

Reimagining Humanity: A Comparative Posthumanist Reading of Technology, Biotechnology and the More-than-Human World in Contemporary Literature

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Abstract: Posthumanism has become an important critical framework for rethinking the boundaries of the human in a world shaped by artificial intelligence, biotechnology, ecological crisis, and complex human–nonhuman relations. Earlier versions of this study offered a broad theoretical survey of posthumanist thinkers, but a research article requires a more clearly delimited corpus, method, research problem, and analytical findings. The present revised study addresses that limitation through a comparative close reading of three contemporary novels: Kazuo Ishiguro's *Klara and the Sun* (2021), Margaret Atwood's *Oryx and Crake* (2003), and Richard Powers's *The Overstory* (2018). The study draws primarily on critical posthumanism associated with Donna Haraway, N. Katherine Hayles, Rosi Braidotti, and Cary Wolfe. It investigates three connected questions: how technological and biological modification destabilizes the category of the human; how literary narratives redistribute agency among humans, machines, engineered organisms, and ecological systems; and what ethical model emerges when human exceptionalism is displaced by relationality. The analysis finds that the three novels do not present a single posthuman future. Instead, they construct three complementary forms of posthuman condition: technological intimacy and artificial subjectivity in *Klara and the Sun*; biotechnological overreach and species redesign in *Oryx and Crake*; and ecological decentring and plant agency in *The Overstory*. Taken together, the novels suggest that the most productive meaning of posthumanism is not the replacement of humans by machines or engineered species but a reorientation from autonomy to interdependence, mastery to responsibility, and anthropocentrism to a more-than-human ethics. The paper contributes a comparative literary framework linking AI, genetic engineering, and ecological agency within a single posthumanist argument.

Keywords: Artificial Intelligence; Ecology; Human Exceptionalism; Posthumanism; Technology; Transhumanism.

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I. INTRODUCTION

The question of what it means to be human has acquired renewed urgency in the twenty-first century. Artificial intelligence can generate language and images, biotechnology can modify living organisms, and ecological disruption demonstrates that human societies are inseparable from planetary systems. These developments do not simply add new technologies to an otherwise stable human condition. They expose the instability of the categories through which modern culture has traditionally defined the human: autonomy, rationality, bodily integrity, species superiority, and separation from nature. Posthumanism is valuable precisely because it asks how these categories were constructed and what becomes visible when they are reconsidered.

The revised paper begins from a distinction that is essential to critical posthumanist research. Posthumanism should not be equated with transhumanism. Transhumanist arguments generally emphasize technological enhancement and the possibility of overcoming biological limitations. Critical posthumanism, by contrast, questions the assumptions of human exceptionalism and the fantasy of the autonomous subject. Hayles's *How We Became Posthuman* links cybernetics, information, embodiment, and changing models of subjectivity [1]. Braidotti describes the posthuman condition in terms of relational, embodied, and post-anthropocentric subjectivity [2]. Wolfe similarly insists that posthumanism challenges humanism and anthropocentrism rather than simply imagining a technologically upgraded human [3]. Haraway's cyborg figure further destabilizes the boundaries between organism and machine, nature and culture [4].

Literature is especially suited to this inquiry because literary narratives can make abstract transformations of subjectivity concrete. Literary texts can place readers inside artificial minds, dystopian biotechnological futures, or narratives in which trees and ecosystems acquire forms of agency. Wallace's account of literature and posthumanism emphasizes embodiment, materiality, cyborg theory, digital culture, and human–nonhuman relations as important areas of literary inquiry [5]. The present study therefore treats contemporary fiction not merely as an illustration of posthumanist theory but as a site in which the meaning and limits of the posthuman are tested.

The research problem addressed here is the fragmentation of posthumanist literary discussion across separate technological, biological, and ecological domains. Studies of artificial intelligence often focus on the human–machine boundary; studies of biotechnology examine genetic modification and species design; ecocritical work examines nonhuman nature. A comparative framework can show how these apparently different issues are structurally connected by a common challenge to anthropocentrism. This paper accordingly brings together three novels that represent three distinct but related posthuman configurations: the artificial companion in Ishiguro's *Klara and the Sun*, the genetically engineered beings and ecological catastrophe of Atwood's *Oryx and Crake*, and the tree-centred ecological imagination of Powers's *The Overstory*.

The study has four objectives. First, it clarifies the critical posthumanist concepts most relevant to literary analysis. Second, it examines how the selected novels represent unstable boundaries between human and nonhuman forms of existence. Third, it identifies how agency is distributed across technological, biological, social, and ecological networks. Fourth, it evaluates the ethical implications of these representations. The central argument is that the novels collectively move posthumanism away from a fantasy of technological transcendence and toward an ethics of interdependence.

➤ Research Questions and Objectives

The study is guided by three research questions:

- RQ1. How do the selected novels destabilize conventional definitions of the human through artificial intelligence, genetic engineering, and ecological agency?
- RQ2. How is agency redistributed among humans, machines, engineered organisms, animals, plants, and material environments?
- RQ3. What ethical model emerges when human exceptionalism is replaced by relationality and interdependence?

The corresponding objectives are to identify the posthumanist features of the selected texts; to compare their different representations of technological and ecological transformation; and to develop an integrated interpretation of posthuman ethics in contemporary literature.

II. REVIEW OF LITERATURE AND RESEARCH GAP

Posthumanist literary criticism has developed through several intersecting intellectual traditions. Hayles's study of cybernetics is foundational because it demonstrates that ideas of information cannot be separated from the material bodies and technological systems through which information operates [1]. Haraway's cyborg theory rejects rigid boundaries between organism and machine and provides a vocabulary for hybrid identities and technologically mediated embodiment [4]. Braidotti extends the discussion toward a relational and post-anthropocentric subject, connecting posthumanism with questions of sustainability and the wider field of life [2]. Wolfe brings animal studies and ethics into the centre of posthumanist inquiry, challenging species hierarchy and anthropocentrism [3].

Literary scholarship has increasingly applied these theories to contemporary fiction. Recent research on Ishiguro's *Klara and the Sun* identifies the novel as a productive site for examining artificial subjectivity, embodiment, relational identity, and the human–nonhuman boundary [9, 13]. Scholarship on Atwood's *Oryx and Crake* has emphasized genetic engineering, ecological catastrophe, corporate power, and the instability of the distinction between natural and artificial [10, 11]. Research on Powers's *The Overstory* has shown how trees can be represented as actors rather than passive objects, thereby weakening the conventional opposition between human mind and nonhuman matter [12].

These studies establish that the selected novels are individually significant for posthumanist criticism. However, a comparative reading that places artificial intelligence, species engineering, and plant agency within one analytical framework can make a further contribution. The present study does not claim that no previous scholar has discussed any of these texts. Rather, its specific contribution lies in connecting three different forms of decentering—the technological, the biotechnological, and the ecological—and showing how they converge around the question of human exceptionalism. This comparative design is the principal research gap addressed by the paper.

III. THEORETICAL FRAMEWORK

The theoretical framework combines four complementary strands of critical posthumanism.

First, Hayles's emphasis on embodiment is essential for interpreting artificial beings. A posthuman subject is not adequately understood as information detached from a body. Her work traces the historical tendency to treat information as separable from material embodiment and shows why that separation is philosophically and culturally consequential [1]. In literary analysis, this framework permits questions about how bodies, interfaces, perception, memory, and technological systems interact.

Second, Haraway's cyborg theory challenges binary categories such as human/machine and nature/culture [4]. The cyborg is useful not because every technologically mediated human is literally a cyborg, but because it reveals that supposedly pure categories are already entangled. This concept is especially relevant to narratives in which artificial beings participate in human relationships.

Third, Braidotti's post-anthropocentrism shifts attention from the autonomous individual toward relational subjectivity and the continuum of human, animal, technological, and ecological life [2]. Her approach makes it possible to read environmental relations not as background scenery but as constitutive of human existence.

Fourth, Wolfe's critique of humanism and species hierarchy expands posthumanism into an ethical project [3]. If humans are not the unquestioned centre of moral consideration, then literature can be examined for the ways it grants or denies agency to animals, machines, organisms, and environments.

These perspectives are not treated as interchangeable. Hayles is particularly useful for technological embodiment; Haraway for boundary crossings; Braidotti for relational and post-anthropocentric subjectivity; and Wolfe for ethics and the question of the nonhuman. Their combination creates an analytical model with three dimensions: boundary instability, distributed agency, and ethical interdependence.

IV. MATERIALS AND METHODS

This research is a qualitative, interpretive study in English literary criticism. The primary corpus consists of three contemporary novels:

Kazuo Ishiguro's *Klara and the Sun* (2021), Margaret Atwood's *Oryx and Crake* (2003), and Richard Powers's *The Overstory* (2018). The novels were selected purposively because each foregrounds a different form of posthuman transformation while remaining concerned with human relationships and ethical responsibility.

The method is comparative close textual analysis. The analysis identifies recurring narrative situations, character configurations, forms of agency, and representations of human–nonhuman boundaries. These observations are interpreted through the concepts of embodiment, hybridity, relationality, post-anthropocentrism, and ethical responsibility derived from the theoretical framework. Secondary scholarship is used to establish the existing critical conversation and to position the comparative argument within current research.

The study is not an empirical investigation involving human participants, surveys, experiments, or statistical measurement. Its "results" are therefore interpretive findings generated through systematic comparison of the primary texts. To maintain analytical focus, the study examines three thematic categories across the corpus: (1) technological subjectivity, (2) biotechnological transformation and

ecological consequence, and (3) more-than-human agency. This design enables the comparison to move from individual textual observation toward a broader argument about contemporary posthuman literary imagination.

V. ANALYSIS AND RESULTS

➤ *Klara and the Sun: Artificial Subjectivity and Relational Intelligence*

Ishiguro's *Klara and the Sun* places an Artificial Friend, Klara, at the centre of its narrative. The novel immediately complicates the assumption that technology is merely an external tool. Klara observes, interprets, remembers, forms attachments, and attempts to understand human behaviour. The narrative does not require the reader to decide that Klara is simply "human" in disguise. Instead, it creates a more difficult question: can ethical significance depend on biological membership in the human species?

Klara's perspective is important because the novel grants narrative authority to a nonhuman technological being. Her observational system is limited and sometimes fragmented, yet those limitations do not make her irrelevant. On the contrary, her partial perception exposes the assumptions of the humans around her. She observes social rituals that human characters take for granted and interprets emotional behaviour through a different cognitive framework. The result is a form of narrative estrangement: the human world becomes unfamiliar when viewed through an artificial perspective.

This feature can be read through Hayles's emphasis on embodiment and information [1]. Klara is technological, but she is not simply disembodied information. Her perception depends on a physical body, visual processing, environmental conditions, and relationships with other beings. The novel therefore complicates the popular fantasy that artificial intelligence is purely computational and independent of material context.

The novel also illustrates Haraway's boundary critique [4]. Klara occupies a space between machine and companion, product and participant, object and subject. The humans purchase her, but their relationship with her exceeds the logic of a simple commodity. Care, dependence, affection, and sacrifice create relations that cannot be completely explained by ownership.

A further result concerns relational identity. Klara becomes meaningful through her relationships with Josie, Rick, the Mother, and the surrounding environment. Her identity is not an isolated essence; it emerges through interaction. This corresponds to Braidotti's relational subject [2]. Recent scholarship likewise identifies Klara's artificial perspective as a significant site for examining posthuman subjectivity and ethical relations [9, 13].

The novel therefore produces a first major finding: artificial intelligence destabilizes the human category most effectively when the narrative shifts attention from the question "Is the machine human?" to the question "What kinds of relationships and responsibilities become possible when a

machine participates in human life?" The ethical issue is relational rather than taxonomic.

➤ *Oryx and Crake: Biotechnological Mastery and the Failure of Human Exceptionalism*

Atwood's *Oryx and Crake* presents a darker form of posthuman transformation. Here the problem is not simply that technology enters human life; it is that biotechnology becomes a means through which powerful humans attempt to redesign life itself. Crake's project embodies a belief that human beings can be improved by eliminating traits considered defective or dangerous. The creation of the Crakers therefore represents an extreme form of instrumental rationality: life becomes an object of design.

The novel exposes the contradiction within this project. Crake attempts to eliminate violence, jealousy, hierarchy, and other sources of human conflict, yet the consequences of his intervention produce new ethical and ecological uncertainties. The engineered beings do not become blank objects. They develop social practices, symbolic behaviours, curiosity, and relationships that exceed the intentions of their designer. The supposedly controllable biological product becomes an evolving form of life.

This finding resonates with Braidotti's critique of the fantasy of mastery [2]. Posthumanism does not necessarily celebrate the ability to manipulate biological material. It asks what happens when the desire for control becomes the governing principle of life. Atwood's dystopian world demonstrates that technological capacity without ethical responsibility can intensify, rather than solve, human problems.

The ecological dimension is equally important. The genetic modifications in the novel are connected to environmental degradation, species manipulation, corporate power, and the commodification of life. Existing scholarship has read the novel through ecological philosophy and sustainability, showing how its technological utopianism is tied to environmental and ethical crisis [10]. More recent posthumanist work similarly argues that the novel destabilizes the distinction between natural and artificial and exposes the paradoxes of engineered posthuman futures [11].

The second major finding is therefore that biotechnological posthumanism cannot be separated from questions of power. The important issue is not simply whether humans can redesign bodies and species, but who has the authority to do so, whose interests determine the design, and what ecological and social costs follow from that authority. Atwood's novel consequently turns posthumanism into a critique of technological mastery.

➤ *The Overstory: Plant Agency and the More-than-Human World*

If *Klara and the Sun* destabilizes the human through artificial intelligence and *Oryx and Crake* through biotechnology, Powers's *The Overstory* moves the discussion toward ecological agency. The novel gives trees and forests an importance that exceeds their traditional role as setting.

Human characters gradually encounter trees as living systems with temporalities, networks, and forms of interaction that challenge human assumptions about intelligence.

This shift is significant for posthumanist literary criticism because it changes the scale of narrative attention. Human lives are relatively short, while trees operate across decades and centuries. The difference in temporal scale exposes the limitations of human-centred perception. What appears passive from a human viewpoint can become active when viewed through ecological processes.

Austin's study of *The Overstory* argues that Powers represents trees as actors rather than passive objects and uses the novel to undermine the mind/matter and human/nonhuman distinctions [12]. This supports the present study but also allows a broader comparison with the other two novels. In all three works, the human is forced to recognize an agency that it did not create: Klara possesses technological capacities beyond ordinary human cognition; the Crakers become more than the controlled products of Crake's design; and trees participate in ecological systems that precede and outlast individual human intentions.

The novel also challenges the idea that knowledge must be human-centred. Scientific knowledge about trees becomes one route toward recognizing their agency, but the novel does not reduce trees to scientific objects. Its narrative structure itself changes the reader's scale of attention. Human stories are placed within a larger ecological story.

The third major finding is that posthumanist literature can decentre humanity without denying human experience. The human characters remain important, but their significance is relational. Their lives become intelligible through forests, species, climate, scientific knowledge, and material environments.

➤ *Comparative Result: Three Modes of Posthuman Decentring*

The comparison produces a three-part model. *Klara and the Sun* represents technological decentring: the human encounters an artificial being that can participate in care and perception. *Oryx and Crake* represents biotechnological decentring: the human attempts to redesign life but discovers that life exceeds the designer's intentions. *The Overstory* represents ecological decentring: the human discovers that agency and meaningful processes exist beyond human temporal and perceptual scales.

These are not identical versions of posthumanism. Ishiguro is concerned with intimacy, care, and artificial subjectivity; Atwood emphasizes power, biotechnology, inequality, and catastrophe; Powers emphasizes ecological relation and the agency of plant life. Yet all three narratives undermine the autonomous human subject.

The comparative result can be summarized as follows:

- Humanism: human as autonomous centre
- Posthumanism: human as relational participant.

- Humanism: technology as instrument
- Posthumanism: technology as part of human–nonhuman networks.
- Humanism: nature as background/resource
- Posthumanism: ecological systems as constitutive agents.
- Humanism: species hierarchy
- Posthumanism: ethical attention across forms of life.

The significance of this comparison is that posthumanism becomes a method for connecting issues that are often studied separately. AI, genetic engineering, and ecological crisis are different phenomena, but they share a question about human control and human limits.

VI. DISCUSSION

The findings suggest that contemporary literature uses posthumanism less as a prediction about the future than as a critical method for understanding the present. None of the three novels offers a simple celebration of technology. Instead, each exposes the costs of treating humans as autonomous masters of their environments.

The first implication concerns agency. In conventional humanist models, agency is usually attached to an individual subject who makes choices and produces effects. The three novels complicate this model. Klara's actions are shaped by technological design and social relationships; the Crakers emerge from genetic engineering but develop beyond their creator's control; and the humans of *The Overstory* are embedded in ecological processes they cannot fully command. Agency therefore appears distributed rather than concentrated.

The second implication concerns embodiment. Posthumanism does not require the disappearance of the body. Hayles's work is particularly important here because the information age can create fantasies of disembodiment [1]. The novels instead repeatedly return to bodily vulnerability. Klara has a physical form; Atwood's engineered beings are biological bodies subject to mortality and ecological conditions; Powers's humans are dependent on the material environment. The posthuman condition is therefore embodied rather than purely virtual.

The third implication concerns ethics. Wolfe's critique of anthropocentrism encourages a reconsideration of who or what counts as an object of ethical concern [3]. The selected novels suggest that ethical responsibility begins when humans recognize that their actions affect beings and systems beyond themselves. In Ishiguro, care becomes meaningful across a human–artificial boundary. In Atwood, the manipulation of life reveals the ethical dangers of treating organisms as commodities. In Powers, ecological responsibility requires humans to recognize forms of life whose value cannot be reduced to human utility.

The fourth implication concerns power. A weak version of posthumanism can become a celebration of novelty: smarter machines, modified bodies, and new forms of life. The selected novels resist that interpretation. Atwood most explicitly shows that technological power is distributed

unequally and can be used to reinforce corporate and social hierarchies. Ishiguro shows technology embedded in systems of class, education, and care. Powers demonstrates that environmental exploitation is also a question of economic and political power. A useful posthumanism must therefore remain attentive to inequality.

Finally, the comparison shows that posthumanism is not anti-human. It does not require abandoning human values. Rather, it asks whether values such as care, justice, responsibility, and dignity can be extended beyond a narrowly defined human subject. Braidotti's relational posthumanism is useful here because it connects decentring with the possibility of new forms of social and ecological responsibility [2]. The result is not the disappearance of humanity but a more modest understanding of its place within a larger network of life.

VII. CRITICAL EVALUATION AND LIMITATIONS

The study has several limitations. First, its corpus is deliberately small. Three novels cannot represent the whole field of contemporary posthuman literature. Second, the study focuses on Anglophone fiction and therefore does not address posthumanist writing from Indian, African, Asian, or other literary traditions. Third, the method is interpretive and qualitative; the findings should be understood as analytical conclusions rather than statistically generalizable results. There is also a conceptual limitation. "Posthumanism" is a broad and internally diverse field. It overlaps with transhumanism, new materialism, animal studies, ecocriticism, science and technology studies, feminist theory, and the environmental humanities. The present study therefore uses critical posthumanism in a specific sense: as an approach that questions human exceptionalism, emphasizes relational embodiment, and expands ethical attention to nonhuman forms of life and agency.

These limitations also identify directions for future research. Comparative studies could examine Indian English fiction, regional literatures, climate fiction, digital literature, disability narratives, or poetry. Further research could also compare literary representations of generative AI with actual cultural practices of AI-assisted writing and reading. Such studies would extend the literary analysis developed here without reducing literature to technological illustration.

VIII. CONCLUSION

The revised study has argued that contemporary literature offers a powerful space for rethinking the human through posthumanist theory. The comparative reading of *Klara and the Sun*, *Oryx and Crake*, and *The Overstory* demonstrates three connected transformations: the technological challenge to human uniqueness, the biotechnological challenge to human control over life, and the ecological challenge to human-centred ideas of agency.

The principal result is that the posthuman in these novels is not simply a future condition in which machines replace people. It is a condition of entanglement that already exists

within contemporary life. Humans depend on technological systems, biological processes, other species, and ecological environments. The novels make this dependence visible by shifting narrative attention toward artificial companions, engineered organisms, and trees.

The study therefore proposes that the most productive literary meaning of posthumanism is relational rather than replacement-based. The question is not whether the human will disappear, but how the human can be reimagined when autonomy, superiority, and separation are no longer adequate descriptions of existence. Hayles directs attention to embodiment and technological mediation; Haraway to boundary crossings; Braidotti to relational and post-anthropocentric subjectivity; and Wolfe to ethical responsibility toward the nonhuman [1–4].

The selected novels finally suggest that a responsible posthuman future requires limits as much as innovation. Technology must be evaluated through questions of power and care; biotechnology through ecological and ethical responsibility; and human culture through recognition of more-than-human life. Literature contributes to this work because it does not merely define concepts—it allows readers to inhabit unfamiliar perspectives and to imagine the consequences of different relationships.

Posthumanism, then, should not be understood as the abandonment of humanity. It is better understood as a critical reorientation: from autonomy toward relation, from mastery toward responsibility, from species hierarchy toward ethical attention, and from an isolated human world toward a world shared with technological, biological, and ecological others.

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