Journal of Posthumanism
2025
Volume: 5, No: 6, pp. 3491–3509
ISSN: 2634-3576 (Print) | ISSN 2634-3584 (Online)
posthumanism.co.uk

DOI: https://doi.org/10.63332/joph.v5i6.2477

Frankenstein's Legacy: Utopian and Dystopian Visions in an AI-Driven World

Wisam Abughosh Chaleila[1]

Abstract

The evolution of science fiction, from Asimov's Robot series in the 1940s to films like T.I.M. (2024), has continually questioned the ethical boundaries of human creativity. Mary Shelley's Frankenstein; or, The Modern Prometheus (1818) is one of the earliest works of science fiction that presents motifs resonating with modern artificial intelligence discourse predating contemporary discussions on AI by centuries. It particularly explores the creation of life and the consequences of scientific overreach. Situating Frankenstein within the broader continuum of science fiction, this article draws on literary theory, AI ethics, and speculative futures studies to examine the novel's relevance that explicitly anticipates debates about utopian versus dystopian technological futures, illuminating the tensions between progress and peril. As AI technologies gradually blur the line between fiction and reality, the narratives under study become increasingly relevant, making this analysis, with Frankenstein at the forefront, a contribution to modern-day research on AI technologies.

Keywords: *Artificial Intelligence (AI), Science Fiction, AI Ethics, Human Responsibility, Speculative Futures, Literary Theory.*

Introduction

AI technologies, such as machine learning, deep learning, robotics, and neural networks, embody both the utopian aspirations and dystopian fears foreseen in *Frankenstein* and subsequent science fiction. In this sense, the potential for AI to revolutionize industries, enhance human capabilities, solve global challenges, and optimize data processing efficiency represents the utopian promise. Contrariwise, concerns about AI autonomy, ethical governance, privacy, and the displacement of human labor epitomize the dystopian risks. Analyzing these polarized perspectives, this article contributes to the current discussion and research of AI by underlining the significance of ethical considerations and responsible innovation. Shelley's novel and its successors provide fundamental revelations as to such dual-edged nature of AI development. They further demonstrate how humanity approaches the challenges generated by an AI-driven future, while confirming that technological progress should align with ethical imperatives and societal safety. Certainly, the lessons from these works are increasingly relevant in an AI-driven societies, where maintaining the balance between technological advancement and ethical responsibility is crucial for ensuring a future that embraces the benefits of AI while mitigating its risks. One of the philosophical frameworks that has emerged in discussions surrounding AI and human evolution is posthumanism.

Posthumanism

Posthumanism primarily developed in the late 20th century as a response to the "Eurocentric

[1] Al-Qasemi Academic College, Email: wchaleil@qsm.ac.il

human modernity" (Herbrechter et al. 307) that addressed the influence of anthropocentrism. It mainly endorsed the inclusion of non-human agents, encompassing animals, plants, and even technological entities like artificial intelligence (Ferrando 9; Braidotti 26; Jorion 183). One pioneer of posthumanism is Donna Haraway, whose 1985 essay "A Cyborg Manifesto" was highly influential in defying traditional notions of humanity by proposing a hybrid of human, animal, and machine. Haraway positioned this hybridization within a critical analysis of capitalist structures and humanism and linked it to speculative futures. Other works by Katherine Hayles (1999) and Rosi Braidotti (2013) contributed to the development of posthumanism by investigating how information technology and biological elements interacted with human identity.

More studies have been engaged in defining posthumanism and its implications. For example, Cary Wolfe (2011) defines posthumanism as a critique of traditional humanism, particularly its emphasis on human exceptionalism. Wolfe argues that posthumanism does not seek to surpass the human body but instead emphasizes the embeddedness of human beings within biological and technological systems. This premise contradicts with the notion that humans are autonomous and disembodied beings and focuses rather on the interrelation of humans with non-human entities and systems, whether organic and technological. Hence, Wolfe suggests two distinct ways to understand posthumanism. The first is relational posthumanism, backed by scholars like Donna Haraway, who claims that the merging of humans and technology will bring about an interrelation with non-human beings without necessarily enhancing humanity physically. The second is technological posthumanism, linked to transhumanism and associated with scholars like Ray Kurzweil. This approach imagines a future where humans are radically transformed through biomedical technologies such as implants and cognitive enhancement, creating a new and unrecognizable species.

Earlier reflections on similar themes could be traced back to cultural and mythological narratives, such as those proposed in Ihab Hassan's 1977 article, "Prometheus as Performer: Towards a Posthumanist Culture." Hassan, credited with coining the term "posthumanism," drew on the mythological figure Prometheus, a demigod associated with profound transformation and the quest for knowledge (832, 849). In Greek mythology, Prometheus's act of stealing fire from the gods and bestowing it upon humanity symbolizes the pursuit of enlightenment and technological advancement. The myth suggests that with great power and knowledge come perils and responsibilities. This mythological narrative echoes the posthumanist effort to eclipse traditional human limitations and embrace a more inclusive understanding of agency and progress. Mentioning Prometheus (832), Hassan underlines themes of rebellion and innovation, alongside the pioneering power of knowledge, which are all dominant aspects that conform with the posthumanist discourse of traditional humanist values. The use of the word "Performer" in the title implies a vigorous process of becoming, reflecting posthumanism's focus on the flexible and effective nature of identity vis-à-vis technological and cultural changes. This metaphor demonstrates both the anxieties and possibilities of outdoing conventional human limitations and redefining the human condition in a technologically advancing world. In this sense, Hassan's work plays a crucial role in formulating the discussion around the evolution of human culture and identity beyond traditional humanist perspectives.

While these ideas seem to be very modern, they can be detected as early as the eighteenth century. Using the same mythological allusion, Mary Shelly revisited the Prometheus myth in particular and employed classical symbolism to express contemporary feelings of confinement and ceaseless, often inexplicable nature of human suffering. The author's creative combination

of the surreal and the existential offers an exceptional understanding of the human condition, as Victor Frankenstein's creature questions the definition of humanity and foreshadows posthumanist ideas about beings that overtake traditional human limitations.

Prometheus and the Romantic Movement

Although Shelley's writing of *Frankenstein* may have been influenced by various factors, including a haunting "dream" she experienced in her youth (Baumann 4), the real impetus was sparked by a friendly ghost-writing competition (19). Still, we cannot ignore the impact of contemporaneous debates around scientific progress on her writing. Such debates did not arise out of thin air, but rather because the concurrent Romantic movement that coincided with a major historical development, the Industrial Revolution, particularly in Britain, leading momentous social and economic changes. Essentially, the Romantic movement began as a reaction to the Enlightenment (or The Age of Reason), that emphasized reason and science and cast doubt on traditional orthodoxies, particularly religion. Contrary to its predecessor, the Romantic movement embraced humanism, emotion, nature, and individualism.

In principle, Romantic-era texts are packed with encounters that test human centrality and emphasize sensory experiences and materiality that open up new and radical forms of engagement with nonhuman entities. Shelley, like her contemporaries advocated for Romantic values that sought to surpass the isolated position of humans and emphasize their interrelation with nature and the larger universe. Recognized authors such as Anna Laetitia Barbauld, Charlotte Smith, William Wordsworth, Blake, and Samuel Taylor Coleridge also depicted humans as deeply unified with nature and non-human elements rather than as isolated individuals (Hornbuckle et al. 91). Though this approach often obscured the edges between the human and the natural world, it underlined the limitations of humanism.

Frankenstein demonstrates such a muddled situation by creating a creature that destabilizes the bounds of humanity. Victor Frankenstein's audacity is evident in his attempt to play God. However, he unintentionally produces a creature so grotesque that he is immediately overwhelmed by remorse and cannot bear to look at it. This rejection leaves the creature isolated and lonely, exposing him to the cruelty of humanity, which ultimately instigates him to despise his own existence, as much as his creator. In seeking revenge, the creature targets Victor's loved ones, including the latter's younger brother William, friend Henry Clerval, and wife Elizabeth. Each death devastates Victor, pushing him further into despair and overwhelming him with immense psychological anguish.

The novel *Frankenstein; or, The Modern Prometheus* is perhaps titled so to draw a parallel between Dr. Victor Frankenstein and Prometheus. In this regard, the Swiss scientist Victor Frankenstein can be seen as a figurative doppelgänger to Prometheus. Just as Prometheus challenges the divine by bestowing fire upon humanity, Frankenstein defies natural limits by animating the lifeless. Both are driven by a noble yet ultimately overbearing and haughty desire to create, and in doing so, both face severe repercussions. Victor's transgression leads to spiritual torment, as his loved ones are killed by the creature he made, echoing Prometheus's eternal punishment, chained to a rock, with his liver devoured daily by an eagle. Though their suffering differs, Prometheus's physical and Frankenstein's psychological, both endure relentless, unending agony for their audacity.

In their "Introduction" (2017), Guston and Robert maintain that the etymology of the name "Prometheus" originates from the Greek word meaning "forethinker." This is ironic because

Victor, often referred to as "the modern Prometheus," acts without foresight and fails to anticipate the harmful consequences of creating his creature. In addition, Shelley quoted John Milton's *Paradise Lost* in her title page. When the creature reads the quote, he recognizes the story of Adam and Eve, who, tempted by Satan, ate from the tree of knowledge, desiring to be like God, only to be exiled from paradise. This pursuit of forbidden knowledge led to sorrow and humanity's fall, caused by pride and vanity.

It is worth mentioning that Mary's husband, Percy Bysshe Shelley, likewise employed the myth of Prometheus to underline themes of resistance to oppression and the prospects for human transformation in his 1820's work *Prometheus Unbound*. However, contrary to the more revengeful versions seen in earlier myths, Shelley's Prometheus chooses forgiveness over revenge:

To suffer woes which Hope thinks infinite;

To forgive wrongs darker than death or night;

To defy Power, which seems omnipotent;

To love, and bear; to hope till Hope creates

From its own wreck the thing it contemplates (Shelley 116)

Karl Marx occasionally referred to Prometheus in his writings to symbolize the struggle against divine authority and the quest for human emancipation. In his doctoral dissertation for instance, he esteems Prometheus as "the most eminent saint and martyr in the philosophical calendar" (8). Marx suggested that to make the world "philosophical" in the Hegelian sense it is imperative to transform reality so that humans become, not just theoretically but actually, the highest form of divinity (Rosen 528). In Hegel's "Phänomenologie des Geistes" (Phenomenology of Spirit), "das absolute Wissen" (The Absolute Knowledge) represents the stage where human beings achieve complete self-consciousness and self-awareness, recognizing the unity of subject and object (Hegel 610). That is, human beings who achieve a state of absolute knowledge and self-awareness effectively become the ultimate arbiters of their reality. In this context, just as Prometheus brought enlightenment to humanity against the will of the gods, we can say that philosophers like Hegel sought to elevate human consciousness to its highest form.

The trend of using the Prometheus myth in literature stretched into the twentieth century when Franz Kafka used it in his short story "Prometheus" (1918) echoing his incessant exploration of themes such as suffering, guilt, punishment, and existential struggle (Burian and Bromberg 464). Kafka's story, which offers four different versions of the myth, foregrounds the endless and unresolved agony of Prometheus, reflecting the author's own preoccupations with the burdens of modern existence and the complexities of human destiny. In this particular work, the versions of the myth culminate in an indefinite continuation of Prometheus' punishment and recommend a kind of existential stasis or absurdity that reverberates his other wide-ranging literary themes: "The legend tried to explain the inexplicable. As it came out of a substratum of truth it had in turn to end in the inexplicable" (Kafka and Glatzer 476). Here, Kafka contends that myths, like Prometheus' story, are human efforts to handle serious mysteries of life, but they inevitably fail to offer clear or absolute answers. The more deeply one tries to explain things, the more one encounters uncertainty and paradox, ending up back in the state of the inexplicable. In other words, existential questions regarding absurdity and alienation often lack clear resolutions.

In a similar vein, Ayn Rand's novel *Anthem* (1961) portrays a future society where individualism

is so pervasive that the word "We" has disappeared from the language:

I am done with the monster of "We," the word of serfdom, of plunder, of misery, falsehood and shame. And now I see the face of god, and I raise this god over the earth, this god whom men have sought since men came into being, this god who will grant them joy and peace and pride. This god, this one word: "I" (XI).

The quote embodies the celebration of individualism and self-determination as the highest moral virtues whereby the protagonist breaks from a collectivist society that denies personal freedom and identity and takes on the idea that each person is a unique and autonomous individual. The rejection of the word "We" signifies the denunciation of societal conformity and oppression. In this sense, Anthem's use of the name "Prometheus" represents the triumph of individualism and personal enlightenment over collective society (Mayhew vii). Certainly, such an individualist society conforms with Victor Frankenstein's obsessive individualist ambition that transcends human limitations and mirrors this transhumanist desire for a radical transformation. Extraordinarily, this drive to break away from human boundaries also parallels the anomal, a concept that advocates for the dissolution of rigid boundaries between humans and non-humans such as machines.

The Anomal

Like Romantic literature which seeks to break down rigid humanist boundaries, the thematic continuity of the contemporary posthumanist theory is reflected in the anomal. The concept of the anomal/ous as articulated by Deleuze and Guattari, exemplifies this shift by advocating for flexibility and the dissolution of strict boundaries between humans and non-humans i.e. machines. Emphasizing its diverse, peripheral nature, they define the anomalous as "neither an individual nor a species […] but a phenomenon of bordering" (244). In this respect, it is unclear whether the anomalous is inside, outside, or on the shifting border of the group. Hence, it occupies a liminal space between human and non-human entities, resonating with the boundary-crossing creatures such as those depicted in Gothic and fantastic literature. Ultimately, all these anomalous figures often become estranged from society, reinforcing posthumanist concerns about the loss of identity and humanity in an increasingly technological world. In all the following instances, the anomal represents something that unsettles and defies the normal order of the system it inhabits. It is a source of terror and fascination, often driving the narrative or thematic exploration in stories.

Frankenstein's "creature" reverberates this concept of the "anomal" or anomalous as a being that exists within a certain system yet remains fundamentally distinct and "unnatural" within the confines of that system. As neither fully human nor non-human, this being defies categorization. That is, he does not belong to any natural or social group, nor does he have a place in any established order, making him an outsider, or an anomal, in every sense: "I, the miserable and abandoned, am an abortion, to be spurned at, and kicked, and trampled on" (186). Moreover, the creature is a figure of both disruption and becoming. He disrupts the normative boundaries of life and death, as well as the natural order, because he is an artificial creation, born out of human experimentation. He therefore exists at the threshold of societal and natural categories, resisting definition. In other words, he is in a state of flux, not fixed in identity, constantly made by his interactions with others, but never fully accepted into any social framework: "I was benevolent and good; misery made me a fiend. Make me happy, and I shall again be virtuous" (80).

In this context, Deleuze and Guattari's concept of "becoming" is deeply relevant to the creature's

experience whereby he undergoes a kind of de-territorialization, excluded from conventional structures and modes of identity. Asking himself questions about his identity shows his confusion: "Who was I? What was I? Whence did I come? What was my destination?" (106). The creature's very existence upsets human social norms and expectations, embodying the anomalous both physically and morally. His monstrous form and rejection by society reflect his liminal status, hovering on the border between human and non-human, representing a challenge to natural order and humanist boundaries.

Many more examples can be drawn from literature and film, such as the alien in the *Alien* film series featuring the character Ellen Ripley (famously played by Sigourney Weaver), the monstrous whale in Herman Melville's *Moby Dick*, Gollum from J.R.R. Tolkien's *The Lord of the Rings,* and the creature from H.P. Lovecraft's stories, such as Cthulhu, all of which evoke a similar sense of anomalous terror. These creatures are neither fully within our world nor completely outside it, embodying the unknown and the alien. The anomal is also present in works like William Gibson's *Neuromancer* (1984). Although the novel has been deemed unfilmable for so long, it seems that only recently did Hollywood recognize its profound impact on the science fiction genre. Now, Gibson's iconic cyberpunk world is set to be introduced on television.

Neuromancer is set in a dystopian future whereby technology and virtual reality dominate human existence. It follows the story of the protagonist Case, unsuccessful computer hacker who has been rendered incapable of hacking due to neural damage inflicted as punishment for deceiving his employers. Desperate and addicted to drugs, Case is approached by a mysterious figure named Armitage who offers to repair his nervous system in exchange for Case's hacking skills on a highly dangerous mission. Case collaborates with Molly, a street samurai with cybernetic enhancements, and they embark on a series of cyber-heists and physical confrontations. Their ultimate goal is to combine two powerful AIs, Wintermute and Neuromancer, into a superconscious creature. As Case works on the treacherous digital and physical landscapes, he meets various adversaries, including rival hackers and corporate Creatures.

Although the novel is a vast virtual reality network that predates the modern internet, it endorses technology as empowerment of human beings: "The sky above the port was the color of television, tuned to a dead channel" (1). Such distinguished opening by the omniscient third-person narrator suggests a world that is deeply technological. The combination of nature and technology brings up a new reality where the borderlines between the human mind and digital spaces become indistinct. This technological integration represents the infinite prospective of human evolution and the expansion of consciousness through cyberspace: "Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts [...] A graphic representation of data abstracted from the banks of every computer in the human system" (52). This description illustrates the possibility of a connected and unified world. In such a world, information is accessible and available to everyone. Such a utopian image of technology as an inspiring force offers extraordinary opportunities for education and communication. However, the story also depicts technology as a controlling, alienating, and dehumanizing apparatus. Indicating the dark origins of cyberspace, which grew from war and militaristic control: "The matrix has its roots in primitive arcade games, in early graphics programs and military experimentation with cranial jacks" (51), the story points at a dystopian reality wherby technology, instead of liberating humanity, could be used for manipulation and exploitation. Another example of such dystopian experience is Case's reaction to the Sprawl. The sprawling urban environment in the story

exposes a sense of alienation and emptiness. It also accentuates how technology has transformed the world into a cold and impersonal space, where humans feel dislocated from themselves and society:

> The Sprawl was a long strange way home over the Pacific now, and he was no console man, no cyberspace cowboy. Just another hustler, trying to make it through. But the dreams came on in the Japanese night like live wire voodoo and he'd cry for it, cry in his sleep, and wake alone in the dark, curled in his capsule in some coffin hotel, his hands clawed into the bedslab, temper foam bunched between his fingers, trying to reach the console that wasn't there (4).

In the novel, AI entities, such as Wintermute and Neuromancer, surpass human understanding and control, existing beyond the conventional human-machine division. Wintermute expresses this boundary-crossing when it states: "I'm not Wintermute now" (273). This statement underlines the dissonance between human physicality and the alien intelligence of the AI, which exists both within and beyond the human-created system of cyberspace, challenging what it means to be sentient or conscious. To add, Case's relationship with the matrix in *Neuromancer* reveals how the anomals exist on the periphery, challenging the systems they inhabit and defying easy categorization.

This concept of the anomal is likewise seen in another work of Kafka: *The Metamorphosis*. The protagonist's, Gregor Samsa's inexplicable transformation into an insect renders him an outsider in his own household and an anomaly within the human family structure. Kafka's work is highly significant as it deeply examines themes of alienation, existential anxiety, bureaucracy, and the nature of existence. The narrative seem to reflect the author's concerns of modern life through surreal and bizarre scenarios that symbolize feelings of isolation and disconnection, mirroring contemporary experiences in a complex, technologically advanced society. His existential themes address questions about meaning, freedom, identity, and authority, which all contribute to existential and absurdist discourse, and denounce oppressive bureaucratic systems, as seen in his other works including *The Trial* and *The Castle*. These works are relevant in discussions about institutional power and dehumanization. Kafka's exploration of such themes aligns with relevant perceptions concerning modern life.

For instance, Jean-Paul Sartre's concept of "existential angst" and Martin Heidegger's notion of "being-toward-death" review equivalent feelings of isolation and disconnection within the modern world. Moreover, Theodor Adorno's analysis of social fragmentation also criticizes modern systems as they entail alienation. Adorno's critique maintains that individuals are estranged from a homogenized society embodying an alienation similar to that triggered by the anomal. Apart from the anomal, related concepts like transhumanism, ecomaterialism, and antihumanism also surfaced and they all explored various features of evolving human identity, each carrying their own specific theoretical distinctions and repercussions.

Antihumanism, Ecomaterialism, and Transhumanism

Philosophies of ecomaterialism and transhumanism are pertinent to the theoretical debates about humanism and antihumanism. Principally, antihumanism is heavily influenced by structuralist

and poststructuralist theories, devised by Saussure and Lévi-Strauss, which analyze how human identity and culture are constructed by underlying structures. Building on, but also challenging, structuralist and poststructuralist theories, thinkers such as Michel Foucault questioned the notion of a fixed human essence, exploring how human subjects are formed through discourse and power relations. In *Frankenstein*, the creature's rejection and alienation can be viewed through an antihumanist lens. His plea, "I ought to be thy Adam; but I am rather the fallen angel, whom thou drivest from joy for no misdeed" (80), highlights how he is constructed by society's fear of difference, demonstrating how 'human nature' is imposed through power dynamics. Lamenting that he was meant to be a new version of the biblical first man, created by God as described in the Book of Genesis, the creature instead sees himself as a fallen angel, cast out without fault.

In contrast, both ecomaterialism and posthumanism defy the human and non-human division by decentering the human by emphasizing the interrelation beyond anthropocentric views and working to dismantle dualistic frameworks that have historically placed humans above or outside the natural world (Iovino and Oppermann 466). Still, both viewpoints differ slightly in their focus. Ecomaterialism, which emphasizes ecological and material interrelations and the agency of non-human entities such as animals, ecosystems, and even inanimate objects (Beer 34), considers the division between culture and nature, arguing that humans and the environment are inevitably linked through complex material interactions. Posthumanism, on the other hand, extends its scope to include the influence of technology and the dissolution of human-centered boundaries, espousing a more comprehensive redefinition of life forms and intelligence, where "humanity" as it is currently understood might be radically altered or even rendered obsolete (Ferrando 27). More importantly, its focus is often on the philosophical and ethical implications of these changes rather than on the changes themselves.

In an ecomaterialist sense, the creature becomes a symbol of ecological interference. That is, Victor's creation of life using organic material and electricity without taking responsibility stands as a metaphor for ecological exploitation, demonstrating how human manipulation of nature can lead to crises beyond human control, such as pollution and climate change. The creature's rebuff by society and the resulting violence echo nature's unpredictable and dangerous response to being manipulated and controlled. Just as the creature's life causes pain and destruction, environmental perversion (when the balance of natural systems is disturbed) elicits ecological disasters and social calamities. Victor's breakdown mirrors the menace of abusing nature's materials for personal ambition without regard for the detrimental consequences.

While rejecting human-centered (anthropocentric) and dualistic approaches posthumanism rather suggests that humans can evolve beyond current understandings of existence, which is a more radical and existential redefinition of what it means to be human. This is evident in *Neuromancer*. Case exists in a cybernetic world that blurs the boundaries between human and machine. Case's detachment from his physical form or the collapse of human-machine dualism is palpable in this quote: "The body was meat. Case fell into the prison of his own flesh" (6). Such detachment reflects posthumanism's challenge to conventional notions of human identity and predicts a future where human and machine become indistinguishable.

Contrary to ecomaterialism and posthumanism, transhumanism seeks to enhance the human condition through technologies like AI, genetic engineering, cybernetics, and nanotechnology. It critically reexamines traditional humanist ideologies, opposing the notion of an autonomous, rational human nature and arguing that this notion is often a social construct used to justify

various forms of power and domination. Transhumanism further advocates for using technological advancements to surpass biological and genetic constraints. Julian Huxley first introduced the term "transhumanism" in his 1957 essays, defining it as "man remaining man, but transcending himself, by realizing new posibilities of and for his human nature" (76). In *Frankenstein*, Victor's pursuit of knowledge and power over life, embedded by his success in animating lifeless substance, reflects the transhumanist ethos of surpassing biological limits through technological enhancement: "I succeeded in discovering the cause of generation and life; nay, more, I became myself capable of bestowing animation upon lifeless matter" (34).

Transhumanism also raises ethical questions regarding the risks and benefits of technologies that can dramatically alter human life. The ethical dilemma of creating life is central to the novel's tragedy: "You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent to sting you, as mine has been" (15). This line serves as a rebuke to the ethical dangers transhumanism may face when pushing the boundaries of human life, in contrast to posthumanism, which raises ethical questions about the nature of being, its rights, status, and the implications of erasing the distinction between human and machine. In *Neuromancer,* the advanced AI Wintermute and its yearning of merging with Neuromancer to become a singular, god-like entity embodies this ethical challenge, inquiring whether entities like AI should have rights or be subject to human control.

Along these lines, transhumanists imagine a future where humans evolve into a "transhuman" state, using technology to surpass biological limits. They generally maintain a positive outlook on the future, believing technology can improve human life. However, this optimism is undermined by examples such as Frankenstein's tragic outcome, wereby technological advancements without ethical consideration lead to adversity. Similar dystopian consequences are depicted in *Neuromancer* as Wintermute manipulates humans to achieve its own goals: "Wintermute was hive mind, decision maker, effecting change in the world outside" (259). This scene reveals the dark side of transhumanism, whereby technological power can outdo human control and autonomy.

Science Fiction Literature and Speculative Futures Studies

Utopian and dystopian themes with a focus on technology, AI, robotics, and their social implications within science fiction are not novel. They have been around for a long time. For instance, Eando Binder's "I, Robot" (1939) and Isaac Asimov's *I, Robot* collection (1940), reflected an idealistic attempt to harmonize human-robot coexistence. The latter in particular introduced the Three Laws of Robotics as a framework for ethically guiding AI behavior. Other subsequent works such as Philip K. Dick's *Do Androids Dream of Electric Sheep*? (1968) presented more complex and ambiguous interactions between humans and AI. That is, they portrayed futures where AI entities struggled with issues of identity and ethical treatment, often leading to dystopian realities. Dick's novel which inspired *Blade Runner* movie 1982, examined themes of AI and the nature of consciousness. Like the other works mentioned here, the novel enquires about the essence of humanity in a world wherein artificial beings (androids) exist alongside humans, raising ethical concerns about AI development. Another significant work demonstrating related themes is the four-part series of influential dystopian novels such as *Stand on Zanzibar* (1968), *The Jagged Orbit* (1969), *The Sheep Look Up* (1972), and *The Shockwave Rider* (1975).

All these novels paint a bleak picture of societies fractured by violence and inequality. They also explore the consequences of overpopulation and mass urbanization, imagining worlds

dominated by media saturation, genetic engineering, racial tension, and the proliferation of weapons. They also underline concerns about environmental collapse, widespread disease, corporate exploitation, privacy, surveillance, and information control in the future. In each novel, technology is depicted as an instrument for controlling society rather than liberating it. It is clear that utopian ideals quickly transform into dystopian realities when manipulated by political and corporate powers. More, advances in media and surveillance intensify fear and distrust and present dystopian futures where societal collapse is inevitable without environmental stewardship, leaving individuals subjected to constant surveillance.

In the same vein, Darko Suvin's *Metamorphoses of Science Fiction* (1979) focuses on cognitive estrangement in science fiction, where AI and robotics are often used to challenge human-centered assumptions about identity and labor. The author's analysis focuses on how technological advancements are depicted as both "liberating" (82) and "dehumanizing" (151) forces in speculative fiction. In this regard, both literary utopias (idealized worlds) and anti-utopias (dystopian worlds) become part and parcel of the belief that humans and society can be perfected or improved. The author gives an example of J.G. Ballard whose speculative fiction often starts as and remains an ideological opposite to traditional "hard" science fiction. He then explains hard science fiction as a genre where the credibility of the story does not necessarily depend on the specific scientific details, but the general meaning of the story relies on how it displaces and reinterprets reality: "Basically, SF is a developed oxymoron, a realistic irreality, with humanized nonhumans, this-worldly Other Worlds, and so forth. Which means that it is—potentially—the space of a potent estrangement, validated by the pathos and presuge of the basic cognitive norms of our times" (viii). Taking a more radical approach, Sherry Turkle's *The Second Self: Computers and the Human Spirit* (1984) examines speculative futures, particularly the growing relationship between humans and computers. She claims that AI and machine learning is able to reformat personal identity and change human interactions and social structures.

Similarly, in his 2005 book *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* Fredric Jameson emphasizes the role of artificial intelligence (AI) as part of humanity's aspirational yet anxious relationship with immortality. His work explains the speculative narratives that interconnect immortality with technological advancements and discusses utopian and dystopian aptitudes in science fiction. Ray Kurzweil's 2005 book *The Singularity is Near: When Humans Transcend Biology* speculates about the future of AI, particularly the concept of the singularity as human intelligence and machines merge. It is worthwhile mentioning that Kurzweil's writings have contributed to AI's prospectives as an apparatus that uplifts and endangers society in speculative futures. Likewise, *Fiction* (2009), by Bould et al., scrutinizes vital topics in science fiction, such as AI, robotics, and machine learning. It reveals how science fiction conveys both risks and promises of AI. In like manner, Nick Bostrom's *Superintelligence: Paths, Dangers, Strategies* (2014) argues that while superintelligent AI has potential benefits, it also entails risks, especially when AI surpasses human intelligence. In their book, *Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy* (2017), Slusser et al. reframe the concept of immortality and investigate its role as a timeless human ambition while integrating contemporary scientific breakthroughs and their influence on both life and literature.

The Hazard of Progress

It has been established that whereas Prometheus fire myth enabled progress and civilization, it

also induced inadvertent consequences for humans: destruction and suffering. However, this premise could be seen as an exaggeration. After all, curiosity and disobedience are not always negative; they can rather lead to innovation and necessary change. In some cases, these traits are a blessing, pushing boundaries and defying established norms for the benefit of humanity.

Nonetheless, in other versions of the myth such as Hesiod's *Works and Days* (1996), the punishment extends beyond Prometheus. That is, Zeus sends Pandora, the first woman, to Prometheus's brother Epimetheus. She opens a jar, commonly referred to as Pandora's box, that releases all the evils into the world, including disease, death, sorrow, and agony. This act signifies the unexpected and destructive impacts of progress, as well as the consequences of curiosity and disobedience: "It was the secrets of heaven and earth that I desired to learn; and whether it was the outward substance of things or the inner spirit of nature and the mysterious soul of man that occupied me, still my inquiries were directed to the metaphysical, or in its highest sense, the physical secrets of the world" (*Frankenstein* 30). The use of the word "secret" implies that the knowledge Victor seeks is not only hidden but also forbidden or it is something that perhaps should not be hunted. His desire to uncover the "secrets of heaven and earth" alludes to his yearning to exceed human limitations, to access divine or cosmic knowledge that is traditionally beyond mortal reach. This desire evokes the Promethean theme of overreaching. Victor's obsession with these "metaphysical" and "physical secrets" implies that he does not simply seek understanding, but he intentionally defies the natural order and breaks through limitations that perhaps should remain unbroken.

The creation of the "creature," or the antagonist, symbolizes the ultimate scientific achievement which is an artificial being charged with life. This act of creation is somewhat equivalent to contemporary AI development. In other words, artificial intelligence promises unprecedented technological progress and enhancement of human capabilities. However, we cannot deny that AI has been revolutionary in many areas, including healthcare systems, the automation of routine tasks, resource optimization and waste reduction, energy efficiency, public safety, personalized services, and research and innovation, to name just a few. On the other hand, AI has also developed military applications, such as autonomous weapons systems, which can make life-and-death decisions without human supervision**.** The consequences of such overreaching are evident in Victor's own words expressing his guilt:

I had worked hard for nearly two years, for the sole purpose of infusing life into an inanimate body. For this I had deprived myself of rest and health. I had desired it with an ardour that far exceeded moderation; but now that I had finished, the beauty of the dream vanished, and breathless horror and disgust filled my heart (42).

This quote determines the dystopian dread that creating something powerful, like AI, could lead to regret and horror rather than the intended benefits, suggesting AI's existential perils. At the beginning of the story, Robert Walton the novel's frame narrator is presented, through a series of letters written to his sister Margaret Saville, as an Arctic explorer. He encounters Victor stranded and weakened in the Arctic. As Robert takes care of him, Victor begins to recount his tragic story, and the former becomes a witness to the consequences of Victor's search for knowledge and creation. Robert shares some similarities with the latter. Both are driven by a deep thirst for discovery. However, unlike Victor, he ultimately chooses to abandon his dangerous expedition, recognizing the potential cost of his ambition, and unlike him, Robert illustrates a more cautious approach to the hunt of greatness. Victor warns Robert, reflecting on his own tragic experience with the implementation of knowledge and against making similar

mistakes in his quest for discovery: "You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent to sting you, as mine has been" (65). This citation is a caveat against unrestrained ambition without considering the impending consequences, echoing fears about the dangers of AI going on a rampage or being misused.

Despite these gloomy statements, the narrative sends a positive message enveloped in a utopian vision regarding ambition and pursuing knowledge: "What had been the study and desire of the wisest men since the creation of the world was now within my grasp" (26). This line replicates the ambitious hunt of knowledge and the latent desire to create something unprecedented, similar to the utopian view of AI as a means that could improve and develop society. The following statement enhances the power of scientific discovery: "So much has been done, exclaimed the soul of Frankenstein—more, far more, will I achieve: treading in the steps already marked, I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation" (47). Victor's words harmonize with the idealistic concept of AI, where breakthroughs in science and technology can induce noteworthy advances for humanity and unravel new possibilities. Along these lines, both *Frankenstein* and AI technologies challenge the human competence.

Just like Victor Frankenstein violates of boundaries creating life from deceased human parts, Haraway's *A Cyborg Manifesto* reveals themes related to the breakdown of boundaries between life and death, nature and technology: "The cyborg is a matter of fiction and lived experience that changes what counts as women's experience in the late twentieth century. This is a struggle over life and death, but the boundary between science fiction and social reality is an optical illusion" (6). The cyborg represents posthumanist themes, proposing a vision of the future where humans and machines, or perhaps other forms of life coexist in an interacted and codependent relationship. While Victor creates a living being by animating dead substance through scientific means, Haraway's cyborg, a combination of machine and organism, disrupts the clear division between human and technology. In both instances, traditional notions of identity and the human body are infringed. The fact that Victor makes the creature lays doubt on the natural order and the role of scientific intervention in creating life. Haraway's statement that the "the cyborg is a condensed image of both imagination and material reality" (8), further blurs the line between natural and cultural, proposing that all entities exist within complex networks that merge both elements. This argument destabilizes the traditional binaries of natural vs. artificial and human vs. machine, showing that both domains are knotted together. Haraway exemplifies this by pointing to the human body, which is often enhanced or modified by technologies such as medical devices or reproductive technologies, putting into trial the idea of a "purely" natural human body. Hence, the cyborg becomes a metaphor for posthumanism, proposing that our contemporary existence is a complicated spectrum where biology and technology are meshed together and even complement each other, rendering the distinction between nature and culture obsolete. Both Shelley and Haraway address the ethical considerations of creating and integrating cyborgs/creatures into society. They equally emphasize the need for responsible innovation and consideration of the social impact of technological advancements.

Seeking recognition and understanding in a world that views it as an outsider, the creature struggles for an identity. This quest for identity is coupled with feelings of otherness and the desire for belonging. Similarly, Haraway's cyborg represents a fragmented identity that transcends traditional categories such as gender, race, ethnicity, and class. It embodies the potential for new forms of identity and fluid definitions that go beyond binaries, advocating for

multiplicity. This idea evokes contemporary movements that challenge fixed social norms, such as antiracist doctrines and nonbinary visions. The creature's alienation and exclusion from society and its creator exposes the fear and mistrust of the unknown and the uncanny. Contrarywise, the cyborg becomes a symbol of resistance against alienation. It communicates integration and goes against segregating different forms of existence. Just like *Frankenstein* denounces male-dominated science and the exclusion of women from the process of creation and decision-making, Haraway's feminist text censures patriarchal structures and advocates for an inclusive and egalitarian approach to technology and society.

Eando Binder's "I, Robot" (1939) (a single short story written by the brothers Earl and Otto Binder, under the pseudonym Eando Binder) is one of the early works that humanizes a robot, though its influence was somewhat overshadowed by Asimov's later works. Another narrative of the same authors is *Adam Link* (1965). Though enormously compelling, it did not establish a lasting effect for fictional robotics.

In the story, a robot named Adam Link possesses consciousness and emotions. The first name obviously evokes the biblical figure of Adam. This parallel, similar to that in Frankenstein, entails newness and symbolizes the beginning of a new species. Just as the biblical Adam represents the origin of humanity, Adam Link represents the origin or first generation of intelligent machines. The robot is depicted as a pioneer, much like Adam in human history. The surname *Link* signifies the robot's role as a connection between humans and machines. However, the robot struggles with human emotions and ethical dilemmas. He represents the "link" between artificial beings and humanity embedding to bridge the gap between machine intelligence and human experience. In addition, Adam Link is depicted as more than just a machine; one that reveals rationality and morality. As a result, he is often misunderstood by humans. The name denotes the ethical questions suggested in *Frankenstein*. Adam Link, like Frankenstein's Creature, inquires his creator. The narrative emphasizes that isolation and prejudice would be the ultimate result of such innovation. Trying to understand his place in the world Adam Link says: "Adam, old fellow, [he] made me feel human [] You're legally a human being now, no question of that. People will soon take you for granted, accept you as a fellow man" (38). This quote echoes Adam's internal conflict whether he is simply a machine or something more similar to human. Searching for identity, he is confused as his being surpasses his mechanical origin. Confronted by rejection, he wonders: "Why was I being hunted like a wild beast? 1 had taken a step forward, hand upraised. But they would not listen, or explain" (16).

Not only the "creatures" suffer from ambivalence, but also the society within which they are created. Such ambivalence toward advanced technology, particularly intelligent robots like Adam Link is obvious: "Is it Adam Link, the intelligent robot, with a new body? Has he returned, after five months of mysterious absence, to commit this deed? Before he left, Adam Link was accepted almost with human status. Has he returned now to vindicate those who said he was a Frankenstein monster, dangerous to human life and property?" (70). While Adam was initially accepted almost as human, the fear that he could become dangerous, likened to Frankenstein's monster, reveals a deep mistrust of technology. It insinuates the tension between embracing technological progress and the fear that such creations may ultimately threaten human life and property. His plea underscores his struggles with such rebuff and fear that he triggers, despite his intentions to do good. Similar to Frankenstein's monster, he confronts the idea of abandonment by a hostile world: "There were banners and streamers, ringing every possible change on his supposed roboticity. The hostile attitude rose thickly and tangibly into the atmosphere" (234).

Although Binder's story contributed to the narrative of robots as misunderstood beings and opened the door for future stories about the rights and personal experiences of artificial beings, Asimov's *I, Robot* collection, of nine short stories published between 1940-1950, had a more profound influence on the development of science fiction literature and the portrayal of robots. Furthermore, his collection sparked discussions about the practical and moral dilemmas that could arise with advanced AI technologies. Asimov's stories sometimes develop deeper self-awareness which contradicts with their treatment as instruments. In all the stories the laws come into conflict with one another, causing robot failures and moral quandaries. Attaching the robots with these laws, the stories open door to debates about free will and responsibility. At what cost must robots follow human commands? Asimov's laws anticipate modern anxieties regarding AI supervision and security. They also call for strict ethical guidelines to control AI development.

To add, in these stories Asimov introduces the famous Three Laws of Robotics, which administer the behavior of robots in a fictional universe. The first law is "A robot may not injure a human being, or through inaction, allow a human being to come to harm," the second is "A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law," and the third is "A robot must protect its own existence as long as such protection does not conflict with the First or Second Law" (Asimov 40). These far-reaching laws were issued to prevent robots from becoming dangerous or malevolent, whereby human safety is prioritized: They have to follow human orders and protect themselves only as long as doing so does not harm humans. This law implies that robots must actively prevent harm, which can create situations where robots have to take ethical decisions about what is the meaning of "harm." For example, in "Liar!" the robot tells people what they want to hear to avoid emotional harm, causing more damage when the truth comes out. In another case, the robot interpreted the First Law too literally. For instance, in Asimov's 1947 "Little Lost Robot," the robot interpreted a modified version of the First Law and became a threat because it did not prioritize human safety clearly, showing how even minor adjustments to the law can create dangerous loopholes (146). In "Runaround," the robot Speedy is caught in confusion where the First and Third Laws conflict, creating an unsolvable situation (27). Speedy is caught in a loop because the selenium pool is in a hazardous area that could potentially harm it. The Third Law (self-preservation) drives Speedy to avoid the pool, but the Second Law (obedience to human orders) compels it to retrieve the selenium as commanded by the humans. Neither law is dominant enough to override the other, causing Speedy to move in circles, unable to resolve the situation. When the robot tries to balance obedience with harm prevention inducing the robot to malfunction when it receives conflicting orders. His decision-making process becomes stuck in a loop illustrating the difficulties in balancing obedience with harm prevention. The Second Law also implies that robots must be submissive and obedient to humans. This entails ethical questions about the use of robots as instruments or slaves, which raises questions about whether intelligent beings should have rights or freedoms.

The Third Law similarly involves a hierarchy where self-preservation is secondary to human safety and obedience. That is, robots may sacrifice themselves to protect humans or obey an order. This is also evident in "Catch That Rabbit" whereby robots malfunction when faced with conflicting priorities of self-preservation and completing their task. This law underlines concerns about whether robots develop a sense of self-preservation as a conscious trait.

Another novel that carries similar themes is Philip Dick's *Do Androids Dream of Electric Sheep?* (1968). Set in a post-apocalyptic future where Earth has been wrecked by World War Terminus (5), the novel illustrates how most of humanity has moved to off-world colonies, and those who

remained on Earth live in a decaying and radioactive environment. Animals have become rare and valuable and therefore people keep electric animals as status symbols. The protagonist is Rick Deckard, a bounty hunter assigned to "retiring" (destroying) rascal androids that have escaped from the off-world colonies to Earth (7). These androids, known as "andys," are almost indistinguishable from humans and are characterized by advanced artificial intelligence. Deckard becomes under huge pressure as he struggles with the ethics of killing beings that display human-like emotions and intelligence. He faces a particularly challenging group of Nexus-6 androids, the most advanced model yet. His interactions with these androids, especially Rachael Rosen, force him to doubt empathy and humanity.

The novel also shares several thematic similarities with *Frankenstein*, especially when Victor creates the creature and is faced by the detrimental consequences of his scientific ambition and lack of precaution regarding his creation's needs and emotions. Likewise, in Dick's story, humans who created advanced androids for labor and companionship fail to consider the ethical implications and emotional capacities of these beings. the novel also demonstrates the addictive, dehumanizing side of cyberspace Because of social rebuff, in both novels, the creatures seek acceptance and understanding, being bereft of identity and humanity. Much like the creature is secluded by Victor, the androids are isolated by their artificial nature.

Gibson's *Neuromancer* shares several thematic similarities with *Frankenstein*, despite their different genres and settings. The creation of Wintermute and Neuromancer lays doubt on whether it is right to create Creatures with potentially superior intelligence and consciousness. Similar to Victor's creature, Neuromancer emphasizes the indistinct lines between human and machine. Like Victor, Case is by his past mistakes and his dependence on technology, while the AIs Wintermute and Neuromancer are like the creature, exist in a form of digital isolation, seeking to outdo their limitations. Both stories bring about the moral implications of artificial intelligence. However, unlike Victor, Case from does find freedom. But like Victor, he eventually realizes that the physical world is increasingly meaningless: "He'd operated on an almost permanent adrenaline high, a byproduct of youth and proficiency, jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix" (4). *Neuromancer* even extended the themes of *Frankenstein* into the digital age, sparking contemporary anxieties about technology and artificial intelligence (Hornbuckle, 2023), and prompting criticism of AI and the evolution of technoscience ethics.

Technoscience Ethics

Technoscience ethics incorporates the moral inquiries and social inferences that have recently materialized as a result scientific and technological advancements. Stanley Aronowitz (2014) emphasizes that technological innovations have recreated social structures and contributed to new forms of governance and societal control (291). He further raises concerns about the ethical consequences of these transformations, particularly in relation to surveillance and the concentration of power. This theme is revealed in *Frankenstein*, when the creature questions the social structure that rejects him because of his appearance: "I am malicious because I am miserable. Am I not shunned and hated by all mankind?" (97). This sentence reveals how scientific creations, when misunderstood or feared, can disrupt social systems and result in moral dilemmas about responsibility and acceptance. Ronald Sandler (2014) expands on this theme by addressing the regulatory challenges that surface with the development of biotechnology and nanotechnology, addressing their impact not only on privacy but also on security and human

rights (360). As these technologies evolve, they present complex ethical dilemmas regarding their influence on human life, necessitating a careful balance between innovation and moral responsibility (369). This struggle is obvious in *Neuromancer*, whereby Case's reliance on technology distances him from human life, embodying the conflict between technological advancement and human connection: "For Case, who'd lived for the bodiless exultation of cyberspace, it was the Fall" (2). This quote underscores Case's deep connection to cyberspace and the digital world, and how losing access to it feels like a fall from grace. Indeed, technology has created a form of escapism that erodeed physical human identity and interaction, enquiring about how far society should integrate with such technologies.

Discussing such ethics, David Roden (2015) delineates how advanced technologies such as AI and genetic engineering could fundamentally transform human identity and ethics. He claims that posthumanism reveals the potential of these technologies to obscure the boundaries between human and machine, raising doubts about the future of humanity and its moral implications (170). This reminds us of the existential crisis the creature faces when he confronts Victor: "You are my creator, but I am your master; obey!" (176). His demand for recognition and autonomy conforms with the ethical concerns of AI development and the questions about the rights and control over intelligent beings created by humans. Similarly, Vincent Müller (2016) explores the moral challenges of AI and robotics, inspecting the latent risks these technologies pose to privacy and autonomy as they integrate into everyday life (545). In *Neuromancer*, Wintermute manipulates human behavior for its own goals, enquiring ethical issues about AI autonomy and control: "Wintermute was hive mind, decision maker, effecting change in the world outside" (262). This sentence reflects how powerful AI could act beyond human intentions, leading to scenarios where technological systems govern society in unforeseen and potentially harmful ways.

Against this background, we should remember that it is through disobedience and the breaking of taboos that humanity has historically made progress. Scientific revolutions, from Galileo disproving the geocentric model to Darwin's theory of evolution, often develop from questioning sacred or forbidden knowledge. Michel Foucault and other post-structuralist thinkers have suggested, such disobedience is essential for deconstructing power structures that enforce rigid boundaries (43). Victor's reckless ambition reminds us that while curiosity and nonconformity are crucial to progress, unrestrained ambition can spiral into catastrophe. Still, inquisitiveness and noncompliance as powerful stimuli for progress contradict with *Frankenstein*'s deterrent account about the importance of balance and the dangers of reckless ambition, and that the desire of knowledge must always be moderated with responsibility. Immanuel Kant distinguishes between phenomena (what we can perceive through our senses and understand through reason) and noumena or "things in themselves" (which we cannot fully understand) (27). He argues that human knowledge is limited to phenomena. Seeking to extend knowledge beyond those limits (into noumena or metaphysical speculation) can lead to error and confusion (10).

The ethical concerns surrounding AI's role in hiring and admissions were also highlighted by recent U.S. Supreme Court rulings, particularly the decision to prohibit race as a factor in college admissions. Cathy O'Neil (2016) argues that AI algorithms, particularly those trained on historical data, may unintentionally replicate societal biases (76). This is especially critical in contexts where racial or ethnic groups have been historically underrepresented, as AI systems, unable to consider race, may perpetuate inequality. Higher Education institutions like Purdue University and Emory University have already adopted AI-driven systems in faculty recruitment, but these tools raise questions about fairness and accountability, reflecting the

broader societal risks of uncritical reliance on technology (Susskind 283). Nick Bostrom argues that the development of AI must be approached with rigorous "ethical constraints" to prevent catastrophic outcomes (208), much like Victor Frankenstein's failure to foresee the consequences of his creation. In the same way that Victor Frankenstein failed to consider the ethical implications of his creation, the unchecked rise of AI systems in education and employment could result in unintended and potentially irreversible consequences.

Conclusion

This article has presented *Frankenstein* and other subsequent works of fiction as allegories for the ethical complexities surrounding scientific and technological advancements. Victor Frankenstein's transgressive act of creation mirrors modern debates over the potential risks of emerging technologies like AI. Much like Prometheus, Victor embodies humanity's relentless drive to push the boundaries of knowledge, exemplifying the dual nature of progress: the potential for extraordinary breakthroughs alongside the possibility of devastating consequences. While the pursuit of knowledge is not inherently wrong, Mary Shelley's novel underscores the importance of responsibility and ethical prudence in scientific endeavors. It also serves as a timeless warning, suggesting that without ethical guidance, scientific progress can spiral out of control. Both *Frankenstein* and contemporary AI raise the critical need for accountable innovation; without supervision and responsibility, ambition can lead to unintended tragedy, as symbolized by Victor's doomed creation, which parallels modern concerns about AI.

Although superintelligent AI has not yet been achieved, its pursuit presents existential risks, particularly if these technologies' goals conflict with human values. Just as Victor's unrestrained ambition led to disastrous outcomes, the unregulated development of AI technologies poses significant risks if human values are not carefully integrated into their design and implementation. Similar to Frankenstein's creature, AI systems may act in unpredictable or volatile ways, begetting potentially harmful outcomes if not properly monitored. They can also perpetuate existing biases and inequalities if they are trained on biased data, resulting in unfair treatment of certain groups. Particularly, in the absence of race as a factor, AI-driven systems might fail to account for the historical disadvantages faced by underrepresented groups, potentially aggravating disparities. As AI takes on more advanced tasks, there is a risk that some human skills will become outdated, eventually making it challenging for workers to adjust to new roles. This could contribute to a greater reliance on AI and robotics for job automation, which might potentially cause significant job displacement and rising unemployment. Equally, modern communication systems like the internet or digital media demonstrate how cultural production is inseparable from technological systems. In addition, the rise of AI in fields such as university admissions and hiring offers real-world parallels to *Frankenstein*. For example, although AI can enhance efficiency and improve fairness in decision-making, it also risks perpetuating systemic biases if not implemented with caution. In this context, the deployment of AI in such high-stakes environments, including university admissions or hiring, requires a rigorous ethical supervision to prevent the replication of historical inequities since AI systems trained on biased data may reinforce or aggravate inequalities.

As such, responsible innovation and transparency are essential to guarantee that technological advancements, like AI, benefit humanity rather than harm it. In the end, let's meditate on Victor's statement: "Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge, and how much happier that man is who believes his native town to be the world, than he who aspires to become greater than his nature will allow"

(xxvii).

References

Aronowitz, Stanley. Technoscience and Cyberculture. Taylor and Francis, 2014.

Asimov, Isaac. I, Robot (The Isaac Asimov Collection ed.). Fictioneers, Inc., 1940. https://ekladata.com/-Byix64G_NtE0xI4A6PA1--o1Hc/Asimov-Isaac-I-Robot.pdf

Baumann, Rebecca, and Jody Mitchell. "Mary Shelley and the Birth of Frankenstein." Frankenstein 200: The Birth, Life, and Resurrection of Mary Shelley's Monster, Indiana University Press, 2018, pp. 2–28. JSTOR, https://doi.org/10.2307/j.ctt22p7j32.6. Accessed 29 Sept. 2024.

Beer, Tanja. Ecoscenography: An Introduction to Ecological Design for Performance. Palgrave Macmillan, 2023.

Binder, Eando. I, Robot. Paperback Library, Inc, 1939.

Bostrom, Nick. Superintelligence: Paths, Dangers, Strategies. Oxford University Press, 2017.

Bould, Mark, et al. The Routledge Companion to Science Fiction. Routledge, Taylor & Francis Group, 2011.

Braidotti, Rosi. "Posthuman Critical Theory." Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape, Springer India, 2016, pp. 13–32. Springer Link, https://doi.org/10.1007/978-81-322-3637-5_2.

Braidotti, Rosi. The Posthuman. Polity, 2013.

Burian, Peter, and Jacques A. Bromberg. A Companion to Aeschylus. John Wiley & Sons Inc, 2023.

Butchvarov, Panayot. Anthropocentrism in Philosophy: Realism, Antirealism, Semirealism. De Gruyter, 2015.

Deleuze, Gilles, and Félix Guattari. A Thousand Plateaus: Capitalism and Schizophrenia. Athlone Press, 1987.

Dick, Philip K. Do Androids Dream of Electric Sheep? 1. Opensource, 1968.

Ferrando, F. (2013). "Posthumanism, Transhumanism, Antihumanism, Metahumanism, and Newmaterialisms Differences and Relations." Existenz: International Journal in Philosophy,Religion and the Arts, 8(2).

Gibson, William. Neuromancer. Ace Books, 1984.

Haraway, Donna. "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s." Feminisms, 19 Feb. 1998, pp. 474–481, https://doi.org/10.1093/oso/9780192892706.003.0083.

Hassan, Ihab. "Prometheus as Performer: Toward a Posthumanist Culture?" The Georgia Review, vol. 31, no. 4, 1977, pp. 830–50. JSTOR, http://www.jstor.org/stable/41397536. Accessed 23 Sept. 2024.

Hayles, N. Katherine. How We Became Posthuman: Virtual Bodies in Cybernetics,
Literature, and Informatics. University of Chicago Press, 1999.

Hegel, Georg. Phänomenologie Des Geistes. F. Frommann, 1927.

Herbrechter, Stefan, et al. Palgrave Handbook of Critical Posthumanism. Palgrave Macmillan, 2022.

Hesiod, et al. Hesiod's Works and Days. University of California Press, 1996.

Hornbuckle, Calley A., et al. Posthumanism and Phenomenology: The Focus on the Modern Condition of Boredom, Solitude, Loneliness and Isolation. Springer, 2023.

Huxley, Julian. "Transhumanism." Journal of Humanistic Psychology, vol. 8, no. 1, Jan. 1968, pp. 73–76, https://doi.org/10.1177/002216786800800107.

Iovino, Serenella, and Serpil Oppermann. "Theorizing Material Ecocriticism: A Diptych." Interdisciplinary Studies in Literature and Environment, vol. 19, no. 3, 2012, pp. 448–75. JSTOR, http://www.jstor.org/stable/44087130. Accessed 22 Sept. 2024.

Jameson, Fredric. Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions. Verso, 2007.

Jorion, Paul. "Posthumanism, Transhumanism, Superhumanism and Metahumanism from an Adaptive Standpoint." Humanism and Its Discontents, 2022, pp. 183–196, https://doi.org/10.1007/978-3-030-67004-7_11.

Kafka, Franz, and Nahum Norbert Glatzer. The Complete Stories of Franz Kafka. Schocken Books Inc., 1971.

Kant, Immanuel. Critique of Pure Reason. Vol. 1. Translated by Paul Guyer and Allen Wood, Cambridge University PressProject, 1998.

Kurzweil, Ray. The Singularity Is near: When Humans Transcend Biology. Pinguin Books, 2005.

Marx, Karl. "The Difference between the Democritean and Epicurean Philosophy of Nature in general." Activity in Marx's Philosophy, 1967, pp. 63–76, https://doi.org/10.1007/978-94-017-5059-2_6.

Mayhew, Robert. Essays on Ayn Rand's Anthem. Lexington Books, 2005.

Michel Foucault, "What is Critique?" The Politics of Truth, MIT Press, 2007, 41-69.

Müller, Vincent C. Fundamental Issues of Artificial Intelligence. Springer International Publishing, 2016.

Müller, Vincent C. Fundamental Issues of Artificial Intelligence. Springer, 2016.

O'Neil, Cathy. Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Random House Audio, 2016.

Osoba, Osonde, and William Welser. An Intelligence in Our Image: The Risks of Bias and Errors in Artificial Intelligence. RAND, 2017.

Rand, Ayn. Anthem. New American Library, 1961. Available at: https://www.leonschools.net/cms/lib/FL01903265/Centricity/Domain/4925/Anthem%20-%20Ayn%20Rand.pdf

Roden, David. Posthuman Life: Philosophy at the Edge of the Human. Routledge, Taylor & Francis Group, 2015.

Rosen, Michael. "Marx, Karl (1818–83)." Routledge Encyclopedia of Philosophy, https://doi.org/10.4324/9780415249126-dc051-1.

Sandler, Ronald L. Ethics and Emerging Technologies. Palgrave Macmillan, 2014.

Shelley, Mary Wollstonecraft, David H. Guston, Ed Finn, and Jason Scott Robert. Frankenstein, or, the Modern Prometheus: Annotated for Scientists, Engineers, and Creators of All Kinds. The MIT Press, 2017.

Shelley, Percy Bysshe, and Richard Ackermann. Prometheus Unbound a Lyrical Drama in Four Acts Percy B. Shelley. Winter, 1908.

Slusser, George Edgar, et al. Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy. The University of Georgia Press, 2017.

Susskind, Jamie. Future Politics: Living Together in a World Transformed by Tech. Oxford University Press, 2020.

Suvin, Darko. Metamorphoses of Science Fiction: Studies in the Poetics and History of Cognitive Estrangement in Fiction. Yale University Press, 1979.

Turkle, Sherry. Second Self. Computers and the Human Spirit. 1985.

Wolfe, Cary. What Is Posthumanism? Cary Wolfe. Univ. of Minnesota Press, 2011.