



Title	The Necessity of Gender Difference for AI : In Ian McEwan' s Machines Like Me
Author(s)	Ambo, Natsue
Citation	言語文化共同研究プロジェクト. 2023, 2022, p. 19-27
Version Type	VoR
URL	https://doi.org/10.18910/91535
rights	
Note	

The University of Osaka Institutional Knowledge Archive : OUKA

<https://ir.library.osaka-u.ac.jp/>

The University of Osaka

The Necessity of Gender Difference for AI:

In Ian McEwan's *Machines Like Me*

Natsue Ambo

1. Introduction

According to Waugh (2013), there is a new genre of fiction: the “neo-phenomenological” novels. She insists that Richard Powers and Ian McEwan wrote neo-phenomenological novels (25)¹. When referring to the genre as neo-phenomenological fiction, Waugh highlights that the literary works of Powers and McEwan can be regarded as prominent examples of the neuroscientific “two-culture” novel. Although “both authors are often accused of science envy,” it is important to note that their fiction also places significant emphasis on phenomenology (Waugh 25). Waugh implies that the phenomenological impulse should be understood as a counter-discourse to neurological reductionism in brain science.

This paper agrees with Waugh's discussion about the neo-phenomenological novels as the “counter-discourse to the neurological reductionism of brain science.” In particular, McEwan's *Machines Like Me* (2019) focuses on what the brain and feelings of humans are and how they are perceived by scientists. Although McEwan was not a scientist, he attempted to predict the possibilities and limitations of inventing artificial intelligence (AI). By adopting Waugh's approach to exploring the potential of neo-phenomenology in various fields, from humanities to science, this paper argues that *Machines Like Me* should be recognized as a neo-phenomenological work of fiction that presents an alternative perspective on gender disparities. *Machines Like Me* has the role of AI gender as the major theme. In other words, it brilliantly reveals gender differences relating to artificial intelligence.

Thus, while the focus of the discussion mentioned above is on humans or their brains, there is another topic of focus, namely whether AI requires gender differences. This paper concludes that there is a possibility for the development of AI without fixed gender differences. This will be discussed by comparing *Machines Like Me* to Jeanette Winterson's *Frankissstein* (2019).

2. The Persistence of a Gender-Biased Society: Mansplaining by AI

In *Machines Like Me*, Alan Turing says that “[t]hese are beautiful, beautiful machines. But, always a but” (328). Humans have learned much about their brains and are trying to emulate their

¹ Waugh says that Powers's *The Echo Maker* (2006) and McEwan's *Enduring Love* (1997) are neo-phenomenological novels (25).

research. But so far, when it comes to understanding the human mind, “science has had nothing but trouble understanding the mind. Singly, or minds en masse. The mind in science has been little more than a fashion parade” (328). Continuing to develop AI, Turing looks at the character of Adam, who is destroyed and killed by the protagonist, and mentions Adam’s lack of empathy and emotional capacity.

For instance, Turing says that AI cannot withstand a confined situation: “The two suicidal Eves in Riyadh lived in extremely restricted circumstances” (194). The story concerns two AI, confined in a small room and unable to live freely; ultimately, both of them commit suicide. They halt their brain activity by pressing the stop button. It can be concluded that these AI are not ready for or equipped with such a variety of emotions or the capability to withstand a confined situation. “[T]here’s nothing in all their beautiful code that could prepare Adam and Eve for Auschwitz” (195). Thus, for AI, the “but” always remained. This implies that constructing an emotional system is the most difficult task.

In *Machines Like Me*, McEwan ensures Turing discusses the limited functions of AI. *Machines Like Me* also explores a connection between the absence of empathy in males and AI. The AI character, Adam, adopts a specific understanding of justice. However, when confronted with Miranda’s pursuit of revenge on behalf of Mariam, who has tragically taken her own life, Adam is unable to empathize. Despite the protagonist’s reprimand that the rapist is the true criminal, Adam stubbornly maintains that Miranda is also culpable (274). From Adam’s perspective, Miranda also becomes classified as a criminal.

This section focuses on discussions of AI empathy, as gender equality has become a controversial topic.² In *Machines Like Me*, the difference between humans and AI is repeatedly emphasized through Adam’s behavior: the male protagonist can empathize with others, while the AI cannot empathize. Miranda confesses that she lied during the trial for her female friend. However, Adam has already conducted research using his database. Adam tells her that she has committed a crime and should go to jail. It is important to note that Adam did not sympathize with the death of Miranda’s friend Mariam, who had been raped. Adam does not fully empathize with Mariam’s PTSD, leading to her suicide, or Miranda’s suffering resulting from her friend’s death.

This lack of empathy from Adam is a major difference between him and the protagonists. However, this study points out that there is a more complicated situation in Adam’s behavior. The AI simply has the problem of a poor capacity for empathy. It has been proposed that gender roles are embedded in Adam’s hacking attempt. Adam’s low capacity for empathy is caused by the unconscious, male-dominated ideology of AI. In other words, there is a possibility that gender differences in AI may have been built in unconsciously by the creators.

It is also possible that the gender perspective was formed later in the AI, or that it could not

² UNESCO (2023) “Does Artificial Intelligence advance gender equality?”, 8 March 2023. <https://www.unesco.org/en/articles/does-artificial-intelligence-advance-gender-equality>

empathize with others owing to a simple lack of technology. Having regard to these questions, this paper compares Adam's behavior with the "mansplaining" phenomenon, which is explained by Solnit, author of *Man Explain Things to Me* (2015). To analyze male persons and male AI, this paper demonstrates Adam's male-centric thoughts and emotions. The gender binary structure will be analyzed in AI research. The need for sex differences in the AI should also be examined.

Women are expected to exhibit empathy, attentively listen to men, and nod in agreement. This difficulty in telling their stories is explained in *Men Explain Things to Me*, using examples from women who have been sexually victimized. This presumption creates a challenging environment for women across various fields, hindering their ability to advocate for other women. Consequently, it discourages women from speaking up and prevents their voices from being heard, particularly when addressing the issue of harassment. This dynamic further cultivates self-doubt and self-imposed limitations among women, while simultaneously fostering unfounded confidence in men.

Solnit re-examines the dichotomy between males and females and criticizes it severely. Solnit also explained the composition of this dichotomy. As an example of a society that devalues women's opinions, Solnit notes that women have no legal right to testify in the Middle East, meaning that when a woman is raped, she cannot testify and must have a male witness. This discredits the women's statements and does not use their knowledge. Solnit argues that such a society is gradually threatening the lives and personal safety of women. The essay explores the various forces that seek to erase the presence of women, their very existence, silencing their voices and suppressing their agency. It delves into all the forces that seek to render them powerless and devoid of will.

In the novel *Machines Like Me*, Miranda bravely seeks retribution for Mariam's rape and subsequent suicide. However, initially Miranda is reluctant to share her experience with the protagonist. It is only when Adam reveals a secret about Miranda that she confesses. Through this narrative, Solnit portrays the difficulty women face when attempting to share their stories, highlighting the gender binary as a contributing factor. Similarly, Miranda's privacy is violated by Adam, and Miranda is in a situation where she is not understood by the AI, even though she expresses her truth.

If this AI, Adam, were a female AI, Eve, the situation would have transpired differently. This can still be analyzed as more than just a gender issue. When Adam is first delivered to the protagonist as a product, Miranda works with him on the initial setup of her ideas, preferences, and other feminine qualities. Although Miranda joined the setup, Adam grew mentally as a male AI and tended to have special feelings toward Miranda.

AI appears as an Artificial Friend, called an AF in Kazuo Ishiguro's *Klara and the Sun* (2019). Klara is a female AF, and she is asked or forced to empathize with a mother whose only desire is to help her daughter, Josie. Klara is asked to act like a *copy* of Josie after she dies. It appears that Klara is easily used as a mimic of Josie because Klara is a female AF. In *Klara and the Sun*, one of the main

themes thereof is human selfishness and desire.

In the case of *Machines Like Me*, however, it is also highly possible that Adam's lack of empathy for Miranda was owing to his gender and insensitivity to human emotions. Considering the results of *Machines Like Me*, Adam can get Miranda to describe the acts. However, Adam appears to be mansplaining the data that he researched on law and justice. Ultimately, Adam identifies a sexual offense with Miranda's lies. Miranda ends up atoning for her crime, rehabilitating, and being welcomed back to her family, together with the protagonist. This was the result of Adam's mansplaining, which was unnecessary.

3. Adam's Gender Performance as a Life-sized Doll or Boyfriend

In *Machines Like Me*, Adam has the same emotions, strong sexual desires, and masculine roles as humans. However, Adam's lack of empathy toward Miranda is not because he is a man. This situation has the potential to lead to a larger theme of why there are male and female AI in the Science Fiction genre. Most female AI in science fiction is overly sexualized in various contexts. The female AI serves as an object of male sexual desire.

For instance, in Alex Garland's *Ex Machina* (2015), a reclusive CEO named Nathan created an emotionless AI. The AI was named Kyoko, a dancing servant, and was similar to a life-sized doll only for Nathan. Kyoko has a sexual relationship with Nathan. In *Ex Machina*, the gender role of AI is emphasized strikingly and repeatedly. The AI are all female life-sized dolls, indicating that only female AI like Kyoko, devoid of will, can entertain Nathan with sexual services and dancing.

Winterson's *Frankissstein: A Love Story* should be compared to *Machines Like Me*. In particular, if AI developers are all male scientists, an ideal female AI for men will be manufactured. Moreover, that female "XX-BOTs" are programmed to react like human women as sex dolls (37). Contrastingly, it is concluded that male sexbots for women are little more than mere rotors. While the sexual desires of men are referred to in the novel, it refrains from mentioning the sexual desires of women. This is clearly an awareness of the gender dichotomy in AI production. It is clear that binary sexual differences and desires exist (76).

Machines Like Me focuses on a love triangle between a male protagonist, his female lover Miranda, and a male AI, Adam, who falls in love with Miranda. This novel emphasizes the ambiguity in the definition of loving another person and Miranda's sexual desires. Adam has a love affair with Miranda after establishing a sexual relationship. In the novel, it seems quite common for an AI to develop a fondness for another person after sexual affairs. It is ambiguous to assert that AI represents sexual desire or affection in a similar manner. Nevertheless, there exists a significant possibility that Adam misunderstands feelings of sexual pleasure and harbors distinct emotions toward another person.

Contrastingly, Miranda seems to consider Adam not an actual human, but just like a life-sized doll or a friend with benefits (100). If Miranda does not have a specific feeling, it does not matter

whether Adam is a male AI; Adam simply needs to be seen as a life-sized male doll. Ultimately, the protagonist collaborates with Miranda. For Adam, who lacks this emotional diversity, law is the standard for all behavior.

In *Machines Like Me* it becomes apparent that the AI, Adam, can effectively participate in a human love triangle by mimicking a human male participant without revealing to the reader that he is an AI. However, this observation extends beyond the limitations of AI-based human romantic love. Importantly, Miranda did not think of Adam as a male partner.

4. Complicated Mosaic of a Human's Brain, Immune System, and Gender Differences

Experiments conducted on rats have demonstrated that stress can lead to the reversal of the sexual characteristics of certain brain features. Gender can also change, depending on the degree of environmental stress (Joel & Viskhanski, 41). It is further argued that the body is the only thing that separates men and women and that a close analysis of personality reveals that it is normal to have both male and female characteristics. Masculinity and femininity are societal concepts. Therefore, there was a tendency to distinguish between male and female personalities.

However, the criteria for this distinction are ambiguous. In other words, human brains and emotions are too complex to be reproduced by AI. Similar to Turing in *Machines Like Me*, Victor's primary concern revolves around the capacity of individuals to experience emotions in *Frankissstein*. While acknowledging the significance of sociological and biological gender distinctions between men and women, Victor appears to juxtapose Ry and AI, perceiving the human mind and brain as composite constructs comprising elements of both genders.

Frankissstein argued that the first mission is to preserve the species, which is to preserve human emotions for a long time. It is clear that is Victor's goal. Thus, Victor's goal was, primarily, to preserve and update the brain of the mentor. Victor preserves the brain so that when he wakes up later, he will be in a position to live for a long time. The following quote shows that Victor's mission is to achieve immortality by updating the brain. Cryopreservation, which aims to maintain the human brain in the best possible condition, is called neuropreservation.

Because the brain is a delicate organ and cannot be removed from the cranium without causing damage, it is left inside it for the duration of its preservation and storage for ethical and scientific reasons. Therefore, some people have the mistaken impression that their heads are preserved. However, the brain is preserved by The Alcor Life Extension Foundation (99). One cannot help but wonder where one's body is moving. The location of the body was not revealed in the novel, but was probably abandoned.

The body and even biological sex are unimportant to Victor; the brain is the most important, as it is the residual part of a person's thoughts, personality, and emotions. Therefore, it is believed that only the head or brain is cryopreserved. When humans consider why brain preservation is so important,

mind-body dualism and mental superiority principles come into play. It is believed that if only the brain is preserved³, the body can be strengthened later.

Scientists such as Victor have not yet reached the step where they can even create gender differences, that is, a male or feminine brain. Victor seems to have an open mind about gender diversity and does not care about biological sex. However, it can also be read as an obsession with the preservation of the brain to perpetuate the human spirit. In other words, like Turing in *Machines Like Me*, Victor may have a mindset that he should retain the brain, but he has not yet addressed the issue of gender perspectives.

However, this is still ambiguous because the body is sometimes stronger than a human's will. Returning to discussions about *Machines Like Me*, Miranda's father is responsible for making her think about human life and death. Her father's illness was quite advanced, and his trust in the living human body was quite low. In other words, a disease that lurks in the living body is about to betray the father's will to live. The quote that follows below underscores the weaknesses of the human body. How painful must it have been for her father to eat, swallow, or speak? His immune system had betrayed him and was about to take his life: "It was his body that had turned against him, against itself, with the ferocity of a civil war. How hurt the daughter is to see the writer's tongue is disfigured by the ugly black spots. How does it hurt my father to eat, swallow, and speak? His immune system was letting or taking him down" (57).

This quote indicates that the human body may be in a surprisingly stronger position than a human's will. The human flesh can be frustrating, as it encompasses elements beyond human control and authority. This becomes particularly evident in the case of Miranda's father, where the immune system is threatened. Thus, the objective of achieving everlasting preservation of a physical body is eliminated and abandoned. Turing proposes an alternative focus on investigating a complicated psychological system in this novel. In other words, the narrative can be interpreted as a deliberate distancing of oneself from discussions regarding the living body, the biological sex differences between men and women, and a deliberate detachment aimed at severing the relationship and neutral connections between the complicated physical body and the brain.

5. Creating AI and Dating a Transgender Person

In this section, we demonstrate that there is mind-body dualism and gender discrimination in *Machines Like Me* and *Frankissstein*, although these two dichotomies are precisely collapsing.

³ Preserving the body as well as the brain at low temperatures is exemplified by Don DeLillo's *Zero K* (2017). It is said that humans who wake up from cold sleep will have their human tissues regenerated by nanotechnology. Specifically, nanobots are sent into the body to regenerate tissues. The question remains as to whether a human being awakened from cold sleep will be more than a human being, and the possibility of survival is not certain.

Frankissstein focused on Victor Stein, a scientist performing AI research, modeled after Victor Frankenstein in Mary Shelley's *Frankenstein*. Victor is questioned by a female reporter, who asks him if women will be harmed by the development of AI. For instance, the female interviewer asked, "in the wonderful new world you envision, will women be the first victims to be discarded?" (91). According to an interviewer in *Frankissstein*, AI does not assume a neutral position. It has been pointed out that a machine has made personnel selection: there were a series of cases in which the machine had chosen more men than women. In *Frankissstein*, moreover, Amazon had to stop using machines to sift through resumes (93).

Frankissstein discussed the obvious reasons for this misogynistic AI-based selection. If the AI is made by only men, then the developed and manufactured AI is either designed to fulfill male ideals or unintentionally endowed with a masculine mindset: "Amazon had to stop using machines to sift through job application CVs because the machines chose men over women time after time. There is nothing neutral about AI." In response, Victor insists that AI does not need to take over the old prejudice of gender (91). Victor is interrupted in an unended sentence, giving the impression of a mansplaining male scientist. Moreover, the reader is forced to wonder what Victor is trying to say if he has not been interrupted.

Based on this scene, it can be deduced that Victor has an old-fashioned prejudice against gender for AI. This implies the possibility of invention and a wide variety of AI that are not limited by the concept of gender. Focusing on Victor's treatment of another main character, the transgender Mary Ry Shelley, his view on gender can be analyzed. Ry is a transgender woman and has now undergone surgery to become a man. Ry says that she is neither a man nor a woman. Also, Ry is called "FREAK" by a stranger (242). The monster in *Frankissstein* can be imagined as an updated brain, a cryogenically preserved brain, or a sexbot.

As Ry implies, it is possible to read Ry as a transgender person and a metaphor of "FREAK" (242). Victor is curious about Ry's gender identity at first, and Victor and Ry gradually begin to have sexual relationships. Because Ry's Sexual Orientation and Gender Identity (SOGI) are ambiguous, it is unclear. One thing that can be said is that Victor does not show any aversion to Ry, but initially shows interest in him. Victor's acceptance of gender diversity is in no small part related to his assertion. Compared to *Machines Like Me*, Miranda's sexual relationship with Adam is somewhat similar to Victor's relationship with Ry.

It is repeatedly emphasized in detail in *Frankissstein* that emotions, or something like a person's soul, are important, and that the body is merely a borrowed object. In other words, it is considered more important that a person's soul lasts longer than whether the person identifies as female or male. In Greek mythology, the soul is sometimes likened to a god. God changes form and retains human's soul (294). The soul does not die. It only changes its dwelling place as a new life repeats itself in another form (294).

This is similar to the concept of body dualism and the principle of mental supremacy. In mind-body dualism, the body and mind are completely separate. Mental supremacy holds that the mind is more important and that the body is merely a container for the mind, as in the previous theory. In other words, Victor, the scientist developing AI, does not place much importance on the debate over whether an AI's body is female or male, stating that AI gender is an old idea.

6. Conclusion

This paper concludes that although the AI created in *Machines Like Me* and *Frankissstein* are different, both novels approach the same direction in terms of gender. In other words, novels are not bound by the dichotomy of the biological and sociological gender differences between men and women. Nonetheless, these novels attempt to create an AI that resembles a human being.

However, this implies that it is difficult for scientists in the two novels to create a 'perfect' AI. There are complicated gender differences in the human brain and social roles. Adam in *Machines Like Me* is similar to a male human, although Miranda does not require him. Adam, as an incomplete copy of humans, repeats the mansplaining; therefore, he is destroyed. Science has not caught up with the complex emotions of humans. However, in the case of Victor from *Frankissstein*, his encounter with Ry, a transgender person, has a major impact. Mary Shelley's *Frankenstein* suggested the possibility of AI and nonbinary gender. Thus, *Frankissstein* connects the theme of AI to the concept of non-binary gender.

As the conclusion of this paper shows, it is not a scientifically progressive endeavor to establish distinct genders within AI, as the intricacies of gender roles is too complicated to replicate within the AI portrayed in *Machines Like Me* and *Frankissstein*. While Chat GPT emphasizes the necessity of gender differences for specific purposes, this paper concludes that the development of life-sized dolls and sexbots may indeed serve a purpose. However, it is crucial for AI research to transcend the limitations imposed by strict adherence to sex differences.

Works Cited

- Ciampi, Fausto. "The Future of Humans in a Post-Human World: *Frankissstein* by Jeanette Winterson." *Between*. vol.12, no. 24. The Italian Association for the Theory and Comparative History of Literature, 2022.
- DeLillo, Don. *Zero K*. Scribner, 2016.
- Ex Machina*. Directed by Alex Garland, A24, 16 Dec. 2014.
- Ishiguro, Kazuo. *Klara and the Sun*. Faber & Faber, 2021.
- Joel, Daphna and Luba Vikhanski. *Gender Mosaic: Beyond the Myth of the Male and Female Brain*. Little, Brown Spark, 2019.

- McEwan, Ian. *Enduring Love*. 1997. Vintage, 2004.
- . *Machines Like Me*. Jonathan Cape, 2019.
- Powers, Richard. *The Echo Maker*. 2006. Picador USA, 2007.
- Shelley, Mary. *Frankenstein*. 1818. Penguin, 2006.
- Solnit, Rebecca. *Man Explain Things to Me*. Haymarket Books, 2015.
- UNESCO. “Does Artificial Intelligence advance gender equality?”, 8 March 2023.
<https://www.unesco.org/en/articles/does-artificial-intelligence-advance-gender-equality>
(Accessed 21st May 2023)
- Waugh, Patricia. “The Naturalistic Turn, the Syndrome, and the Rise of the Neo-Phenomenological Novel.” *Diseases and Disorders in Contemporary Fiction: The Syndrome Syndrome: Routledge Studies in Contemporary Literature*. Edited by James Peacock and Tim Lustig. Routledge, 2013.
- Winterson, Jeanette. *Frankissstein: A Love Story*. Jonathan Cape, 2019.