

**Analysis of Environmental Metaphors in *The Three-Body Problem*:  
From Ecological Crisis to Cosmic Fragility**

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**Abstract:**

Environmental metaphors reflect contemporary concerns such as climate change, resource depletion, and ecological collapse. In Liu Cixin's *The Three-Body Problem*, environmental metaphors serve as a critical tool for exploring the fragility of both human civilization and the broader universe. These metaphors manifest in various forms throughout the novel, ranging from the depiction of ecological crises on Earth to the extreme and chaotic environment of the alien Three-Body planet. Through these contrasting environments, the novel delves into profound themes of vulnerability, existential uncertainty, and the limitations of human technological advancement. It presents a vast cosmic backdrop intertwined with complex interstellar conflicts, offering a profound exploration of human vulnerability and existential dilemmas in the face of alien threats.

This paper analyzes the environmental metaphors within *The Three-Body Problem*, examining how the depiction of natural landscapes, societal structures, and civilizational processes reflect humanity's limitations and ethical quandaries in the universe.

By utilizing environmental metaphors in such a multifaceted way, Liu Cixin highlights the fragility of human society and existence both on Earth and within the universe. These metaphors invite readers to reflect on the broader implications of ecological collapse and technological advancement. The novel suggests that, despite our technological prowess, humanity remains profoundly vulnerable to environmental and cosmic forces, reminding us of our place in the larger, often hostile universe. In this way, *The Three-Body Problem* serves not only as a meditation on contemporary ecological issues but also as a broader commentary on the existential dilemmas that humanity faces in an increasingly unstable and unpredictable world.

Keywords: *the three-body problem*, environmental metaphor, dark forest theory, trisolaris, civilization conflict, existential dilemma

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## 1. Introduction

Metaphors play a crucial role in shaping how we think about and engage with environmental issues. They not only reflect our conceptualization of the environment but also actively influence public attitudes, policy decisions, and individual behaviors toward ecological concerns. Environmental metaphors—whether drawn from nature, war, economics, or other domains—serve as cognitive tools that help structure complex environmental phenomena in ways that are both accessible and persuasive. These metaphors can frame the way people perceive the urgency, severity, and potential solutions to environmental challenges, and, as such, they are central to the discourse surrounding sustainability, climate change, and ecological preservation.

Recent scholarship has begun to explore the cognitive and cultural dimensions of environmental metaphors, recognizing their power to shape both individual thought processes and collective societal actions. From the cognitive linguistic perspective, metaphors are not merely linguistic ornaments but fundamental to our reasoning and worldview (Gibbs 2008; Thibodeau 2011). Theories of conceptual metaphor, as laid out by Lakoff and Johnson (2003), emphasize how metaphors structure human experiences and perceptions, including our relationship with the natural world. Scholars such as Semino (2008) and Anaïs Augé (2022) have explored how metaphorical representations of environmental issues can influence how people think about sustainability, ecological balance, and policy measures (Sullivan & White, 2004).

In the context of environmental advocacy and communication, metaphors are also powerful tools for mobilizing public engagement and supporting pro-environmental behaviors (Jensen 2019). By analyzing the metaphors employed in environmental discourse, it becomes evident how language shapes not only individual cognition but also the broader societal response to ecological crises.

This paper aims to review recent literature on environmental metaphors and their role in shaping public understanding and action on environmental issues. It draws on interdisciplinary approaches, from cognitive linguistics to cultural studies, to better understand how metaphorical language influences ecological thinking and behavior.

Environmental metaphors are a crucial component of how humanity conceptualizes its relationship with nature. These metaphors not only serve as linguistic tools but also as powerful mechanisms for framing complex ecological ideas, guiding public perceptions, and shaping societal attitudes toward environmental sustainability. Liu Cixin's *The Three-Body Problem* employs environmental metaphors to explore the fragile balance between technological progress and ecological vulnerability, highlighting the interconnectedness of Earth's ecosystems and the broader, cosmic environment.

In *The Three-Body Problem*, Liu uses the metaphor of an alien world plagued by extreme climate fluctuations to reflect humanity's own ecological instability. The novel's depiction of the Three-Body planet, where unpredictable and severe environmental changes wreak havoc on its inhabitants, parallels the environmental challenges that Earth faces due to human-induced climate change. The alien planet's volatile conditions are symbolic of Earth's ecological vulnerability, pointing to the consequences of unchecked technological advancement and environmental exploitation (Liu, 2008). This imagery mirrors growing public concerns over global warming, resource depletion, and the limitations of human control in the face of ecological collapse (Swain, 2022).

The environmental metaphors in *The Three-Body Problem* function on multiple levels: representing ecological fragility on Earth, reflecting the existential threats posed by technological advancements, and extending concerns of ecological fragility to a cosmic scale. In the novel, the alien civilization's struggle with an unpredictable environment serves as a cautionary tale for humanity. Just as the Three-Body planet's inhabitants are trapped in a cycle of environmental instability, so too is humanity at risk of being caught in a cycle of ecological collapse if current environmental practices are not addressed. This notion of ecological collapse extends beyond terrestrial boundaries, suggesting that human vulnerability is not confined to Earth but is a cosmic reality (Liu, 2008).

Furthermore, *The Three-Body Problem* also reflects the paradoxes inherent in technological progress. While technology offers potential solutions to environmental problems, it simultaneously exacerbates them, as seen in the novel's portrayal of advanced weaponry and its unintended consequences for the ecosystem. This duality underscores the limits of human agency and the unpredictable nature of technology's impact on both Earth and the cosmos. By using environmental metaphors to explore these themes, Liu emphasizes the delicate relationship between humanity and the environment, urging readers to reconsider the consequences of unchecked technological advancement.

The environmental metaphors in *The Three-Body Problem* not only highlight the ecological fragility of Earth but also extend these concerns to a broader, cosmic scale. By depicting an alien world ravaged by environmental instability, the novel illustrates the dangers of ecological collapse and the existential threats posed by technological progress. The metaphors underscore the vulnerability of human civilization and the unpredictable forces that shape both earthly and cosmic environments.

## 2. Environmental Metaphors in *The Three-Body Problem*

### 2.1 The Three-Body World and Human Society

The environment of the alien planet in *The Three-Body Problem* serves as a striking metaphor for the fragility of ecosystems and the precariousness of civilizations in the face of extreme environmental conditions. The unpredictable orbits of the three suns create chaotic, rapidly changing climates that force the inhabitants to adapt or perish. This metaphor extends beyond the fictional world of the novel and into real-world concerns about ecological collapse and environmental degradation. Here are some key examples that further illustrate how the Three-Body environment functions as a powerful metaphor for Earth's ecological challenges:

#### 2.1.1 Climate Instability and Resource Scarcity

On the Three-Body planet, civilizations are forced to adapt to extreme and unpredictable shifts in temperature, from intense heat to freezing cold, as the planet's orbit brings it closer or farther from the three suns. In much the same way, Earth's climate is becoming increasingly unstable due to human-induced climate change, with more frequent and severe heatwaves,

storms, droughts, and floods. Just like the inhabitants of the Three-Body world who must plan for periods of “stable eras” and “chaotic eras,” human societies must grapple with the increasing unpredictability of climate conditions and the corresponding scarcity of vital resources like water, arable land, and energy.

### 2.1.2 Ecological Fragility and Collapse

The Three-Body planet’s volatile environmental cycles mirror the fragility of Earth’s ecosystems. On this alien world, entire civilizations collapse during chaotic eras when the environment becomes inhospitable. Similarly, Earth’s ecosystems—ranging from coral reefs to rainforests—are at risk of collapse due to deforestation, pollution, and the loss of biodiversity. Both worlds share the reality that ecosystems are delicate and can collapse if pushed beyond a certain threshold, leading to the destruction of civilizations or the destabilization of societies that depend on them.

### 2.1.3 Technological Hubris and Environmental Limits

In *The Three-Body Problem*, civilizations attempt to manipulate their environment, employing advanced technologies to predict or control the chaotic climate. However, their efforts ultimately fail, as they cannot overcome the fundamental unpredictability of the planet’s orbit. This mirrors the way human societies have often relied on technological innovation to mitigate or control the environmental damage caused by industrialization. Despite our advanced technologies, we are finding that nature’s limits cannot be fully controlled or outsmarted, as seen with the rising challenges of climate change, soil degradation, and the depletion of natural resources.

### 2.1.4 The Great Filter and Existential Threats

The Three-Body planet serves as a backdrop for existential threats that arise from the inability to adapt to environmental chaos. In the novel, the alien civilizations face the Great Filter—the idea that many civilizations fall due to their inability to survive long enough to achieve sustainable growth. This concept parallels the real-world issue of ecological collapse leading to existential threats for humanity. Just as the civilizations on the Three-Body planet are

in constant peril due to environmental instability, humanity faces its own existential crisis driven by ecological degradation, overpopulation, and the looming threat of resource depletion.

#### 2.1.5 The Concept of “Stable” and “Chaotic” Eras

In the novel, the planet’s history is divided into periods of relative stability and chaotic eras, symbolizing the cyclical nature of ecological stability and collapse. Earth too has experienced periods of relative environmental stability but is now entering an era of increasing unpredictability, where human actions are driving rapid ecological changes. Like the Three-Body planet, which swings between stable and chaotic states, Earth’s climate is becoming more erratic, with previously stable patterns of weather now disrupted by human-induced changes such as carbon emissions and deforestation.

#### 2.1.6 The Role of Adaptation and Survival

On the Three-Body planet, the civilizations must constantly adapt to survive, either by hiding during chaotic eras or building highly specialized technologies to withstand the extreme conditions. This mirrors the ways in which human societies are now forced to adapt to rapidly changing environmental conditions—whether through innovations like renewable energy, urban redesign to withstand climate change, or the relocation of populations due to rising sea levels. Adaptation becomes a critical factor for survival in both the alien world and our own.

#### 2.1.7 The Collapse of Ecosystems as a Warning

The collapse of civilizations on the Three-Body planet underscores a central theme of the novel: no civilization, no matter how advanced, can escape the consequences of environmental mismanagement and ecological instability. Similarly, Earth’s current trajectory suggests that unchecked ecological degradation—whether through climate change, pollution, or overconsumption of resources—could lead to the collapse of ecosystems and, ultimately, the destabilization of human society. The novel’s depiction of these themes serves as a potent allegory for our own environmental struggles, urging humanity to reconsider its trajectory before it is too late.

*The Three-Body Problem* presents the alien world as a metaphor for Earth's growing ecological crises. The constant instability and unpredictability of the planet's environment not only highlight the fragility of any civilization's relationship with nature but also mirror the increasing vulnerabilities humanity faces due to climate change and environmental degradation. Just as the inhabitants of the Three-Body planet must adapt to survive in a world beyond their control, human societies must also confront the realities of ecological collapse and work toward more sustainable and harmonious relationships with the natural world.

## 2.2 The Universe and Human Insignificance

In *The Three-Body Problem*, the theme of human insignificance in the context of the vast and indifferent universe is explored through various narrative elements, from the novel's cosmological setting to its portrayal of extraterrestrial civilizations. The universe's indifference is not only a reflection of humanity's vulnerability in the face of ecological collapse but also a broader commentary on existential questions about human place and survival. The following case analyses illustrate these themes:

### 2.2.1. The Fate of Earth in the Face of Cosmic Forces

The most direct case of the universe's indifference to human life is the potential destruction of Earth by an alien civilization. The Trisolarans, an alien species whose home planet is caught in the unstable gravitational pull of three suns, represent a higher technological power that poses an existential threat to humanity. Despite their technological superiority, the Trisolarans view Earth merely as a potential resource, rather than as a home to sentient beings. Their decision to invade is driven not by malice but by the necessity of survival, underscoring the indifference of the cosmos. The Trisolaran threat illustrates that human civilization is vulnerable not only to natural forces like climate change and ecological degradation but also to extraterrestrial forces that are beyond human comprehension and control.

### 2.2.2. *The Three-Body Problem* as a Metaphor for Environmental Collapse

The novel takes its name from the "three-body problem," a reference to the chaotic and unpredictable motion of three celestial bodies under gravitational influence. This physical problem serves as a metaphor for the precariousness of human civilization on Earth, where

humans struggle to understand and control their environment. *The Three-Body Problem* mirrors the ecological crises humanity faces—climate change, resource depletion, and biodiversity loss—which are, like the movement of celestial bodies, complex and difficult to predict or control. The environmental degradation on Earth is echoed in the novel's depiction of the Trisolaran home world, where the inhabitants' survival depends on their ability to predict and adapt to the erratic behavior of their suns. This parallel draws a stark comparison between the ecological collapse on Earth and the cosmic chaos in the universe, highlighting how humanity is just one small part of a larger, uncontrollable system.

### 2.2.3. Human Inability to Control Cosmic Forces

Another significant case of human insignificance is the portrayal of the “dark forest” theory, introduced later in the novel and its sequels. According to this theory, the universe is like a “dark forest” where every civilization is a hunter trying to avoid being detected, because any civilization that reveals itself risks being destroyed by more advanced civilizations. This theory further illustrates the vulnerability of human civilization, not just to ecological or environmental forces, but to the actions of other civilizations that view humanity as a potential threat. The “dark forest” is a metaphor for the existential fear of being powerless in an uncaring universe. Humanity's inability to control these forces, both terrestrial and extraterrestrial, underscores its insignificance on the cosmic scale.

### 2.2.4. The Ephemeral Nature of Human Existence

The novel also presents the notion that human life, like the fleeting moment of a civilization, is a brief and transient phenomenon in the grand sweep of cosmic time. Earth, in this view, is a fragile dot in a vast and indifferent universe. The narrative shifts between the history of humanity on Earth and the fate of civilizations throughout the universe, suggesting that what happens on Earth is just a small chapter in a much larger, often hostile, cosmic history. This perspective encourages readers to reflect on the relative brevity and fragility of human life, as well as the ecological and existential challenges humanity faces, not as isolated incidents but as part of a broader, timeless struggle for survival.

### 2.2.5. Ecological and Cosmic Interconnectedness

The novel's treatment of the ecological crisis on Earth, and its relationship with cosmic forces, provides a philosophical lens for understanding the interconnection of all life forms. The environmental collapse that humanity faces on Earth is not merely a local or isolated event but is part of the larger fabric of the universe. In *The Three-Body Problem*, the Trisolarans' desperation to survive by finding a new planet mirrors humanity's own struggles with environmental destruction. Both species, despite their vastly different origins and technological advancements, are caught in a universe where survival is fragile, and life is at the mercy of forces beyond their control. The novel thus links human ecological vulnerability to the existential threat of cosmic annihilation, emphasizing that humanity's struggles against environmental collapse are part of a much larger cosmic context.

*The Three-Body Problem* uses the vast, indifferent universe to illustrate humanity's insignificance and vulnerability. Whether through the existential threat of extraterrestrial invasion, the metaphor of *The Three-Body Problem* for ecological collapse, or the "dark forest" theory that suggests the dangers of cosmic existence, the novel challenges readers to confront the limits of human power. It forces us to reflect not only on the fragility of life on Earth but also on the potential for humanity's extinction in a universe that is indifferent to our survival. This cosmic perspective invites readers to reconsider the way we interact with our environment and with each other, urging humility in the face of forces far greater than human civilization.

### 2.3 Technological Advancement and Ecological Fragility

In *The Three-Body Problem*, one of the key environmental metaphors explored is the duality of technological progress—its potential to both solve and exacerbate ecological issues. This theme resonates deeply with the real-world challenge of balancing technological innovation with environmental sustainability. Through the novel's narrative, we see how advanced technologies—while offering solutions to global threats—can also contribute to ecological destabilization. This case study examines the metaphor of technological advancement in the context of ecological fragility, exploring how *The Three-Body Problem* reflects real-world dilemmas faced by humanity.

#### 2.3.1. Technological Progress as a Double-Edged Sword

The novel illustrates the tension between technological development and environmental fragility through the example of human efforts to combat existential threats. One notable technological advancement is the development of weapons capable of annihilating entire civilizations, a theme symbolizing both human ingenuity and its dangerous potential. This mirrors humanity's current dilemma with technologies like nuclear weapons, artificial intelligence, and biotechnology, which, while holding the potential for significant advancements, also bring with them catastrophic risks if misused.

The Trisolarans, an alien civilization, possess advanced technology that could enable them to conquer Earth. Their technological superiority is both awe-inspiring and terrifying, reminding humanity of the precarious balance between technological achievement and ecological vulnerability. This scenario acts as a metaphor for how technological advancements can tip the balance of environmental and social stability.

While technology offers potential solutions to humanity's environmental crises, it can also exacerbate these problems. In the novel, technological efforts to combat ecological collapse and alien invasion often result in unforeseen consequences, highlighting the complexity of using technology as a one-size-fits-all solution.

In the novel, the human race attempts to use technology to respond to the alien threat posed by the Trisolarans. However, as these technologies evolve, they inadvertently lead to the destabilization of Earth's ecological systems. The use of advanced weapons, such as the "sophons," illustrates how a technological solution to one problem can inadvertently create a host of new challenges, much like how humanity's reliance on fossil fuels has led to global warming and environmental degradation.

In real life, technologies like nuclear energy and geoengineering hold the potential to address climate change but also come with significant risks. Nuclear energy, for example, can provide a substantial reduction in carbon emissions, but the threat of radioactive disasters or nuclear proliferation shows the dangers of unchecked technological deployment. Geoengineering technologies, like carbon capture and storage, aim to mitigate climate change, but they come with potential risks, such as unintended disruptions to local weather patterns or ecosystems. Similarly, while renewable energy technologies (e.g., solar and wind) offer hope for reducing

environmental impact, their widespread implementation has raised concerns about resource extraction and waste management.

### 2.3.3. Technological Progress vs. Ecological Responsibility

The novel underscores the idea that technological solutions alone are insufficient without a corresponding commitment to ecological responsibility. The key message is that while technology can help address environmental threats, it must be paired with a broader understanding of ecological sustainability. The unchecked acceleration of technological development without consideration of its environmental consequences can lead to catastrophic outcomes.

The conflict between the human race and the Trisolarans serves as a metaphor for the broader struggle between technological development and ecological stewardship. The Trisolarans' ability to destroy Earth's environment in their pursuit of survival mirrors the destructive consequences of human overconsumption and environmental exploitation. This sets a stark warning about the future trajectory of humanity if technological advancements continue to outpace ecological awareness.

The ongoing global struggle to balance technological development with ecological preservation is evident in debates around climate change policy, resource management, and sustainable development. For instance, the development of "green technologies" like electric vehicles and wind turbines needs to be matched by efforts to reduce the consumption of nonrenewable resources, ensure energy efficiency, and protect natural ecosystems.

In *The Three-Body Problem*, the metaphor of technology as both a savior and a destroyer serves as a powerful commentary on the dual nature of human ingenuity. While technology holds the potential to advance civilization and address environmental crises, it also brings with it the risk of exacerbating ecological and existential threats. This duality reflects the real-world challenge of technological progress—how innovation can lead to both solutions and disasters, depending on how it is managed.

The novel's depiction of technological advancement highlights the importance of considering the broader ecological and social consequences of new technologies. It suggests that

a more holistic approach, combining technological innovation with environmental stewardship, is essential to avoid the destructive outcomes of unchecked progress. This theme resonates deeply with contemporary concerns about climate change, biodiversity loss, and the unsustainable exploitation of natural resources. Ultimately, *The Three-Body Problem* serves as a cautionary tale, warning against the pursuit of technological advancement without due consideration for the ecological and existential consequences it may bring.<sup>2.4</sup> The “Wounded Earth” and Human Responsibility

The metaphor of a “wounded Earth” is a recurring theme in environmental discourse, and it is also evident in *The Three-Body Problem*. The Earth is depicted as a planet in distress, suffering from the cumulative effects of human exploitation and neglect. This metaphor emphasizes the idea that humanity has inflicted harm upon the environment, and that efforts must be made to restore the planet to health.

In the novel, this metaphor is used to illustrate humanity’s growing awareness of the damage it has caused to the Earth. The depiction of the Earth as a wounded body evokes a sense of responsibility and moral obligation to heal the planet, emphasizing the need for collective action to address ecological crises. However, the metaphor also reflects the challenges involved in restoring the Earth to health, highlighting the difficulty of reversing the damage caused by centuries of environmental degradation.

This metaphor also raises important ethical questions about the relationship between humanity and the Earth. By framing the planet as a wounded body, the novel suggests that humanity must take responsibility for the harm it has caused and work toward restoring balance and sustainability. At the same time, the metaphor challenges readers to consider the limits of human agency and the complexities of environmental restoration.

### 3. Impact of Environmental Metaphors on Public Perception and Policy

Metaphors in *The Three-Body Problem* go beyond mere literary devices; they play a crucial role in shaping how environmental issues are understood and addressed in real-world contexts. These metaphors—such as ecological fragility, cosmic insignificance, and the duality of technological progress—offer profound insights into humanity’s relationship with the

environment and the broader universe, influencing both public perception and policy decisions. By using metaphors in such an effective manner, the novel draws attention to the urgency and complexity of the environmental crises we face and calls for a more thoughtful, global approach to these issues.

One of the most powerful metaphors in the novel is the depiction of Earth as a wounded body. This metaphor not only emphasizes the fragility of the planet but also highlights the urgency of collective action in the face of environmental degradation. The image of Earth as a wounded body conveys a sense of vulnerability, suggesting that just as a human body requires immediate care and healing when injured, so too does the planet require urgent and coordinated efforts to address its environmental crises. This framing is intended to provoke a sense of collective responsibility, encouraging a response from governments, industries, and individuals alike. It suggests that inaction or complacency in the face of ecological collapse is as reckless as ignoring the needs of a sick or injured person. By invoking this metaphor, *The Three-Body Problem* calls for swift and decisive action to prevent further environmental damage, stressing the importance of taking proactive steps toward sustainability, conservation, and the repair of damaged ecosystems.

Another key metaphor in the novel is the portrayal of the universe as indifferent to human existence. By situating environmental crises within the vast, uncaring cosmos, the novel underscores the existential risks posed by ecological collapse. This metaphor shifts the focus from human-centric concerns to a broader, cosmic perspective, illustrating humanity's vulnerability in the grand scheme of the universe. Unlike traditional narratives where humans are seen as the central figures, the universe in *The Three-Body Problem* is depicted as a vast, cold, and indifferent expanse that neither acknowledges nor prioritizes human survival. In this context, environmental issues are not merely local or temporary problems, but rather, they are deeply interconnected with universal forces that could have irreversible and far-reaching consequences. The novel suggests that humanity's survival is precarious, not guaranteed, and this reality heightens the urgency for collective action to address ecological collapse. The metaphor of cosmic indifference encourages readers to recognize the larger, existential implications of environmental degradation, urging them to think beyond the immediate and consider long-term sustainability in policy and global cooperation.

Finally, *The Three-Body Problem* explores the tension between technological advancement and ecological fragility. The novel critiques unchecked technological progress, suggesting that while technology is key to solving many of the world's environmental problems, it must be developed with an awareness of its long-term ecological consequences. This metaphor serves as a cautionary tale about the dangers of pursuing technological solutions without regard for their environmental impact. It acknowledges the promise of technology to address pressing issues like climate change, resource depletion, and environmental restoration, but it also warns that technological advancement, if pursued recklessly, can exacerbate environmental destruction. The novel thus advocates for a balanced approach to technological innovation—one that prioritizes sustainability and incorporates ecological considerations into every stage of development. It emphasizes the need for policymakers to adopt a more holistic view of progress, where the pursuit of technological solutions is guided by an awareness of their potential consequences on ecosystems, biodiversity, and the planet's long-term health.

The environmental metaphors in *The Three-Body Problem* provide more than just a narrative device; they serve as tools for shaping public discourse around environmental responsibility and policy. By framing the Earth as a wounded body, presenting the universe as indifferent to human survival, and highlighting the fragile relationship between technology and ecology, the novel calls for a deeper, more urgent engagement with the environmental challenges facing our world. These metaphors have the potential to influence both individual and collective action, shaping how society approaches the complex issues of environmental sustainability. They suggest that the fight to preserve the planet is not just a matter of national or local concern, but a global challenge that requires cooperation, foresight, and a rethinking of progress. In this way, *The Three-Body Problem* offers a compelling narrative that blends science fiction with a profound commentary on the state of our environment, urging readers to reconsider the future of the planet and our role in shaping that future.

Through these metaphors, the novel calls attention to the interconnectedness of human actions and the natural world, urging us to adopt a more responsible, sustainable approach to both technological development and environmental stewardship. The urgency of addressing environmental crises, as depicted in the novel, is not merely an abstract concept but an immediate challenge that demands a global response. By shifting the focus from individual

nations or issues to a more universal, long-term perspective, The Three-Body Problem encourages us to confront the scale of the environmental crisis with the seriousness and urgency it deserves.

#### 4. Conclusion

In *The Three-Body Problem* by Liu Cixin, environmental metaphors are used to explore the fragility of human civilization and the universe. On Earth, the novel reflects real-world concerns like climate change and ecological collapse, symbolized through the environmental degradation that mirrors the protagonist Ye Wenjie's pessimism about humanity. This is linked to global political and ecological crises, underscoring humanity's failure to live sustainably.

The novel expands this metaphor to a cosmic scale with the alien Three-Body planet, where extreme environmental instability mirrors the unpredictability and fragility of existence. The chaotic movements of the planet's three suns create a volatile environment, suggesting the vulnerability of all life, whether on Earth or elsewhere in the universe. This contrast emphasizes the theme of humanity's insignificance in the face of vast, indifferent cosmic forces.

Overall, the environmental metaphors in the novel highlight humanity's vulnerability to ecological and cosmic forces, urging reflection on our place in a vast, unstable universe. The novel links contemporary ecological concerns to broader existential questions about humanity's technological limitations and precarious existence.

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