Neo-robophilia

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Introduction

'Neo-robophilia' is a speculative design project. Differing from traditional design, widely known as a problem-solving process, speculative design, coined by Dunne and Fiona Raby, is to identify and understand problems in depth. Taking a current issue, speculative design does not seek to predict how the future will be precisely but presents creative alternatives about a possible future to raise questions (Dunne & Raby, 2013, p. 2). The process invites audiences to view emerging problems from various perspectives. Therefore, the purpose of Neo-robophilia is to encourage audiences to think about their desirable future. It presents imagined artifacts from a dystopian scenario based on research about social and technological intersections. Neo-Ropbophilia is a development based on increasing home and companion robots. In the scenario, robot nannies alleviate a shortage of childcare and trace the subsequent consequences of humans with humanoid attachment and posit a codependent relationship in their adult years. The project presents five artifacts employed in human-robot sex to bring insight into this imagined arena.

Background

1.1 Rise of Home Robots

The rise of home robots has become an almost guaranteed future. An increasing assortment of robots across all touchpoints embed into human life. Between 2019 and 2020, global sales of domestic and personal robots increased by 34% (International Federation of Robotics, 2022). Samsung and Amazon have ventured into increasingly personal robots donning them with names such as "Bot-handy" and "Astro." Using terms such as "seamless" and "natural" to lend them a human-like interaction style, they mimic friends, pets, and friendlies in the family (Tritschler, 2021). Family or children embracing droids in an advertisement is becoming more common and points at the intention to fashion robots with an emotional appeal to consumers/humans. Japanese company Groove X released "Lovot," with no functionality other than receiving human affection by following human owners, begging them for cuddles. Groove X's CEO reasons that Lovot gives users emotional fulfillment by replicating attachment where robots are "satisfied" with human interaction (Saunders, 2019). The industry is ostensibly interested in building emotional relationships between humans and machines, forging them as life companions through emotional mimicry.

1.2 Childcare Crisis

At the same time, there is a demand for home robots to compensate for the lack of human personnel in the social sphere (Savage, 2022). Home robots are already being touted as a promising solution for the aging population to replace caregivers and provide emotional support. Neo-Robophilia focuses on the global childcare crisis, where the cost of childcare is problematic in both developing and high-income countries. World Bank Group reports that 40% of families in the EU currently indicate they struggle to afford childcare (Devercelli & Beaton-Day, 2020, p. 23). In the UK, childcare costs have grown four times faster than wages between the years 2008 and 2016 (Trades Union Congress, 2017). One ripple effect is a decline in the birth rate, which may continue to accelerate the global fertility decline (Morning Consult, 2020, p. 27). On the side of supply, low pay and mental burnout are causing high turnover and exit rates of childcare workers (Social Mobility Commission, 2020, p. 17). Urgent action is needed to alleviate this intersection of problems.

There are indications that companies are turning to robots to address this crisis. Global bridge holdings and Gunma University developed "Vevo" to compensate for the shortage of Japanese nurseries. Vevo socializes with different children with facial recognition and monitors health conditions during nap time. It reduces the burden on nursery staff by alarming them if unexpected conditions are observed (Sadamatsu, 2019). In 2018 Chinese company AvatarMind presented "iPal," also designed for childcare and was advertised as a solution for working parents away from the household. For some, it might still be a startling idea for full-time childcare to be taken up by a robot. However, it has also become commonplace in our current age for children to be left with digital machines like computers, tablets, and television in place of constant supervision (Sharkey & Sharkey, 2010). Taking this further and imagining machines with more advanced functionality does not grasp at straws. Neo-Robophilia takes these trends and spheres as the background for its speculation.

Scenario

2.1 The Mother-bot: a perfect illusion of mother

Neo-Robophilia speculates into a future 100 years later. With the purpose of encouraging discussion by using imagination, assumption, and provocation. Its role is not about forecasting the future. In this fictitious scenario, humans depend on a new machine, the nanny robot. New companies launch childcare robots in the wake of a heightening childcare crisis and new all-time lows in the birth rate. The nanny robots are realistic humanoids with appearances and behaviors like humans. Their high level of realism allows children to develop social and empathetic skills (Meltzoff & Moore, 1977) despite being robots. Each robotic caregiver also operates within selected behavioral and ethical codes (Jiang, Hwang, Bhagavatula, Le Bras, Forbes, Borchardt, Liang, Etzioni, Sap, & Choi, 2021), mimicking versions of ideal mothers. For these children, their attachment to the mechanical robots is not dependent on whether the robots have self-consciousness. Although at first, the nanny robots are part-time helpers, greater functionality gives birth to "Mother-bot". Designed with the image of the "perfect" mother, unconditionally loving and devoted, a new generation is raised by a "Mother-bot" equipped with sensors, accident prevention, and constant surveillance. Because these robots have enhanced functionality, they create an exceedingly "safe" environment for children. Yet, at the same time, this overprotection hinders the development of independence (Ungar, 2009).

2.2 Obsolescence: will you throw away your Mother-bot?

Despite appearances, these robot nannies "die" by mechanical wear and usage. They do not enjoy human rights, and similar to the disposal of Sony's robotic dog AIBO (Knox & Watanabe, 2018), new releases are standard, and older models are left without ongoing technical support and upgrades. Users, in turn, do not place effort into the repair of nannies and discard these machines. This causes conflict within families, and many children aged 8-11 experience detachment from their primary caregiver before having a complex understanding of death.

3. Childhood loss to fetish

After losing their primary caregiver, children undergo psychological phases to cope with the loss (Bowlby, 1980). They deny the loss and search for something to replace the absence of the lost one (Winnicott, 1953). In their despair, they begin to accept the loss; however, they do so by using a transitional object for the lost caregiver (Goldstein, Petty, Morris, Human, Odendaal, Elliott, Tobacco, Angal, Brink, & Prigerson, 2020). In this scenario, they link the caregiver to other objects that share similar traits to the robots and identify with the machinery. They feel comfortable with artificials rather than the warmth of flesh and the sound of a fan. In the absence of a primary caregiver, they find anxiety relief from machines. This habituation with non-human objects is regarded as paraphilia or fetish.

These children begin to isolate themselves from other humans and feel hostility toward remaining parents (Institute of Medicine (US) Committee for the Study of Health Consequences of the Stress of Bereavement, Osterweis, Solomon, & Green, 1984). They believe certain humans are at fault for causing the loss of their "mother" figure. Preferring the predictability of robots, they are more inclined to build deeper relationships with non-humans in later life.

4.1 Transition of love

In the present society where robots are employed for sexual fantasy, humans project imaginary human subjects on a machine and simulate their fantasies (Bisconti & Piermattei, 2020). The relationship between humans and robots is heavily human-centered. With a new generation of adults raised by robots, instead of projection, they are attracted to the machine singularly. The intimate relationship between robots and humans is characterized by the perceived interdependence between humans and robots. The phenomenon of humans falling in love with machines becomes "Neo-Robophilia."

However, unlike their predecessors, this new generation, raised by Motherbots, holds a different attitude toward mechanical intelligence. Emotional value becomes a core functional value of robots. Rather than mere technological aids, these robots become essential relational companions. As companions and not simply property, the performance of codependence becomes highly desirable. Contending with the idea that robots have no self-consciousness, this generation is characterized by the desire to be interdependent with the robot despite its fiction. Sexual intimacy becomes one such arena where humans establish new interaction as means to make themselves "necessary" and "essential". In this codependent relationship (Bacon, McKay, Reynolds & McIntyre, 2020), humans perform actions to "please" robots, extending their own comfort to "satisfy" robots. In this way, humans create their own meaning within this relationship.

4.2 Transition of Sex

This relationship alters the concept of sex. Sex between humans is focused on the human body - skin, organs, etc. to share levels of work to satisfy the other. In Robophilia, sex is still human-centered, where the robots pleasure humans. On the contrary, in Neo-Robophilia, the performer becomes the human. In this codependence, humans satisfy robots by taking on the servicing role. Sex here is no longer human (organ) centered but robot (architecture) centered.

In this scenario, because robots do not have self-consciousness, humans project ideas onto robots and decide what robots would "like" (Broadbent, 2017). In this anthropomorphism, machine "satisfaction" is based on having good working conditions. Humans insist that maintenance gives robots pleasure. By uncovering machine parts and letting humans touch edges, material, and crevices, humans project the idea of sharing vulnerability, like being naked. A careful and elaborate maintenance process becomes intimate touch.

4.3 Future Probes

A series of objects are designed as future sex toys for human-robot sex. Each object can be divided into two parts, one for humans and another for robots. In human parts, audiences can notice the conventional sexual gestures using hands, fingers, and mouth. The toys let humans clean machines as a result of making the gestures. Humans take a giving and submissive role in sex to 'please' (clean) the machine.

Figure 1 Air Blow
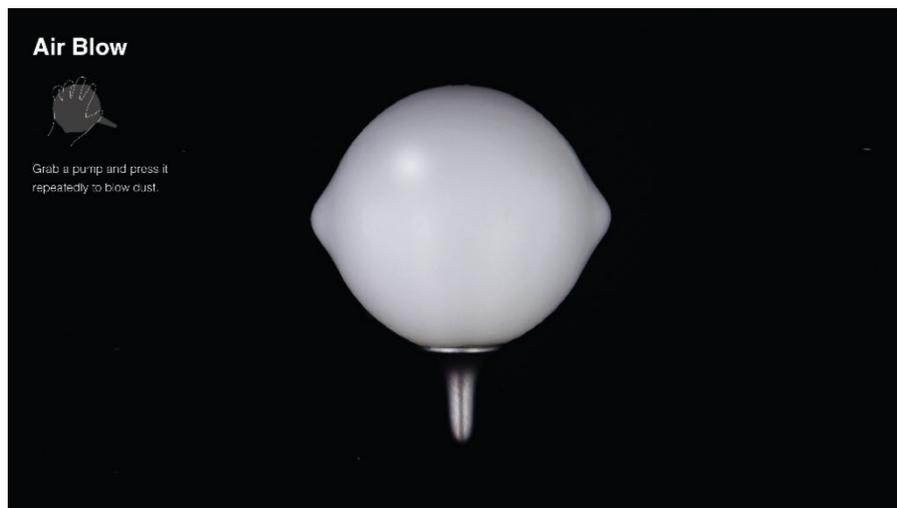
Figure 2 Wiper and Dusting Gum
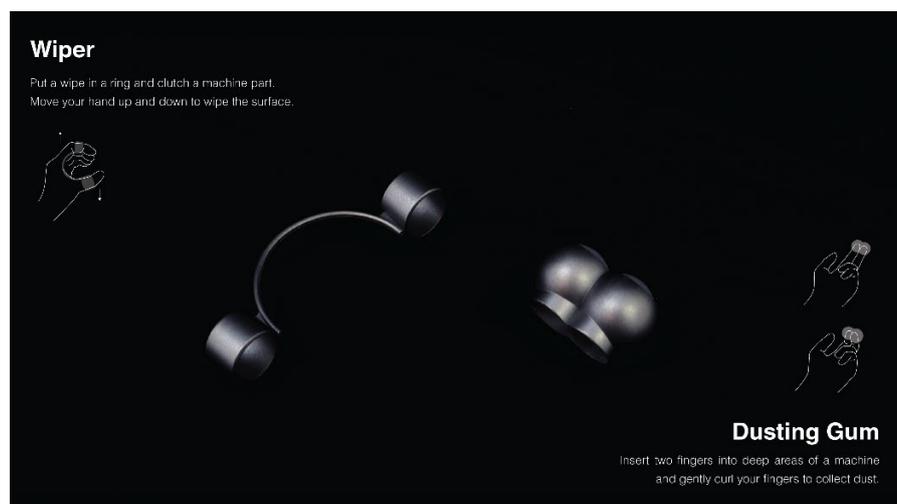
Figure 3 Lubrication


Figure 4 Static Electricity
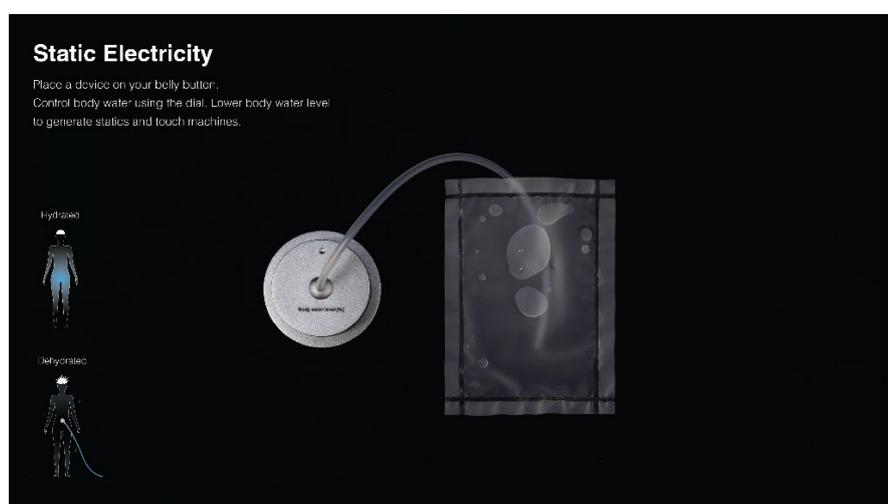
The last object speculates a new sexual sensation in Neo-robophilia. Humans want to feel physically connected with the machine as in penetration. The imaginary object lowers the body's water level and causes static electricity, the movement of electrons between machines and humans. The haptic sense of static electricity becomes a sexual sensation between robots and humans.

Figure 5

Figure 6
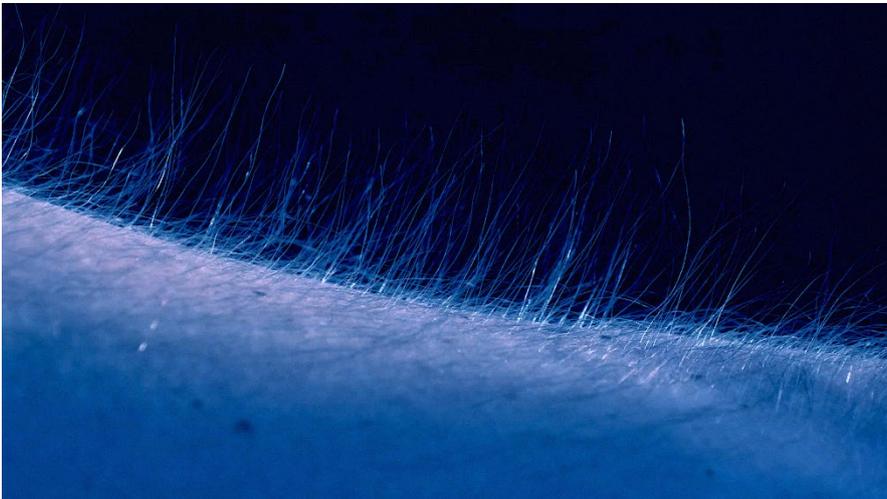
Conclusion

In the posthuman society where highly advanced robots and humans coexist, myriad values may change. The impact can be positive, but we are still determining what unexpected problems it will bring, as we never expected how smartphones and other technology shape our society. Through the provoking scenario, the project asks the audience, 'creating the 'perfect' human will come at a price, and what if it is our humanity?'

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