crying and uncomfortable baby, that “Laura has scheduled a play date for 3pm,” and even that “Laura loves you and you’re doing a good job” (Amazon, 2019). In this case, the stereotypically feminine tasks of remembering essential childcare-related information and providing emotional support to the family have been successfully offloaded onto the feminised AI.⁵

Below, we consider the ethical risks posed by feminised AIs to perennial feminist philosophical concerns regarding objectification and the gendered division of labour described above, as well as the challenges these risks pose to existing accounts.

3.1 Objectifying Women

The increased integration of feminised AIs, which are more permissibly treated as objects because they are non-sentient, risks normalising the objectification of feminine agents more generally. In fact, feminised AIs possess key features of objectified agents by design: they are instrumentalised for specific purposes at the user’s discretion; they are endowed with enough personality to provide their users with the sense that they have sufficient autonomy, agency, and subjectivity so as to be engaging, but not so much as to drive the interaction in ways contrary to the user’s wishes;⁶ they are interchangeable with one another (barring differences in design features that could in principle be changed); they lack personal boundaries; and they are bought, owned, and enabled or disabled at users’ discretion.

One might challenge the notion that feminised AIs can themselves be objectified because objectification involves treating as an object that which is not an object (i.e., human beings) (Nussbaum, 1995), and feminised AIs do not rise to

⁵See also Amazon’s Baby Stats in Alexa’s Skills that keeps track of baby-related information (e.g., feeding times) and issues reminders.

⁶See, for instance, results from recent studies by Panfili et al. (2021), which suggest that users especially dislike being interrupted by AIs.

the level of human non-object, in the relevant sense.⁷ Even if feminised AIs currently lack certain important features required for full-blown objectification to which humans are susceptible, they are designed to have human-like qualities so as to engage users similarly to human agents and be capable of performing duties that are typically expected of human women in care-giving, companion-related, and other intimate-relationship domains. Feminised AIs therefore arguably rise beyond the level of mere objects, at least with respect to users' expectations and engagement.

Thus, irrespective of whether feminised AIs are apt for full-blown objectification, the ways in which they are designed and used enables the association of femininity with permissible treatment as an object. This compounding connection introduces new, widespread opportunities for the dehumanisation of feminine agents more generally, which in turn has serious implications for feminist theories of objectification.

Some have argued that objectifying someone necessarily involves dehumanising them insofar as the process of objectification just is a process of denying someone's fundamentally human characteristics (Langton, 2009; MacKinnon, 1987; Mikkola, 2016). By contrast, Manne (2017) has suggested that many of the most vicious forms of women's oppression require seeing women as humans whose autonomy, agency, and other fundamentally human traits are recognised only insofar as they perform the essential care-related duties expected of them. Any expression of women's humanity that does not conform to these expectations regarding the performance of care-related duties poses what Manne calls a "psychic threat" that needs to be manipulated, humiliated, or suppressed (163). In this way, and much like gender stereotypes whose descriptive and prescriptive elements mutually reinforce one another, the restriction of women's humanity to their role as givers and efforts to manipulate, control, or suppress expressions of women's humanity that do not conform to this role may represent mutually reinforcing tendencies in misogynist societies such as ours.

Regardless of whether human women are necessarily or routinely dehumanised as part of their objectification, the ubiquitous integration of feminised AIs poses serious, additional risks. On the one hand, feminised AIs perpetuate a tendency to view women as human *givers* as opposed to human *beings* insofar as they are endowed with sufficient capabilities to provide their users with the sense that they have at least minimal humanity required to play the social role expected of feminine agents. On the other hand, feminised AIs make ubiquitous the link between femininity, permissible objectification, and lack of fundamentally human traits, or non-humanness, by virtue of the fact that they are not human. As a result, even if oppressed women need not necessarily also be dehumanised, this new form of objectification that reinforces associations between a lack of human traits and femininity is poised to normalise the dehumanisation of feminine agents, including human women, on a much larger scale. This means that theories of objectification that accommodate this dual threat of feminised AIs both to the dehumanising objectification of women and forms of objecti-

⁷Thanks to an anonymous reviewer for raising this point.

fiction that weaponizes women’s humanity may be better poised to explain the oppression of women moving forward, particularly in social situations into which feminised AIs are increasingly integrated. Understanding exactly which features of feminised AIs and contexts of use most exacerbate this connection highlights a crucial task for empirical research.

3.2 Reinforcing Sexist Gendered Labour Norms

Routinely offloading stereotypically feminine tasks onto feminised AIs risks reinforcing sexist narratives according to which (1) saddling feminine (as opposed to masculine) agents with feminine tasks is acceptable, and (2) feminine agents are perceived as relatively better than masculine agents at performing such tasks. This is so for at least two reasons.

First, gender stereotypes are produced and reinforced throughout various social interactions, as discussed above. It should therefore be expected that creating additional opportunities to practice offloading feminine tasks onto feminine agents will further reinforce gender stereotypes according to which task allocation along stereotypically gendered lines is expected and permissible, and the possession of stereotypical traits is normatively reinforced (Loideain & Adams, 2020; Woods, 2018).

Second, increased reliance on feminised AI to perform stereotypically feminine tasks is likely to de-skill users with respect to the abilities needed to perform those tasks. De-skilling results when we offload tasks onto technologies, thereby missing out on the opportunity to practice the skills required to perform such tasks (Vallor, 2015). In the case of feminised AI, men and women may often rely, and be expected to rely, on feminised AIs in different ways. The risk of de-skilling may therefore apply to some individuals (i.e., men) more than others. Yet, women are likely to be especially harmed by the de-skilling of men when they become unfairly burdened with the task of performing the tasks for which the relevant skills are required.

For example, recall that in the Amazon Echo commercial described above Echo’s feminisation does *not* decrease the cognitive and emotional labour for the new mom: she still has to arrange play dates, set reminders, and provide emotional support. By contrast, the new dad offloads the tasks of knowing and remembering the relevant care-giving information in the first place—something he is portrayed as having done with his partner and now continues to do with his AI helper. Feminised AI may thus even contribute to dynamics that fuel and perpetuate employed women’s disproportionate tendency to experience a double burden of labour outside and within the home—the so-called second shift (Hochschild & Machung, 2012). Moreover, de-skilling with respect to cognitive-emotional skills required to perform care-giving and other traditionally feminine duties is especially problematic, given the fundamental importance of care for all humans (Kittay, 2019) and the well-documented need to hone such skills through training over time (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Taylor, Oberle, Durlak, & Weissberg, 2017).

These risks posed by feminised AI also have serious implications for existing

feminist philosophical accounts of women’s exploitation in public and private labour domains. Traditionally, feminist philosophers have rightly focused on the need to protect the rights and interests of human women in labour contexts, where these moral agents merit full legal, institutional, and moral protections. Discussions of the harms to women workers of the public-private division in capitalist societies, which many suggest deny women their full autonomy and human rights, provide a prominent example (Brenner, 2006; A. Ferguson, 1989, 1991; Okin, 1989).

While human women still deserve the focus of our concern, if we do not study the ways in which integrating feminised agents that lack this full normative status can change social dynamics, we may be missing out on distinctive and important mechanisms of harm for human women. If the empirical claim made above turns out to be correct—namely, that feminised AI risks contributing to objectification and sexist gendered labour norms—it is crucial that feminist theorists work to develop the legal, institutional, and moral frameworks required to make sense of feminised AIs.

4 Conclusion

We have argued that the widespread use of feminised AI poses new challenges to longstanding feminist philosophical concerns. In particular, the risks of (1) exacerbating and complicating the objectification of feminine agents and (2) perpetuating a sexist gendered division of labour pose challenges for existing conceptual paradigms. We therefore maintained that those paradigms that are able to accommodate the risks of an increasingly technologically mediated and gendered labour landscape will be better positioned to respond to the ethical and political realities in these domains moving forward.

At the same time, these issues are highly complex and require careful theoretical, as well as empirical investigation. As cross-disciplinary research on related issues—such as pornography (C. J. Ferguson & Hartley, 2020; Oddone-Paolucci, Genuis, & Violato, 2017) and violent video games (Anderson & Bushman, 2001; Kühn et al., 2019)—indicates, understanding the psychological impact of technology, as well as the complex dynamics of gender stereotypes and oppression is complex.

It is crucial, therefore, that investigations into the ethical implications of feminised AIs occur throughout the process of developing and integrating these technologies. Because we can expect AI of various sorts to occupy an increasingly important role in society, developing such technology deliberately and responsibly offers a powerful means of combating and dismantling systems of gender oppression.⁸

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