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LITERATURE

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# "The present is the only thing that has no end" – Liminality of Space-time in Robert Lanza's and Nancy Kress's *Observer*

**Abstract.** The paper examines the representation of the liminality of space-time in *Observer* (2023), a novel by Robert Lanza and Nancy Kress, through the lens of biocentrism, Lanza's controversial theory asserting that consciousness shapes physical reality. The study situates its inquiry within the broader context of discussions on the intersections of science, philosophy, and literature, focusing on how the novel's narrative conveys biocentrism's implications for understanding space-time. Drawing on narrative techniques such as heterodiegetic narration and free indirect discourse, the analysis explores how the protagonist, neurobiologist Caro, progressively embraces a biocentric worldview. This transformation underscores the theory's foundational claim that consciousness creates space-time and resonates with concepts in quantum physics, as articulated by figures like Erwin Schrödinger and Stephen Hawking. The article highlights the novel's portrayal of time as an illusion and presence as a liminal state navigating between past and future. Through its characters and their experiences, *Observer* presents space-time as a fluid, transitional realm, with each moment imbued with transformative potential. The findings suggest that the narrative effectively embodies biocentrism's principles, illustrating the dynamic interplay between consciousness and the perception of reality. Ultimately, the study concludes that the novel offers a compelling literary exploration of the liminal nature of space-time, positioning consciousness as the pivotal agent in shaping the fabric of existence.

**Key words:** liminality, consciousness, space-time, quantum physics, biocentrism, observer, narrative techniques

In their 2023 novel Robert Lanza and Nancy Kress explore the far-reaching implications of biocentrism, a subversive scientific theory proposed by Lanza. Biocentrism postulates that consciousness is not merely a product of the physical universe, but rath-

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er that it is the agency shaping the physical reality we interact with. While Nancy Kress is an established science-fiction author, Robert Lanza is a renowned American scientist and medical doctor, particularly recognized for his groundbreaking contributions to the field of regenerative medicine, focusing on stem cell research and tissue engineering. His radical theory of biocentrism is rooted in the realm of theoretical physics.

Biocentrism challenges the conventional materialistic view of the universe by asserting that consciousness is not a mere epiphenomenon of physical processes, but rather the fundamental framework through which reality is constructed. At its core, biocentrism posits a radical inversion of the traditional scientific paradigm: instead of life and consciousness emerging as byproducts of the physical universe, the physical universe itself arises as a construct of conscious experience. This theory calls into question the foundational assumptions of classical physics and cosmology, proposing that space, time, and matter are not objective entities existing independently of observation, but subjective constructs contingent upon the presence of an observer (Lanza and Berman 2009, 1–2).

The theory of biocentrism draws on principles from quantum mechanics, biology, and philosophy to argue that the observer is inseparable from the observed. Quantum mechanics, in particular, provides compelling support for this perspective through phenomena such as wavefunction collapse and the observer effect. According to these principles, particles exist in a state of superposition, representing a range of potential outcomes, until they are measured or observed. Biocentrism interprets this phenomenon as evidence that the act of observation is not merely passive but actively determines the outcome of physical events. In this view, consciousness becomes a central player in shaping reality, a proposition that undermines the objectivist stance traditionally upheld in the natural sciences (Lanza and Berman 2009, 49–51).

Lanza's biocentrism also challenges the Newtonian conception of time and space as absolute and immutable dimensions within which events unfold. Instead, it suggests that time is a construct of the human mind, a way of organizing sensory input into a coherent narrative. Without consciousness to perceive it, time has no independent existence. Similarly, space is not an external container for objects but a mental framework that provides context for relationships between objects. This aligns with the philosophical arguments of figures such as Immanuel Kant ([1781] 1998), who proposed that time and space are a priori conditions of human perception rather than intrinsic properties of the universe (155–71).

Lanza posits that the universe is designed to support life and debunks the Copernican view of the world, which treats life as purely accidental side effect of the powerful forces of the universe. Consequently, Lanza supports the strong anthropic principle. As John D. Barrow and Frank J. Tipler (1985) explicate, the strong anthropic principle purports that the existence of the fundamental physical constants is proof that the universe has been finely tuned for the existence of life. As they argue, one of the interpretations of the strong anthropic principle is that "observers are necessary to bring the Universe into being" (22). They also explain that this interpretation "has physical

content when considered in the light of attempts to arrive at a satisfactory interpretation of quantum mechanics" (22). As a result, Lanza's theory is also strongly rooted in quantum physics, which emphasizes the importance of the observer for the nature of physical reality. As Lanza explains:

> When studying subatomic particles, the observer appears to alter and determine what is perceived. The presence and methodology of the experimenter is hopelessly entangled with whatever he is attempting to observe and what results he gets. An electron turns out to be both a particle and a wave, but how and, more importantly, where such a particle will be located remains dependent upon the very act of observation. (49)

Therefore, Lanza combines in his theory the strong anthropic principle and quantum physics, arriving at the conclusion that the universe is constructed in such a way so it enables existence of conscious observers. As Subhash Kak (2012) explains,

> Quantum physics is different from classical physics in so much that the quantum system is a superposition of many possibilities and while the evolution of the quantum state is deterministic (given by the Schrödinger equation) its observation results in a collapse of the state to one of its components in a probabilistic manner. (12)

What it means effectively, is that the quantum superposition is one of the basic principles in quantum mechanics, wherein a particle or system can exist in multiple states or configurations simultaneously until it is measured or observed, at which point it collapses into one of the possible states. As a result, until a measurement is made, a particle can be in a superposition of being both "here" and "there" at the same time, blurring the distinction between past, present, and future. Thus, for many theorists, including Lanza, the collapse of the quantum superposition as a corollary of observation constitutes the fabric of the physical reality.

In line with this observer-centered view of existence, the quantum conception of time challenges the classical understanding that treats it as an independent and uniform continuum. In classical physics, time is often treated as an absolute and continuous parameter that flows uniformly forward, independent of any physical processes occurring within the system. This view of time is deeply ingrained in our everyday experience and forms the basis for much of classical mechanics. However, in quantum mechanics, the nature of time becomes much more subtle and intertwined with the other fundamental aspects of the theory such as the aforementioned quantum superposition, or quantum entanglement, wherein the quantum states of two or more particles become correlated in such a way that the state of one particle instantaneously influences the state of the other(s), regardless of the distance between them (Rosenblum and Kuttner 2010, 121). This non-local correlation challenges our classical intuition about the flow of time and the locality of cause and effect. Nevertheless, for the scientific community in the novel this is the accepted paradigm of reality. It can be argued, however, that

for the characters in *Observer* such a reality is inherently liminal. As Victor Turner (2012) argues, liminal entities are "neither here nor there; or may even be nowhere (in terms of any recognized cultural topography) and are at the very least "betwixt and between" all the recognized fixed points in space-time of structural classification" (97). Convinced that time is solely the mind's tool aimed at making sense of the physical reality and its dynamics, the characters are living in the liminal presence, trapped between the illusional past and future, and treating the presence as the rite of passage culminating in the ultimate transition to one of the multiverses effected by the observer effect in quantum physics.

The story follows a group of scientists and researchers who are on the forefront of investigating the nature of consciousness. The protagonist, Caro, a gifted neuroscientist whose career has been unfairly disrupted by a scandal, finds herself entangled in a covert project that could revolutionize our understanding of physical reality. As she delves deeper into the research, the initially skeptical scientist gradually accepts the theory that posits that consciousness may not be merely the epiphenomenon of the brain's electro-chemical activity but that it can influence the very fabric of reality. The central project, conducted by a clandestine team of neuroscientists, is designed to save the terminally ill Dr. Weigert by transporting his consciousness into another universe. This experimental procedure constitutes the novel's dramatization of the observer effect and its radical implications. In scientific terms, the experiment seeks to verify whether consciousness can survive the death of the body by collapsing a quantum superposition in which the same observer exists in multiple universes simultaneously. The theoretical underpinning derives from Lanza's biocentric postulate that consciousness is fundamental and continuous across all space-time configurations.

Narratively, this experiment becomes both the engine of the plot and the epistemological core of the novel. It embodies the fusion of metaphysics and scientific inquiry that Lanza's theory proposes. The scientists' task – to relocate Weigert's consciousness rather than his body – underscores the novel's commitment to exploring mind as the defining substance of existence. This idea is expressed through a combination of advanced neural technology, computational modeling, and quantum entanglement. The surgical procedure Caro assists in involves connecting Weigert's neural patterns to a quantum interface capable of detecting and stabilizing his consciousness at the threshold between universes. The machine effectively serves as a liminal portal, a technological embodiment of Turner's notion of the "betwixt and between."

Consequently, the science-fiction novel intertwines the thriller convention with scientific, if controversial, theory of biocentrism, put forward by Robert Lanza.

Through Caro's perspective, the reader witnesses the tension between scientific skepticism and metaphysical wonder. Caro's immersion and eventual acceptance of the vision of the universe proposed by biocentrism is gradual and unenthusiastic. Representing the rational western scientific thought, she seems to support the Copernican principle, which posits that humans are not in any way privileged observers in the universe and, consequently, that the existence of life is purely accidental. This con-

tradicts the strong anthropic principle as well as Lanza's biocentrism. The transition from reluctance to acceptance in the novel is expressed through what Gerard Genette terms the heterodiegetic narrative, with Caro functioning as the focalizer. As Gerard Genette (1998) points out, "in every narrative we define the narrator's status both by its narrative level (extra- or intradiegetic) and by its relationship to the story (hetero- or homodiegetic)" (248). Building upon Genette's concepts, Shlomith Rimmon-Kennan (1999) explains that narration is frequently a tiered structure, and extradiegetic narrative constitutes the highest level within this kind of narration, "the one immediately superior to the first narrative and concerned with its narration", while intradiegetic narratives represent a lower tier in the narrative structure, which Rimmon-Kennan terms "narratives within narratives" (94). Regarding the relationship to the story the homodiegetic narrator is one who is at the same time a character in the story, while the heterodiegetic narrator is absent from the story they relate (Rimmon-Kenan 98). In the novel the heterodiegetic narrative is focalized through the protagonist's consciousness and is occasionally interweaved with instances of free indirect speech and perception, as in the following passage, in which Caro ponders over her life in the context of quantum superposition:

> How many times had Caro herself made one decision rather than another? She could visualize her life as an infinitely branching tree, with each branch a path she might have chosen. What if her mother had not said that terrible thing at Caro's brother's funeral, if Caro had not lost her temper, if family anger seething for decades had not erupted into chaos? What if she and Ellen had not been disinherited? What if she hadn't chosen to go to the med school, but some other career instead? What if Ellen had married someone who wasn't a scumbag, or had not birthed Angelica, or had chosen to institutionalize Angelica and gotten a job? Those, and a million other decisions – "observations" in Weigert's language – would have resulted in very different paths through life. (Lanza and Kress 74)

Effectively, what the novel combines is heterodiegetic thought report and free indirect style, which contributes to the increased fidelity of the representation of consciousness as the agent rendering the physical reality. As Alan Palmer (2008) points out, "represented consciousness is not a realistic reproduction of the mind at work", pointing in this way to the futility of representing consciousness purely by means of direct discourse in an attempt to simulate the mechanism of consciousness (72). Rather, consciousness is represented in a variety of ways, taking into account the multi-faceted relations of the mind with other minds and the environment. Consequently, thought report seems to be well-suited for representation of the non-verbal part of consciousness (76). Palmer draws attention to the thought report's linking aspect, which means that through thought report "the narrator, in presenting a character's consciousness, connects it to its surroundings" (76), which is significant as "minds do not function in a vacuum" (80). As a result, according to Palmer, narrators must combine the presentation of subjective consciousness and the presentation of the environment in which it is

located. Only in this way can the full picture of the fictional mind be observed. Palmer asserts that the best way to achieve this goal is the use of the aggregate of free indirect perception and thought report.[1]

Moreover, the experiment's success reframes the boundaries of narrative space and time within the text. Once Weigert's consciousness transcends, the novel begins to oscillate between multiple realities, blurring distinctions between the world of the living and the continuum of alternate universes. These narrative shifts illustrate the biocentric claim that time and space are constructs of consciousness. The text itself begins to perform the theory it describes: by moving between universes, perspectives, and even narrative voices, it enacts the instability of reality as perceived through the lens of the observer. The experiment thus functions as a meta-narrative device that transforms the novel into an experiential simulation of its central philosophical thesis. By foregrounding this experiment and its consequences, *Observer* transforms biocentrism from a theoretical abstraction into a living narrative force. The plot's progression mirrors the unfolding of biocentric insight: from empirical curiosity to metaphysical revelation, from the finite to the infinite. Through its intricate interplay of scientific speculation, emotional depth, and philosophical reflection, the novel embodies the idea that consciousness is both the observer and the creator of its reality. In this sense, the experiment is not merely a narrative device but the central metaphor through which the novel articulates its vision of space-time as inherently liminal and consciousness as its generative core.

The vision of reality as output of quantum wave collapse is intrinsically related to the quantum concept of time, expressed in the novel through the conversations Caro has with the scientists working on the project, which is utilized as an attempt of smuggling scientific lecture in the form of fictional language, as in the following passage:

> "The thing you have to understand about time, Caroline, is that it doesn't really exist."
> Caro said, "Always good to lead with a right hook."
> "I beg your pardon?"
> "Never mind." They walked along the beach at Spot Bay. […]
> "Time doesn't exist?"
> "No, at least not as real objective or external 'thing'. We only believe it does because our brain's algorithms are wired to interpret information as occurring sequentially. Otherwise, we wouldn't make sense of the world at all."
> "I should think not," Caro said. A pebble wedged itself into her shoe. She bent to remove it. Round, worn perfectly smooth by the sea, the pebble was reality proven mutable. But time?
> "Let's start with the basics," Weigert said. "You know that the equations for Newton's laws of motion, Einstein's special and general relativity, quantum theory – they all function independently of the notion of the passage of time. They operate backward as easily as forward!

[1] The discussion of the narrative strategies for rendering consciousness presented in this section is based on the chapter on narrative fiction and consciousness in Czerwiński (2023, 83–94).

> And you also know that Einstein proved that time is relative to the observer – that there is no one definite 'present moment' for everyone in the universe." (Lanza and Kress, 173)

In terms of the subject matter, the novel is based on solid scientific grounds, with characters making references to the reputable scientific authorities, like Newton or Einstein, mixing the established scientific concepts with Lanza's biocentric views and their fictional extrapolation, as can be observed in the following passage:

> The photo of Einstein reappeared, with a different quotation. Julian's voice-over said, "After Besso has departed from this strange world a little ahead of me. That means nothing. People like us … know that the distinction between past, present and future is only a stubbornly persistent illusion." All the evidence Dr. Weigert just explained tells us that Einstein was right – death *is* an illusion. (Lanza and Kress, 342)

By combining the authentic quotes from the respected scientific figures with the words of fictional scientists the credibility of the fictional world is augmented and while the concept of time expressed in the novel is in line with the current state of research in experimental physics, the authors go even further in utilizing the modern scientific theories to validate the biocentric views, which are the conceptual basis for the narrative of the novel. As stated before, Lanza's biocentrism is based on the view that consciousness creates space-time. This view is expressed in the novel through the author's fictional alter ego, Dr Weigert. Weigert's theory is the framework for the narrative and is described throughout the novel in the conversation between the characters. To amplify the aura of plausibility the novel also utilizes the metafictional device, whereby Weigert's theory is described in a fictional article in *Times*:

> The heart of Weigert's biocentric theory is that instead of matter and evolution giving rise to consciousness, the truth is the other way around. Consciousness gave rise to both matter and time. Nothing – not the Earth, the galaxy, your kitchen, or even your brain – existed before human consciousness created it. Weigert's book, well written and full of references to accepted science, explains this in great, if esoteric, detail. (Lanza and Kress, 305)

This view is inherently connected with the concept of conscious observers and the anthropic principle, and the narrative is again heavily suffused with quotes and references to established scientific personas, like aforementioned Einstein, and others. In the heterodiegetic passage Caro reflects that

> Weigert's theory had a lot of respectable antecedents, going back over a hundred years. A great many physicists had seriously posited an ultimate substrate of reality made up of consciousness, or something like consciousness, or something not quite like consciousness but able to be controlled by consciousness.

> Noble laureate Max Planck, regarding consciousness as fundamental to the universe: "I regard matter as derivative from consciousness."
> Astronomer Royal Martin Rees, who insisted that the universe could only come into existence if someone observed it, even if that observer turned up "several billion years later. The universe exists because we are aware of it."
> And more Nobelists: Wigner, Schrödinger, Matlof.
> Finally, she tried to read Stephen Hawking, who believed that "there is no way to remove the observer – us – from our perceptions of the world … the past, like the future, is indefinite and exists only as a spectrum of possibilities." (Lanza and Kress, 277)

Hawking's quantum perspective on the nature of time may be construed as coinciding with space-time as inherently liminal. Discussing liminality and its affinity with quantum mechanics Timothy Carson (2019) argues that

> Seen through the lens of quantum mechanics, on the one hand is the surface or appearance of reality, the presenting structure with which physicists of the past have been preoccupied. However, then, as the philosopher and physicist Bernard s'Espagnat reminded us, there are veiled aspects beneath what appears to be ordinary reality. On this side of the threshold, the liminal veil, we live with the appearance of structure, the ordinary and ongoing way of things that belong to the Newtonian domain. Once we lift that veil, however, we cross a threshold into mysterious quantum territory, a time and space that plays by its own rules, bizarre and unpredictable behavior that does not match what we normally observe above the surface. Beyond everyday appearance is a whole other invisible world that actually determines the visible one. (225)

In the view of the physical theories presented in the novel it can be argued that for the characters space-time is inherently liminal, which is reflected in their proceedings through the narrative, wherein they treat the reality as the "liminal veil" which is to be lifted in order to reach the spectrum of possibilities offered by the multiverse. What suffuses the novel is the primordial striving for making sense of the passing of life and apprehending the surrounding physical reality. Because of the inherent desire to overcome death the characters live in the liminal space-time, looking forward to different reality, where death has no power. Ultimately, it is the striving for overcoming death, based on scientific theory and effected by state-of-the-art technology, that connects the characters and renders the present liminal, with characters suspended between reminiscing the past and looking to the future life in one of the multiverses. Founded in the quantum concept of the flow of time as illusional, the characters live in the liminal state, treating their lives as a transitional process, effectively construing every moment in time as liminal, suspended between the perceptual past and future. Consequently, this understanding of space-time also determines the perception of consciousness in the novel, which is well reflected in another quasi-lecture by one of the scientists-characters:

> Time and space are simply the way our mind puts quantum information together, organizing it into the reality we see and experience. Our individual seperatness – whether in this universe or between multiverses – is an illusion. The consciousness that was behind the youth you once were, is *also* behind who you are now, and who you will be anywhere in space and time. Ultimately, they are all melted together, parts of a single entity that transcends space and time. And if space and time aren't real things, in what sense can you consider yourself separate from 'another you' that exists in space and time? (Lanza and Kress, 343)

Again, the specific perception of space-time and consciousness seems to be in line with the perception of consciousness by some of the most renown theoretical physicists, like aforementioned Noble prize laureate Erwin Schrödinger ([1951] 2008), who claims that "eternally and always there is only now, one and the same now; the present is the only thing that has no end" (22) and argues that "all consciousness is essentially one" (29). Discussing consciousness Schrödinger goes on to explain that

> it is not possible that this unity of knowledge, feeling and choice which you call your own should have sprung into being from nothingness at a given moment not so long ago; rather this knowledge, feeling and choice are essentially eternal and unchangeable and numerically one in all men, nay in all sensitive beings. (21)

This explicitly expressed concept of spatially and temporally universal consciousness is represented in the narrative through free indirect discourse, as exemplified in the following passage, in which Caro reminisces about her childhood:

> *She lay – at six years old? Seven? – on a blanket in the back garden, watching clouds drift across the sky. Then, all at once, the clouds were no longer there, and neither was Caro. She was nowhere and everywhere, woven into what she later thought of as "the fabric of the universe." She was the clouds, the grass, the breeze, the ant crawling across her arm. Everything was her and she was everything.* (Lanza and Kress, 82)

It can be argued that Caro's free indirect discourse interweaving the scientific narrative of the novel is aimed at authenticating the theory, creating an impression that it only confirms what one can instinctively feel regarding their relation to time and physical reality. Caro's initial skepticism concerning the theory and the experiment expressed in the heterodiegetic narrative is, in a way, contradicted in the free indirect discourse. Eventually, she is convinced by the empirical data she gains access to as a member of the medical personnel, carrying out operations designed to enable the participants to peregrinate "between multiverses". This is made possible by the combination of brain surgery, advanced computer algorithms, and the phenomenon of quantum superposition and wavefunction collapse as a result of conscious observation. By utilizing the concept of multiverses, the authors attempt to render the plot feasible, grounding it in ideas seriously considered within theoretical physics. This approach situates the novel

at the intersection of speculative fiction and scientific theory, offering a unique narrative framework where imaginative possibilities are underpinned by scientific plausibility, as the concept of the multiverse has become a subject of interest among theoretical physicists. Brian Greene (2000), for instance, defines the multiverse as a "hypothetical enlargement of the cosmos in which our universe is but one of an enormous number of separate and distinct universes" (181). Greene's description encapsulates the fundamental shift in cosmological understanding introduced by the multiverse hypothesis, which challenges the conventional view of the cosmos as a singular, self-contained system. This conception invites a reimagining of reality as a vast, layered structure where our universe is but one among many, each existing independently yet contributing to an overarching cosmic totality. Stephen Hawking and Leonard Mlodinow (2012) expand on this idea, emphasizing the diversity within the multiverse. They argue that "they aren't just different in details, such as whether Elvis really did die young or whether turnips are a dessert food, but rather they differ even in their apparent laws of nature. In fact, many universes exist with many different sets of physical laws" (53). Hawking's and Mlodinow's assertion underscores the radical variability inherent in the multiverse concept. Unlike traditional understandings of reality as governed by a universal set of physical principles, they present a framework where each universe operates according to its own unique laws. These variations extend beyond superficial differences to encompass fundamental disparities in time, space, and causality, thereby opening up a kaleidoscopic view of existence.

This variability has profound implications for the characters in the novel, whose spatio-temporal reality becomes inherently liminal. If the laws of physics differ across universes, then the constants and principles foundational to human understanding, such as gravity, electromagnetism, and the speed of light, are revealed to be contingent properties rather than universal truths. Within the narrative, this destabilization is mirrored in the characters' lived experiences, where the present is not a fixed or stable state but a transitional phase. The expectation of traversing multiverses transforms their perception of time, rendering it not as a linear progression but as a fluid and malleable construct shaped by consciousness and quantum phenomena.

For Caro and the other participants, this liminality is both physical and psychological. The act of preparing to move between multiverses places them in a state of perpetual anticipation, where the boundaries of their current reality blur with the possibilities of others. This transitional state is further complicated by the philosophical implications of multiverse theory, particularly in relation to identity and individuality. If innumerable versions of a single person exist across parallel universes, each leading slightly or vastly different lives, then the concept of a unified self becomes fragmented. The narrative reflects this complexity by depicting characters whose sense of self is constantly renegotiated in light of the infinite permutations of their potential existence across multiverses. Moreover, the novel's exploration of liminality extends beyond the individual to encompass broader philosophical and scientific questions. The multiverse hypothesis challenges not only traditional notions of identity but also the

boundaries of scientific inquiry. As certain aspects of alternate universes may remain permanently inaccessible to empirical observation or experimentation, the very limits of human knowledge are called into question. This perspective aligns with Greene's and Hawking's views, which suggest that the multiverse transcends the traditional domains of science, intersecting with philosophy and metaphysics to address questions of meaning, purpose, and the nature of reality itself.

Within this framework, the novel reinterprets the concept of liminal states, presenting them not as transitional phases within a conventional temporal framework but as intrinsic to the nature of existence in a multiverse. Patrick Parrinder's (2015) observation that "the liminal state of moving between worlds involves a timeless condition, or as Turner puts it 'a moment in and out of time,' or … a state to which the structural view of time is not applicable" (84), encapsulates this idea. The characters' experiences reflect this timelessness, as their present lives are reframed as transient conditions leading toward an indeterminate future in alternate universes. This portrayal of time as liminal and non-linear resonates with contemporary theoretical physics, where time is increasingly understood as a relative and context-dependent phenomenon rather than an absolute.

The novel's integration of these ideas highlights its broader thematic concerns, including the redefinition of humanity's place within the cosmos. By situating its narrative within the multiverse framework, the text invites readers to contemplate the vastness and complexity of existence. The characters' potential journeys between universes symbolize a broader philosophical exploration of the interconnectedness of all things, where individual experiences are situated within an infinitely diverse and ever-expanding cosmic tapestry. Consequently, the novel uses the multiverse concept as a means of engaging with profound scientific and philosophical questions and explores the implications of contemporary cosmological theories for identity, time, and reality. Greene's and Hawking's perspectives on the multiverse provide a scientific foundation for these ideas, while the narrative itself expands their implications, creating a rich and multifaceted portrayal of existence as both fragmented and interconnected and, at the same time, fundamentally liminal.

It can be contended then that the novel offers a different perspective on the concept of liminality. While traditionally a liminal condition is construed as a temporary state within the space-time, the narrative of the novel represents the characters' lives as inherently liminal. This interpretation redefines the boundaries of liminality, suggesting that it is not merely a transitional phase but a fundamental aspect of existence itself, as experienced by the characters. By employing diverse and innovative narrative devices, such as heterodiegetic narrative, metafiction, and free indirect perception, the authors construct a layered, multidimensional portrayal of reality. These techniques serve to blur the lines between the external and internal, the real and the speculative, and the past and the present, ultimately challenging conventional notions of temporality and spatiality.

The intricate use of a heterodiegetic narrative allows the text to distance itself from the immediacy of individual experience, offering a panoramic view that contextualizes personal stories within a broader speculative framework. Simultaneously, the in-

corporation of metafiction draws attention to the constructed nature of the narrative, encouraging readers to question the reliability and stability of the world depicted in the novel, as well as their own assumptions about the stability of reality. Free indirect perception further amplifies this effect by merging the subjective consciousness of characters with an external narratorial voice, creating a sense of fluidity and ambiguity that mirrors the thematic preoccupation with liminality. Through these methods, the authors appear to validate the speculative science that suffuses the plot. The speculative elements, which challenge traditional understandings of physical reality, are not merely narrative devices but integral to the thematic and philosophical fabric of the text. This overturns the traditional perception of the nature of physical reality and the linear character of time, positing instead that the present moment is "the only thing that has no end" (Schrödinger, 22) Such a reimagining of temporality destabilizes the linear progression typically associated with human experience, portraying existence as a perpetual state of becoming, rather than a journey with a definitive beginning and end. In this context, the novel not only redefines the concept of liminality but also engages in a broader philosophical inquiry into the nature of existence. The characters' inherently liminal lives suggest that the boundaries of identity, reality, and temporality are porous and mutable, rather than fixed or absolute. The speculative framework serves as a lens through which the interconnectedness of time, space, and perception can be explored, ultimately presenting a worldview that aligns more closely with the uncertainties and complexities of contemporary existence.

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