

Speculating the Future of Machine-Human Interactions Across Cultures: A Posthuman and Transhuman Study of *The People of Sand and Slag* and *Anukul*

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ABSTRACT

Speculative Fiction, as a literary genre, can be considered to be a broad area, encompassing several narratives “speculating” what the future might look like for humans. Largely, Speculative Fiction points out the inevitable that dawns upon the humans, as a result of Anthropocentrism, which does not look too much on the positive side. Theoretically, Transhumanism, Posthumanism, and the idea of ‘posthuman’ are such movements which work on similar lines. Transhumanism, as a philosophy, advocates for infusing technology with humans for a better future and a more productive outcome; further, creating ‘posthumans.’ While Posthumanism, on the other hand, challenges the notion of human-centred hierarchies – and observes humans as a part of intricately connected systems including various non-human elements, as well.

This study focuses on defining and examining the future of Machine-Human interaction through a thorough reading of the two stories. The selected stories, Paolo Bacigalupi’s *The People of Sand Slag* and Satyajit Ray’s *Anukul*, are such which, despite belonging to different cultures, have a similar undertone of portraying the life of the future, abundant with machines. Further, the study partakes in a critical analysis of the select narratives through the mentioned theoretical framework.

KEYWORDS

Anthropocentrism, Dystopia, Posthuman, Posthumanism, Speculative Fiction, Transhumanism

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1 | INTRODUCTION

“To transcend human nature, to pass beyond human nature”

– Dante

With the onset of the scientific era in the 19th century, different spheres of culture, literature, art and life were shaped with new ideas which were based on logic and rationality. This evolution of concepts gave birth to a genre where the future was speculated, and it was a place where possibilities and impossibilities were explored. Known as ‘Speculative Fiction,’ this genre came up with a variety of sub-genres that saw what the future would look like. This paper focuses on the scientific speculation of how the future will look like for humans and suggests various outcomes for human civilization and the world. Here, the emphasis remains upon the dystopian representation via science fiction literature.

Specifically, this study focuses on specific pieces of science fiction and analyses them through the Posthuman and Transhuman lens. Additionally, the study also speaks of the concept of ‘Posthumanism’ – which is completely separate and different from the idea of ‘post-human.’ The critical theory of Posthumanism looks at an egalitarian future, where both humans and non-humans are regarded, while the ‘post-humans’ are those humans which have evolved beyond normal humans, with the help of Transhumanism (Kriman 135). Transhumanism talks of technology that can equip humans and support their enhancements. Even though the notion seems like a positive approach, select literature shows otherwise. While ‘posthumanism’ and ‘transhumanism’ remain philosophical movements, which can be traced to their beginning in the 20th century, the idea of ‘post-human’ is a result of technological intervention. Thus, it is extremely crucial to not confuse the two ideas during the reading of the two select narratives. Considering the select stories *The People of Sand and Slag* and *Anukul*, there is a dystopian end to it. Moreover, in the stories, there is a depiction of a bleak world where the human-machine interaction is not a glorious dream but rather a rusted future that walks towards its annihilation.

The study is based on two different writers from different cultures, *The People of Sand and Slag* by Paolo Bacigalupi and *Anukul* by Satyajit Ray, to show how two perspectives meet on the dystopian question of machine-human interaction in the future. Even though the culture and time period of the writing are at a significant distance from one another, they share the same approach and apprehension of the future. And, while there is hope for the betterment of human beings, there is a loss of compassion, understanding and sensibility which are otherwise core values of human civilization. The speculation of the worlds as represented in the stories gives a whole new dystopian fear that is congruent across cultures.

2 | SPECULATIVE FICTION: WHAT DOES THE FUTURE LOOK LIKE?

According to the Cambridge Dictionary, the term ‘speculation’ refers to “the activity of guessing possible answers to a question without having enough information to be certain.” So, it is implied that the term deals with defining and redefining the possibilities and the “what

ifs.” Additionally, it must be noted that these possibilities are based on some amount of information, not necessarily acting as ‘proofs’ to back something up.

Interestingly, the concept of speculation has been used by science fiction writers, where the narratives depict and try to question what the future might look like. This is known as ‘Speculative Fiction,’ and it serves as a blanket term that covers a variety of other subgenres such as Fantasy. Speculative fiction, just as the name suggests, is guessing the reality, even when it is through fiction. This type of literature deals with “events that extrapolate those of the everyday world” (Araújo and Gomes 26). In such narratives, reality is considered as an alternative possibility – and a heavy exploration is on questioning the existence and future if rules were somehow placed differently than as we now know them to be.

The root to one of the initial usages of the term “Speculative Fiction” can be found in the October 1899 issue of the *Lippincott’s Monthly Magazine*, in the review of Edward Bellamy’s *Looking Backwards, 2000 to 1887* (1888) by M.F. Egan. Furthermore, the term itself “came to have such a wide application that science fiction became one of its subsets, next to fantasy, horror and many others” (26).

However, as the genre is well encompassed within the area of fiction and fictional narratives, it is extremely important to differ the arena of speculative fiction, with general, or rather, realistic, and science fiction. As Girolimon notes, “Speculative fiction freely explores possibility and impossibility alike. In addition to its inclusion of the fantastical, speculative fiction can have different traits than general fiction due to differing narrative styles associated with the genres.” The key difference in realistic fiction and speculative fiction is the subject matter and the focus area. Realistic fiction, more often than not, focuses on character, their lives, and the issues that they face on a daily basis – all at a realistic level. On the other hand, speculative fiction reimagines the society, holding on to just a little figment of “reality,” mostly focusing on elements that are not familiar to contemporary times. According to Girolimon, “speculative fiction lives in the space where real life and make-believe converge.” In a debate between Margaret Atwood and Ursula K. LeGuin, Atwood goes on to humorously mention a basic differentiation between speculative and science fiction. She says, “Science fiction has monsters and spaceships,” while “speculative fiction could really happen” (Potts).

Martin, in his *Contemporary Drift: Genre, Historicism, and the Problem of the Present* (2017), discusses fiction as a genre and states that it is “a powerful social tool for making sense of what is emergent and unfamiliar about our contemporary moment” (7). What is interesting to note is that speculative fiction, also, somehow, critiques and alerts the readers of the consequences of their actions. Heise, on the similar lines mentions that some of the extant literature and “portrayals of apocalypse tend to recycle well-known motifs from earlier science fiction, and their visions of the future serve mostly to reconfirm well-established views of the present.” Further, she states that, “if there is one thing that stands out about the deluge of dystopias over the last decade, it is their untiring attention to routines of everyday life.”

Therefore, it would not be incorrect to consider speculative fiction as something that, through fictionality, attempts to make the readers aware of the up and coming future. Allan sharply

sums up the entire discussion in just a few words, stating, “imagined this way, speculative fiction’s primary utility comes from its ability to allegorize and moralize. It warns rather than reforms” (407). More importantly, as Araújo and Gomes mention, “this kind of fiction leads to critical thinking, providing insights into humanity and opening room to disturbing questions, since it usually puts regular people face-to-face with extraordinary circumstances” (26).

They further go on to state the literary perspective, “it’s the literature of freedom—freedom to escape from conventional thought, and portray old issues from a brand-new perspective” (27). Thus, it could be concluded that speculative fiction not only incorporates warnings, but provides an open space for writers to create, explore, and attend to various physical and metaphysical dimensions of human existence and beyond. And it certainly constantly reimagines and restates what the future might look like – having a noticeably dystopian inclination.

3 | POSTHUMAN, TRANSHUMANISM, AND POSTHUMANISM: A DYSTOPIA?

The philosophical movement of Transhumanism and Posthumanism, of the 20th century, found its way to speculative fiction soon after the onset of Postmodernism. As the discourse around both philosophy and critical theory got shaped, the concept of “Posthuman” originated in the spheres of art and literature, where the interrelation of humans and non-humans, or better yet, technology was depicted. It is critical to restate that Posthuman and Posthumanism are often confused to be lining up, but they hold different meanings.

Posthumans are the advanced versions of human beings who have evolved with transhumanism, and Posthumanism is the concept which rejects anthropocentrism and regards both humans and non-humans. This idea of ‘Posthuman’ can be best understood through the movements of Transhumanism and Posthumanism. However, both have their roots traced back to two different movements altogether and are not to be amalgamated.

The term “Transhumanism” came into popular eyes through Julian Huxley’s essay. Generally, According to Ferrando, Transhumanism seeks its origin in human evolution through biological and technological innovations (27). It believes in the enhancement of the human condition with futuristic innovations that take humans to an advanced level by achieving longevity, improved cognition, and well-being. Many thinkers of Transhumanism point out the ideas of overcoming human limitations and achieving a posthuman condition. As said by Kriman, “Transhumanism is paradoxically anthropocentric because it sees value in the human being himself” (135). This implies that, in the discourse of Transhumanism, human superiority is valued and technology is considered as a tool that subordinates or supports the growth of humans. Additionally, a common feature of the theory is to overcome the finitude of humans and move towards the posthuman form of existence (Kriman 135).

The theory of Posthumanism was popularized after being coined by postmodern theorist Ihab Hassan in 1977. This speculative concept emerged and gathered the attention of scholars in the 20th century. It is a crucial movement that stood as a critique towards humanism and anthropocentrism. Unlike transhumanism, it blurs the boundary between

humans and non-humans (animals, nature, and technology) and keeps all entities under the umbrella of inclusion. As Ferrando says in *The Body*:

Posthumanism offers atheoretical invitation to think inclusively... ('posthuman-ism' as a criticism of humanism, anthropocentrism and univer-centrism) and alterity within the self... ('posthuman-ism' as a recognition of those aspects which are constitutively human and still, beyond human comprehension) ... Is becoming a key concept for the past not only for the present and the future. (220)

Posthumanism rejects the idea of hierarchy as speciesism, it overcomes human primacy without replacing it with another type of primacies (29). As a result of this non-centrism idea, Posthumanist worldviews also reject the binary opposites as Krizan states, "Posthumanism tries to go beyond any binary opposition of human – non-human, male – female, culture – nature, humanism – antihumanism" (139).

This brings us to the principal difference in the concepts of Transhumanism and Posthumanism. As Krizan says, while Transhumanism wishes to seek greater expansion of hybrid humans (142), Posthumanism includes the subjectivity of non-humans, too (144). Moreover, when the focus lies on the perspective of technology, there lies a point of convergence between the two concepts. According to Krizan:

In transhumanism, technical features acquire sacral features. Technology is seen as something that will liberate humans from the shackles of biological. Thus, the biohuman, considered as a weak and intermediate form of the posthuman, is rejected ... Posthumanist discourse is not so techno-optimistic. Posthumanism attaches great importance to technology and machines as agents, placing them on a par with biological ones. (143)

While both theories see technology as a part of humanity, their views towards the conception and usage of technology starkly differ. While Transhumanism sees technology as a tool of enhancement, Posthumanism examines it as an entity, and not just a mere tool that is to be feared.

Nevertheless, even after accepting technology as a part of "Posthuman" in both theories, there comes the question of "dystopia." Transhumanists' speculation of havoc through technology is evident in various works of literature, like *The Humanoids* by Jack Williamson, *Do Androids Dream of Electric Sheep* by Philip K. Dick and *Anukul* by Satyajit Ray. Moving towards Posthumanists who believe technology must not be feared and there is an inclusive way of evolving, however, traces of a Posthumanism dystopian world can be found in speculative science fiction. Some examples are *The Windup Girl* and *The People of Sand and Slag* by Paolo Bacigalupi and William Gibson's *Neuromancer*. A dystopian speculation is brought forward by the human-machine interaction from the sense of both Transhumanism and Posthumanism.

4 | AN ANALYSIS OF *THE PEOPLE OF SAND AND SLAG* AND *ANUKUL – HUMANS AS MACHINES, MACHINES AS “HUMANS”*

The narrative, *The People of Sand and Slag*, published in 2004, by Paolo Bacigalupi becomes a clear and precise representation of “environmental and posthumanist concerns ... in which Bacigalupi creates a dystopian future of environmental desolation and posthuman alienation and decadence” (Tidwell 95). Identical to the characteristic features of speculative fiction, *The People of Sand and Slag* embodies the concept of speculating a future, just as Tidwell mentions, illustrating, “a turn in the genre toward the intersection of the posthuman and the nonhuman” (94). In the narrative, Bacigalupi notes the “manipulation of bodies, whether for entertainment, longevity, or durability” (Tidwell 95). More interestingly, this presents a striking similarity to the concept of transhumanism. As discussed before, the concept advocates the fusion of human and non-human technologies for an effective and productive lifestyle.

In the story, the readers encounter the beings of the future life, which seem to have undergone several ‘immortalizing’ procedures, one of them being “gene modifications” (Bacigalupi 63). In one of the books that the characters read, it reads:

Cut me, I won't bleed. Gas me I won't breathe.
Stab me, shoot me, slash me, smash me
I have swallowed science
I am God.
Alone. (62)

Notably, these modifications have come to them at the cost of their natural world, which seems to have deteriorated to the worst possible scenario. There are numerous mentions of the bleak dystopian world – which is a direct result of the technological advances – throughout the narrative. Chen, the narrator, often describes his surroundings which portray a vivid imagery of the maximum level of environmental damage:

Boulders, some as large as our HEV, some cracked and shattered by high explosives, shared the slopes with the unstable yellow shale and fine grit of waste materials from SesCo's operations ... Outside the security bunker, the mining robots rumbled back and forth, ripping deeper into the earth, turning it into a mush of tailings and rock acid that they left in exposed ponds when they hit the water table, or piled into thousand-foot mountainscapes of waste soil. (51, 53)

Good to walk along the beach holding hands while black waves crashed on the sand ... When the Sun started to set, Jaak lit the ocean on fire with his 101. We all sat and watched as the Sun's great red ball sank through veils of smoke, its light shading deeper crimson with every minute. (64)

Just as any dystopian fiction, the story provides an insight into a society formed on the Anthropocentric values. And it is interesting to note the implied central focus that the

“humans” of this age have on themselves. Lisa, a character from the story, perfectly embodies this very energy. While talking about eating the dog that they found in one of their operations, Chen is unsure if they would be able to ingest the animal. To which, Lisa replies, “We can eat anything. We’re the top of the food chain” (55). And, it is true in the case of the characters as just after, they talk about ingesting mercury.

‘You’ve probably got more mercury and lead running through your blood than any pre-weeviltech animal ever could have had.’

‘That’s bad?’

‘Used to be poison.’

‘Weird.’ (55)

From the snippet above, it is inferred that these characters thrive on a technology, called “Weeviltech,” which allows for them to survive in the harsh environmental conditions. As Tidwell mentions, the “technology works by placing worms in their stomach that can digest the toxins in the dirt for them” (98). This is where the Transhumanistic element of combining technology and human elements is distinct. And, this is what leads to the formation of the ‘post humans.’ the modifications made in their bodies seem to have a crucial purpose, and even make sense to them. But in contemporary reality, the mention of such a technological advancement serves the purpose of warning the readers about the heavy dependence on technology – and what world it would ultimately lead to.

Furthermore, “the characters’ bodies are not only modified for practicality ... they also modify their bodies for appearances and sensory experimentation” (Tidwell 98). Bacigalupi seems to have been deliberate with this step, in order to portray the fickleness of the characters. These modifications do not serve any purpose for their or the environment’s benefit, rather, they remain merely superficial enhancements.

Interestingly, the characters in this world do not stop at modifying themselves. The world around them also has been modified, with newer creatures coming up, who act as their “soldiers” and employees. One such modified creation is that of a “Centaur,” who are strong but unintelligent soldiers, which are used as instruments during any battle or operation. Chen describes them as:

... scary monsters: bigger and faster than a man. Their behavior patches make them vicious, their sentience upgrades give them the intelligence to operate military equipment, and their basic fight/flight response is so impaired that they only know how to attack when they’re threatened. I’ve seen a half-slagged centaur tear a man to pieces barehanded and then join an assault on enemy ridge fortifications, dragging its whole melted carcass forward with just its arms. They’re great critters to have at your back when the slag starts flying. (56)

Another such creature, which Chen describes as a “lab rat” (58) is the biologist Lin Musharraf. Chen mentions:

He (Musharraf) had a whole pack of memory addendums blinking off the back of his skull: a fat pipe of data retrieval, channeled direct to the brain ... Looking at those blinking triple fins of intelligence draping down the back of his head, you could tell he was a typical lab rat. All brains, no survival instincts. (57)

These descriptions of the other non-human or post-human characters point to the obvious fact that the people of these times do not consider any other forms of life as 'worthy.' To mention again, this attests the anthropocentric values, which has ultimately led the world to be what it is described as in the narrative. An instance where this mindset of the characters is clearly visible when Lisa says:

Work out weeviltech and DNA patches for every stupid species? Do you know what that would have cost? ... If you want animals around you, go to a zoo. Or get some building blocks and make something, if it makes you happy. Something with hands, for god's sake, not like that dog. (63)

And, this has resulted in the "Weeviltech" world losing out on a number of species of animals. So much that when they find the dog, Jaak comments, "It's like finding a goddamn dinosaur" (52).

More importantly, the descriptions of technology are particularly noteworthy in the narrative. The technology seems to have advanced to an extent that it is merely impossible to die. Furthermore, these technological advancements have changed the lives of the characters – both for the better, and the worse. The mechanical apparatus for the SesCo's soldiers make their hunting operations effortless, "I strapped on my own exoskeleton, pulled my 101 from its rack, checked its charge, and followed ... The hunter lurched as its anti-collision software jerked us away from the roughening terrain" (49, 50).

This is the same technology that has given them strength – such which could be considered as "superhuman" in contemporary times – that, referring to the dog, Lisa mentions, "It's as delicate as rock. You break it, and it never comes back together" (56). And the characters, themselves, acknowledge the role of scientific technologies in making them immortal. When appreciated by Lisa for being "bad-ass," he thanks science for the opportunity. However, at the same time, the technological advancements got dangerously better – enough to put peoples' lives at stake. Chen explains the newest version of the "immersive response" for the video games:

The new IR was supposed to be as good as the arcades, full immersion and feedback, and portable to boot. People got so lost they had to take intravenous feedings or they withered away while they were inside. (61)

Surprisingly, the tone, while describing the technology, seems to be rather positive and awestruck, rather than sounding cautious or worrisome. This is what science has led them to. Thus, it is well understood that the narrative emphasizes heavily upon the consequent environmental degradation and the ultimate wipeout of several non-human species due a heavy dependence on transhumanism – which is essentially, anthropocentric in nature. And,

the post-humans of the *The People of Sand and Slag* provide an insight into the bleak possibility of life in the considerably transhuman future.

However, another narrative, which concerns itself with the machine-human interaction is *Anukul*. The narrative, contrary to the previous one, provides an in-depth insight into a society where machines are just as equipped as any human being. "It looked exactly like an ordinary human being although it was really a machine" (Ray).

This short story by Satyajit Ray, first published in 1986, becomes a window to the future, which envisions a time when Humans will be well-equipped with Robots. The story stands as a strong portrayal of the concept of transhumanism while raising the question of dystopia. When the Western world was coming up with science fiction during the 20th century, Ray also brought out his idea of Post-human in the Indian cultural context. His approach to science fiction is shaped by Indian ideas which depicts the speculative mindset of society and how it may lead to a hazardous end.

The piece of speculative fiction, *Anukul*, is set in Calcutta, specifically in Salt Lake, where Nikunja Babu stays alone. Living in a futuristic world, Nikunja Babu came across the newly launched mechanical servant and decided to bring it home. Notably, the robot, Anukul represents the pinnacle of artificial intelligence, as it is efficient, helpful, attuned to the values, and is well aware of topics of all kinds, from the Bhagavad Gita to Tagore's song. Nevertheless, the robot projected sensitivity, which made it commit the crime of killing Nibaran Banerjee. Interestingly, while the notion of ethics and values turns Anukul into an idealistic artificial intelligence, it also makes him the epitome of dystopia.

The human-like acuity of Anukul was established at the beginning of the story by the Robot Slupping Agency:

He'll do more or less everything an ordinary servant does... you must talk to him politely. He expects one to say "please" and "thank you"... you'll find him troublesome only if you raise your hand. Our robots cannot stand physician assault... Robots can, at times, feel and understand things that a human being can't. (Ray)

Ray created a society where humans coexist with anthropomorphic robots, and Anukul is one such robot programmed to perform tasks with perfection (Roy 142). Moreover, the story depicts the people in the future who are indeed happy with the Mechanical servant robots, "Everyone said they were very satisfied and that their servant gave them no trouble at all... he must have a real brain and a heart!" (233). How Anukul adapted to Nikunja Babu's life was proof that Anukul is an anthropomorphic robot. He gradually learnt the "Human way,":

If asked whether the water for his bath was ready, he would not only bring the water immediately but would also provide a soap and a towel for his master... get his clothes and shoes and everything else that might be needed. (Ray)

The idea of dystopia came up when the repercussions of the robot were brought to light. Despite being sensible the robot is incapable of tolerating a bad gesture towards him,

he is programmed to give a “high voltage electric shock” which can cause the death of a human. While his intelligence in various fields is considered a feature to admire, it stands as an insult to some people like, Nibaran Banerjee:

I was reciting a few lines from the Gita the other day and that damned servant has the cheek to correct what I was saying. Even if the words I had spoken were wrong, it’s not for him to correct me, is it? Isn’t that a bit too much? I felt like giving him a tight slap. (Ray)

The idea of robots correcting humans was taken as a threat by Nibaran Banerjee, so Anukul was intolerant towards any kind of human insult. “He got some words wrong, so I felt obliged to correct him. He got so angry at this that he gave me a slap. So I had to pay him back” (Ray) said Anukul, who confessed to his act of killing Nikunja Babu’s uncle.

The story is a representation of Transhumanism, while holding a layer of Posthumanism to it. There is an idea of Zoe-centered egalitarianism which suggests that even after being a robot it needs to be addressed with respect. As Rosi Braidotti states “the wider scope of animal and nonhuman life also known as Zoe” (32) and it is a “vitalist approach to living matter” (Braidotti 32). The thought of “the android” not being addressed with “it” but with “his” proper name, “Anukul” (Roy 142), depicts the very concept of Posthumanism which rejects anthropocentrism.

While the entanglement and combination of the two – Transhumanism and Posthumanism – concepts in *Anukul* seem positive, just as a “man and machine continue their camaraderie” (Roy 143), this is the exact thing which leads to a dystopian end. The robot being a non-human fails to understand human life’s emotions, negating the chance of mistakes. This speculation of Ray in the Indian context directs towards the future where an erroneous step will not be judged or corrected, rather, it would be the end of human civilization – or creation of a ‘Dystopian World.’

5 | CONCLUSION: FUTURE, AI, HUMANS

Thus, it becomes important for literature to focus on the same dystopian world, and this is exactly what Speculative Fiction does. This term is an umbrella concept that carries different subgenres under it, Science Fiction being one of them. As it is considered to be a literature of freedom it holds autonomy of moving around various ideas, and one such is the speculation of the future of human interactions with machines. When the particular works of science fiction, based on human-machine interrelationship, is studied it becomes evident that there is an apprehensive tone towards the world of advancements.

The selected stories, *The People Of Sand And Slag* and *Anukul* portray a future where there is a lack of compassion, understanding, and co-habitation of the human and posthuman entities. This is where the theories of Posthuman and Transhuman come in. While the evidence of both concepts is found in the stories, there is also a rejection of Posthumanism’s idea of the egalitarian status of humans and non-humans.

Considering Paolo Bacigalupi's *The People of Sand and Slag*, the narrative takes a dark turn. The so-called advanced humans of "Weeviltech" are modified to such an extent that they are simply immortal. However, what is more surprising is the fact that they do not consider other non-human entities worthy to live. At the expense of several species these modified humans believe that they have gained rationality, enlightenment, and high performance – simply being at the pinnacle of their lives. But they fail to see the recurring loss of emotional intelligence and compassion that have degraded them – in and out.

The next narrative, by Satyajit Ray, titled *Anukul*, is a depiction of a Transhuman world, where robots are accepted to be an innovation that supports human society for advancement. Nevertheless, the idea of posthumanism is represented in a bad light as it becomes a threat to humans. While Anukul is an idealistic robot, it fails to understand the essence of human life and the concept of mistakes and proceeds by killing in the name of disrespect.

Both the narratives signal at just one plain idea – the future looks unimaginably bleak, dystopian, and unlivable. And while the study is centered around the future that is dawning upon humans, as a result of their misconduct for other non-human life forms, it becomes crucial to note the current ongoing trends in the field of machine technologies, which also become a limitation of this study.

One such limitation being the arena of Artificial Intelligence or AI, which has currently been accessed by the public without any restriction. However, several concerns have come up with the model, one such being the 'AI Bias.' This "refers to the occurrence of biased results due to human biases that skew the original training data or AI algorithm—leading to distorted outputs and potentially harmful outcomes" (Holdsworth). This poses a severe challenge to the objective truth and promotes misinformation, which can prove to be detrimental in the long run.

Just as the study suggests, this, too, is a result of anthropocentric values that ties humans and provides them with the chance to deny accountability over their discourse. At the end, it is just the humans who innovate limitlessly, get unimaginably dependent, and then fret over their future.

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