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A Meta-Human Approach towards Robinson's *2312*

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DOI: https://doi.org/10.33545/26648717.2023.v5.i1c.101

Abstract
In this paper we have tried to focus on the Meta-Humans and their society in the science fiction *2312*. The human-computer interaction and the cognition of AI helped better to understand the humans and their civilization and to criticize the author's approach towards gender distortions in the space age. Through this paper we want to explore the advancement in science and technology and the socio-cultural aspects of humans who are not natural but bio-engineered. Robinson's science fiction *2312*, thus, becomes crucial in observing the simulation of humans in futuristic society and applying meta-human approach in delineating human-AI bonding.

Keywords: Meta-humans, terraforming, androgyn, qubes, humanoids

Introduction

Artificial Intelligence (AI) is a dynamic stride in the world of science and technology and they are widely used in mobile phones, computer and so on. AI has been updated from time to time, and human civilization has witnessed many such modifications since technological advancement. Building advanced AI robots like Sophia and working more towards developing AI is now one of the trendiest issues in science and technology, particularly around the notions of AI capable of self-thinking like, humanoids and "qubes". According to Merriam Webster dictionary the prefix "Meta" means *occurring later than or in succession to*. It also reflects a change and transformation, therefore, meta-humans means transformed humans or a being super than its predecessor. These transformations as seen in science fictions occur mainly due to technological intervention or biological engineering as depicted in science fiction novel *2312*. Web series like *Halo* (2022) and films like *Ironman* series, *Hulk* series or even the transformation of *Captain America* etc. renders meta-humans; humans that were initially normal beings but with the help of AI or biological engineering they surpassed the limits of normal humans, thus, became super humans or meta-humans. The term meta-humans will be used in this paper to reflect and critically analyse the society of creatures beyond humans who are technologically or biologically modified and advanced than the normal humans specially in the science fiction novel *2312* by Kim Stanley Robinson.

Knowledge, in technological society lead by AIs will be evaluated on how rapidly, efficiently and skilfully a person can work along the super or quantum computers. One such instances is William Gibson's novel *The Peripheral* that shows the concept of "quantum tunnelling"; a method of data transferring (including thoughts, ideas etc.) from one body to the AI simulation of human body in future. These AI powered computers are very efficient as within millisecond time they can perform any task like, controlling drones, combat weapons, education, computers, video games, spaceships, robotic and so on that also poses serious ethical concerns but they represent advancement of a nation and its military power as well. The AI powered robot "Sophia" is one such instances that presents technological revolution in the history of mankind and from the invention of such a smart robot till date AI has modified itself and become more faster and smarter like, Alexa or the AI features in mobile phones and computers. This article is concerned to elucidate futuristic stride and possibilities in the fields of science and technology concerning AIs especially 'humanoids and qubes' in the science fiction novel *2312* that deploys AI cognition alongside human emotions. Programming AI to understand human cognition would be a great leap in the evolution of mankind from normal to more advanced and intelligent, for instance, Cortana, an artificial

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intelligence, in web series *Halo* is implanted in the protagonist, John, to make him more advanced and improve his combat skills. Further, a small steel object was also inserted near the lower spine and controlled in such a manner that it obstructs the emotion. In short, humans are made robot like so that humanity can be saved from the mass erasure by the hands of Covenants. "Quantum AI" or "quantum tunnelling" in science fictions are merely predictions at present but with advancement in the fields of science and technology these mechanism can be achieved in future.

"Hyperreality" (Baudrillard, 1981) [11] is a term given to the inability of consciousness to distinguish between reality and simulation of reality. Virtual reality like video games is such simulation of reality that they seem very real copy, but without original, of our world. Robinsons's *2312* in this aspect is the perfect blend of simulacra and simulacrum, that is, a perfect example of hyperreality wherein it becomes difficult sometimes to distinguish between what is real and fictional. For instance, the qube implanted and gender distorted humans-androgyn are the leading characters in the world of *2312* that are not simply humans but meta-humans. Here, both the qube implantation and gender distortion biologically is the futuristic simulation of our real world but the humans, upon whom these experiments were done, are original. Implanting qubes in human body arises ethical concerns for distorting the biological naturalness but it also displays the human-computer relationship in the technological world. Films like *Free Guy* (2021)*,* which is a gaming simulation of our real world wherein the programmer encodes emotions inside a gaming character through computer programming, and *The Peripheral,* a web series adapted on the novel of the same name by William Gibson that presents the mode of connecting past and future through quantum tunnelling stresses the human-computer relation in more complex and futuristic terms with more AI-human cognition.

In a similar vein, American science fiction writer Kim Stanley Robinson's novel *2312* speculate the AI cognition through humanoids with qubes as their brain. Apart from terraforming Mercury and moons of Saturn, Robinson implied more advancement towards science, galactic governance and police patrols that appear very fictional at first, but later the narrative becomes so real and based on scientific precision that it predicts the futuristic reality of human civilization. Humanoids; the simulation of humans in *2312* and their cognition regarding "Turing Test" render the AI intelligence in a man-made world as shown below:

"I can't pass a Turing test," one of them stated flatly. "Do you want to play chess?" And the three of them laughed, looking and moving like teeth, mouths, gums, tongues, and inside cheeks. (Robinson, 213)

Swan was perplexed by their build quality and began testing them. She initially thought she was being duped by these humanoids, but as the plot unfolds, we learn that the three ladies she encountered with were most likely humanoids. However, we cannot locate any signs of these three later in the narrative, but it is crucial to note that if they were humanoids then they exhibit in a way that bewildered humans and not machines. The implantation of AI based qube in Swan, Inspector, Wahram etc. exemplifies author's goal to combine machine-human interactions much like Clarke's "HAL" from *2001: A Space Odyssey* that is capable of playing the game of chess, controlling the

spaceship and even murdering the on board astronaut. Clarke's AI in this respect becomes even more powerful than Robinson's humanoids that cannot even pass a Turing Test in its present programming.

A Meta-Human Approach in *2312*
In order to terraform the distant planets of the solar system Robinson applied the mixed method of terraforming and "Pantropy" (a scientific process of modifying the body to adjust the environment of an inhabitable place) in *2312* along with the notion of human-computer interaction through "qubes" and "quantum qubes" (a faster version) that changed natural humans into more sophisticated super beings. Pauline and other such AI implanted in Swan and other characters in the novel helped to ease the process of terraforming very much like "Cortana" eased the combat skills of Captain in the sci-fi series *Halo*. Pauline's cognition that is capable of connecting with other qubes and Cortana's ability to break through any firewall is a leap in the fields of science and technology and a powerful tool in the form of AI in the hands of humans. These implanted AIs are responsible for producing meta-humans like Swan, the Captain from *Halo* or even humanoids with a self-programming cognition. While it is true that science fiction depicts wonderful scenarios that are beyond the grasp of [current] science and technology, this does not entitle that such development cannot be achieved in near future.

In her research article *"Artificial intelligence in fiction: between narratives and metaphors,"* Isabella Hermann stated that "artificial intelligence in fictional stories might be deceptive since it distorts the current functioning and potential of the technology" (2). The AI in the form of qubes and humanoids in *2312* is indeed fictional but it does not distort the functioning of current technology, rather it envisions the plausible advancement in such technology. The longevity treatment, bioengineering and the advancement in technology has been used as a tool in *2312* to depict the development of human civilization and to create a race of rare species-meta-humans, with a hope of designing a utopian world. The meta-humans are generally spacers doing human like stuffs for terraforming other planets besides Mars. However, the terraforming project of Robinson was carried out by the natural humans in his Mars Trilogy but the advancement in technology is too carried away that in *2312* the same terraforming projects are now carried out by bioengineered species-"androgyn" supported by AI like Pauline, Passepartout etc.

Humanoids on the other hand are challenging the socio-political repercussions of meta-human society by routing a pebble attack on Venus and bypassing the trajectory of Mercury to launch attack on its lone city-Terminator. Humanoids were created on a large scale on Venus by some groups with the intention of reloading space with AI species among the humans. The chapter "Swan and Kiran" in *2312* speculates *'the delivery of eyeballs on a large scale to make artificial people'* (Robinson, 475). This is unpretentious why author presented intriguing humanoids and its opposite qubes like, Pauline in his plot but this is for sure that neither of these advanced AIs was capable of passing the "Turing Test" that renders the idea that all these AIs were made to assist the emergence of meta-humans in the space age. Meta-humans do not simply resemble humanoids; they encompass all features that are superior to humans, including their regular IQ level.

2312 reflects the meta-human notion as the only species surviving in the futuristic civilization of the space age. Robinson's characters in *2312* are generally "androgyne" that functioned as both husband and wife (a wife who can father women and become mother as well), which is generally not observed in our common heterosexual marital culture. In this novel, technology, particularly AI and quantum computers, were so intertwined with humans that they generally exhibited the human-machine bond with limited freedom to AI such as Passepartout or Pauline. These AIs were considered because they were in direct control of humans and followed their instructions, kept medical records etc. as shown below:

"Pauline, please send my medical information to this tabletop" and Pauline displayed- Treatments for long life, age 40-present Genital mutilation, factious condition, never treated, and so on". (Robinson, 182-83)

But machines capable of self-control, such as the humanoids, were considered a threat to Robinson's meta-human civilization. Additionally, these humanoids attacking the Terminator demonstrated their growing power through self-programming. The computer programming was the life of humanoids and other AIs in *2312*, despite being the simulation of humans, their inner system and organs were made of chip and wires; an artificial technological object. The meta-humans in *2312* were indulged more in saving the space and the "intelligent species" from intriguing humanoids. This throw light upon author's faith in humanity no matter how much advance they become. These meta-humans are a type of cyborgs with natural human emotions and actions and they are even concerned for the people of earth by providing them foods grown in space on different android belts and returning the lost species of animals on terraria for maintaining ecological balance. Such approach by these meta-humans helped the space age to grow and develop in sustainable direction.

Conclusion

The novel *2312* has a plethora of meta-human ways to finish the terraforming endeavour, particularly with regard to the damaged metropolis of Mercury. The exile of humanoids by androgyn in the novel mirrors anthropocentrism that hints envy against these technological species and arises ethical concerns that collectively questions entire AI race due to few intriguing humanoids or qubes. Humans implanted qubes for their efficiency, speed, and storing data; the same data that Alex felt is not safe and can be tapped that resembles a very similar idea discussed in book *Postmodern Condition* by Lyotard and asked that who will control knowledge in the future, pointing a suspicious finger at multinational corporations associated with such data storage (data that can even reveal secrecy).

Human cognition is different from AI cognition because of difference in emotions; humans are naturally built with emotions and empathy but the humanoids, as we have seen in *2312*, is pure machine based on computation and lacks both empathy and emotions, moreover, the extent of world ruled by meta-humans focuses more on the cognition of these AIs that can endanger the entire "intelligent species" from the universe. Apart from technological intervention the bio-engineering that resulted in gender distortions in space age explains the need to move away from biasness based on race, class or gender. Also, the world of *2312* represents a domination and altruism by meta-humans who cannot tolerate other intelligent species besides humans in the entire universe. *Halo* and series like it represents room for no emotion in a technological world, especially preventing human civilization against the aliens or any such interstellar objects, and a hero breaking such stereotypes. But, *2312* presents a protagonist who is a cyborg and spacer but built with same human emotions and intellectuality. Though implanting small quantum computers aided these meta-humans to achieve accuracy, speed etc. but these qubes controlling humanoids become extremely danger due to machine cognition like, *'what if humanoids were studying humans as we study them'* (Robinson, 423). The passing of Turing test therefore, becomes very important for humanoids that resemble their ability to act and behave like humans, in short, developing human cognition. The androgyn heroine Swan perceived a notion about humanoids recalling *'the look in the eyes of the three girls she met and the lawn bowler who can do practically anything'* (Robinson, 423). Thus, by applying meta-human approach in *2312* we understood gender distortions, humanoids evolution and cognition and the struggle to safeguard the omniscient sentient beings in the universe.

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