History in American New Wave and Hard Renaissance Science Fiction

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This dissertation examines the novels of American New Wave science fiction authors Philip K. Dick and Ursula K. Le Guin as well as the novels of American Hard SF Renaissance author Kim Stanley Robinson. This examination places the rhetoric of these three authors into the larger SF discourse that metaphorically visualizes the physics of space-time, historiography, periodization, and narrative form. By crafting nonteleological arguments against hard determinism, Dick and Le Guin influence Robinson’s ahistorical perspectives celebrating human agency.
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*Time equals space.* This metaphorical equation occurs throughout human mythology, religion, and literature. Giving time spatial dimensions, by using either concrete objects or abstractions, creates diverse rhetoric that nevertheless tends to fit into four overlapping semantic categories. This research identifies evidence throughout the genre of science fiction, specifically late twentieth century American SF, which can be mapped somewhat like quadratic equations. Through this perspective, a four-sectioned graph would have its y-axis distinguishing hard determinism from libertarian free will and its x-axis distinguishing the benefits from the disadvantages of each philosophy. In other words, space-time rhetoric primarily tends to argue for or against determinism or individual free will, while simultaneously making evaluative judgments to emphasize either the positive or negative aspects of these two disparate temporal philosophies.

The first category of rhetoric contains the advantages of hard determinism, which structures time through temporal typologies, etiology, and teleology. Time can visually appear as mechanical inventions providing order, ranging from hourglasses, metronomes, and clocks to the more ancient metaphor comparing time to a string that can be weaved, measured, and cut. Historical determinism views events in history as inevitable, often using imagery of roads, architectural monuments, and written texts with fulfilling endings. Growing plants, cycles of agricultural seasons, and rivers are the most common examples of destiny using natural imagery. SF authors creatively add to the rhetoric. Historical determinism at its best becomes music and
poetry for Philip K. Dick, a journey home for Ursula K. Le Guin, and ambitious metaphors of advanced STEM concepts for Kim Stanley Robinson.

Another category of rhetoric emphasizes the negative aspects of philosophical determinism, as a temporal system of limitations, artificial meaning, and cynical doom. This rhetoric tends to visualize time with repetitive movements changing without real progress, often stuck in an infinite loop. The lack of free will often implies an inability to create new things, as if ultimately there can be nothing new under the sun. Temporal restrictions on agency and novelty lead to rhetoric obsessed with stagnant eternities or devouring entropies. Space-time rhetoric criticizing historical determinism also stresses how romantic biases distort the authenticity of experiences. These disadvantages visually become mazes and prisons to escape for Dick’s characters and cages for Le Guin’s. The anxieties give Robinson’s characters a reason to critique historical periodization and narrative structure. In its most subversive form, Le Guin and Robinson’s rhetoric challenges traditional SF tropes of space exploration and colonialism for their implicit tendencies of imperialism.

The benefits of free will provide an escape from historical determinism. The rhetoric often requires binary examples like the ancient Greek’s nonlinear time of *mythos* as opposed to the linear time of *chronos*. In contrast to a teleological river, natural imagery tends to embody an eternal present that resembles open skies, valleys, and oceans. Le Guin compares an ahistorical alphabet to the ongoing sentence of history. In a less logocentric metaphor, Le Guin compares a tree to a cut board to demonstrate how time becomes anthropocentric. Robinson similarly compares experiences of time to a wheat field and history to a loaf of baked bread. The final category sees the disadvantages of free will, which fashions time as unpredictable, unrefined, and
usable. Time appears random because as space it seems to become too much to quantify and too raw to qualify. Characters aware of this temporality often feel lost as if they were in Jorge Luis Borges’s 1941 “The Library of Babel,” a short story describing a universe-wide archive of textual indeterminacy. This chaos takes many forms, creating the schizophrenic episodes and drug hallucinations in Dick’s writing, the muddled dream worlds in Le Guin, and the amnesiac historians and senile futurists in Robinson.

SF writers in the first half of the twentieth century, from H. G. Wells to Ray Bradbury, set many precedents of space-time rhetoric. This research analyzes the evolution of this discourse in the second half of the twentieth century. The primary methodology will be to employ concepts of the philosophy of time and narrative theory in compatible ways. The organization will focus on the literary careers and styles of three significant authors. Chapter one will examine the major novels of Dick, and chapter two will examine the major novels of Le Guin. These New Wave authors additionally influenced later SF movements including the Cyberpunk Movement that began in the early 1980s by William Gibson and the Hard SF Renaissance Movement of the late 1980s and early 1990s, popularized by Robinson. Chapter three will examine Robinson’s major novels. This research considers these three authors in relation to the history of the SF genre, including its movements and interactions with other genres, such as fantasy, utopia/dystopia, and alternative history. In addition to considering other literary genres, this research acknowledges diverse religious philosophies that influence how American SF sees history, including Dick’s Gnosticism, Le Guin’s Taoism, and Robinson’s Zen Buddhis
INTRODUCTION

“Science looked a lot like literary criticism, from across the room.”
—Richard Powers, *Galatea 2.2*

*The History of Space-Time*

In the 1895 novella *The Time Machine* by H. G. Wells, the character referred to only as the Time Traveler attempts to communicate with humanoids in the future called the Eloi. He specifically wishes to convey the concept of time to explain himself and where he comes from. Despite being limited to only gestures, the Time Traveler points to the sun, if only because, while traveling through time, he saw the day and night appear as “the flapping of a black wing” with the sun “hopping swiftly across the sky … every minute marking a day” (22). Having no understanding of a calendar, however, the Eloi mistakenly believe that the Time Traveler comes from the Sun itself, misunderstanding his attempt to communicate. Through this scene, Wells explores the abstraction of time, a central theme of his novel, but struggles to visualize it in its simplest form—and in turn to articulate the conceptualization to others.

The failed dialogue between the main character and the Eloi represents the contradiction underlying space-time. This scene is ironic because the Time Traveler constantly affirms the possibility of spatializing time, announcing early in the novel, “Time is only a kind of space” (4). If time were indeed a space, then its dimensions should be describable, if not visually observable, yet when his characters rhetorically explore this imagery, Wells explicitly presents his audience with a *non-sequitur*. Failing to represent time by pointing to the Sun, the Time Traveler
encounters the difficulty of creating concrete images for abstract concepts and sharing them with others. As a result, Wells shows what his Time Traveler could not tell. This task sets a precedent of how to depict space-time that would be emulated by decades of authors beyond those writing in the genre of SF.

J. R. R. Tolkien wrote in his critical studies that the Eloi in *The Time Machine* are like elves with their “enchantment of distance,” though their enchantment specifically is one “of distant time” (*On Fairy* 34). Despite this impression of alienated time, Wells was not able to create characters truly separate from the culture of Victorian England, which promoted its own temporal ideology. Rather than leaving the *fin de siècle* behind, the novella bears heavy influences from the nineteenth-century scientific community, the Industrial Revolution, and the tradition of utopian literature. Karl Mannheim prominently argued that historical context, particularly when creating utopias, cannot be escaped: “The very way in which a concept is defined and the nuance in which it is employed already embody to a certain degree a prejudice concerning the outcome of the chain of ideas built upon it” (197). *The Time Machine* embodies prejudice from various temporal ideologies established by the contemporaries of Wells.

Trish Ferguson pinpoints 1859 as a key date in altering the Victorian conceptualization of time. In this year, Charles Darwin published *On the Origin of Species*, describing evolution and extinctions in a way that scientifically undermined “man’s supremacy over time” (Ferguson 1). Darwin’s ideas affirmed humans existed within geological time, which was relatively stationary as humans move through it. According to George Lakoff and Mark Johnson, abstractions of time involving motion often receive a “front-back orientation facing in the direction of motion” (42),
with “the future in front and the past behind” (43). For the Victorians, time would ultimately succumb to entropy, as argued by Lord Kelvin in his influential 1852 essay, sensationnally titled, “On a Universal Tendency in Nature to the Dissipation of Mechanical Energy.” Amidst these scientific discussions, Wells envisioned a time in the far future when the sun would stand still, after “the Earth had come to rest with one face to the sun” (106).

Other ideas of time reinforced by the Victorians were less scientific and more commercial. Apart from Darwin’s ideas, Ferguson points out that 1859 additionally marked the completion of London’s clock tower “Big Ben,” which instilled “[p]ublic time … in the Victorian consciousness, internalized to facilitate industrial capitalism, a central fact of the burgeoning global empire” (1). The Industrial Revolution of the nineteenth century necessitated standardized time to measure wage labor. Observing how capitalism and the concept of time remain linked through the English language, Lakoff and Johnson identify three common metaphors: time is money—it can be spent, invested, budgeted—time is a limited resource—it can be used, used up, run out of—and time is a valuable commodity—it can be possessed, given, lost, thanked for receiving (8-9). These economic conceptions of time attempt to provide a semblance of control, compensating for the temporal conceptions from geology or evolutionary biology that remain beyond human control.

Between scientific and economic influences, The Time Machine also participates in a utopian tradition popularized by Thomas More’s 1516 Utopia. Edward Bellamy’s 1888 Looking Backward depicted a future society of urban socialism. William Morris’s 1890 News from Nowhere depicted a future society of agrarian libertarianism. Amidst this utopian discourse, Wells published his novella, which was an expansion of a short story, “The Chronic Argonauts.”
The short story features Dr. Nebogifel, a self-proclaimed anachronic man, who believes he lives in the wrong time. Mount Nebo is the biblical location where Moses surveyed his land of milk and honey. In *The Time Machine*, Wells added the component of traveling to the future to visualize the year 802,701 C.E as a “weedless garden” (32). This imagery alludes to Morris as well as the Garden of Eden or a biblical Promised Land. Wells adds a crucial element to his society of “childlike” Eloi (30); a proletariat class of posthumans, called the Morlocks, live underground and reduce the novel to a Marxist allegory. Wells even dehumanizes the Morlocks, describing their motion to be like watching “human rats” (96). For these reasons, Peter Kemp considers the novella “a blend of Marx and Darwin” (14).

In the penultimate chapter of *The Time Machine*, the Time Traveler journeys millions of years into the future, beyond even the time of the Eloi. He emerges on a sloped beach underneath a “red and motionless” sun (107). The red sun becomes a symbol for the future used by later SF writers, as in the title of Alexander Bogdanov’s 1908 novel *Red Star*. The beach becomes as significant as the star. David Ketterer traces this recurring setting from *The Time Machine* to J. G. Ballard’s 1964 short story “The Terminal Beach.” Ketterer perceives the imagery as having both eschatological and biological meaning, “the notion being that, just as, in Darwin’s view, the transposition of life from the sea to the land allowed for the genesis of humanity, so the end of man might appropriately be envisaged as taking place ‘on the beach,’ to utilize Nevil Shute’s title. H. G. Wells is perhaps the originator of this ‘myth’” (11). This natural imagery of time appearing as a star or a beach, like the concepts of the future returning to the garden-like state of the past, became crucial features for many other SF authors and the development of space-time rhetoric. Space-time rhetoric refers to various tropes, including metaphors, similes, hyperbole,
clichés, idioms, or examples of imagery, allowing the scientific conception to be comprehensible and in turn persuasive.

Just as his character uses a machine, Wells explores time with metaphor. Visualizations of time have always existed in human languages, *the time is coming, time passes, time is short.* By practicing the earliest forms of writing, ancient Sumerians institutionalized the textualization of time with Tablets of Destiny. In Virgil’s *Aeneid,* the Roman god Jove says to the goddess Venus, “I will speak and, further unrolling the scroll of fate, will disclose its secrets” (7). By the English Renaissance, in *2 Henry IV,* Shakespeare puts in verse:

```
O God, that one might read the book of fate,
And see the revolution of the times
Make mountains level, and the continent,
Weary of solid firmness, melt itself
Into the sea. (3.1.45-49)
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The metaphor of time as a text seems to change, appearing as forms of the most commonly used technology, a tablet, a scroll, and a book. Like all metaphors, textualized time ignores the complexities of temporal physics, which are not necessarily so determined. Gareth Morgan remarks, “Metaphor stretches imagination in a way that can create powerful insights but at the risk of distortion” (5). Plato’s fear that art could corrupt what it imitated led this philosopher to encourage censorship in *The Republic.* Nevertheless, metaphors are a method of logic, enabling the development of comprehension. Morgan claims, “Metaphor encourages us to think and act in new ways. It extends horizons of insight and creates new possibilities” (341). Edwin A. Abbott’s 1884 novella *Flatland, A Romance of Many Dimensions,* in which “upward” metaphorically becomes “northward,” showed Wells and others how to use rhetoric as a method for understanding physics.
An even more influential force than Darwin’s *On the Origin of Species*, “Big Ben,” and *The Time Machine* on shaping space-time rhetoric in the twentieth century was Albert Einstein’s scientific theories, popularized in his 1920 book *Relativity: The Special and the General Theory*. Like the Time Traveler speaking to the Eloi, Einstein presented humanity with an alternate way to spatialize time, as if pointing to a fabric. This rhetoric immediately affected the style of SF authors, even Wells. His 1923 novel *Men Like Gods*, written almost thirty years after *The Time Machine*, contains an improvement upon visualizing space-time that Wells accredits personally to Einstein. In the chapter titled, “The Shadow of Einstein Falls Across the Story But Passes Lightly By,” the narrator explains the structure of the universe at large: “there actually were a very great number of such space-and-time universes, parallel to one another and resembling each other, nearly but not exactly, much as the leaves of a book might resemble one another” (39). Einstein’s fabric-like material becomes the leaves of paper, and per the imagination of Wells, is sown into a metaphor of textualized time—another trend perpetuated for later SF writers.

When Einstein popularized the visualization of space-time as a fabric in the early twentieth century, the scientific synergy between *space* and *time* and fabrics spread beyond the field of physics, from the melted clocks in Salvador Dali’s 1931 painting *The Persistence of Memory* to Alan Lightman’s 1992 novel *Einstein’s Dreams*, in which each chapter presents visions of time warped by relativity. Walter G. Creed’s 1981 article asks with its title “Is Einstein’s Work Relevant to the Study of Literature?” and answers that this scientist is indeed relevant, but Creed observes that most literary applications have oversimplified the science, claiming they imply “some sort of philosophical relativism” (203). Despite titles evoking the concept of relativism, both Einstein’s special and general theories of relativity still maintain
absolute objectivism. Einstein declares in his autobiography, “Out yonder there [is] this huge world, which exists independently of us human beings and which stands before us like a great, eternal riddle, at least partially accessible to our introspection and thinking” (qtd. 206). SF takes the challenge of solving Einstein’s riddle.

According to Creed, Einstein “believed in a real external world which one could, through daring hypotheses and patient, disciplined effort, come even closer to knowing—not as a reflection of oneself, one’s community, or even one’s language, but as it really is” (206). When drawing upon Einstein’s science, those in the humanities often miss the mark, minimizing Einstein’s larger picture, conflating concepts like relativity with philosophical relativism, and setting specific theories against Einstein’s personal writings that had revealed his belief in fatalism. In several of his writings, the scientist claims not to endorse human agency. In one instance, Einstein uses another influential trope of space-time rhetoric besides the imagery of fabric, using the orbit of the moon. Einstein argues, “If the moon, in the act of completing its eternal way around the earth, were gifted with self-consciousness, it would feel thoroughly convinced that it was traveling its way of its own accord” (qtd. in McDowell 158). Such beliefs led Einstein to offer a third famous trope to the space-time discourse, specifically when refuting the principles of quantum mechanics, “God did not play dice” (qtd. in Halpern 2). The imagery of linking determinism with orbits and human agency with dice becomes two important features in the historical discourse of later SF authors.

Daniel Dennett’s 1984 *Elbow Room* defines hard determinism as the idea that “all physical events are caused or determined by the sum total of all prior events” (1). Historical determinists believe that events in history are preordained because libertarian free will does not
exist. Mathematician Hari Seldon is a historical determinist in Isaac Asimov’s 1951 novel *Foundation*. He develops psychohistory to calculate the fate of an interstellar civilization. Using Einsteinian rhetoric, Seldon announces, “The psychohistoric trend of a planet-full of people contains a huge inertia. To be changed it must be met with something possessing a similar inertia” (33). Individual free will technically still exists for Seldon, but this agency is too insignificant a force to impact his calculations, which accurately predict the demise of his interstellar civilization, known affectionately as the Galactic Empire. Like Plato’s ship of fools and Edward Bellamy’s stagecoach, allegories of a society in motion typically serve to distinguish favorable routes into the future. After Seldon’s death, Hober Mallow concludes the novel: “What business of mine is the future? No doubt Seldon has foreseen it and prepared against it. There will be other crises in the time to come… Let my successors solve those new problems, as I have solved the one of today” (296). These last lines foreshadow the larger *Foundation* series to come in which the Seldon Plan of determinism vies against “new problems.”

Einstein’s space-time rhetoric appears sprinkled throughout literature of the twentieth century. His allusions became an unchallengeable expectation for nearly half a century in the SF genre, popularized by figureheads like Wells and Asimov. Over thirty years after *Men Like Gods*, for example, Asimov used Einsteinian rhetoric in his 1955 novel *The End of Eternity* to help his audience visualize “the fabric of time” (126). Asimov presents time travel as something practiced, not by a single inventor as in Wells, but by a group of Platonic guardians known as Eternity, who oversee the long-term development of the human species. Eternity makes changes to any tens of thousands of years of human history, which—like Einstein’s fabric—can “tremble” when disturbed (37). The references from *Men Like Gods* and *The End of Eternity*
demonstrate how Einsteinian rhetoric dominated the imagery of space-time, becoming almost cliché, for the hard SF writers of the genre’s Golden Age.

Hard SF did not challenge Einsteinian space-time to the degree that soft SF did, particularly in the movement of New Wave that began in the 1960s. A challenge to Einstein’s space-time imagery and a seminal work in New Wave SF was Frank Herbert’s 1965 novel *Dune*. In this novel, Paul Atreides can see the future. Later in the novel, he becomes the prophet known as the Maud’Dib. Herbert articulates for his audience Paul’s visions, perceived through “the one-eyed vision of the past, the one-eyed vision of the present and the one-eyed vision of the future—all combined in a trinocular vision that permitted him to see time-become-space” (193). With this visual power, Herbert describes various illustrations of time using natural imagery: Paul’s “entire future was becoming like a river hurtling toward a chasm—the violent nexus beyond which all was fog and clouds” (242). To maintain the impression of free will, Herbert obfuscates the visions throughout the novel and allows Paul to choose his favorite: “He sampled the time-winds, sensing the turmoil, the storm nexus that now focused on this moment place” (467). As the novel ends, its space-time rhetoric becomes clearer.

As Wells had done in *The Time Machine*, Herbert uses numerous examples from nature to visualize time, but he chooses imagery that presents uncertain outcomes. The third-person omniscient narrator of *Dune* explains how Paul, from “the central line of the time storm … could see in the future. There would come an instant when it could be unraveled, but only if he were where he could cut the central knot of it” (Herbert 264). The imagery continues this trend of becoming more flexible with the notion of destiny. In a moment that nearly breaks the novel’s fourth wall, the narrator confesses, “This is the climax, Paul thought. From here, the future will
open, the clouds part onto a kind of glory” (314). The transition of temporal images in Herbert’s *Dune* shifts from a river to a storm and then appears as a sky. The sea finally becomes the last image for time in an entry after the novel from the second appendix: “I am a net in the sea of time, free to sweep future and past” (506). By progressively growing less deterministic, Herbert’s imagery implies there are more potential outcomes to the story.

While the imagery of space-time is unique in *Dune*, Herbert does not successfully pair his rhetoric with the expectations of narrative time. The ending of *Dune* is ironic because while the imagery presents clouds parting and the open sea as symbols for indeterminacy, the events of the conclusion explicitly depict a single-minded outcome. Specifically, Paul had prophesized that the success for his hero’s journey would result in dire consequences, as his conflict would inevitably spread beyond the planet and become a galactic jihad. Nevertheless, the space-time rhetoric seems to open potential endings; at the same time, the content closes into a specifically doomed result. Frank Kermode observes in *The Sense of an Ending* that the end of a typical narrative structure, like a religious apocalypse, “is traditionally held to resume the whole structure” (6). In other words, narrative patterns tend to repeat themselves, which in turn stymies the future’s potential. The Maud’Dib’s war will inevitably repeat itself on a much larger scale of time and space, as the sequels to *Dune* indeed verify.

Contrary to such comprehensive narrative models, Gary Saúl Morson proposes the neologism of *sideshadowing*, a term that “names both an open sense of temporality and the set of devices used to convey that sense” (6). Open temporality entails a nonteleological, undetermined narrative trajectory. For example, one literary device under the rubric of *sideshadowing* includes world-building, an umbrella-term indicating elaborate back stories, histories, genealogies, maps,
or other supplementary information in a story. The background information listed in the
appendixes in Herbert’s *Dune* resembles those at the end of Tolkien’s trilogy. Similarly, places
on Tolkien’s maps or planets in Herbert’s appendices, which the actual storyline never visits,
exemplify such world-building. Unlike the typical narrative, *sideshadowing* admits, according to
Morson, “in addition to actualities and impossibilities, a middle realm of real possibilities that
could have happened even if they did not.” Fictitious cartography gives the impression that
characters could have crossed other mountain ranges or visited other planets even though their
journeys never led to such places.

Characters in a plot proceed like missiles toward a target that metaphorically resembles
the notion of destiny. They are inclined not to yaw off course. Morson’s imagery is more
appropriate: “The temporality of destiny is something like a vortex. The further one is from the
center, the more freedom of movement one experiences. But the closer one comes, the more
one’s movements are constrained by the future pulling one in. At some point near the center of
the vortex, all moves have the same immediate result” (65). Vortex time’s inevitability, which
could be visualized as a violent black hole, works against the more natural spaces opened by
*sideshadowing*. In *Dune*, Paul believes, “The future’s becoming as muddled for the Guild as it is
for me. The lines of vision are narrowing” (433). Paul’s confessions articulate the restrictive pull
of narrative time that SF authors have a tradition of disturbing. The key word “muddle” appears
often for this purpose, as demonstrated best by the title of John Brunner’s 1993 novel *Muddle
Earth*.

Through obfuscated prophecies and world-building, Herbert delays the determinism of
narrative time, despite its inevitable progress toward a conclusion. *Dune* influences later space-
time rhetoric in the second half of the twentieth century, particularly in its discourse of narrative
determinism. The novel contains the postmodern feature of challenging the narrative of progress.
An epigraph from the Maud’Dib reads, “The concept of progress acts as a protective mechanism
to shield us from the terrors of the future” (313). Herbert presents the alternative to progressive
motion in a chapter’s epigraph: “And that day dawned when Arrakis lay at the hub of the
universe with the wheel poised to spin” (434). Visualizing space-time as a wheel presents a
notion of control to those positioned at the hub. Morson considered narrative time as an impetus
shaped like a vortex, and, in this regard, the novel’s conclusion, as signified by this epigraph
positioned near it, reaches the center of space-time. Other SF authors use this imagery to depict
the centripetal force of narrative time, visualizing the ending as a center.

Contrary to a person’s perception of time, narrative time favors prioritized events
foreshadowing the future. This difference causes Kermode to claim that “all plots have
something in common with prophecy, for they must appear to educe from the prime matter of the
situation the forms of the future” (83). Kermode refers to the teleological aim of narrative time in
tandem with the overlooked consideration that experiencing foreshadowing resembles the
reading of omens; both rely on signals to predict what is to come. Asimov’s short stories
frequently feature endings that close into a prophecy and repeat the larger narrative structure.
“Nightfall” (1941) and “The Last Question” (1956), for example, reveal a larger ongoing cycle
of repetition in their conclusions consistent with the expectations of narrative time. At the end of
“Nightfall,” co-written with Roger Silverberg, a collapse in civilization clarifies local histories
that had vaguely recorded and predicted similar events. At the end of “The Last Question,” the
computer system survives the total entropy of the universe only to restart the cosmos anew. Like
the weedless garden and the terminal beach in *The Time Machine*, the future frequently turns out to resemble the past.

Asimov’s *The End of Eternity* is an exception to Kermode’s observation about narrative tradition only because it reacted against such cyclical repetition and therefore attempted to subvert it. The main character Andrew Harlan discovers his mission from Eternity is to travel to the organization’s earliest beginnings and paradoxically establish it himself. Coming to comprehend his role, Andrew momentarily visualizes the concept of time, as he feels “caught up in the vision of a mighty circle in Time, closed upon itself, and traversing Eternity in part of its course” (100). Considering space-time to be fabric-like, Andrew believes he is “knitting the circle in Time together again” (124), but fears he may lose his “chance to keep the circle in time closed” (125). However, falling in love makes Andrew change his allegiances. In the end, he intentionally fails his mission to create the time traveling organization, only to watch his time machine disappear. The last words of the novel declare, “the final end of Eternity. –And the beginning of Infinity” (155). In this case, “Infinity” represents breaking the circle of determinism as well as a conclusion allowing anything to be possible.

The New Wave movement embraced Asimov’s hyperbole of possibility. Its SF underscores psychology, sociology, anthropology, ecology, and other soft, human sciences, over the hard, natural scientific fields—though Einstein’s ideas linger. Narratology was even affected by this scientist as some theorists use Einstein’s phrase “chronotope,” a combination of the Greek words for time (chronos) and space (topos). According to Mikhail Bahktin, a chronotope represents “the inseparability of space and time (time as a fourth dimension of space)” (84). Bahktin further explains, “Time, as it were, thickens, takes on flesh, becomes artistically visible;
likewise, space becomes charged and responsive to the movements of time, plot and history.” Such narrative concepts allow insight into the story world, encouraging questions such as "How does chronotope facilitate the logic of the protagonist's actions?" (Tarvi 6). Herbert’s allusions to a river, a storm, and the sky, Asimov’s closed and open circles, and even Wells’s descriptions of the sun, a weedless garden, and the terminal beach are all examples of chronotopes functioning in a narrative. They become indistinguishable markers of time and space and have significant impacts on narrative structure and character development.

Other SF authors followed the precedent set by Herbert’s *Dune* to move beyond Einstein when visualizing temporal physics, while simultaneously seeking to use space-time to reflect narrative time, as exemplified by Asimov. Beyond special and general relativity, quantum physics is yet another influence on space-time rhetoric, utilized heavily by the New Wave. Niels Bohr and Max Planck did early work in the field of quantum physics in the early twentieth century. Erwin Schrödinger devised his thought experiment in 1935. Known as Schrödinger’s Cat, the idea presented the imagery of a cat in a box, killed but also left alive from indeterminacy inherent to the quantum world. Schrödinger’s box, however, becomes as significant as the cat, as another trope emulated by later SF authors to challenge historical determinism. Quantum influence challenges Einsteinian rhetoric in the New Wave works of Michael Moorcock, Dick, and Le Guin. Later examples of quantum influence include the multiple selves in David Gerrold’s 1973 *The Man Who Folded Himself*, the parallel worlds in Jack Williamson’s 1977 *The Legion of Time*, the “Infinite Improbability Drive” in Douglas Adam’s 1979 *The Hitchhiker’s Guide to the Galaxy*, a solution to the grandfather paradox in Gregory Benford’s 1981 *Timescape*, and the acid-tinged philosophy of Robert Anton Wilson’s 1982 *Schrödinger’s*
Cat Trilogy. A SF subgenre known as quantum fiction has subsequently formed, as exemplified by Neal Stephenson’s 2008 Anathem.

Philip K. Dick

A. E. Van Vogt’s 1948 novel The World of Null-A presents a human civilization inhabiting the planet Venus and promoting “non-Aristotelian” (null-A) logic. Attempting to reach the planet, the main character Gilbert Gosseyn finds that his memories are not what they seem. He undergoes a deadly quest to reclaim his lost identity, but is asked ominously by one antagonist, “Have you been reading Aristotelian fiction where the hero always wins?” (54). At the end of the novel, Gilbert does rediscover his occulted life: he in fact had originally founded the null-A regime on Venus. By the novel’s own definition, The World of Null-A is therefore an Aristotelian fiction. Nevertheless, the novel subverts many expectations of narrative time, much to the chagrin of SF authors and critics. Damon Knight condemned the novel for an excess of “misleading clues, and irrelevant action” (qtd. in Silverberg 32). Kim Stanley Robinson characterized Van Vogt’s overall style as “rabbits-from-the-hat carelessness” (95). Considering how easily critics find fault with Van Vogt’s style of SF, its impact on the genre is ironic.

Philip K. Dick repeatedly expressed his passion for Van Vogt’s style. He specifically asserted that he did not agree with Knight’s assessment in a 1974 interview. In his admiration for Van Vogt, Dick revealed a great deal about his own writing style, from the early 1950s to the early 1980s. On The World of Null-A, Dick states in an interview with Arthur Byron Cover,

All the parts of that book did not add up; all the ingredients did not make a coherency. Now some people are put off by that. They think that's sloppy and wrong, but the thing
that fascinated me so much was that this resembled reality more than anybody else's writing inside or outside science fiction…. Damon feels that it’s bad artistry when you build those funky universes where people fall through the floor. It’s like he’s viewing a story the way a building inspector would when he’s building your house. But reality is a mess…Van Vogt influences me so much because he made me appreciate a mysterious chaotic quality in the universe that is not to be feared. (35)

Dick reiterates this point about realistic chaos in his 1978 essay “How to Build a Universe that Doesn’t Fall Apart Two Days Later,” confessing, “I have a secret love of chaos. There should be more of it. Do not believe … that order and stability are always good, in a society or in a universe. The old, the ossified, must always give way to new life and the birth of new things” (5). At its best, this chaotic style prompted Fredric Jameson to consider Dick the Shakespeare of SF (“Science” 312).

In his column “The Dissecting Table,” Knight had reacted favorably to Van Vogt’s 1950 novel *The House That Stood Silent* because “all the threads in this story have been satisfactorily tied up” (115). On the other hand, Dick appreciated a narrative’s loose threads. In *The House That Stood Still*, Van Vogt presents a common SF trope with characters, as Robinson puts it, “scooped out of the past by a time machine” (*Novels* 73). Dick relied on this trope in both his 1964 novels *The Simulacrum* and *The Penultimate Truth*. The results of this chaotic writing style were not positive reviews. *The Simulacrum*, for example, according to Robinson, is “seriously flawed … a natural consequence of Dick’s strategy of … the tradition of the American pulp magazines, and of the short stories of O. Henry, with their ubiquitous ‘twist’ endings” (*Novels* 72). In this novel, an android disguised as a human runs the U.S. government, until revelation of this fact causes a nuclear war to begin. At the end, a group of Neanderthals, called chuppers, emerge from hiding to symbolize what the novel calls “the supremacy of the past” (104).
Dick’s early style of writing falls short of the postmodern ethos of Joseph Heller’s 1961 novel *Catch-22*, with some of its scenes out-of-order, sometimes repeated, and described from different points of view, though Dick attempts these moves in his writing. For example, his 1964 novel *Martian Time-Slip* contains all three. His writing style also does not come close to matching the complexity of Thomas Pynchon’s 1973 novel *Gravity’s Rainbow*. As cited in Robinson’s dissertation on Dick’s novels, Le Guin generously claimed in conversation with Robinson that Dick’s writing was “always adequate to the task, and often poetical in a stripped, skeletal way” (qtd. in *Novels* 76). His early work, however, embodies the weakest version of this skeletal style. For example, Robinson critiques Dick’s 1967 novel *The Crack in Space*, in which humans discover a parallel Earth inhabited by Peking Man, another illustration of pre-humans. The novel ends after invasions from both sides fail. Robinson calls the novel “a skeletal, hasty effort” (34).

In addition to his fascination with posthumans in *The Time Machine* and *Men Like Gods*, H. G. Wells also depicted hominids predating human evolution, setting a precedent for Dick. In Wells’s 1921 short story “The Grisly Folk,” Neanderthals symbolize a broken connection to the past. In this tradition, Dick frequently focused on earlier hominids in his novels, including the Peking Man in *The Crack in Space* and the Neanderthals in *The Simulacrum* as well as the non-SF novel *The Man Whose Teeth Were All Exactly Alike*, written early in Dick’s career but published posthumously in 1984. Oriented toward the future, a posthuman escapes capture in Dick’s 1953 short story “The Golden Man” using his ability to see the future. When considering whether the Golden Man is a form of homo superior, George Baines tells Anita Ferris, "The Neanderthal probably thought the Cro-Magnon man had merely an improved line. A little more
advanced ability to conjure up symbols and shape flint. From your description, this thing is more radical than a mere improvement" (44). In Dick’s SF, evolution requires education, time presents information, and knowledge allows one to conquer the past. Dick sets his intellect to work on shaping new symbols of space-time rhetoric as if learning from the Time Traveler’s failed attempt to conjure a symbol for time.

In the appendix to VALIS, Dick quotes Pascal in the thirtieth entry: “All history is one immortal man who continually learns” (387). Dick viewed the spirit of SF as intellectualist, or what he calls “an idea.” Dick once qualified the genre by distinguishing it from space adventure in a 1981 essay “My Definition of Science Fiction,” writing, "space adventure lacks the distinct new idea that is the essential ingredient" (99). Howard Canaan calls Dick’s requirement of some intellectual novelty another version of Darko Suvin’s novum, which is Latin for “new thing” (Canaan 342). The novum, an innovation using science, was a criterion for the SF label. Aside from intellectualism, Dick’s writing additionally relies on spiritualism to shape his space-time rhetoric. Douglas Mackay generalizes that the genre of SF is itself a metaphor for transcendence (112). Considering this thought, Canaan adds, “no science-fiction writer more fully merges satire with the portrayal of the quest for transcendence than does Philip K. Dick” (3). Dick’s humor can be lost amidst his intellectual and spiritual pursuits.

Narrative form was equally important to Dick, despite being marginalized by his content. Narrative theory has tedious but beneficial jargon appropriate for understanding Dick’s style. Literary terminology such as fabula, a Russian formalist\(^1\) term for the raw plot-material, erzähltze Zeit, a German term for time represented by a plot, and sideshadowing, referring to

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\(^{1}\) Boris Tomashevsky’s 1925 Theory of Literature argues narratives must distinguish a background fabula, or “temporal and causal connections,” from the sujet, the basic description of events (qtd. in Schmid 3).
content that points away from a plot’s conclusion, are all concepts that allow a story to digress in the spirit of Van Vogt. On the opposite end of the spectrum, literary terms such as *sujet*, the chronological sequence of plot events, *Erzählzeit*, the time spent in the actual discourse of those events, and *foreshadowing*, references that point toward later events, all describe the forces of narrative time that converge toward a conclusion. Narrative tradition prioritizes the converging forces of historical determinism over the diverging temporalities of indeterminacy, if only because the trajectory of any story must narrow the possibilities as it closes into a coherent ending. Dick emphasizes the diverging forces to subvert narrative time.

Dick understood the limits of narrative time early in his career, as well as the limits of challenging it. In his 1956 novel *The World Jones Made*, he encountered the problems of prophecy and narrative. Robinson explains how the novel failed largely from “postulating an entirely determined universe, devoid of free will, since Jones could see what happened before it actually occurred. This made the ethical choices, indeed all the choices, of the characters meaningless” (30). Robinson argues that Dick’s solution in his subsequent novels was to adapt the “precogs” to “only see probabilities.” The precog therefore becomes reduced to simply a character who can judge odds. Robinson visualizes this process: “A common image is that of pigeonholes, with four holes filled by one eventuality, two by another, one by a third, and so on, so that the precog can only give odds, and free will remains in existence.” In the 1956 short story “Minority Report,” from the same years as *The World Jones Made*, Precrime Bureau agent John Anderton similarly works with the “theory of multiple futures.” As an author of these earlier narratives, Dick resembles his own character Addison Doug from the 1974 short story “A Little Something for Us Tempunauts,” a later short story from Dick’s corpus. Addison is a time
traveler, called a Tempunaut, who mistakenly arrives in the wrong century and creates a closed time loop. Attempting to exercise his free will only reinforces the determinism of his actions.


All these apparent objects -- each has a name. Book, chair, couch, rug, lamp, drapes, window, door, wall, and so on. But this division into objects is purely artificial. Based on an antiquated system of thought. In reality there are no objects. The universe is actually a unity. We have been taught to think in terms of objects. This thing, that thing. When Null-O is realized, this purely verbal division will cease. It has long since outlived its usefulness. (138)

Null-O is a state of understanding that the separation between objects is subjective and accomplished only with language. This holistic vantage represents Dick’s process of creating a narrative: “the distinction into arbitrary objects is now gone. This unification of things into their basic homogeneity can be applied to the universe as a whole. The universe is a gestalt, a unified substance, without division into living and non-living, being and non-being. A vast vortex of energy, not discrete particles!” For Dick’s SF novels, ideas outweigh words. Dick’s larger designs outweigh smaller chaotic moments in his work. In this same spirit, Darko Suvin claims, "Dick’s truth lies in his plot or *fabula*" (“Goodbye” 373).

The scene-by-scene *sujet*, on the other hand, frequently contradicts itself own progress. Stanislaw Lem, author of *Solaris* (1961), wrote in his 1975 essay “Philip K. Dick: A Visionary Among Charlatans” that Dick presents, “The world gone mad, with a spasmodic flow of time” (35). Dick writes about many topics, including psychology, theology, and pharmacology
throughout his corpus to explore determinism, subverting narrative time largely by presenting diverging timelines. Characters in Dick’s fiction additionally participate in, rather than just briefly observe, numerous alternate temporalities, which often turn out to be more significant than the primary worlds. Alternative temporalities created from religious rites, illicit drugs, and mental illnesses allow characters in Dick’s work to alter not only physical time, but aspects of the narrative, exploring the background physics of the *fabula*, expanding the *erzähltze Zeit* far into the future or past, and exhibiting *sideshowing* that veers into alternate universes.

Physically traveling to an alternative time in Dick’s writing rarely involves a machine, as had traditionally been the case for Wells and Asimov. Robinson observes of Dick’s corpus,

> When time travel is a real-world fact in a fictive world of a novel—something created by a machine, then the element is being used in its trivialized, domesticating function. It is when time travel is a private, uncontrollable, perhaps illusory experience, achieved by drugs or a descent into madness, that it is used as a method for a serious examination of the nature of time and the human experience of it. (*Novels* 32)

One exception that proves this rule is in the 1954 short story “Jon’s World,” in which Dick envisions a time machine called a time ship. At the end of the story, Kastner understands that the title character was mentally travelling through time as much as physically and “must have had some kind of parallel time sense. Awareness of other possible futures. As work progressed on the time ship his visions increased” (80). Kastner shows an early link between the intellectual and spiritual threads running throughout Dick’s corpus when adding,

> This opens up whole new lines of speculation. The mystical visions of medieval saints. Perhaps they were of other futures, other time flows. Visions of hell would be worse time flows. Ours must stand some place in the middle. And the vision of the eternal unchanging world. Perhaps that's an awareness of non-time. We'll have to think more about that too. (81)
This space-time rhetoric presents a temporality *in medias res* with alternative futures in addition to one completely negated by itself. Dick’s novels likewise present potentialities at the cost of contradictions.

Mental disorders such as schizophrenia give Dick’s novels yet another platform for space-time rhetoric, as space and time become as schizophrenic as the characters. In his 1965 essay “Schizophrenia and *The Book of Changes*,” Dick explains his belief that the disorder is a temporal disorientation. Dick writes, “What distinguishes schizophrenic existence from that which the rest of us like to imagine we enjoy is the element of time. The schizophrenic is having it all now, whether he wants it or not, the whole can of film has descended on him, whereas we watch it progress frame by frame” (112). With this analogy, Dick exemplifies schizophrenia with references to film, though his rhetoric also describes his own novels, which frequently end on a schizophrenic note. Instances of space-time rhetoric similarly reduce into a single symbol numerous and complex ideas.

In his 1978 essay “How to Build a Universe that Doesn’t Fall Apart Two Days Later,” Dick returns to the topics of schizophrenia and time with more reflection. He asks, “What about the world of a schizophrenic? Maybe, it's as real as our world. Maybe we cannot say that we are in touch with reality and he is not, but should instead say, His reality is so different from ours that he can't explain his to us, and we can't explain ours to him” (3). Schizophrenic characters in the novels present this disconnect, often as both a benefit and a burden from experiencing alternative temporalities. Canaan notes that the concept of precognition in Dick’s novels reveals how “the cost of inner vision is isolation and entrapment in one’s own reality,” including the three precogs in the short story “Minority Report” who “are babbling, incoherent, in most ways
subhuman” and the precogs in the novel *Ubik* who are “socially marginalized” (343). Despite the social costs, Dick’s characters suffer from mental disabilities ironically to receive a keener insight into space-time.

Much of Dick’s space-time rhetoric evokes the concept of entropy. The inevitability of entropy, as argued by Lord Kelvin’s influential 1852 essay, pervades Dick’s writing. Entropy symbolizes the end of the story. Dick delays the entropic conclusion using alternative temporalities, typically generated from alternate states of consciousness, including drugs, mental disabilities, and religious experiences. While religious references are scattered throughout Dick’s early writing, the specific belief system of Gnosticism came late in his career as a means of exploring alternative temporalities. Gnosticism provides Dick with a vehicle to subvert time, but only as far as narrative conventions can allow. *The Three Stigmata of Palmer Eldritch* (1964) and *Ubik* (1969) use gnostic elements in relation to space-time in small degrees. After Michael Moorcock’s 1969 novel *Behold the Man*, Dick’s corpus explores early Christianity in more detail. Moorcock sends a time traveler named Karl Glogauer back to the time of Jesus, and—to fulfill his expectations from the New Testament—Karl becomes Jesus, ultimately dying on the cross. Dick’s 1970 novel *The Maze of Death* introduces religious themes that are explored more thoroughly in his 1981 novel *VALIS*, *The Divine Invasion* from the same year, and the 1982 novel, *The Transmigration of Timothy Archer*.

Another famous scientific concept recurs in Dick’s space-time rhetoric. British aeronautical engineer J. W. Dunne’s 1927 *An Experiment with Time* posits a theory of time called serialism, a two-tier conception of time as containing both higher and lower realms. Dick presents alternative temporalities in hierarchical relations in *The Man in the High Castle, A*
Scanner Darkly, and his VALIS novels. Other novels contain alternative realities that are not associated with a hierarchy. While one tier tends to represent hard determinism, another challenges it. Dick even attempts to blur the lines separating the tiers, using terms from Heraclitus to explain the divide (“Schizophrenia” 113). Many novels intentionally obfuscate the distinction between a private universe, called an idios kosmos, and a public universe, called a koinos kosmos. Private universes come with alternative space-times including the computer simulations in A Maze of Death, the alternate histories in The Man on the High Castle, and the hallucinations in Flow My Tears, The Policeman Said, Now Wait for Last Year, and The Three Stigmata of Palmer Eldritch. In these novels, sideshadowing and foreshadowing become difficult to distinguish without the presence of space-time rhetoric.

Other scholars have noted that Dick’s novels present tension between subjectivism and objectivism. Howard Canaan’s 2008 article argues that the “triumph of subjective vision over objective reality is arguably the impelling force behind Dick's science-fiction” (335). Throughout the alternate worlds presented in Dick’s fiction, they all, in Canaan’s words, “decline to identify any ground ‘reality’ independent of human … subjectivity.” Dick’s novels repeatedly emphasize subjective reality. Canaan considers the repeated motifs of precognition and time travel “to undercut and question both our linear experience of time and causality and our commonsense belief in an external reality that exists ‘out there,’ distinct from our perception of it” (342). Dick stretches the rhetoric but never completely reaches something, in Einstein’s words, “out yonder” and independent of human perception.

Dick’s space-time rhetoric uses the imagery of locked circles, un navigable mazes, invisible prisons, and mysterious books to represent the disadvantages of historical determinism.
The imagery often symbolizes the narratives that contain them, specifically its *sujet, Erzählzeit*, and moments of foreshadowing. Characters repeatedly condemn these symbols because they evoke determined outcomes. Dick resents his own metaphorical treatment of determined time as evident by how it negatively affects his characters. When the space-time rhetoric looks toward indeterminacy, Dick’s representations depict temporally polarized realms, characters, or concepts. Unlike Asimov’s escape from history, Dick cannot break the circles in his space-time rhetoric, but he can quantify the circle as a sphere of many layers. Imagery of this complexity, moving from historical determinism to indeterminacy, appears in his 1975 essay “Man, Android, and Machine.” Dick describes an aspect of time as “orthogonal” to “our experience of the sequence of events” (215). He wrote, “our world as extensive in time (rather than extensive in space) is like an onion, an almost infinite number of successive layers” (217). Such a distinction between layers creates multi-layered endings in Dick’s novels, as in the endings of *Solar Lottery, Do Androids Dream of Electric Sheep?, Flow My Tears, The Policeman Said*, and *A Scanner Darkly.*

*Ursula K. Le Guin*

Michael Moorcock’s *Cornelius Series* consists of four novels featuring the protagonist Jerry Cornelius. The 1971 novel *A Cure for Cancer*, the second work of the quartet, introduces a machine that can create alternative timelines. The unnamed gadget “looks like some sort of Geiger counter” (23). Jerry explains to his friend Flora, “There’s no real word for it. Nothing—*authentic*. One of its functions is as a sort of randomizer. It can produce all the alternatives at once. There’s a lot of power in that little box… Not a computer. Far from it. Almost the opposite,
In one sense. It breaks down the barriers. It lets the multiverse—well—‘in’” (24). Kept in a box like Schrödinger’s Cat, the machine symbolizes indeterminacy. Its descriptions emphasize the lack of restrictive barriers and the presence of alternatives universes. The device is appropriate for Jerry because he disagrees philosophically with historical determinism. Jerry’s brother tells him, “History’s against you, Jerry” (34). Jerry quickly responds, “I’m against History.” In other words, Jerry does not like being part of any larger pattern.

Jerry may be suffering from what Mircea Eliade calls a “terror of history” brought on by humanity’s instinctual longing for mythos over chronos. The experience is at worst a literal anxiety caused by a perception of historical progress. The randomizer reacts to this historical anxiety, and even the narrative form is not immune from its effects. Roger Luckhurst claims that the randomizer impacts the novel’s structure by randomizing the text, “turning it into discontinuous fragments, destroying any sense of temporal continuity” (154). These experimental effects result from Moorcock’s criticism of the SF genre as too conventional. He thought SF audiences were “deeply conservative and pretty much addicted to generic conventions” (qtd. in Williams). He complained of the tradition, “Repetition is what it needs, not innovation.” Moorcock linked with repetition what Luckhurst calls “temporal continuity.” As editor of New Worlds, a leading pulp-SF magazine in Britain, Moorcock sought to push the genre toward new narrative styles.

American writers were also eager to randomize narrative patterns in this regard, among them being Ursula K. Le Guin, whose opus spans more than fifty years and includes classics in the SF and fantasy genres as well as essays, short stories, novels, poems, graphic novels, and several multi-volume series. Many, but not all, of Le Guin’s books belong to either the Hainish
series or the Earthsea series. Le Guin’s writing frequently contains themes contradicting long-established views. Jerry’s randomizer from *A Cure for Cancer* resembles Le Guin’s writing style in its insistence to challenge traditional patterns. Characters in Le Guin’s fiction often struggle with historiography, breaking barriers, disrupting temporal patterns, and exploring multiple alternatives. These actions take on symbolic meaning with respect to narrative time. Some barriers, typical patterns, and single outcomes are necessary components to the process of telling a story. For this reason, Le Guin’s novels tend to surrender her impulse toward narrative subversion, so her audience can achieve a sense of fulfillment in reading her works.

Romantic and realistic elements continually battle throughout Le Guin’s corpus. In her 2015 essay “The Carrier Bag Theory of Fiction,” Le Guin considers these styles by combining narratology and anthropology to establish a spectrum of narrative time; the hunter/gatherer binary replaces that of hard determinism and libertarian free will. The temporality of the hunter serves the purpose of the hero monomyth, guilty of both romanticism and historical determinism, which Le Guin claims should be unnatural for the novel:

The novel is a fundamentally unheroic kind of story. Of course the Hero has frequently taken it over, that being his imperial nature and uncontrollable impulse, to take everything over and run it while making stern decrees and laws to control his uncontrollable impulse to kill it. …first, that the proper shape of the narrative is that of the arrow or spear, starting *here* and going straight *there* and THOK! hitting its mark (which drops dead); second, that the central concern of narrative, including the novel, is conflict; and third, that the story isn’t good if he isn’t in it. I differ with all of this. I would go so far as to say that the natural, proper, fitting shape of the novel might be that of a sack, a bag. (355)

Le Guin’s imagery of a bag symbolizes her obsession with challenging traditional narrative determinism, what she calls “the linear, progressive, Time’s-(killing)-arrow mode of the Techno-Heroic” (356).
Le Guin’s writing struggles against determinism and its compliance with holistically controlled patterns. Various settings, objects, and even characters through her works are infused with alternate temporalities to remind readers that narrative time, in the Shakespearian sense, is out of joint. The consequences of this disjunction are palpable for her characters, as if they embody a fear of narrative determinism, a conflict that sits at the center of Le Guin’s writing that often emphasizes how fiction presents time in ways incompatible with humans’ perceptions of it. In narrative time, for example, artificial conclusions are fashioned at the expense of realism. A more accurate, non-teleological depiction of an experience should occur without a preconceived ending. Le Guin’s writing consistently struggles against the arrow of time—evident from her ambiguous endings.

In Le Guin’s 1989 collection *Dancing at the Edge of the World*, the humbly titled essay “Some Thought on Narrative” asks the most important question: “Is it truthfulness of the story, then, the all-important value; or is the quality of the fiction important too?” (43). Narrative fiction requires suppressing the disclosure of Le Guin’s truthfulness with what Jacques Derrida called a secret, or more specifically, an “instrument of torture working to wring out the narrative as if it were a terrible secret” (94). This secret can be simplified to mean the same two words that close all narratives: the end. Le Guin delays this secret in favor of presenting the story’s own neglected opportunities and mysteries. Derrida’s secret may extend beyond the boundaries of narrative and apply to those individuals whose lives are oriented toward an apocalypse, as in the original Greek *apokalupsis*, meaning an uncovering of a secret. Due to the continuity of *chronos*, many feel their lives inevitably head toward an uncovering of some significant moment. Le
Guin’s characters express this feeling, sometimes even explicitly as Jerry does in Moorcock’s *A Cure for Cancer*.

With this delayed reveal, a style of patience characterizes Le Guin’s novels, as many critics have noted. One of the most convoluted acknowledgments come from Harold Bloom. Using the character in *One Thousand and One Nights*, the Persian queen whose stories delayed her rape and execution, Bloom adapts his analysis of Le Guin’s fiction from Walter Benjamin’s study of Franz Kafka: “narrative art regains the significance it had in the mouth of Scheherazade, to postpone the future” (3). Bloom continues, “narrative art, though so frequently set in the future, not only borrows its authority from death but also works to postpone the future, works to protect us against myth and its nightmare” (3). James Bittner similarly notes that Le Guin’s works generally have “the form of a spiral journey back home” (56). SF critic Darko Suvin claims, “Le Guin writes centripetally, in a narrowing spiral (say of a falcon circling to a swoop) delineating ever more precisely the same object” (“Parables” 134). The space-time rhetoric of this criticism embodies Le Guin’s reluctant determinism. 2

The end of a story dominates narrative time, but Le Guin turns this determinism upside-down. The end spirals toward the beginning. Le Guin reconciles determinism by understanding that her novels, short stories, and even poems have already been warped by the vortex of narrative time. Against this pull forward, the message appears throughout her corpus to follow the motion of returning to the beginning. In her 1974 SF novel *The Dispossessed*, Odo establishes an anarchist society by proclaiming that true voyage is return. In the 1985 utopic novel *Always Coming Home*, lines from a poem from a section titled “The Gyres” affirm, “To

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2 In the same essay, Darko Suvin claims Philip K. Dick writes “centrifugally” comparable to “a radar sweep . . . whose apex is always the same but whose field may differ” (“Parables” 134). This imagery of a changing field of view with a consistent apex captures the limits of Dick’s indeterminate style.
begin / is to return. / To lose the seed / is the flower” (398). In the 1990 fantasy novel Tehanu, the fourth Earthsea volume, the main character sings a song called “The Creation” with verses telling listeners, “we enter departing. / Among all beings ever returning” (654). Le Guin’s 1997 translation of Lao Tzu includes the passage: “The ten thousand things arise together; / In their arising is their return. / Now they flower, / and flowering / Sink homeward, / returning to the root. / The return to the root is peace.” Le Guin consistently followed this motion to return to a beginning in numerous genres and modes of writing.

The same theme of returning to a beginning appears in its most simplified form as early as the 1971 novel The Lathe of Heaven, when George Orr is told at the end, “There is time. There are returns. To go is to return” (184). The theme of returning to the past throughout Le Guin’s corpus attempts to reconcile determinism with human agency. Le Guin’s return can be chosen, ignored, left incomplete or unclear. The return can act to delay the future, postponing it, as Bloom claims, but this delay does not acknowledge the complex temporalities that result from Le Guin’s fiction. About-facing the future, however, recognizes both a consideration of an open present, enriched by indeterminacy, and a closed past, sealed by determinism. Le Guin’s recurrent solution to the pull of narrative time and the inevitable end is, in a way, not to face it, or, more accurately, to acknowledge a center through the pattern. Her temporal subversion (in its most fulfilled incarnation) can therefore be summarized as a two-staged about-facing of the future: an attempt at accurate depictions of time by first turning toward the open present until ultimately returning to the closed past.

Despite its ahistorical intentions, Le Guin’s theme of returning to the past conforms to historical determinism. Bittner even places Le Guin’s (re)turn toward the past into the context of
Plato's *anamnesis*, or “learning by reawakening” (24). According to Plato, *anamnesis* describes innate knowledge from past lives. Bittner claims that Le Guin's lesson for readers is likewise that “we move forward only by returning.” Narrative time would therefore resemble something like the Greek notion of *apokatastasis*, or a return to something earlier lost. In the 1972 novel *The Farthest Shore*, the third Earthsea volume, the wizard Ged makes such a statement, as if remembering the future. The wizard stresses, “It’s not only in our dreams … that we find ourselves facing what is yet to be in what was long forgotten” (370). Ged's observation invokes Plato’s *anamnesis*, or what was long forgotten, and reveals its unescapable connection with historical determinism.

In the introduction to her 1969 novel *The Left Hand of Darkness*, Le Guin wrote, “The future, in fiction, is a metaphor” (xix). Le Guin felt a need to clarify, perhaps due to her use of highly symbolic landscapes, that the future is not a place, as typically might be assumed of the past. In her 1985 essay “Science Fiction and the Future,” Le Guin reiterates, “The future is not mere space... it is not possible that we will conquer the future, because there is no way we can get there. The future is the part of the space time continuum from which—in the body and in ordinary states of consciousness—we are excluded” (143). Le Guin's 2002 novella “Paradises Lost” presents a multi-generational starship that turns away from its intended destination after none of its occupants can remember a time before living on the ship. One character remarks, “Our ancestors spoke of the Destination as a world, because they knew nothing else” (333). The group decides to value the journey over the destination, a motto from *The Left Hand of Darkness*, to abandon the planet their ancestors had planned for them to call home, to turn
toward the eternal present, and to live in the alternative temporality between the stars. In this temporality, they are severed from hegemonic relationships with both the past and the future.

Such alternative temporalities throughout Le Guin’s corpus center in many areas comparable to Michel Foucault’s heterotopias, in which some narrative settings act as distinct human geographies. Foucault’s heterotopias are spaces that deviate from typical hegemonic rules or expectations, including schools, prisons, cemeteries, gardens, and museums. In Le Guin’s case, the hegemonic influence is that of history. Le Guin creates alternative temporalities to shield her characters from both historical determinism and narrative time. Many of these characters embody the philosophy of Ernst Bloch, who writes, “Not all people exist in the same Now” (97). He argues that history is “a polyrhythmic and multi-spatial entity with enough unmastered and as yet by no means revealed and resolved corners” (62). A map depicting Le Guin’s use of alternative temporalities would likewise contain such corners.

From the empty space between the stars in the Hainish series to a grove in the Earthsea series, Le Guin creates alternative temporalities that are most conspicuous when characters cross the thresholds segregating these zones from the standard temporality. Le Guin’s alternatives for space-time give characters deeper understandings of the temporal relationships. In Le Guin’s 1967 novel City of Illusions, her third Hainish novel, Falk asks another character to describe space travel where “no time passes” (262). Young Orry replies, “You can’t tell how—things relate. You see and hear, but it doesn’t hang together—nothing means anything—I can’t explain it. It’s horrible, but only like a dream.” From the outside-looking-in, this alternative space-time seems detestable for its lack of structure. The opposite proves to be the case within the alternative temporality of the Immanent Grove in the fifth Earthsea installment. The title
character in the 2001 short story “Dragonfly,” stands inside-looking-out: “From here, under the eaves of the Grove, she saw [the building] as stone walls enclosing all one kind of being and keeping out all others, like a pen, a cage” (248). The lack of relations, represented by stone walls, makes the alternative temporality desirable. In Le Guin’s temporal heterotopias, the grass is not greener on the other side.

Earthsea’s standard temporality surrounds the warped space-time of the grove, while the Hainish series makes the space surrounding planets into the alternative temporality. In a topological way, Le Guin’s SF and fantasy have inverted geographies of time. Orry and Dragonfly articulate these alternative temporalities as something that causes them to gain or lose certain relationships with their worlds. Orry and Dragonfly each witness the extreme version of the other’s preferred setting and both inevitably experience disorientation after reorientation. As Le Guin demonstrates, a change in orientation may be one problem that even advanced multi-star civilizations can experience—particularly when traveling between those stars. In the 1966 novel *Rocannon’s World*, the first Hainish novel, Semley becomes the first of Le Guin's characters to enter and return from an alternative temporality between the stars. James Bittner summarizes: “Her sixteen-year-long journey is Le Guin's metaphor for the judgment that Semley's self-absorption and pride, her tragic flaw, cut her off from relationships with those around her, remove her from history, and form a breach between herself and her world that leads to madness. She ceases to be part of the whole” (70).

As if she possessed Moorcock’s randomizer, Semley has lost her place in time and does not regain it. The opposite is true in Le Guin’s 1969 short story “Winter's King” for King Argaven, who was succeeded by his son King Emran, then travelled between the stars,
eventually returned, and ironically succeeded his now-older son. Bittner again has an appropriate analysis:

[“Winter's King”] moved on from the kind of history embedded in the Asimov-Wollheim\(^3\) tradition, the ethnocentric kind that projects the arrow of time onward to the stars. Having absorbed anthropology and anthropological myth into the internal dialectic impelling her future history forward, she turned her gaze around 180 [degrees], for anthropology is a science that attempts to understand our own culture by searching for its origins and its ecological relations with other cultures. (109)

Bittner articulates how Le Guin's use of alternative temporalities adhere to the rules of Morson’s sideshadowing, works in concert with a temporal about-facing because both allow subjects to re-evaluate their temporal and spatial relations.

Crossing the threshold of alternative temporalities involves such a reorientation in two ways that are best highlighted by Walter Benjamin’s “Angel of History,” a text based on Paul Klee’s engraving *Angelus Novus*. Benjamin views this figure as oriented with its back to the future and face to the past. He avers that a storm constantly blows the angel into an unknowable future “while the pile of debris before him grows skyward” (260). Benjamin claims the angel sees an “empty time” that does not move from the past to the future as much as it is stuck in the present. Progress comes without change as time continually awaits a real potential. This deterministic time is distinguished from the otherwise “messianic time” of indeterminacy.

Whereas Dick’s temporal style remains trapped despite its best efforts by what Benjamin would call empty time, Le Guin’s resistance allows her space-time rhetoric to depict what Benjamin would call messianic time. Le Guin infuses moments in her novels with messianic time that can glimpse a freedom from history.

\(^{3}\) Donald A. Wollheim was an American SF author and an editor of Ace Books, who published Le Guin’s first two Hainish novels.
In this sense, both Le Guin’s characters and Benjamin’s theoretical angel jump from the present time in a dramatic and uncontrollable way. They are then forced to re-establish themselves by means of the accumulating debris pile that is history. If the conception of interstellar travel used by Le Guin turns out to be accurate, as Einstein’s relativistic physics posits that it should, then travelers between the stars will feel much like the Angel of History upon reaching their destination: suddenly exploded into an uncertain future and forced to turn themselves to the past to catch up on the missed time. Rip Van Winkle, for example, would have been more likely to seek out a chronicle than an almanac after his sleep. Le Guin ever nudges her readers to experience feelings of waking up, acting free of teleological relations, and turning their backs on the future.

In the spirit of Moorcock as well as Herbert, Le Guin subverts determinism through her space-time rhetoric, but her novel *The Dispossessed* notably favors narrative determinism. The novel’s closed temporality results from its cyclical depiction of time. Fatalistic works from *The Dispossessed* to *Lavinia* represent, in the landscape of Le Guin’s corpus, the peaks in a mountain range of determinism, while a novel like *Always Coming Home* represents a valley of *sideshadowing*—*The Lathe of Heaven* being the deepest rabbit hole in Le Guin’s oeuvre. This novel represents Le Guin’s greatest attempt at open temporality via an overwhelming quantity of *sideshadowing* and quality of about-facing. The mind of George Orr in the novel creates indeterminacy much like the randomizer in Moorcock’s *A Cure for Cancer*. In *The Lathe of Heaven*, many narrative elements such as characters, settings, props, and the plot itself challenge the temporal *status quo*, at the risk of their undoing. Le Guin reluctantly navigates the chaos to
resolve conflicts and achieve ordered conclusions, despite clearly being aware of the artificiality imposed by the false claim, “The End.”

*Kim Stanley Robinson*

Ray Bradbury’s 1952 short story “A Sound of Thunder” depicts a corporation called Time Safari, Inc., charging customers to travel back in time, despite not knowing whether “messing around in Time can make a big roar or a little rustle in history” (4). The former scenario implies historical determinism, while the agency of the latter implies indeterminacy. Bradbury’s conclusion reveals that visiting the Jurassic period and inadvertently killing a butterfly could change the course of modern history, even causing different results in a presidential election. The uncanny ending of the story is similar enough to the beginning to be recognizable but different enough to show the consequences of changing the smallest detail: the results can be “a big roar,” according to the text, and, as the title suggests, could be as figuratively loud as “A Sound of Thunder.” Bradbury’s space-time rhetoric would be completely deterministic, were it not for the very presence of Time Safari, Inc.

The time-traveling company stumbles into the indeterministic principles of chaos theory, which began in the late nineteenth century with the work of Henri Poincaré. In the 1960s and with the advent of computers, Edward Lorenz used chaos theory to model the atmosphere for weather forecasting. He discovered that computers could not even predict deterministic systems with perfect accuracy due to the presence of small, random events that he labeled, with a bit of irony, “deterministic chaos” (qtd. in Parker 8). In Michael Crichton’s 1990 SF novel *Jurassic Park*, Ian Malcolm explains, “The behavior of this big complicated system always defied
understanding. So naturally we couldn’t predict weather. But what the early researchers learned from computer models was that, even if you could understand it, you still couldn’t predict it. Weather prediction is absolutely impossible” (74). In chaos theory, the future is unpredictable just as the causal links occurring between Bradbury’s dead butterfly and the presidential election are ambiguous.

Contrary to various popular beliefs, the scientific thought experiment known as the butterfly effect, which simply acknowledges big outcomes from small inputs, did not take its name from Bradbury’s short story but from Lorenz’s imagery. He imagined a butterfly flapping its wings and causing a tornado several weeks later. Both butterflies represent deterministic chaos. Other space-time rhetoric in Bradbury’s work matches the technology of the first half of the twentieth century to conform strictly to determinism: “Time was a film run backward. Suns fled and ten million moons fled after them” (7). Bradbury also clarifies that time-travelling has one limitation: “Time doesn’t permit that sort of mess—a man meeting himself. When such occasions threaten, Time steps aside. Like an airplane hitting an air pocket” (10). Determinism appears as a film running in reverse that sounds thunderous when altered, akin to weather turbulence. This imagery complements the short story itself, specifically the story’s cyclical structure, returning to where it began only to present stark differences.

Kim Stanley Robinson’s temporal style in many ways mimics the deterministic chaos of Bradbury’s “A Sound of Thunder.” Robinson’s short stories, novels, and trilogies mix determinism and free will through a corpus-wide conversation that allows human agency to challenge history. Scholars have considered the narrative structures of his three trilogies, the Three Californias trilogy, the Mars trilogy, and the Science in the Capital trilogy, written in the
80s, 90s, and 2000s, respectively. As Robinson’s writing progressed over these decades, it shows a stronger reliance on determinism, the spirit of which occurs notably in Robinson’s 1999 short story “Four Teleological Trails.” The narrator describes

seeing something in the landscape that hadn’t been there. Only it had been there, I swear. There is something out there. This is why I don’t think we can so easily dismiss some sort of teleology in history. The landscape itself seems to call forth the trail. It imposes on us the best way forward. And it could be that the human landscape, or even the continuum in which time unfolds, has invisible ramps and battlements that shape our course. Of course we still have choices, but there is a certain terrain to be crossed. So I suspect that seeing trails that are not there is actually an everyday activity of the human mind. When the going is hard people come together. And the trails appear out of nowhere. (150)

The wordplay of the short story’s title becomes imagery, comparing narrative plots to a spatial measurement. Robinson’s corpus contains many similar connections between space-time and narrative time.

In many of Robinson’s SF novels, stellar conquest requires characters to stake a proprietalor claim in time and history as much as it requires them to reside in outer space. In his published dissertation, Robinson claimed to admire how Philip K. Dick’s novels achieve this same feat of compelling historical consideration. He claims that the thoughts of Dick’s characters are inherently linked to the experience of reading. Robinson writes, “in their helpless jaunts through a hostile universe both protagonist and reader are forced to contemplate the nature of history itself. Infinitely mutable in the moments of its creation in the present, history itself is fixed, a return to it useless” (33). In Robinson’s novels, whether their genres are SF, utopia, or alternative history, characters reconsider the past to exert control over their own time in history. In his analysis of Dick’s The Man in the High Castle, Robinson notes the novel’s ability to emphasize human agency in an indeterminate universe. Robinson remarks, “An alternative to our history made substantial in a work of fiction will remind us constantly that history is not
inevitable, that it could have turned out differently than it actually did, if even a very minor human act had been different” (42). Like Bradbury’s Time Safari, Inc., and Dick’s alternative version of World War II, Robinson’s space-time rhetoric examines the contradictions of challenging historical determinism with free will.

Throughout his opus, Robinson explores historical determinism most often with the metaphor of colonizing space. Following Einstein’s famous reference, Asimov’s Foundation popularized the discourse of historical determinism to include the SF element of space conquest. Before even publishing his first SF novel, Robinson’s dissertation parsed traditional SF elements and linked “other planet colonies” and “alternative histories” by discussing them in the same section. Robinson states, “Both serve as relatively new worlds, clean canvases onto which Dick can introduce as many changes as he wishes” (33). Whereas Dick used these SF elements to create clean canvases that break from history, Robinson reuses history on the same palimpsest. He combines these elements consistently to question determinism as well as the inevitability of human expansion into the stars. This theme occurs throughout Robinson’s SF corpus, primarily in the novels Icehenge, The Memory of Whiteness, Red Mars, Green Mars, Blue Mars, and Aurora.

Regarding Robinson’s narrative time, some scholars have turned to the ideas of Walter Benjamin. In his interpretation of the Angel of History, Benjamin distinguishes empty time from messianic time; the former is a type of determinism, in which neither the past nor future are existentially real, while the latter describes the potentiality of time, in which every moment is merely a “small gateway in time through which the messiah might enter” (262). K. Daniel Cho considers the narrative time of Robinson’s Science in the Capital Trilogy, his third trilogy
written twenty years into his career, to resemble messianic time, symbolized with Benjamin’s interpretation of the Angel of History. Cho cites Benjamin and argues, “Robinson enjoins us to see every single moment of crisis as the time ‘to make the continuum of history explode,’ as the opportunity to stop the eternal present and finally send time itself into the future” (34). Any moment in time may have the potential to change the future forever, as Lorenz’s (and Bradbury’s) butterfly effect illustrates.

Throughout his corpus, Robinson’s narrative time resembles what Benjamin called messianic time. Other scholars use different terminology but describe similar philosophies behind Robinson’s work. Istvan Csicsery-Ronay sees something like messianic time in Robinson’s Three Californias trilogy in the way that each novel of the trilogy imagines a different future in the same geographical location. Rather than using Benjamin’s Christian diction, as Cho does, Csicsery-Ronay uses Eastern religious terminology to argue that Robinson engages in “Zen’s traditional resistance to historical consciousness [and] models a distinctive consilience of Buddhist and dialectical-historical perspectives” (149). As Robinson’s utopias question and negate traditional anthropocentric historical concepts of time, a postmodern temporality emerges subversive to the guarantee of Whig historiography. Csicsery-Ronay, citing Japanese Zen philosopher Keiji Nishitani, identifies sunyata, the Buddhist concept for emptiness, in Robinson’s treatment of time: “[h]istoricity is able to realize itself radically only on the standpoint of sunyata [emptiness]… Each individual moment of unending time possesses the very same solemnity that is thought in Christianity to be possessed by the special moments of creation, fall, redemption, and second coming” (155). Robinson continually questions and

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4 Herbert Butterfield introduces the term in his 1931 book *The Whig Interpretation of History.*
negates the concept of history like Benjamin’s understanding of messianic time and Zen Buddhism’s notion of sunyata.

For Robinson, however, no history means there can be many histories. Kenneth Knoespel argues, “At a time when readers frequently look to authors like Dan Brown for a ‘good read’ with a puzzle-like plot, Robinson builds an assemblage of multiple systems, histories, and plots” (115). In addition to acknowledging history as pluralistic, Robinson’s main contribution to SF was to return the literary form to its roots in hard scientific discourse. Robinson frequently deviates from his main narrative to provide scientific commentary, but history is never far from his considerations. In the SF tradition, such commentary often considers political history. For example, Tom Moylan addresses the “counter-narratives” that appear in SF from “the book people in Ray Bradbury’s Fahrenheit 451, to the antiestablishment hackers in the works of William Gibson, Pat Cadigan, and other cyberpunkers” (149). In Robinson’s hands, the appearances of counter-narratives tend to merge the Socratic and scientific methods, as natural and political hypotheses are experimented on through a rigorous process of argumentation undertaken by various characters.

Beyond relativity and quantum physics, Robinson debates many other scientific philosophies in relation to time—from chaos theory to John Henry Schwarz’s string theory. Blue Mars, the third novel concluding the terraforming story of Robinson’s Mars trilogy, jumps between the perspectives of numerous characters, including Sax Russell, who observes that “strings constituted the very fabric of spacetime itself” (374). This acknowledgment of Einsteinian space-time and string theory emphasizes the physical universe’s multi-dimensional
framework of interwoven strings less than it underscores the Robinson’s narrative framework of interwoven characters. Knoespel confirms,

> Just as a narrative may have a plot and be geometrically plotted by connecting points, it may delineate other plots or stratagems in which we are entangled. By bundling plots over an extended period of time, Robinson shapes what historiography refers to as “synchronisms.” Synchronisms did not simply work as a form of narrative factoring and simplification—to use a mathematical model—but instead worked to construct intersections or knots to be examined more closely. (113-14)

Synchronisms overlap two historical events in time, visualized by Sax’s strings. Knoespel adds, “Given the span of time embraced by the trilogy, the head narratives offer orientation in time and link the mosaic-like sections. They are hardly static time-switches, but instead modulate the assembly of the evolving narrative” (119). Robinson weaves his characters together by repeating narrative patterns until his established order deliberately breaks. At these intersections of synchronism, or knots in the fabric, Knoespel rightly finds the access points to examine Robinson’s plots. In this regard, ruptures in the pattern serve as a type of hydrostatic test for Robinson’s narrative frameworks.

Aside from imagery from string theory, Robinson’s space-time rhetoric describes time with genetic chromosomes. In Robinson’s short story “Green Mars,” a character posing as a writer articulates the writing process like genetic editing:

> Time passes in a double helix of eternal no-time, in the blessing that cannot be spoken. He revises, rewrites, restructures. The phrase grows, shrinks, grows, shrinks, changes color. He tries it as free verse, sestina, mathematical equation, glossolalia. Finally he returns to the original formulation, complexifying it with an added nuance: “The End.” It says what needs to be said; and it’s twice as many words as his usual daily output. Time to party. (232)

Robinson imagines genes stretching into new shapes even as they return to “the original formulation.” Like Sax’s strings in a fabric, the genes are more important when viewed as part of a whole. For Robinson’s space-time rhetoric, a small step for the individual is simultaneously a
giant leap for the social group. Fredric Jameson parses the shift from hard to soft SF, noting the emerging trend toward biology:

But the more immediate shifts are to be identified in the paradigm shift in modern science itself from physics to the life sciences: a shift calculated to make problems for conventional SF representation and narrative. Indeed, it seems likely that today the complexities of biology and the genetic, indeed bio-power itself, offer a content and a raw material far more recalcitrant to plot formation than even Einsteinian cosmology and the undecideability of atomic sub-particles. (“Great” 67)

This rhetorical shift from Einsteinian and quantum discourse to biological advances and genetic discoveries has yet to overtake space-time rhetoric, which remains heavily dominated by the former elements.

Space-time rhetoric in Robinson’s novels features historical determinism to build solidarity. In “Michel in Provence,” from the short story collection *The Martians*, history becomes a means to unify the human species through an ideal goal:

Perhaps an international village on Mars could have made it clearer to all that they were in a single culture on a single world. The sufferings of any individual Martian settler would have been inconsequential in comparison to the benefits of this great lesson. The project would have justified it. They would have been like cathedral buildings, doing hard, life-eating, useless work, in order to make something beautiful that said, *We are all one*. And some of them certainly would have loved that work, and the life it brought, because of that very statement. That goal—the sheer act of sacrifice for other, of work for the good of later generations. So that people on Earth could look up at night and say, That too is what we are—not just the horrific headlines, but a living world in the sky. A project in history. (173)

Robinson routinely links historical determinism and space colonialization, imagining the impression of the final goal. His novels consistently reveal that the end product, however, is less important than the process. Robinson’s study of Dick accuses *The Man in the High Castle* of presenting the Japanese-occupied San Francisco as a utopia, one symptom being its “missing
The Martian SF of both Dick and Bradbury particularly influenced Robinson. His analysis of Dick’s *Martian Time-Slip* briefly criticized the novel for presenting Mars as a barely habitable desert. Robinson hints at the direction of his Mars trilogy: “There are no wild plants or animals in the environment. Within the society we see not a single example of recreation, or of local art. What culture we do see is imported from Earth” (56). Robinson’s version of Mars corrects these shortcomings by adding diverse ecologies along with human multiculturalism, which in time become characteristic of the planet. Aside from the few Martian novels by Dick, Bradbury’s 1950 short story collection *The Martian Chronicles* similarly served as a major inspiration for Robinson’s Mars trilogy. The biographies of these two SF authors parallel one another beyond sharing the same hometown, as both moved at a young age from northern Illinois to southern California, where Dick (and Le Guin) also lived. In a 2013 interview “Planet of the Future,” Robinson acknowledged, “I thought science fiction was the literature of California. I still think California is a science fictional place. The desert has been terraformed. The whole water system is unnatural and artificial. This place shouldn’t look like it looks, so it all comes together for me. I’m a science fiction person, and I’m a Californian.”

Robinson’s characters tend to rediscover that space-time necessitates a degree of figurative language and in turn evokes subjective experiences. Space-time rhetoric, or the trope of “spatializing language” (375), as Sax calls it in *Green Mars*, appears throughout Robinson’s corpus. Robinson goes as far as describing how characters physical feel Einstein’s concepts. In *Green Mars*, the Martian-born Nirgal travels to Earth and “was truly miserable, spacetime
bending him in an ever more tortuous torque, until every cell of him cried out with the pain of it” (144). Robinson similarly stretches SF tropes, exhibiting what Harold Bloom calls an anxiety of influence. For example, when a solar mirror called a soletta is put in orbit to increase sunlight on Mars, SF references abound. As if he were a client of Time Safari, Inc., Sax tells Phyllis that the soletta “looks positively Jurassic” (155). As if sharing the view with Wells’s Time Traveler, Michel in “Michel in Provence,” looks toward Mars from Earth to see, “the red star shone in the sky” (178). Building on the red lights in The Time Machine and Bogdonov’s Red Star, Michel’s red star symbolizes the future, but with an enriched ambiguity akin to Gatsby’s symbolic green light. Like the works of many other SF authors, Robinson borrows from a century of previously established space-time rhetoric, but his additions to the discourse always create something unique.

The ancient Greek philosopher Plato cautioned that art corrupted what it imitates. The modern SF critic Darko Suvin described SF as a genre of cognitive estrangement, as if it purposefully alters what it imitates (Metamorphoses xvi). Robinson states that SF as a genre turns its power towards social criticism like satire. To accomplish this, Robinson writes, “bringing metaphor systems to life, or bringing them into history in the form of our future, is a way of representing the present that necessarily emphasizes some aspects of the present while hiding others. It is a distortion, a funhouse mirror reflection, very similar to the distortions used to create satire” (69). Suvin’s definition of SF represented exactly what Plato feared in poetry, and Robinson similarly views this distortion as a redeeming quality for SF. As if specifically describing the end of Bradbury’s “A Sound of Thunder,” Robinson observes that generally in SF, “the cultural givens of a society are displaced and made strange by giganticism or some other
deformation, forcing the reader to acknowledge that the given is not a law of nature but a cultural creation; an artifact of history that, since it is changeable in the future, could conceivably be different now” (Novels 33). Despite working on similar projects, Plato and Robinson would not have agreed on the value of SF, just as Plato’s utopia would have greatly feared Robinson’s handling of the genre.
The 1955 novel *Solar Lottery* presents a form of government in the year 2203 known as Minimax. Derived from game theory, Minimax creates a randomization within the social order without any “genuine system of prediction” (4). Herb Moore explains the system to Leon Cartwright, “The whole bottle system is to protect us; it elevates and deprives at random, chooses random individuals at random intervals. Nobody can gain power and hold it; nobody knows what his status will be next year, next week. Nobody can plan to be a dictator: it comes and goes according to subatomic random particles” (37). Using these subatomic particles, Minimax not only picks leaders, known as Quizmasters, but also elects assassins to kill them. Telepaths protect the Quizmaster by reading the “murder-thought” of the assassins. Herb advises Reese Verrick, a former Quizmaster intent on killing his successor, “You can’t have a strategy against telepaths: you have to act randomly. You have to not know what you’re going to do next. You have to shut your eyes and run blindly. The problem is: how can you randomize your strategy, yet move purposefully toward your goal?” (78). The advice emphasizes how the mission of assassination represents narrative time in the novel, as both are concerned with moving toward their goals while also attempting to appear unpredictable.

Assassination becomes a vehicle for narrative time in *Solar Lottery*. Characters treat the concept of assassination as both a random and determined action. The tension between these two forces drives the conflict until determinism eventually dominates. To first establish this tension, Dick has Herb use space-time rhetoric to evoke randomness. He and Reese create an ideal
assassin, a synthetic body named Keith Pellig that contains multiple minds working at the same time. With multiple intentions, the assassin can deceive the telepaths. This randomness of such an assassin, against the determined time seen by the telepaths, according to Herb, “is Heisenberg’s random particle. The teeps can trace his path…but not his velocity. Where Keith Pellig will be along that path at a given moment nobody knows” (79). The metaphor is process-oriented to underscore the assassin as unpredictable, while the space-time rhetoric of the path simulates the sujet of narrative time. When Leon becomes Quizmaster, his more product-oriented perspective considers the assassination as inevitable. He tells Rita O’Neill, “I can’t help thinking if one man is really determined to kill another, there’s not much that can be done to stop him. You can delay him, you can make it hard for him, you can do a lot of intricate things that take up a lot of time and energy, but sooner or later he shows up” (151). Leon’s prediction does not contradict Herb’s space-time rhetoric, but instead emphasizes the determined conclusion of the assassin’s mission.

Before the end of Solar Lottery, Leon ironically assassinates his assassins, as if to show his product-oriented analogy of assassination and determinism as superior to Herb and Reese’s process-oriented analogy implying randomness. The novel also affirms determinism over the indeterminacy of randomness when Leon eventually confesses to Ted Bentley that Minimax is a rigged system: “It’s rotten, corrupt … it’s ready to fall on its face. But something has to go up in its place; something has to be built. Tearing down isn’t enough. I’ve got to help build up the new. It has to be different for other people. I’d like to do something that really alters things. I have to do something that alters things” (177). Minimax reveals indeterminacy as a corruption, but the space-time rhetoric encourages building up over tearing down to imply that
indeterminacy would corrupt the ultimate project. Leon directly makes this analogy into a narrative project. His admission ties numerous themes together when he jokes, “My first assassin is a closed book” (159). Underneath this simple idiom lies complex imagery of narrative determinism.

At the end of the novel, the metaphorical vehicle for narrative time moves away from assassination to colonialization when characters reach the Flame Disc, a massive ringworld surrounding the solar system. This frontier world symbolically resembles Asimov’s link of historical determinism and space conquest—conquering more space means a civilization would have more time. In *Solar Lottery*, Leon has an overoptimistic spirit: “Things are happening. The stars are opening up like roses. The Disc is out there… a half-way point” (190). Captain Groves reaches the mysterious Flame Disc in the final scene to find a replica of an early space pioneer John Preston, forever repeating, “The highest goal of man—the need to grow and advance … to find new things … to expand. To spread out, reach areas, experiences, comprehend and live in an evolving fashion. To push aside routine and repetition, to break out of mindless monotony and thrust forward. To keep moving on…” (200). The novel ends with an ellipsis creating an aposiopesis, the rhetorical device of suddenly breaking off speech. As the sujet goes out of existence, its final message evokes a continuation that is forever coming into existence. Jake Jakaitis considers the ending of *Solar Lottery* to embody “1950s notions of progress … implicitly governed by manifest destiny” (174). Dick critiques this progress by using it as a conclusion, when the narrative time has ended. In this regard, the form and content of the novel are in direct contradiction to one another at the close.
Dick’s writing career continually reverted to many of the techniques used in *Solar Lottery*. The replica of John Preston, for example, is the beginning of a long line of Dick’s characters who will articulate a deeply personal, idealistic space-time rhetoric of progress, including Ragle Gumm in *Time Out of Joint*, Nobusuke Tagomi and Robert Childan in *The Man in the High Castle*, and Joe Chip and his associates in *Ubik*. Ending novels with an image of onward motion is also typical for Dick’s closing lines, which even plagiarize the same imagery of a vehicle in motion. In the last sentence of *The Three Stigmata of Palmer Eldritch*, “The ship rushed on” (233). In the last sentence of *Now Wait for Last Year*, “The cab soared on” (252). In the last sentence of *Counter-Clock World*, “The car flew on” (223). The action continues, even when the story ends. Another precedent set by Dick’s first novel was uniting the trope of assassination with narrative time, in which the pursuit carries the story forward. This trope appears in the form of the hunt for the title character in *The Three Stigmata of Palmer Eldritch*, the hunt for replicants in *Do Androids Dream of Electric Sheep?*, the hunt for Jason Taverner in *Flow My Tears, the Policeman Said*, Fred’s investigation into Bob Arctor in *A Scanner Darkly*, and the prophesized death and resurrection of the title character in *The Transmigration of Timothy Archer*.

*Time Out of Joint*

In the 1959 novel *Time Out of Joint*, Ragle Gumm plays a newspaper contest called “Where-Will-the-Little-Green-Man-Be-Next?” without being consciously aware that his calculations are part of an interplanetary war. Ragle represses the memory that he is in fact predicting where the Earth will be hit by random nuclear missile attacks that are launched every
day from a hostile lunar colony. His predictions allow the missiles to be intercepted. As was the case in *Solar Lottery*, models of determinism ultimately defeat models of indeterminacy and randomization. Ragle in *Time Out of Joint* discovers a determined pattern within the random information he receives. The newspaper editor Stuart Lowery describes his ability: “You view a pattern in space, a pattern in time. You try to fill. Complete the pattern. Anticipate where it goes if extended one more point. That’s not rational; not an intellectual process. That’s how—well, vase-makers work” (33). Lowery’s opinion of Ragle’s ability assumes an underlying model of determinism, which he associates with the artistic process. This connection extends to narrative patterns, as writing and pottery metaphorically connects throughout Dick’s corpus.

Kim Stanley Robinson’s study on Dick uses Lowery’s description to assert, “Ragle’s job is a metaphor for Dick’s” (21). In this regard, Dick’s creation of narrative determinism equates to the completion of a pattern. To simplify Ragle’s task of completing patterns, the government obfuscates his employment, disguises his operations as a newspaper contest, and even designs his whole town to look like the 1950s instead of the late 90s, the time in which the novel is set. This deception makes the Shakespearian allusion an appropriate title. The construction of a false space-time gives Ragle a Hamlet-like “paranoic psychosis” (105). With fragment sentences, he explains,

> Imagining that I’m the center of a vast effort by millions of men and women, involving billions of dollars of infinite work … a universe revolving around me. Every molecule acting with me in mind. An outward radiation of importance … to the stars. Ragle Gumm the object of all the whole cosmic process, from inception to final entropy. All matter and spirit, in order to wheel about me” (105-06).

With solipsistic imagery, Ragle thinks of time as finite because it will ultimately succumb to the forces of entropy, while space is a wheel in motion around him. This impression leads Ragle to
theorize, “Maybe I’m not moving” (127). He ultimately concludes, “I’m the center of the universe” (140).

At the end of *Time Out of Joint*, Ragle rediscovers his lost identity in full, which cures his psychosis and any sense of temporal stagnation. Idealistic impulses replace his paranoid feelings, though he ironically sides with the people on the Moon, called lunatics. His description of his new demeanor complements the similar feelings of John Preston, who expounded his desire to keep moving on at the end of *Solar Lottery* as “the highest goal of man” (200). Ragle discovers, “a need that he had never been aware of. A deep restless yearning under the surface, always there in him throughout his life, but not articulated. The need to travel on. To migrate” (*Time* 222). The ambiguous ending implies that this progress lacks any real change. As Ragle prepares to board a spaceship to the Moon, he sees aboard one of his neighbors from his original, fictitious town, Walter Keitelbein. The Keitelbeins had earlier doubled as the Kesselmans by mistake, a clue to the world’s spurious nature. This ending casts doubt on whether Ragle has truly escaped. Yves Potin claims, “The conclusion of the novel shows us a science fiction universe yet to be built, a completely new and open reality, just like the end of almost all of Dick's novels” (160). While Dick’s endings indeed show new realties, in this case, a journey to the Moon, the markers of narrative determinism, typically established in earlier chapters, restrict these worlds from being actualized.

By depicting both the 50s and 90s alongside one another, *Time Out of Joint* sets the precedent for two space-times to exist within a single novel—both tending to subvert narrative determinism. Alternate temporalities take the forms of various histories for characters in *The Man in the High Castle*, multiple experiences of the passage of time for Jack Bohlen in *Martian*
*Time-Slip* and Sebastian Hermes in *Counter-Clock World*, private and shared universes of Leo Bulero and Barney Mayerson in *The Three Stigmata of Palmer Eldritch*, the past, parallel, and future worlds of Eric and Kathy Sweetscent in *Now Wait for Last Year*, the half-life state of characters in *Ubik*, the computer simulations in *A Maze of Death*, the hallucinations of Alys Buckman in *Flow My Tears, the Policeman Said*, as well as religious visions in *VALIS, The Divine Invasion*, and *The Transmigration of Timothy Archer*. Dick also relates the topic of entropy to narrative time throughout his writing similar to Ragle Gumm’s cosmogony in *Time Out of Joint*. This theme appears in Jack’s ideas about psychosis in *Martian Time-Slip*, Barney’s hangover in *The Three Stigmata of Palmer Eldritch*, Richard Deckard’s *memento mori* and John Isidore’s philosophy about trash in *Do Androids Dream of Electric Sheep?*, Joe Chip’s experience of energy loss in *Ubik*, the Form Destroyer’s description in *A Maze of Death*, and Jason Taverner’s fugitive status in *Flow My Tears, the Policeman Said*.

*The Man in the High Castle*

The 1962 novel *The Man in the High Castle* envisions a scenario where Germany and Japan defeat the United States and its Allies in World War II. Robinson considers the novel a “quantum leap in quality” in Dick’s style (39). As an alternative history, the novel follows in the tradition of Ward Moore’s 1953 novel *Bring the Jubilee*, depicting an alternative conclusion to the Civil War. The genre innately contradicts historical determinism by implying that history could have been different. Space-time rhetoric throughout Dick’s novel, however, struggles in its attempt to resist historical determinism. In the novel, for example, characters use the *I Ching*, an
ancient Chinese oracle, to predict the future. The symbolism of a book again makes the analogy relate to narrative structure. Frank Frink complains, “It’s the fault of those physicists and that synchronicity theory, every particle being connected with every other; you can’t fart without changing the balance of the universe. It makes living a funny joke with nobody around to laugh. I open a book and get a report on future events that even God would like to file and forget” (*Man* 51). Frank ironically considers space-time as a written book while simultaneously parodying Carl Jung’s synchronicity theory as overstating connectivity.

The tension between historical determinism and its alternative in *The Man in the High Castle* creates disparate temporalities, as Ragle Gumm had discovered from the counterfeit and legitimate temporalities in *Time is Out of Joint*. Dick’s alternative history introduces the motif of a novel in a novel, a second textual metaphor for historical determinism and narrative time. *The Grasshopper Lies Heavy* is a fictional book in *The Man in the High Castle* that ironically depicts historical events more accurately, imagining Germany and Japan losing the war rather than winning; the *I Ching* even proclaims the scenario to be a more legitimate version of history. *The Grasshopper Lies Heavy* describes the turning point in the war as the Battle of Stalingrad, only to have Ray Calvin dismiss this more accurate version of history as impossible: “No holding action could have done any more than delay the outcome; it couldn’t have changed it” (68). Ray’s claim can be obviously false due to the indeterminacy inherent in the genre of alternative history. However, with this additional level, Dick also brings the element of determinism to the genre by openly labeling it as alternative.

The chronology of *The Grasshopper Lies Heavy* is not identical to actual history, as FDR was never reelected. On the surface of the space-time rhetoric, the novel in the novel illustrates
indeterminacy, weakly matched against the determinism of the *I Ching*. Complicating this distinction, Hawthorne Abendson writes *The Grasshopper Lies Heavy* using responses from the *I Ching*: “One by one, Hawthorne made the choices. Thousands of them. By means of the lines. Historic period. Subject. Characters. Plot. It took years” (256). In other words, the *I Ching* co-wrote *The Grasshopper Lies Heavy*, making a deeper contrast between the two difficult.

Conflating the two books even more, the ambiguity of the oracle causes it to mimic a living being. Nobusuke Tagomi believes, “We are absurd … because we live by a five-thousand-year-old book. We set it questions as if it were alive. It is alive. As is the Christian Bible; many books are actually alive. Not in metaphorical fashion. Spirit animates it” (70). Dick uses the imagery of a living book, living in the sense that it can react to the present, to challenge this traditionally deterministic space-time rhetoric of time as a text.

One of Tagomi’s interactions with the *I Ching* begins the novel’s most serious examination of historical determinism. In a possible future, Tagomi sees Operation Dandelion, a Nazi plan for a nuclear attack on Japan, and bemoans, “There is no Way in this; all is muddled. All chaos of light and dark, shadow and substance” (190). Contrary to the optimistic progress of historical determinism, Tagomi experiences indeterminacy for all its negative aspects. The hyperbole that “all is muddled” represents space-time rhetoric of indeterminacy, emphasizing its uncertainty as chaotic and destructive. In this regard, the narrative itself is at stake of suffering from being muddled. Frank Herbert’s 1965 novel *Dune*, published three years after *The Man in the High Castle*, uses the same diction to depict the future as muddled. Dick’s usage of the word in relation to history, specifically in the context of Operation Dandelion, forces readers to
reevaluate the inevitability and the ethical implications of the nuclear attacks on Hiroshima and Nagasaki by the United States.

To counter the possible destruction of Operation Dandelion, characters look for other alternatives. Paul Kasoura finds the most positive aspects of indeterminacy as symbolized by a seemingly random piece of jewelry that has, what he calls, “wu,” a Chinese concept: “For it is a fact that wu is customarily found in least imposing places, as in the Christian aphorism, ‘stones rejected by the builder.’ One experiences awareness of wu in such trash as an old stick, or a rusty beer can by the side of the road… In other words, an entire new world is pointed to, by this” (176). Tagomi later sees the same piece as Paul and receives the same insight from a light that reflects from it; only then does the muddled and ahistorical time become clear. Tagomi exclaims, “Yes, there is something new which animates these… The Law of Tao is borne out, here; I sense accurately in these the contracted germ of the future” (225). The finding of this germ demonstrates the positive aspects of indeterminacy with an ability to present options, even if the concept of a certain future seems to double back to resembling determinism.

Tagomi maintains optimism when he reasons to himself (in broken English) the significance of the piece that would otherwise seem trivial. His space-time rhetoric moves from deterministic to indeterministic:

Metal is from the earth, he thought… From below: from that realm which is the lowest, the most dense…Yin world, in its most melancholy aspect… And yet, in the sunlight, the silver triangle glittered. It reflected light. Fire, Mr. Tagomi thought… The high realm, aspect of yang: empyrean, ethereal. As befits work of art. Yes, that is artist’s job: takes mineral rock from dark silent earth transforms it into shining light-reflecting form from sky. Has brought the dead to life. Corpse turned to fiery display; the past had yielded to the future. (229)
In one of the most introspective scenes in Dick’s entire opus, Tagomi perceives time as space, specifically seeing it as two realms—through the perspective of dualism and serialism, a two-tier conception of time as containing both higher and lower realms. In this case, the determined past is a lower realm of darkness, while the future exists in a higher realm of potentialities. Robert Childan similarly believes, “The Tao is that which first lets the light, then the dark. Occasions the interplay of the two primal forces so that there is always renewal. It is that which keeps it all from waring down” (<i>Man</i> 106). Tagomi and Robert seek the experience of creative continuity, like the idealistic outlook from characters in Dick’s earlier novels

The last sentence of <i>The Man in the High Castle</i> depicts the onward sense of motion with which many of Dick’s novels tend to close. Juliana Frink, Frank’s ex-wife, leaves the author of the <i>The Grasshopper Weighs Heavy</i> uncertain and alone: “She walked on without looking again at the Abendsen house and, as she walked, searching up and down the streets for a cab or a car, moving and bright and living, to take her back to her motel” (259). The final three adjectives emphasized by the polysyndeton (a rhetorical device that repeats the use of conjunctions) refer to the higher realm of time as indeterminant, but whether the last sentence is meant to evoke it positively or negatively is ambiguous. Using Taoism, Tagomi associates this realm with the benefits of indeterminacy, including creativity and continuity. However, the final sentence also conveys the chaotic nature of free will. Using Buddhism, Tagomi makes this connection when viewing an afterlife experience that he compared to the <i>Bardo Thodol</i>, from Tibetan <i>Book of the Dead</i>. He calls the sensation “A disturbance affecting my sense of space. Horizon twisted out of line. Like lethal astigmatism striking without warning” (231). He experiences what he claims is “Out of my world, my space and time” (232). In this other realm, he feels, “Hot winds blowing
me who knows where… Unsuccored wherever one turns. The terrible journey—and always the realms of suffering, rebirth, ready to receive the fleeing, demoralized spirit.” This space-time rhetoric represents free will at its most chaotic. The metaphorical journey is unsuccored in the sense that there is no support from structured patterns.

Regardless of how the ending is read, Tagomi discerns two temporalities through his visions that are not equally ranked. His final impression of these levels leaves him to realize that the higher realm cannot be seen from the lower due to an impairment like a visual stigma: “Now one appreciates Saint Paul’s incisive word choice … seen through glass darkly not a metaphor, but astute reference to optical distortion. We really do see astigmatically, in fundamental sense: our space and our time creations of our own psyche, and when these momentarily falter—like acute disturbance of middle ear” (233). From Asimov’s 1955 *The End of Eternity* to Roger Zelazny’s Amber Chronicles (1970-1991), SF repeatedly depicts time metaphysically with two hierarchical temporalities. Other novels by Dick present time structured by serialism, including *Do Androids Dream of Electric Sheep, A Scanner Darkly, VALIS, The Divine Invasion,* and *The Transmigration of Timothy Archer.* Another feature from the novel that recurs in Dick’s writing is the trope of a novel in a novel commenting on narrative structure. Similar to *The Grasshopper Weighs Heavy* in *The Man in the High Castle,* the symbolic trope appears in other novels, including *Pilgrim Without Progress* in *The Three Stigmata of Palmer Eldritch,* *God In a Box* in *Counter-Clock World,* *How I Rose From the Dead in My Spare Time and So Can You* in *A Maze of Death,* and *Look Backward, Idiot* in *The Transmigration of Timothy Archer.*
Martian Time-Slip

In the 1964 novel Martian Time-Slip, characters provide space-time rhetoric through reactions to mental illnesses. Jack Bohlen suffers from schizophrenia that grants him deeper insights into space-time. After immigrating to Mars, Jack laments, “once, he had been able to establish the order of things in space and time; now, for reasons unknown to him, both space and time had shifted so that he could not find his bearings in either one… His life had no purpose… The future had ceased to exist” (81). The negative aspects of his disorder express time as ending, as exhibited by other novels by Dick. Jack feels more restricted as the novel nears its conclusion. He exclaims, “And people talk about mental illness as an escape! He shuddered. It was no escape; it was a narrowing, a contracting of life into, at last, a moldering, dank tomb, a place where nothing came or went; a place of total death” (154). This space-time rhetoric uses the imagery of a tomb. Jack’s awareness of time as narrowing captures Morson’s image of narrative time, moving towards its conclusion as if caught in a vortex. While narrative determinism provides structure for the story, in a negative light, it reduces the end of the story to a metaphorical death.

Jack is not the only character in Martian Time-Slip to have a mental disability that generates space-time rhetoric. The novel centers on the precog child Manfred who suffers from autism. Space-time rhetoric describing Manfred’s perceptions also embodies determinism, but in ways less anthropocentric than Jack’s rhetoric. Dr. Glaub explains his theory in the novel on autism, echoing Dick’s 1965 essay “Schizophrenia and The Book of Changes”: “It assumes a derangement in the sense of time in the autistic individual, so that the environment around him is
so accelerated that he cannot cope” (Martian 46). Putting this idea in layman’s terms, Leo Bohlen, Jack’s father, exclaims, “So this kid’s time-rate is like this seed… I bet he sees slow processes like this seed here … five days for him is like say ten minutes for us” (142). In addition to perceiving time slower than other characters, Manfred sees past, present, and future events overlapping. At the end of the novel, he intensifies his temporal powers to travel through time and escape being imprisoned in a mental asylum—a fate the novel establishes as worse than death.

Jack attempts to see time less anthropocentrically, as it appears to Manfred, but never reaches his degree of control. He explains his symptoms of psychosis as two contradictory layers of time: “It is a splitting apart of the two worlds, inner and outer, so that neither registers on the other. Both still exist, but each goes its own way. It is a stopping of time. The end of experience, of anything new. Once the person becomes psychotic, nothing ever happens to him again” (180). The end of Dick’s novels likewise become psychotic. In the same way, schizophrenia disallows Jack to perceive any unity of space-time. As earlier novels had done, Dick imagines alternative temporalities, as Jack describes his disability as a temporal disorientation. Early in the novel, he gives partial meaning to its title, as he assumes, “perhaps time flowed differently on earth than on Mars; he had read an article in a psychology journal suggesting that” (5). The claim proves true in terms of both temporal physics and Martian culture.

Martian society marginalizes characters for their temporal disorientations at the same time they are exploited for them. Howard Canaan observes how precognition in Dick’s novels reveals how “the cost of inner vision is isolation and entrapment in one’s own reality” (343). Like the mentally handicapped, the indigenous inhabitants of Mars, primitive tribes of humans
called Bleekmen also experience xenophobia. Robinson rightly observes that throughout Dick’s writing the aliens are “usually sages in disguise” (28). The Bleekmen indeed have a more comprehensive understanding of time, more distinct than Leo’s oversimplification of it. When Jack compares the child to the Martian locals, Leo responds, “Possibly their sense of time is close to his… to the Bleekmen, we Earthmen may very well be hypomanic types, whizzing about at enormous velocity, expending huge amounts of energy over nothing at all” (Martian 150). The subjective sensation of time appears in dialogue, particularly with the more narcissistic characters.

Arnie Kott believes an alternative sense of time could be profitable and therefore builds a chamber that alters time. Whereas Leo believes that the precog Manfred experiences time moving slower, like a seed, Arnie believes he experiences it faster and that his technology could slow down time to match Manfred’s perception. By putting him in this chamber, Arnie could thereby communicate with the precog to extract financially valuable information about the future. Arnie asks, “Could such slow motion chambers be built? … Could the schizophrenic be running so fast, compared to us, in time, that he’s actually in what to us is the future?” (113). Arnie’s rhetorical questions vaguely evoke Einstein’s theories of relativity, oversimplifying the science as Leo had with temporal relativism.

The chamber slowing time for Manfred is not the only examples of an aberrant space-time in Martian Time-Slip. At the end of the novel, the child escapes being institutionalized and runs away with the Bleekmen to a sacred rock in the Martian desert named Dirty Knobby, which the Bleekmen believe allows worshipers the ability to travel through time in an objective sense. Heliogabalus, a Bleekman acting as a servant to Arnie, explains with sage-like wisdom, “It is in
actuality the capacity within the boy… The rock alone is powerless. However, it is as follows: time is weaker at that spot where Dirty Knobby lies. … A sort of puncture in time” (236), clarifying later that “one might escape backward into the past” (237). Like the terminal beach established in The Time Machine by Wells, the landmark of Dirty Knobby represents a transposition of life—not from sea to land—but from inanimate to animate matter. Dirty Knobby stands as a monument that juxtaposes both a beginning and an end. At the least, rocks experience time slower than humans, as Palmer Eldritch tells Barney Mayerson in The Three Stigmata of Palmer Eldritch, published in the same year as Martian Time-Slip.

Manfred’s precog abilities interrupt the flow of narrative time with many ellipses, even before encountering Dirty Knobby. The repeated foreshadowing of a particular event at Arnie’s house mimics a schizophrenic perception. The details of the event become clearer as it repeats itself three times. When the actual scene does come to pass, a sexual affair with his adversary’s mistress, Jack does not even experience it. In addition to this interruption of time, the novel finally ends by looping back on itself to repeat a scene near the beginning. Near the beginning of the story, Jack and Arnie become rivals when they meet while assisting some Bleekmen who required rescuing from the Martian desert. This scene repeats itself, after Arnie travels back in time to the same scene to kill Jack—only to be killed by him instead. The alternative reality replaces the historical determinism that generated the original reality. In an ironic reversal, the seemingly important scene foreshadowed three times is made irrelevant by the new reality and never technically occurs.

The disorder of schizophrenia involves more than just a temporal disorientation, but the inability to distinguish the relevant from the irrelevant, even the animate from the inanimate. The
result is to spatialize only the entropic qualities of time. In Martian Time-Slip, Manfred repeats the word “gubbish,” much to the chagrin of Jack, who asks himself, “Could gubbish mean time? The force that to the boy means decay, deterioration, destruction, and, at last, death? … it isn’t even a complete view of time. Because time also brings new things into existence” (153). The neologism besieges Jack: “A voice in his mind said, Gubble gubble gubble, I am gubble gubble gubble gubble. Stop, he said to it. Gubble, gubble, gubble, gubble, it answered. Dust fell on him from the walls. The room creaked with age and dust, rotting around him. Gubble, gubble, gubble, the room said. The Gubbler is here to gubble gubble you and make you into gubbish” (170). This grammatically diverse word denotes the entropy of time. In narrative terms, the word embodies the end of language. Audiences tend to expect language literally to end at the novel’s conclusion, but Dick brings that symbolic death forward into his novel to make the ending encroach upon the rest of the story.

In the final moments before the novel closes, the young Manfred returns as an old man from his time travels to offer a valediction. Jack and other male characters see this return as a closure, Manfred gestures happily to his Bleekmen friends nearby. However, the uncanny visit leaves Jack’s wife Silvia horrified, as if she had seen a ghost of the boy’s father. Adding a moral to the final scene with a sense of reason, she concludes, “We are better off not being able to look ahead, she said to herself. Thank God we can’t see” (278). The final words of the novel read, “their light flashed here and there, and their voices could be heard, businesslike and competent and patient.” In his study, Robinson remarks, “It is the quietest, calmest, and most resolute of Dick’s endings” (58). The polysyndeton repeats the conjunction “and,” adding emphasis to the final two words. The lack of motion is atypical of Dick’s endings. The polysyndeton ending of
Martian Time-Slip also contrasts with the de-emphasis of words that occurs at the end of VALIS using an asyndeton, a rhetorical device that omits conjunctions. As another rhetorical scheme for emphasis, Dick commonly uses fragment-sentence endings, for example at the end of Solar Lottery, A Maze of Death, Flow My Tears, the Policeman Said, The Divine Invasion, and The Transmigration of Timothy Archer.

The Three Stigmata of Palmer Eldritch

Opening in the year 2016, the 1965 novel The Three Stigmata of Palmer Eldritch portrays illicit drugs as “[t]he way out” for emigrants from Earth to avoid “killing one another in … pain” (133). A novel in the novel establishes the bleak tone and foreshadows Dick’s treatment of narrative time. Eric Lederman’s great text on colonial living is titled Pilgrim Without Progress (130). The title is obviously a play on John Bunyan’s Pilgrim’s Progress. Barney Mayerson sees Anne Hawthorne reading the book on route to Mars, despite it being banned. This detail reveals the book’s subversive nature. In connection with the title, Dick presents a critique of modern notions of progress, specifically narrative determinism. Unlike the dead ends of the drug-induced subjective realities and a failed assassination plot, the sideshadowing of the book Pilgrim Without Progress ironically foreshadows an ending without any positive continuation for The Three Stigmata of Palmer Eldritch.

The narrative time of an unfinished journey is reinforced through the trope of a failed assassination. Leo Bulero tries to kill the title character after dehumanizing him as an alien, a demonic god, and even a plant. Leo believes, “It’s Palmer Eldritch who’s everywhere, growing and growing like a mad weed. Is there a point where he’ll burst, grow too much?” (186). Later,
he reasons, “Maybe the damn organism was like a protoplasm; it had to ingest and grow—instinctively it spread out farther and farther. Until it’s destroyed at the source” (230). The growth of Palmer proves too much for Leo. The novel concludes with Leo reassuring Felix Blau the hunt would continue: “But I still have faith I can get at the thing, if not this week then next. If not this month then sometime. I know it; I know myself now and what I can do. It’s all up to me. Which is just fine. I saw enough in the future not to ever give up, even if I’m the only one who doesn’t succumb, who’s still keeping the old way alive, the pre-Palmer Eldritch way” (231). Just after declaring that he knows who he is, Leo forgets his own name, implying his project to eradicate Palmer will ultimately fail due to his exposure to Palmer’s drugs.

Illicit drugs symbolize the *sideshadowing* of Dick’s narrative time in the novel. In hovels on Mars, the contraband Can-D makes users share hallucinations as they are “transported outside of time and space” (36). Chew-Z, a new and more potent drug, causes users, on the other hand, to enter realities of their own creation, to appear in the future as ghosts, and finally to return as if no time had passed—but forever bearing strange stigmata. When Leo takes the drug, Dr. Smile, an automated information service, tells him, “Time sense is subjective, so let’s see how it feels to you” (99). When Barney takes the drug, Palmer Eldritch advises him on how best to experience the century-long time travelling: “If you become inanimate, an old log for instance, you’re no longer conscious of the passage of time… Be a rock, Mayerson. Last it out, however long it is before the drug wears off. Ten years, a century. A million years. Or be an old fossil bone in a museum” (201). Consistent with what Dr. Smile had told Leo, Palmer tells Barney that time would pass differently for him depending on what form he took: an old log, a rock, or even an old fossil bone.
In such moments, Dick’s space-time rhetoric conjures subjectivity for the characters, but without surrendering to it. Subjective time is not reserved for narcissistic characters as in Martian Time-Slip. The Three Stigmata of Palmer Eldritch consistently reserves celebrating any legitimate realities. Dick’s ambiguous conclusion to the novel does not validate time as subjective, as if it were able to foreshadow a conclusion. Rather, these relative timelines serve as sideshadowing for the novel’s narrative time. Chew-Z seems to foreshadow the future for Leo and Barney, only to reveal it as entirely uncertain. As a precog, Barney comes closest to rationalizing the effects of Chew-Z, when, under its influence, he claims, “[H]ere was the essence of the future: interlaced possibilities. And long ago he had accepted this, learned how to deal with it; he intuitively knew which time-line to choose” (214). This space-time rhetoric differs little from Barney’s typical visions as a precog. Earlier, he had seen “Everything of course was blurred, and alternates presented themselves in a chaos of profusion” (57). Though characters in Dick’s novels repeatedly make choices to select the most appropriate future, the choices themselves do little to legitimize the chosen timelines or even to distinguish them qualitatively from their alternatives.

Patricia Warrick puts the hallucinogenic experience into religious context, as “drug and religious experience are synonymous” in the novel (109). Warrick comments,

The reader stumbles into a microcosm mirroring the most horrible macrocosm Dick can imagine—a universe where nothing is certain except that God, turned cannibal, has come to consume, not save, man. And to consume each man alone in his private reality. Unless of course it turns out that each man’s reality is a mere subjective illusion. But if that is true, where is our objective, common reality? Are we anchored together in a shared time and place? …The fascination of Palmer Eldritch is that anything is possible. (96)

The illusory and real worlds blur together, not only by Can-D putting multiple users in a single body, but through an omniscient narrator. Warrick argues, “Implausible as the matrix of
alternative realities may be…. readers never reject them as totally impossible because of Dick’s skillful use of the omniscient point of view to give them credibility” (107). Robinson likewise asserts, “Tension is also created by the disparity between the different characters’ understanding of the events that occur to them, for there is never a final judgment given on the matter by an omniscient narrator” (15). The narrator describes numerous alternate realities in the novel as indistinguishable from the primary one—consistent with Dick’s overarching theme that illusions can be real and reality could be an illusion.

Warrick uses terms from ancient Greek cosmology to describe this binary of subjective and objective realities. She observes, “In this novel, the power of evil isolates man in the idios kosmos, or purely private world, and he loses contact with the given, shared universe, the koinos kosmos” (109). On the positive end, characters using drugs in Dick’s novels frequently articulate temporal disorientations of their own idios kosmos that grant insight into the koinos kosmos. Barney casually describes this feeling: “The cab…whipped him in almost no time to Emily’s conapt building; in a blur he paid it, hurried inside, and in a matter of seconds was ascending. It seemed as if no time had passed, as if time had ceased and everything waited, frozen, for him; he was in a world of fixed objects, the sole moving thing” (173). For Barney, a temporal disorientation allows the intoxicating effects of the drugs to spill out of his idios kosmos and into the larger koinos kosmos. He feels a combination of experiences recorded by earlier characters in Dick’s novels, including the entropy of time. Whereas Ragle Gumm in Time Out of Joint stands motionless at the center of a spinning universe, Barney embodies the reverse imagery as he alone moves through the stillness.
In one of Dick’s most bizarre speeches, delivered at a conference in France in 1977 after he reportedly experienced his greatest religious epiphany, he discusses the impetus behind his novels. In a way that applies aptly to the multiple realities of *The Three Stigmata of Palmer Eldritch*, Dick revealed,

I, in my stories and novels, often write about counterfeit worlds, semireal worlds, as well as deranged private worlds inhabited by just one person, while meantime the other characters either remain in their own worlds or are somehow drawn into one of the peculiar ones. This theme occurs throughout all my twenty-seven years of writing. At no time did I have a theoretical or conscious explanation of my preoccupation with these pluriform pseudo-worlds, but now I think I understand. What I was sensing was the manifold of partially actualized realities lying tangent to what evidently is the most actualized one, the one which the majority of us, by *consensus gentium*, agree on. (Qtd. in Warrick 109)

Dick describes his writing as a deconstruction of any consensus of truth, as if the truth were an argument always struggling against potential rebuttals. However, his writing does not go as far as to validate these “partially actualized realities” as any more authentic or credible than the “most actualized one.” Speaking generally on Dick’s style, Robinson claims, “the reader is left the task of deducing the *koinos kosmos* himself” (16). This immersive technique forces readers to participate in the discourse. Robinson explains, “in Dick’s reality breakdowns there are three levels—the protagonist in his fictive world, the reader reading the text, and the reader in his world—and each reflect the other two, and this resonance lends the text significance” (36). With so many levels to Dick’s writing, all these elements are not always in perfect harmony.

Brian Aldiss considers *The Three Stigmata of Palmer Eldritch*, “a flawed work, over-complicated, and finally disappearing in a cloud of quasi-theology” (qtd. in Robinson 61). Robinson believes that completing all the plot lines in the narrative would have resulted in “a 400- or 500-page novel, which commercial considerations would have discouraged” (63). Dick
left many of the elements unresolved, as narrative time ultimately supersedes the alternative realities. They become *sideshadowing* and inhibit any sense of progress toward the conclusion. Even when the realities are totally open, a narrowing of possibilities occurs, allowing narrative determinism to maintain control. Palmer Eldritch tells Leo, “Even if the future lasts for a million years it can’t restore what you lost by, so to speak, your own hand” (204). Leo can travel through time yet he has ironically run out of time to act. KR-3 and JJ-180 also resemble the fictional drug Chew-Z by creating alternate realities that exhibit a *sideshadowing* effect on narrative time. KR-3 causes *sideshadowing* in *Flow My Tears, The Policeman Said*, which engulfs Jason Taverner’s fame before returning it, and, in *Now Wait for Last Year*, the drug JJ-180 causes *sideshadowing* when it takes Eric Sweetscent into an undetermined future.

Dick’s novels frequently feature characters visualizing space-time through the act of using illicit drugs. In several of his novels, fictional drugs affect not merely the temporal experiences of the users, but the determinism of narrative time. Robinson observes that none of Dick’s time-travelling drug-users ever “gain[s] power over his destiny,” but instead only “becomes more aware than ever of his entrapment in time” (32). In *The Three Stigmata of Palmer Eldritch*, Chew-Z creates hallucinatory worlds for the users before leaving them as ghosts in the future where their hallucinations have become institutionalized history. In *Now Wait for Last Year*, JJ-180 transports users into the past, the future, or even alternate timelines depending on their personalities. In *Counter-Clock World*, an unnamed injection allows one character to move at super speeds in a world where time flows backwards. In *Flow My Tears, The Police Said*, the drug KR-3 captures any character—not merely the user—in the
hallucinations of others. In *A Scanner Darkly*, Substance D, Dick’s most realistic portrayal of an illicit drug, disorients time for users and splits their mind into multiple personalities.

*Now Wait for Last Year*

The 1966 novel *Now Wait for Last Year* depicts the year 2055, when humans are at war with an alien race known as the Reegs. The war becomes only a backdrop for Eric Sweetscent and his wife Kathy becoming addicted to JJ-180, “a drug which permits its user to move freely in time” (127). More specifically, the drug reacts to the type of personality of the user, so the movement through time is not necessarily free. Howard Canaan interprets the drug’s diverse psychological side effects: Kathy goes to the past due to “her possessive obsession with the past,” the UN Secretary General goes to alternative versions of the present due to “his action-oriented political pragmatism,” and Eric goes to the future due to “his visionary idealism and his inclination to look beyond selfish concern in the interest of higher goals” (Canaan 344). While most users travel back into the past or “get bogged down in manufacturing alternate universes” (*Now* 156), Eric’s relatively rare ability lets him travel to a future when the Reegs and humans live peacefully together on Earth. Robinson considers the novel, along with Le Guin’s 1976 *The Word for World is Forest*, “one of the foremost antiwar novels to come from the science fiction community during the Vietnam conflict” (79).

Echoing the diction of Nobusuke Tagomi in *The Man in The High Castle*, Kathy in *Now Wait for Last Year* feels space-time disorientation. The feelings are associated with challenging both historical and narrative determinism. After being asked what day it is, Kathy “felt muddled”
Shortly afterwards, JJG180 takes effect and she is in the past trying to change the course of history. As had been the case with Tagomi, Kathy’s muddled feelings encourage her to question historical determinism. Arriving in 1935, she at first believes, “this is not merely subjective; there’s been a genuine snarl in time” (114). From her perspective in the past, JJG180 makes history undetermined. Her husband has similar experiences with the drug in the future and similarly begins to reconsider the legitimacy of events. In the spirit of this distrust, Eric accuses Don Festenburg of showing him a fake newspaper: “I seem to recall that such has been done before in political history… Joseph Stalin did it to Lenin during Lenin’s last year. Had a completely phony edition of Pravda printed, given to Lenin” (159). Eric cites the newspaper as a symbol of indeterminacy, like the alternative history novel in The Man in the High Castle. These texts within texts challenge the traditional metaphor of time as a text, which tends to emphasize space-time rhetoric of determinism. Whether from the future or past, both Eric and Kathy reveal that the only consistent side effect of JJG180 is a subversion of historical determinism—to challenge history from all sides.

Historical and narrative determinism overlap in the novel, as history, music, and literature require a distinction between originality and recreations. Eric presents space-time rhetoric first with music: “The orchestra isn’t there, the original sound has departed, the hall in which it was recorded is now silent; all you possess is twelve hundred feet of iron oxide tape that’s been magnetized in a specific pattern … it’s an illusion” (29). In narrative terms, Eric mentions the original orchestra, an analogy for the unrefined aspects of narrative time, including the erzählze Zeit and the fabula. The recording of this original sound mimics the structured aspects of narrative time, including the Erzählzeit and the sujet. Eric believes that the structured elements of
narratives create false imitations because they fail to capture originality. He then takes the conversation to literature:

We live with illusion daily, he reflected. When the first bard rattled off the first epic of a sometime battle, illusion entered our lives; the Iliad is as much a “fake” as those robant children trading postage stamps on the porch of the building. Humans have always striven to retain the past, to kept it convincing; there’s nothing wicked in that. Without it we have no continuity; we have only the moment. And, deprived of the past, the moment—the present—has little meaning, if any. (29)

Like the alternative realities in many of Dick’s writing, Eric thinks that all narratives, including the classics, are illusions. Using space-time rhetoric of music to distinguish temporalities appears again in Dick’s work when Rick Deckard hunts replicants at an opera in *Do Androids Dream of Electric Sheep?* as well as Edgar Barefoot’s philosophy of time in *The Transmigration of Timothy Archer*.

Bert Hazeltine, from the Hazeltine corporation where JJ-180 is made, reinforces all the alternative realities as illusions. He states, “I feel that the time period entered by the subject under its influence is phony. I don’t believe it’s the real future or the real past” (168). As the novel presents history, music, and literature, the alternative temporalities become an illusion of *sideshadowing*, not foreshadowing. Near the end of the novel, Eric faces narrative determinism and feels the pull of narrative time. He hears

The click of heels against the pavement, the rushing forward into life; that’s gone and only a slopping, dragging sound is left behind. The most horrid sound in the world, that of the *once-was*: alive in the past, perishing in the present, a corpse made of dust in the future. Nothing changes in Tijuana and yet nothing lives out its normal span. Time moves too fast here and also not at all. Look at my situation, for instance, he thought. I’m committing suicide ten years in the future. (247)

In this future, Eric and Kathy divorced after he committed her to an insane asylum. Returning to his original time, UN Secretary General Gino Molinari assures Eric that life is too short to worry
about the future. Molinari, also called the Mole for short, asks his doctor, “Has using that time-travel drug scrambled your wits, you don’t know you’ve got only one tiny life and that lies ahead of you, not sideways or back? Are you waiting for last year to come back again or something?” (228). The novel ends with the doctor telling a robotic cab driver that he has decided to stay with his wife, despite the unsettling future that he had earlier entered.

**Counter-Clock World**

In the 1967 novel *Counter-Clock World*, the arrow of time reverses its direction through a scientific process called the Hobart Phase, which began “one day in June of the year 1986” (6). The temporal shift is named after the scientist Alex Hobart, who predicted the phenomenon, claiming that it occurs naturally every few billion years. This shift causes the dead to be reborn from their graves, known as old-borns, who are then taken to a vitarium (instead of a moratorium) where they are adopted by living relatives. Joe Tinbane wonders “about the purpose of life and the meaning—if any—of it, what the old-borns experienced while they lay in the ground, and what it would be like, someday, to dwindle away as he eventually would, and enter a nearby womb” (25). The novel contains an embellished *fabula*, half science and half satire. Isaac Asimov’s 1955 *The End of Eternity* seems to have prompted the idea when asking, “Could they halt Time or reverse it?” (*End* 194). *Counter-Clock World* is Dick’s thought-experiment to answer Asimov’s question with a double affirmative. The novel is an expansion of Dick’s 1966 short story “Your Appointment Will Be Yesterday.” Along with *Dr. Futurity*, Robinson consider the novel to be Dick’s “weakest” (32).
The novel criticizes narrative determinism. Beyond the scientist Alex Hobart, a religious leader named Anarch Peake predicts the reversal of time as well as prophesizing his own return. The prophecy becomes a model for narrative time, but Anarch is quickly assassinated upon his return. The trope of a novel in a novel reinforces this irony. In *Counter-Clock World*, Anarch’s famous book, referred to as an *apologia pro sua vita* (a defense of one’s life) is titled, *God In a Box* (80). The title of the text provides a paradox of infinity contained within a finite space. The space-time rhetoric implies the paradox of narrative determinism. When describing her temporal cosmology, Ann Fisher simultaneously describes narrative time: “Time is an illusion. Every instant that comes into being never passes away. Anyhow—he says—it doesn’t really even come into being: it was always there” (203). For narrative determinism, the end supersedes the beginning in importance, just as the scientific reversal of time satirizes this by moving backwards.

Drugs in the novel provide a way out from historical and narrative determinism. Anarch is the former leader of the Udi, a cult that uses the drug DNT to merge its members together, “thousands of people unified into one entity” (21). DNT resembles the drug Can-D from *The Three Stigmata of Palmer Eldritch*; however, it is not the most interesting drug of the novel. The Udi give Sebastian Hermes an injection that frees him from the reversed flow of time, allowing him to escape the Hobart Phase. The Udi detail the effects: “He would … be stationary in time; for all intents and purposes moving neither forward nor backward. It would, paradoxically, be for a finite period: by common time, no more than six minutes. But, from his standpoint, it would be experienced as hours” (166-67). Sebastian’s relationship to time matches the novel’s epigraph from St. Augustine, “Place there is none; we go backward and forward, and there is no place”
(1). For Sebastian, there is no experience of time because he moves forward relative to those around him moving backwards. The injection allows him to travel undetected at super high speeds as he attempts a rescue mission. However, instead of using the drug to rescue the prophet Anarch as was planned, he rescues his wife instead. The drug eventually wears off and Sebastian is returned to the Hobart Phase.

*Counter-Clock World* creates two temporalities, the reversed time mocking determinism and the *sideshadowing* time of drug usage. Dick’s world contains a level of unappreciated humor. The reversal of time comically results in characters using *hello* as a valediction, “Hello, Charise. I must leave for work now” (19), and *goodbye* as a salutation, “‘Bye,’ he said, pleased to run into her” (26). The temporal shift even allows for other paradoxical quips: “he was not becoming young fast enough” (56). The experience of drugs in this already complicated temporality in fact simplifies time, essentially pausing the story. While Sebastian was under the effects of the injection, he perceives the voices of others as slowed. Dick uses dashes between each word to delay the reader’s pace of dialogue, subverting the *Erzählzeit*. Ann Fisher shouts, “‘What – are – you – doing – ’ she began to say. But he could not wait for the enormously prolonged sentence to be completed” (170). Sebastian in turn delays his speech to speak to Ann, “matching his words to her time-sense” (175). Both Sebastian and Ann perceive time in a relative velocity. However, the Hobart Phase itself authenticates Ann’s perception over Sebastian’s, whose injection eventually wears off, causing him to return to the Hobart Phase without completing his plan of saving the prophet. He goes back to work retrieving old-borns from cemeteries in the last scene.
As was the case with Dick’s first novel, the trope of assassination becomes a vehicle for narrative time in the 1968 novel *Do Androids Dream of Electric Sheep?,* which revisits the theme of entropy with various forms of imagery, both auditory and visual. For instance, Rick Deckard takes a break from his job as bounty hunter of androids called “andys” to contemplate the various levels of entropy, using Mozart to articulate his ideas. He asks if the classical composer was aware that he would die so young, “if Mozart had had any intuition that the future did not exist” (98). Rick then thinks about the death of Mozart’s legacy:

This rehearsal will end, the performance will end, the singers will die, eventually the last score of the music will be destroyed in one way or another; finally the name “Mozart” will vanish, the dust will have won. If not on this planet then another. We can evade it awhile. As the andys can evade me and exist a finite stretch longer. But I get them or some other bounty hunter get them. In a way, he realized, I’m part of the form-destroying process of entropy.

Rick compares killing the andys to the entropic forces of the universe. The space-time rhetoric reflects narrative determinism as also form-destroying in its entropic move towards the conclusion.

Whereas Rick’s space-time rhetoric uses music to visualize entropy, John Isidore visualizes entropy through a takeover of trash. Near the beginning of the novel, John defines the word “kipple” for his new neighbor Pris Stratton, an android in disguise. He explains,

Kipple is useless objects, like junk mail or match folders after you use the last match or gum wrappers or yesterday’s homepage. When nobody’s around, kipple reproduces itself. For instance, if you go to bed leaving any kipple around your apartment, when you wake up the next morning there’s twice as much of it. It always gets more and more… There’s the First Law of Kipple… Kipple drives out nonkipple. (65)
Kipple mimics the scientific law of universal entropy. By this reason, John concludes that kipple will inevitably increase exponentially to the point where it fills the entire universe. He posits,

No one can win against kipple … except temporarily and maybe in one spot, like in my apartment I’ve sort of created a stasis between the pressure of kipple and nonkipple, for the time being. But eventually I’ll die or go away, and then the kipple will again take over. It’s a universal principle operating throughout the universe; the entire universe is moving toward a final state of total, absolute kippleization… Except of course for the upward climb of Wilber Mercer. (65)

In terms of space-time rhetoric, *kipple* in *Do Androids Dream of Electric Sheep*? resembles *gubbish* in *Martian Time-Slip*. Kipple exists as something far more tangible than gubbish, though both are equally cynical perspectives of space-time. Gubbish is to the concept of time, what kipple is to the concept of space, and whereas gubbish only represents the half of time that is entropic, kipple too represents the half of space that has lost its potential for reuse. Put another way, Dick’s deterministic forces of narrative time are symbolized by this particular type of space-time, what Dick could have called kipple-gubbish.

Near the end of *Do Androids Dream of Electric Sheep*?, John’s anxiety forces him to seek out the salvation figure of Wilber Mercer, whose “upward climb” has elevated him from kipple’s reach. John fears his plaint will go unheard:

he saw the dust and the ruin of the apartment as it lay spreading out everywhere—he heard the kipple coming, the final disorder of all forms, the absence which would win out. It grew around him as he stood holding the empty ceramic cup… He saw … the ceramic cup crack… Everything in here is old; he realized. It long ago began to decay and it won’t stop. The corpse of the spider had taken over. (212)

The kipple surrounds John, closing in around him. Like Jack Bohlen in *Martian Time-Slip*, John in *Do Androids Dream of Electric Sheep* perceives space-time as a tomb. John shouts, “Mercer… Where are you now? This is the tomb world and I am in it again” (213). Acting as a Gnostic parable, the novel makes the tomb more than John’s final resting place: the savior Mercer in fact
rescues John from the kipple, telling him, “I lifted you from the tomb world just now” (215). The two then enter a higher realm as a means of escaping historical determinism.

Rick’s conclusion does not come as easy as John’s *deus ex machina*, but includes three different layers. After an android kills his goat by throwing it off a roof, Rick and his wife Iran fly away together, ending the antepenultimate chapter by going “To the place where no living thing would go. Not unless it felt that the end had come” (227). Despite this natural sense of ending, Dick continues the novel with two more chapters, beyond the point of his usual conclusion. Ending his novels with the image of a vehicle in motion is typical imagery for Dick’s last sentences as previously noted. After Rick and Iran fly away, Dick presses further into his story for two more chapters, but the subsequent features are merely repeats of previously used motifs.

In the penultimate chapter, Rick follows the pull of narrative determinism toward a symbolic hill that acts as the vortex of narrative time, like Joe’s ascent of the staircase in *Ubik*. The hill continually becomes more difficult to climb for Rick: “He walked on, up the hillside, and with each step the weight on him grew. Too tired, he thought, to climb. Stopping, he wiped stinging sweat from his eyes … he resumed his trudge up the slop, the lonely and unfamiliar terrain, remote from everything; nothing lived here except himself” (230). Before reaching the top, Rick fears his actions will go unrecorded: “Here there existed no one to record his or anyone else’s degradation, and any courage or pride which might manifest itself here at the end would go unmarked: the dead stones, the dust-stricken weeds dry and dying, perceived nothing, recollected nothing, about him or themselves” (231). Rick turns around fearing the end of narrative time and wonders “what would have come next, if I had gone on climbing and reached
the top. Because that’s where Mercer appears to die. That’s where Mercer’s triumph manifests itself, there at the end of the great side-real cycle” (235). Rick understands that the fulfillment of narrative determinism, as an analogy for historical determinism, would make him a martyred messiah.

The penultimate chapter of *Do Androids Dream of Electric Sheep?* ends with Rick’s realization of narrative time’s mortality, only to immediately contradict it with a rhetorical *aporia*. He considers how messiahs die but also live on through their beliefs. The contradiction ends the chapter with Rick calling his wife. He picked up the phone “And froze.” For a second time, Dick does not end the novel despite landing on the familiar note of idealistic continuity in the form of a fragment sentence. One last chapter begins with Rick finding an extinct animal, which turns out to be artificial. Iran tries to buy him a mechanical toad by phone. Satisfied with her purchase of the fake toad, she hangs up, as the final line reads, “And, feeling better, fixed herself at last a cup of black, hot coffee” (244). By embracing the artificial as a means of continuity, this novel’s seemingly harmless ending represents a drastic defeat. Dick’s space-time rhetoric is at its most subtle in describing the coffee as black. Tolkien uses such space-time rhetoric when Gandalf tells Frodo in *The Fellowship of the Ring*, “Our time is beginning to look black” (50). Dick used this rhetoric explicitly in his 1964 short story “Orpheus with Clay Feet.” The story was published under the pseudonym Jack Dowland, which is also the name of a character in the story, who states, "there's going to be a hydrogen war. The future's black. Who wants to write about it?” (qtd. in Canaan 338). The imagery of the black coffee at the close of the novel follows this tradition of a visual *aporia* when attempting to articulate space-time.
In the 1969 novel *Ubik*, set in 1992, space and time shift for Joe Chip and others, who perceive time as reversing back to the year 1940 and space as drifting towards Des Moines, Kansas—the birth date and place of their boss, Glen Runciter (122). Joe eventually discovers that he is in a frozen, half-life state on the verge of death, existing in an imaginary world. Glen attempts to communicate with Joe, but messages appear distorted, with Glen’s face appearing on coins, for example. All seventeen chapters begin with short excerpts from fictitious advertisements of a product called Ubik, similar to the quotations from philosophers that begin each chapter of *Counter-Clock World*. The content of these ads in *Ubik* foreshadows the appearance of the actual product, which resolves the conflicts like a *deus ex machina*. Joe uses Ubik in the end to defeat the main antagonist, Jory Miller. The novel depicts two opposing forces of time: capitalism’s demand for more resources and consumption struggles against entropy’s demand for less energy in a system. Characters experience both these forces in personal ways.

As in other novels by Dick, entropy destroys the future and slows down time, eventually halting it altogether. Joe describes a personal experience of entropy as “An orientation urging him toward death, decay and non-being. A dismal alchemy controlled him: culminating in the grave” (185). The force of entropy parallels Joe’s solipsistic mortality. He details his new world view:

> this is projection on my part. It isn’t the universe which is being entombed by layers of wind, cold, darkness and ice; all this is going on within me, and yet I seem to see it outside. Strange, he thought. Is the whole world inside me? Engulfed by my body? When did that happen? It must be a manifestation of dying, he said to himself. The uncertainty which I feel, the slowing down into entropy—that’s the process, and the ice which I see is
the result of the success of the process. When I blink out, he thought, the whole universe will disappear. (125)

Beyond the solipsistic references, Joe’s space-time rhetoric complements narrative determinism by representing both the inevitable freezing of events after a story as well as its need to pull events in an entropic process toward that conclusion. Similar to Rick Deckard climbing the messianic hill in *Do Androids Dream of Electric Sheep?*, Joe feels narrative determinism at the end of *Ubik* when climbing: “The force goading me on is feasting on my body” (185). He climbs a flight of stairs as entropic time begins to slow narrative time: “Again he climbed a step. Then the next. And the next. He did not talk … he crept snail-like from step to step” (186). The dehumanization continues as he climbs: “It has crushed me like a bent-legged insect, he said to himself. A simple bug which does nothing but hugs the earth. Which can never fly or escape. Can only descend step by step into what is deranged and foul. Into the world of the tomb which a perverse entity surrounded by its own filth inhabits” (187). Joe reaches the hilltop, rising beyond the space-time rhetoric of a tomb, to receive Ubik, an entropy-resisting spray in a can.

The last chapter’s epigraph has a religious tone, declaring, "I am Ubik. Before the Universe was, I am. I made the suns. I made the worlds. I created the lives and the places they inhabit; I move them here, I put them there. They go as I say, they do as I tell them. I am the word whose name is never spoken, the name which no one knows. I am called Ubik, but that is not my name. I am. I shall always be" (226). As the title of the novel, Ubik existed before the text. As a symbol for determinism, Ubik is advertised, obtained, and lost repeatedly throughout the narrative—just as the plot is teased, partially revealed, and twisted for the readers. The product in this regard symbolizes determinism because it provides a coherent conclusion to tie up loose ends.
The alternative to entropy is not necessarily Ubik, but a deeper idealistic force, a Platonic form beyond the material, soul beyond body: “But this old theory—didn’t Plato think that something survived the decline, something inner not able to decay? The ancient dualism: body separated from soul. The body ending … and the soul—out of its nest the bird, flown elsewhere” (139). The imagery of flying out of a nest competes with Joe’s soliloquy-like rhetoric of moving towards nonbeing as a directional opposite. Don Denny expresses these two forces as processes that are “going in opposite directions. One is a going-away, so to speak. A going-out-of-existence. That’s process one. The second process is a coming-into-existence. But of something that’s never existed before” (112). In narrative terms, the first process represents determinism while the second process represents alternative narrative temporalities typically created through extensive sideshadowing and expanding the fabula.

The appearance of coins symbolizes the spirit of idealism throughout the novel. Coins continually open new possibilities. Al Hammond states, “There’s some force at work producing rapid decay…We already knew that. We also know, or think we know, that another force, a contra-force is at work, moving things in an opposite direction. Something connected with Runciter. Our money is beginning to have his picture on it” (115). Money in Ubik, specifically coins, presents possibilities, as an analog to Mr. Tagomi’s jewelry in The Man in the High Castle. As if advancing the story, characters use coins to pay to open doors. Even closets are “coin-operated” (66). Aside from opening passages in a literal sense, coins in the novel furthermore symbolize alternate universes, specifically when Joe observes his boss’s head mysteriously appear on coins that are still accepted by vendors as genuine. The end of the novel reverses this experience when Glen sees Joe’s head appearing on coins, which hints that the
narrative has been at most inverted entirely or at least left incomplete. The ultimate sentence of the novel ironically states, “This was just the beginning” (227). The closing lines of the novel attempt to further open the story world even as the text is ending, a move traceable to Dick’s earliest novel.

A Maze of Death

In the 1970 novel A Maze of Death, various characters are summoned to colonize the planet Delmak-O, or so they initially believe. After failing to understand any purpose for the colony, Betty Joe Berm complains, “We have one vast fear, and that is this: there is no purpose to us being here, and we’ll never be able to leave” (28). Purpose suggests a larger goal, similar to narrative time’s reliance on its conclusion. When General Treaton begins to explain “why the Delmak-O colony was created, by whom and for what purpose. It is basically—” (44). The General is cut off by an aposiopesis, an unfixable technical glitch. The act becomes the first of many dead ends. The image of a maze reappears in the novel in many ways beyond the title as another symbol for space-time and narrative time. The characters struggle with alternate timelines that become dead ends, as a maze tends to only have one way out. Glen Belsnor thinks to himself, “we’re rats in a maze with death” (87). As opposed to the rat-like Morlocks in The Time Machine by Wells, the colonizers die one by one, only to wake up from their nightmare and realize they were on a ship in a simulated reality created to pass time while they drift through space without purpose.

Throughout the novel, Dick expands the fabula with a detailed religious philosophy, claimed to be a computer synthesis of “all the data they had in their possession concerning
advanced religions” (162). While in a simulated reality, numerous characters cite A. J. Specktowsky’s book *How I Rose From the Dead in My Spare Time and So Can You*, a novel in the novel. The book resembles *Pilgrims Without Progress* in *The Three Stigmata of Palmer Eldritch*? and *God In A Box* in *Counter-Clock World* as an indictment of narrative time. Ben Tallchief takes his copy of Specktowsky’s book, “Opening at random (a highly approved method) he read over a few familiar paragraphs of the great twenty-first century Communist theologian’s *apologia pro sua vita*” (8). The theology describes a dualistic universe with four different aspects of God. Ned Russell simplifies, “That’s the basic condition of life anyhow…The dialectic of the universe. One force pulling us down to death: the Form destroyer in all his manifestations. Then the Deity in His three Manifestations. Theoretically always at our elbow” (92). The complexities of the religion allow Dick to explore the nuances of narrative time.

The trinity from the simulation includes the Walker-on-Earth, the Intercessor, and the Mentufacturer. Each has a different temporal domain. The Walker-on-Earth lives in regular time and approaches Seth Morley near the beginning to warn him he had plans to board a faulty ship to Delmak-O. Like the Walker-On-Earth, the Intercessor can exist in historical time to extricate characters from bad situations. Characters pray to the trinity from the book with real results, “it’s so relatively easy, now in the Specktowsky period, to directly contact one of the Manifestations. That’s why in a sense our time is different from even the first two thousand years since the Intercessor first appeared” (35). The third form, known as the Mentufacturer, “existed outside of time, hence outside of causality” (9). Maggie Walsh distinguishes, “If you want time rolled back, say to the moment before any of us accepted this assignment … then it would be to the
Mentufacturer. If we want the Deity to stand in for us, collectively to replace us in this situation, then it would be the Intercessor” (48). Each divine aspect represents the various aspects of narrative time.

The Walker-On-Earth stands for indeterminacy and its idealistic sense of creative continuity, while the Intercessor stands for indeterminacy and its chaotic lack of structures. The former allows the novel to continue, as the latter explodes the ending into ambiguity. The Mentufacturer represents determinism and the presence of structures, while the Form Destroyer represents determinism and the sense of an ending. This final figure takes the form of entropy, a theme common in Dick’s writing. In his study of Dick, Robinson notes that “His novels represent this struggle between form creation and form destruction repeatedly, and for Dick, to struggle on after having all illusions of success stripped away is the greatest heroism” (37).

Characters fight the force of entropy. Seth Morley observes, “Time … is shutting down around us. It is as if the future is gone” (52). Ben Tallchief’s random opening of Specktowsky lands him on this morbid manifestation’s description:

> With each greater circle the power, good and knowledge on the part of God weakened, so that at the periphery of the greatest circle his good was weak, his knowledge was weak—too weak for him to observe the Form Destroyer, which was called into being by God’s acts of form creation. The origin of the Form Destroyer is unclear; it is, for instance, not possible to declare whether (one) he was a separate entity from God from the start, uncreated by God but also self-creating, as is God, or (two) whether the Form Destroyer is an aspect of God, there being nothing— (9)

The Form Destroyer personifies entropy. Like Asimov’s broken loop, Dick seeks to expand the circle as a means of subverting narrative determinism. Unfortunately, only one of Dick’s characters accomplishes this rapture, as the others stay behind.
Like the twist ending in *Ubik*, *A Maze of Death* ends with ambiguity as Seth meets the Intercessor, a character from the simulated reality, but after the simulation has ended. Either the synthesis of religions allowed an accurate depiction of reality, or Seth is still in the simulated reality. Either way, the Intercessor represents indeterminacy by granting Seth an escape from a spiritual form of determinism. Seth is taken away from the ship to be reborn as a plant, as he had asked to “be asleep but still aware of the sun and of myself” (168). For the other characters on the ship, Seth’s absence is insignificant. They enter a new simulated reality, only to continue their loop of habit. Similar to how the novel *A Maze of Death* began, the last lines show a character who decides “To begin to pack” (170). The content implying movement and the form of a fragment sentence is Dick’s original ending. Throughout his corpus, Dick frequently employs rhetorical interruptions or fragment sentences at the end of novels, specifically with an incomplete action—continuing onward, even when the text does not.

*Flow My Tears, The Policeman Said*

The 1974 novel *Flow My Tears, The Policeman Said* takes place in a dystopic 1988 and tells the story of a world-famous musician named Jason Taverner, who wakes up one morning to discover that the world no longer recognizes his fame. In fact, his entire identity has been erased. After overcoming the hardships of being undocumented in a police state, Jason finally discovers the unusual cause of this alternate reality, the experimental drug KR-3, which was not ingested by him, but by one of his fans named Alys Buckman. KR-3, for instance, has the effect of merging multiple subjectivities and creating *sideshadowing*. Phil Westerburg explains what KR-3 has done to Jason:
Anyone affected by it is forced to perceive irreal universes, whether they want to or not. As I said, trillions of possibilities are theoretically all of a sudden real; chance enters and the person’s percept system chooses one possibility out of all those presented to it. It has to choose, because if it didn’t, competing universes would overlap, and the concept of space itself would vanish. (227)

Jason indirectly assisted in the creation of the shared illusion, and chance also played a role, according to the officer, but the sole user of the drug was Alys. Jason otherwise had no direct contact with KR-3.

KR-3 generates some of the most subjective of all Dick’s space-time rhetoric as narrative time expands extensively into sideshadowing: Phil tells Feliz “Time-bending is a function of the brain. It’s a structuralization of perception and orientation” (225). Felix’s sister Alys dies from an overdose of the drug, “And the skeleton itself had become yellow. … She has died, he thought. But when? A hundred thousand years ago? A few minutes ago?” (178). Phil repeats himself and offers a subjective take on space-time:

Time-bending is a function of the brain and goes on as long as the brain is receiving input. Now, we know that the brain can’t function if it can’t bind space as well … but as to why, we don’t know yet. Probably it has to do with the instinct to stabilize reality in such a fashion that sequences can be ordered in terms of before-and-after—that would be time—and, more importantly, space-occupying, as with a three-dimensional object as compared to, say, a drawing of that object. (225)

The comparison of a flat object to a 3D object serves as a red herring to complicate the space-time rhetoric, which basically claims space can be altered using the drug just as the brain naturally alters time.

Using KR-3 distorted space-time with schizophrenia: “The brain can no longer tell which object exist and which are only latent, spatial possibilities. So as a result, competing spatial corridors are opened, into which the garbled percept system enters, and a whole new universe appears to the brain to be in the process of creation” (226). In narrative terms, KR-3 works as
sideshadowing. The hallucination is temporary. Herb Maime explains, “We occupied two space corridors at the same time, one real, one irreal. One is an actuality; one is a latent possibility among many, spatialized temporarily by the KR-3. But just temporarily. For about two days” (229). The sideshadowing of the alternative realities in Flow My Tears, the Policeman Said, contrasts directly with the determinism an extended police chase, mimicking Dick’s narrative model of assassination. Felix Buckman tells Jason, “To live is to be hunted” (230). This tension had earlier resulted in Jason thinking he would be caught and subsequently feeling the typical weight of entropy, which appears in its most scientific terms throughout Dick’s corpus:

Isn’t there some principle of thermodynamics, he thought, that says heat can’t be destroyed, it can only be transferred? But there’s also entropy. I feel the weight of entropy on me now, he decided. I have discharged myself into a vacuum, and I will never get back what I have given out. It goes only one way. Yes, he thought, I’m sure that is one of the fundamental laws of thermodynamics. (101)

Jason alludes to the determinism of the law of thermodynamics, feeling narrative time’s pull. What Morson terms a vortex, Jason articulates as a vacuum.

Alys’s brother Felix Buckman was also trapped in the alternate reality and happens to be the Police General chasing the undocumented protagonist. He fatalistically comments on Jason’s situation: “The die was cast from the beginning…Taverner, he thought, you were doomed from the start” (234). Using Einstein’s imagery, Felix comes to believe in a deterministic universe even after seeing the drug’s fortuitous side effects. These effects turn out to be only temporary; however, having such a great number of participants in the alternate universe almost made the consequences irreversible, particularly the bruised egos of the people involved. When his fame returns at the end of the novel, Jason barely escapes being killed by the police. This conclusion starkly contradicts Felix’s interpretation of a mechanistic universe, indicating that the future is
undetermined. He flies away at the end of the novel’s third part, with an insect-like uncertainty: “His [vehicle] crept across the night sky. Like some wounded, half-dissolved insect. Carrying him home” (242). This last line of the penultimate chapter represents the first level of Dick’s conclusion. It combines two recurrent images: a vehicle in motion and a fragment sentence. However, it subverts the idealism in favor of returning home.

After the three parts of the novel, an epilogue comprises the fourth and final part. Having addenda after his narratives is a feature that emerged late in Dick’s career. This trend continues beyond the epilogue of *Flow My Tears, the Policeman Said*, occurring as the author’s note at the end of *Scanner Darkly* and the lengthy appendix at the end of *VALIS*. The epilogue of *Flow My Tears, the Policeman Said* clarifies that Jason is acquitted at trial and that Felix writes a book titled *The Law-and-Order Mentality*. This title represents the purpose of Dick’s addendum to bring order to the dystopic story world. The epilogue ends with a fragment sentence after describing the fate of seemingly irrelevant pottery from the earlier story. A blue vase rests in a museum: “It remains there to this day, and is much treasured. And, in fact, by a number of people who know ceramics, openly and genuinely cherished. And loved” (249). The fragment sentence interrupts the rhetorical polysyndeton, placing a double layer of emphasis on the last two words.

*A Scanner Darkly*

In the 1977 novel *A Scanner Darkly*, a narcotics agent codenamed Fred watches through hidden cameras called holos a recording of Bob Arctor taking Substance D, a drug that seems to disorient time for its users, splitting their minds into multiple personalities. Fred’s opinion of
Bob is low, as he watches him: “Down there, he thought, in the murk, the murk of the mind and the murk outside as well; murk everywhere” (209). Fred has forgotten that underneath his scramble suit he is Bob. The drug creates two competing personalities, both addicted to Substance D. Fred thinks to himself, “I can drop a few more when I get through work, when I get back home. Looking at his watch, he tried to compute how long that would be. His mind felt fuzzy; how the hell long will it be? He asked himself, wondering what had become of his time sense. Watching the holos has fucked it up, he realized. I can’t tell what time it is at all any more” (209). Substance D creates obscurity, affirmed by the synonyms “murk” and “fuzzy.” In narrative terms, the drug is a plot device surrounded by space-time rhetoric of indeterminacy, creating fuzzy and murky escapes from time. However, like the competing personalities of its users, Substance D additionally represents narrative determinism by acting as the main source of conflict and resolution. Through artistic imagery, the novel compares to both a photograph and a sonnet. Even when establishing alternative temporalities, the space-time rhetoric of *A Scanner Darkly* supports narrative determinism.

The schizophrenic symbolism of Substance D is appropriate given its side effects. When reading literature on the drug, Fred observes an article by Joseph E. Bogan, which posits, “Each of us has two minds in one person” (114). The article tells Fred, “The mind is essentially dual … each cerebrum is a distinct and perfect whole as an organ of thought … a separate and distinct process of thinking or ratiocination may be carried on in each cerebrum simultaneously.” Rather than having balance, the two sides of dualism in *A Scanner Darkly* contradict one another, as Substance D can affect narrative time both as foreshadowing and *sideshadowing*. Despite Fred’s murky recollection of linear time, he claims to experience it moving backward. As opposed to
time moving in reverse in *Counter-Clock World*, Fred’s feelings serve more as a platform for philosophical discussions. He admits to his psychologists, “I have in a sense begun to see the entire universe backward” (221). Fred’s experiences describe narrative determinism, dominated by foreshadowing. Contrary to this over-used technique depending on what Morson calls “backward causation” (7), as if the future had already occurred, *sideshadowing* more accurately depicts the temporal reality of cause and effect relations. Morson asserts,

> In life, most of us do not believe we experience backward causation. Foreshadowing therefore appears as the most artificial, and therefore most recognizable of literary devices… Even when foreshadowing is not explicitly used, it is implicitly present by virtue of a narrator’s reliance on structure and closure. In a well-constructed story, everything points (or will turn out to point) to the ending and to the pattern that will eventually be revealed.

Moments of foreshadowing in narratives are realistically out of place, like Fred’s temporal disorientation.

Fred claims to experience reversed space-time, as if “[t]hrough a mirror” (220). The imagery completes the title’s biblical allusion, revealing it as a technological upgrade. Fred’s psychologist claims, “They used to talk about seeing only ‘reflections’ of reality. Not reality itself. The main thing wrong with a reflection is not that it isn’t real, but that it’s reversed” (221). The psychologist offers space-time rhetoric to explain the two temporalities: “a left-hand glove is a right-hand glove *pulled through infinity*” (220). This imagery extends to identify narrative determinism as a temporal reversal. The conversation uses the analogy of photography. The psychologist continues, “Whereas a photograph can compensate for the lack of bilateral hemispheric parity; it’s not the object but it’s not reversed, so that objection would make photographic images not images at all but the true form. Reverse of a reverse” (222). This analogy demonstrates how Dick sees the problem of narrative determinism and its inverted
effects as systemic problems of context. The error is not merely in minor details; the entire frame of reference is wrong. The fullest extent of this temporal de-contextualization does not appear until Dick’s next novel, VALIS.

One scene in A Scanner Darkly that explores the contextual problem begins as Donna takes Bob to rehabilitation called New Path. She describes for Bob the theophany of Tony Amsterdam:

Sparks. Showers of colored sparks, like when something goes wrong with your TV set. Sparks going up the wall, sparks in the air. And the whole world was a living creature, wherever he looked. And there were no accidents: everything fitted together and happened on purpose, to achieve something—some goal in the future. And then he saw a doorway. For about a week he saw it wherever he looked… And it was always the same proportions, very narrow. He said it was very—pleasing. (241)

The description at first visualizes narrative determinism by depicting connectivity of parts, implied by television signals, and a narrowing toward a conclusion, implied by a doorway. Through the door, the rhetoric becomes sideshadowing: “There was moonlight and water, always the same. Nothing moved or changed. Black water, like ink, and a shore, a beach of an island. He was sure it was Greece, ancient Greece. He figured out the doorway was a weak place in time, and he was seeing into the past” (242). Donna, on the other hand, believes the vision represented the future, as if foreshadowing: “It was a promise. Something to come. Something better a long time in the future.” Only clues from later novels clarify that Bob is observing an alternate mind within his own living in an alternate space-time. This theme occurs more fully developed in VALIS and The Transmigration of Timothy Archer. Bob’s vision of a beach conjures the terminal beach from The Time Machine by Wells. The allusion carries the spirit of taking time to its furthest point, even if it extends beyond the conclusion of the story.
An unknown voice interrupts Fred’s conversation with the psychologist, though only he can hear it cryptically say,

Then shall it come to pass the saying that is written… Death is swallowed up. In victory… Because … as soon as the writing appears backward, then you know which is illusion and which is not. The confusion ends, and death, the last enemy, Substance Death, is swallowed not down into the body but up—in victory. Behold, I tell you the sacred secret now: we shall not all sleep in death” (222)

Death is a metaphor for the end of the narrative, to point when the “writing appears backward” due to narrative determinism. Dick’s typical note of idealism from last sentences attempts to transcend this ending. After Fred becomes Bruce at the rehabilitation center, he hears the same analogy. One anonymous patient at New Path says, “A person can die and still go on…That’s what it means to die, to not be able to stop looking at whatever’s in front of you” (252). Though he speaks literally about staring at a beer can for eternity, his comments have narrative implications. The final sentence of Dick’s novel similarly takes a visual snapshot that remains the lasting impression of the narrative.

Fragment sentences from *Time Out of Joint* and *Solar Lottery* reappear in *A Scanner Darkly* when Donna, Bob’s drug dealer, claims, “[N]o time any more for Bob Arctor. His time—at least if measured in human standards—had run out. It was another kind of time which he had entered now. Like, she thought, the time a rat has: to run back and forth, to be futile. To move without planning, back and forth, back and forth” (239). Compared to John Preston’s optimistic impression of the human spirit always moving forward and Ragle Grumm’s unarticulated impetus to travel onward, Donna sees only a rat, whose motions are not significant, but futile, unplanned, and without meaning. In many ways, Dick’s narrative time balances the inertia of the human spirit with the meaningless motions of a rat. Some characters use drugs, religion, or
mental disabilities to open space-time and narrative time. Other characters act like the rat and run through the maze of the *sujet* and the *Erzalzeit*, foreshadowing death.

The two contrary forces of narrative time appear in *A Scanner Darkly* as two temporalities. Charles Freck slips through space-time to discover temporal serialism, similar to Dick’s earlier novels, but with an inverted perception. Charles parallels the main character Bob Actor in his addiction to Substance D, but the two have different fates. Whereas Bob shows signs of recovering from the fictional drug at the close of the novel, Charles dies by suicide. An inter-dimensional being visits Charles after his death to confirm the dualistic workings of the universe at large. The creature tells Charles, “We are no longer in the mundane universe. Lower-plane categories of material existence such as ‘space’ and ‘time’ no longer apply to you. You have been elevated to the transcendent realm” (196). Having slipped into the higher realm, Charles hears an unending list of his sins read by alien. In other words, the higher realm fails to present a future of potentialities for Charles, but a determined past. His life in the lower plane, on the other hand, held the potential for alternate possibilities had he been more thoughtful of the consequences in the afterlife. The opposite depiction of serialism occurs in *The Man in the High Castle*. The space-time rhetoric has been pulled reversed as the space-time rhetoric of left and right-hand gloves demonstrates.

Space-time rhetoric in *A Scanner Darkly* firmly establishes a circular notion of time as representative of determinism. Fred ends the conversation with his psychologists as they speak of “the infinity of time … Like a loop of cassette tape” (223). Fred has his own circular rhetoric: “Time. Suppose, he thought, time is round, like the Earth. You sail west to reach India in front, not behind. In time—maybe the crucifixion lies ahead of us as we all sail along, thinking it’s
back east” (224). This rhetoric of colonialism shows Fred’s thinking on a grander scale than when he becomes Bruce at the New Path center. As Bruce, he more simply and morbidly concludes, “Motion that is circular is the deadest form of the universe” (253). When another patient then comments on the concept of time, Bob “knew the answer to that. Time is round.” This shape implies that the future resembles the past, and that resemblance results in “the deadest form in the universe.” In other words, the circular motion evokes repetition. To avoid this redundancy, Dick ends his novel at several different times, each one pushing the next to a new level.

In *A Scanner Darkly*, one layer of the story ends after Fred’s investigation of Bob results in both entering New Path rehabilitation center at the end of chapter thirteen. Donna’s final imagery as the chapter concludes subverts Dick’s usual endings of a vehicle in motion. Donna crashes her car while driving away and decides to walk. The last full sentence depicts her forward motion, followed by an incomplete sentence to establish a bleak tone, “She just kept on going. A small figure on foot facing an infinity of oncoming lights” (247). Dick presses past this ending to bring Donna back with a larger plan, but then quickly, “all at once she was gone. Vanished away into the hither-and-thither-going people” (268). Donna can only exist past her own conclusion “wraithlike” (269). Mike Westaway realizes the futility of his lust for Donna: “I seek to net the wind” (268). Mike alludes to Thomas Wyatt’s sonnet “Whoso List to Hunt, I know where is an Hind,” which establishes the imagery of netting the wind: “Sithens in a net I seek to hold the wind.” Dick reduces Donna to a coy mistress, appearing as Laura appears in a Petrarchan sonnet.
As the volta turns the sonnet, the New Path ending turns the novel *A Scanner Darkly*. Fred and Bob become Bruce and experience the turn in narrative time. In one scene, space-time rhetoric freezes completely: “Bruce saw only the flat of Donald’s hand barring the light, and he stared at it a thousand years. It locked; it had locked; it will lock for him, lock forever for dead eyes outside time, eyes that could not look away and a hand that would not move away. Time ceased … There was nothing left to happen” (284). Time is not pulled toward entropy, but has already stopped. After this second layer concludes with the final chapter, an author’s note creates a third layer, the final couplet to this sonnet-shaped novel. The addendum reaffirms the space-time rhetoric of free will, creating fuzzy and murky escapes from time. The author cautions readers against such illicit drug use for its effects of *sideshadowing*, a playful motion that seems inconsequential, but, according to the note, it occurs in the road of determinism: “they were like children playing in the street … run over, maimed, destroyed” (287). The author then offers an expansive list of the deceased to attest to the finality of that determinism. Similar space-time rhetoric of determinism using imagery of death in a street appears in *VALIS*, and similar rhetoric of free will using imagery of children at play appears in *VALIS* and its sequel.

*VALIS*

Dick’s 1981 novel *VALIS* combines SF and autobiography with the character Horselover Fat, who confesses to being the author, Phil. Horselover adds, “I am by profession a science-fiction writer. I deal in fantasies. My life is a fantasy” (178). When Phil receives visions from V.A.L.I.S. (an acronym for Vast, Active, Living Intelligence System), his alter ego Horselover helps him search for a prophesized messiah in a hunt that facilitates narrative time. Horselover
tells Phil, “if I don’t find him, I’m going to die” (290). Tension builds as Horselover continues “narrowing his search” (384). Before the end of the novel, however, the messiah dies, and the search grudgingly begins again for a new one. Horselover separates from Phil to go abroad, while Phil stays at home and “sat before the TV” (385). After the novel, an appendix titled *Tractates Cryptica Scriptura* follows and contains fifty-two short journal entries, many of which are alluded to or directly cited in the novel. The appendix depicts Dick’s theological cosmology in full. The appendix of *VALIS* is a rare instance of Dick including an addendum after his novel.

Dick’s cosmology throughout the text is largely Gnostic. Fredric Jameson suggests that Dick “having grown tired or displeased with using future drugs as the device to create his reality breakdowns, turned to theology to still have a device by which he could generate his central situation” (Robinson, *Novels* 118). In *VALIS*, Dick explains Gnostic theology through the metaphor of writing. The novel’s appendix details a creation myth, though Dick includes his own narrative twist:

> The changing information which we experience as world is an unfolding narrative. It tells about the death of a woman. This woman, who died long ago, was one of the primordial twins… The purpose of the narrative is the recollection of her and of her death… All the information processed by the Brain—experienced by us as the arranging and rearranging of physical objects—is an attempt at this preservation of her; stones and rocks and sticks and amoebae are races of her. The record of her existence and passing is ordered onto the meanest level of reality by the suffering Mind which is now alone. (390)

This phenomenological description presents narrative as a Gnostic monomyth. Dick expands the analogy with narrative by imagining two personalities of narrative time as primordial twins that he distinguishes as a clockwise male and a counter-clockwise female (393). The forward-moving male embodies the positive, orderly aspects of narrative determinism, while the backward-moving female embodies its negative limitations, particularly regarding the sequence. Regarding
relevancy, however, the forward-moving twin embodies the order of determinism because it “was information-rich,” as the backward-moving twin “become noise” (394). In other words, the female twin governs the undesirable aspects of both foreshadowing and sideshadowing, as she is ironically a force of both restriction and chaos.

Dick complicates the gender binary by borrowing elements from his earlier writing as well as contemporaneous writings from other SF authors. Dick’s long-standing obsession with entropy merges with the female twin, who “is the origin of entropy, undeserving suffering, chaos and death, as well as the Empire, the Black Iron Prison.” Dick adds imperial rhetoric, borrowed for George Lucas’s 1977 movie Star Wars, along with the metaphor of interstellar telepathy, borrowed from Robert Anton Wilson’s nonfiction 1977 Cosmic Trigger, which is directly mentioned in VALIS (343). These additional metaphors supplement the gender binary: Entry 43 in the appendix, appearing first in chapter eight of the novel, reads, “Against the Empire is posed the living information, the plasmate or physician, which we know as the Holy Spirit or Christ discorporate. These are the two principles, the dark (the Empire) and the light (the plasmate). In the end, Mind will give victory to the latter” (392). In total, Dick’s mixed metaphor employs the oppositions of male against female, forward against backward, light against dark, and, most importantly, information-suppressing empire against free information.

Other entries from the novel’s appendix similarly juggle numerous binaries. The second entry, which additionally appeared in chapter four of the novel, reads, “The Mind lets in the light, then the dark, in interaction; so time is generated. At the end Mind awards victory to the light; time ceases and the Mind is complete” (386). Dick adds the binary of time’s beginning and ending as the initial move in a philosophical escape from entropy. The final move is to view the
chronology in reverse so that, instead of tending toward chaos, the universe moves toward order. The tractate declares that some ancient sages could follow this reverse movement toward a completed cessation of time. Entry number 11 reads, “The great secret known to Apollonius of Tyana, Paul of Tarsus, Simon Magus, Asklepios, Paracelsus, Boehme and Bruno is that: we are moving backward in time. The universe in fact is contracting into a unitary entity which is completing itself. Decay and disorder are seen by us in reverse, as increasing. These healers learned to move forward in time, which is retrograde to us” (386). After decades of returning to the theme of entropy, Dick theorizes how to escape by means of his own narrative version of Gnosticism, a theology that already provides rhetoric to transcend beyond an undesirable universe.

In practice, the freedom from entropy is more difficult to display. The escape occurs initially by means of adding another layer of time, a typical feature of Dick’s writing. VALIS engages with temporal serialism different from A Scanner Darkly, with its deterministic temporality above, but like The Man in the High Castle, with its determinism below. A part of entry 48 reads, “Two realms there are, upper and lower. The upper, derived from the hyperuniverse … is sentient and volitional. The lower realm…is mechanical, driven by blind, efficient cause, deterministic and without intelligence, since it emanates from a dead source… Until astral determinism is broken, we are not even aware of [the upper realm], so occluded are we” (396). Despite the Gnostic framework, Horselover only has access to the lower temporality, which traps him in a deterministic timeline and restricts him from other potentialities. The novel emphasizes the realms through the presence and absence of determinism, even as it deemphasizes the hierarchical relationship that Dick’s corpus had previously established. When
Horselover specifically asks if the alternative temporality is “higher” than the current one, Eric Lampton responds, “We just call it ‘Different’” (341).

In addition to temporal serialism, *VALIS* expands many other themes from *A Scanner Darkly* in attempt to deliver the promised escape from entropy. Drugs make a brief appearance when “Fat had dropped one huge hit of it and had abreacted back in time or had shot forward in time or up outside of time; anyhow he had spoken in Latin” (196). The experience initiates the same imagery of an ancient Greek beach that Bob Arctor had glimpsed in a dream in *A Scanner Darkly*. In *VALIS*, the displacement is more developed. Horselover eventually believes, “There’s someone else living in me and he’s not living in this century” (271). He then concludes, “We are not individuals. We are stations in a single Mind… Space and time were revealed … as mere mechanisms of separation” (272). Horselover reasons that he is linked with another character in ancient Greece, not merely as a past life, but as a life that is still being lived. As opposed to the effect of *sideshadowing* in *A Scanner Darkly*, the ancient beach in *VALIS* foreshadows the Gnostic escape from entropic determinism. The location symbolically acts as the terminal beach from Wells’s *The Time Machine*, not as an evolutionary endpoint, but a complete definition of the self.

This escape from time parallels the Gnostic concept of salvation. A part of entry 48 states plainly, “‘Salvation’ through *gnosis*—more properly *anamnesis* (the loss of amnesia)—although it has individual significance for each of us—a quantum leap in perception, identity, cognition, understanding, world- and self-experience, including immortality—it has greater and further importance for the system as a whole” (395). This emphasis on system over individual appears in a crucial metaphor in *VALIS*. Horselover has a friend, Kevin, whose cat’s death becomes a
central topic in an existential debate regarding determinism. On the surface, the cat evokes the famous thought experiment by Erwin Schrödinger, which envisioned a cat in a box that could be either alive or dead, based on the indeterministic system of quantum mechanics. Schrödinger believed the energy could not be both a particle and a wave, just as a cat could not be both alive and dead. Kevin asks the messiah named Sophia why his cat died, as Schrödinger might have then asked why the universe is deterministic. Sophia replies that the cat was stupid (368).

Sophia’s response means the cat lacked gnosis. Horselover at first misses this implication, mocking Keven, “you meet the Savior and all you can do is rant about your goddam cat” (368). With capital letters representing determinism, Kevin argues that the cat was stupid “because GOD MADE IT STUPID.” The analogy explicitly describes Horselover, when Kevin says, “You’re as stupid as my cat” (369). Regarding the determinism of fate, the simile is accurate. Horeselover does not generate information; rather information comes to Horselover through V.A.L.I.S., specifically when he receives the great secret that “Time does not exist” (223). This claim contradicts entry 11’s assertion that the great secret is backward motion through time. In both cases, information is sufficient to stop or reverse time but may not be necessary for the effect, as a lack of information can also stop time. Entry 18 reads, “real time ceased in 70 CE with the fall of the temple at Jerusalem. It began again in 1974 CE” (322). Despite these temporal complexities, Sophia maintains that the future must exist in a direction away from the past, or different from what was determined. She repeats the idea, first specifically, then generally, “Your future must differ from your past. The future must always differ from the past” (349). This phrase reappears in Dick’s next novel The Divine Invasion.
Chapter three of *VALIS* concludes with an excerpt from the opera *Parsifal*, comparing Horselover’s journey to the shape of a maze: “There is no route out of the maze. The maze shifts as you move through it, because it is alive” (205). Parsifal complains, “I move only a little, yet already I seem to have gone far,” to which Gurnemanz replies, “You see, my son, here time turns into space.” Horselover then interjects to ask, “[C]an space turn into time?” (205). Horselover, like Parsifal, attempts to escape the maze of time by visualizing it as space, which he specifically calls the Black Iron Prison. Forestalled in finding an escape, he asks in frustration, “Why couldn’t anyone see the walls of the Black Iron Prison?” (214). Horselover seeks liberation from this metaphorical prison by researching Mircea Eliade’s chapter “Time Can Be Overcome” in the 1940 book *Myth and Reality*. Horselover reads, “It is a basic purpose of mythic ritual and sacrament to overcome time” (205). Time visualized as “the maze at Minos, on Crete” connects the ancient Greek beach and prison-like maze imagery (345). Like the clue leading Theseus out of the labyrinth, Horselover is told, “VALIS selectively fires information to us which aids us in escaping from the maze, in finding the way out” (345). Despite this assistance, Horselover never escapes the maze of time.

In one dream, Horselover sees the Black Iron Prison destroyed. In his dreams, a locus for *sideshadowing*, Horselover describes dreaming “of a measureless void, yet a void which was alive” (214). These dreams hint that Horselover’s practices of mediation were allowing him to partially achieve this ritual and sacrament of escaping linear time. He even claims that he “had seen an augmentation of space: yards and yards of space, extending all the way to the stars; space opened up around him as if a confining box had been removed” (214). However, this liberation is only temporary. When the messiah is accidentally killed, Horselover’s options disappear. At the
end of the novel, he and Phil are still trying to “get outside the maze” (346). The imagery of a maze culminates the shift away from the measureless void and back to the confining box run by an evil empire. Walter Creed claims that the imperial imagery “embodied for Dick the oppression of … the freedom of the subjective imagination” (136). The ability of characters to think becomes the greatest casualty of determinism, as it narrows possibilities into one conclusion.

*The Divine Invasion*

The 1981 novel *The Divine Invasion* is set centuries in the future when humans have colonized numerous worlds. The text is the second novel in the *VALIS* trilogy, but contains new characters. Terms from *VALIS* recur, including the “Black Iron Prison” (505), and even “Valis” (553), to develop a similarly Gnostic plot. Space-time rhetoric from the predecessor appears as well. In *VALIS*, Horselover quotes Heraclitus, “Time is a child at play, playing draughts; a child’s is the kingdom” (336). Horselover considers the idea to be the “most terrible of all.” In *The Divine Invasion*, the imagery becomes literal: a ten-year-old named Emmanuel is the incarnation of God but, like Manfred in *Martian Time-Slip*, is mentally disabled, which limits his powers. Zina repeats the same quotation from Heraclitus to calm Emmanuel’s father Herb Asher, who “trembled” after discovering his son’s importance (520). The fearful imagery of time as a child playing a two-player game embodies both dualism and indeterminacy. When Emmanuel admits that he does not know everything, Zina asks, “God plays at dice?” (522). Zina uses Einstein’s rhetorical imagery to enhance the metaphor that time is a game, while simultaneously questioning Emmanuel’s certainty of winning.
In many ways, Emmanuel cheats the game of time. He describes his ability to time travel as a bodily function that allows him to mediate two levels of existence—a typical Dickian view of temporal serialism. However, the reference differs from earlier precedence in its mathematical precision:

First he speeded up his internal biological clock so that his thoughts raced faster and faster; he felt himself rushing down the tunnel of linear time until his rate of movement along that axis was enormous… Beyond this point he began to travel at the rate of the Upper Realm, so that the Lower Realm ceased to be something but became, instead, a process; it evolved in accretional layers at a rate of 31.5 million to one in terms of the Upper Realm’s time scale. (449)

Emmanuel emphasizes the different speeds of time between the two realms: the lower as slower, and the upper as faster, as was the case in *The Man in the High Castle*. In *The Divine Invasion*, Emmanuel explains the benefits of entering the upper realm: “There are many potentialities that do not become actualized. I select from among the potentialities the ones I prefer and I bestow actuality onto them” (542). In other words, Emmanuel turns *sideshadowing* into foreshadowing: the upper realm represents free will, until one potential event becomes a determined outcome. Like Alys’s use of KR-3 in *Flow My Tears, The Policeman Said*, Emmanuel changes his own reality and the reality of others, eventually with a degree of control that allows him to defeat his demonic antagonist named Belial.

Herb sums up a less fanciful purpose of choosing the correct timeline from all the other prospects: “The future need not resemble the past” (604). Herb’s proverb echoes the sentiments of one of the most prominent characters in SF. In the beginning of George Orwell’s *1984*, Winston Smith wonders for whom he is writing his journal, settling momentarily on the answer, “For the future, for the unborn” (7). However, he quickly reasons that this answer embodies “double-think,” meaning a contraction. Winston asks, “How could you communicate with the
future? It was of its nature impossible. Either the future would resemble the present in which case it would not listen to him, or it would be different from it, and his predicament would be meaningless.” This dilemma states that the future either resembles the present or it does not. Winston presents the concept that appears with similar diction in numerous novels by Dick. When Emmanuel in *The Divine Invasion* travels “down the tunnel of linear time,” he escapes the repetition of the past that Sophia warns against in *VALIS* as well as the circular motion of time that Bob Arctor fears in *A Scanner Darkly*.

A classic example of space-time rhetoric appears in *The Divine Invasion* through Zina, who also has temporal powers to “make time stop and then run backward” (439). She lacks, however, Emmanuel’s ability to challenge determinism, claiming to be the embodiment of the Torah (568), “the formula and blueprint of the universe” (569). As a religious text, Zina symbolizes determinism through the classic metaphor, used in SF as early as H. G. Wells, that time is a written text. Reinforcing the visual links between books and determinism, a Bible appears in one scene as a multi-layered hologram, “beautiful to the eye” (458). Emmanuel looks at a three-dimensional text, which is described as “the Bible expressed as layers at different depths within the hologram, each layer according to age.” Imagery of the text represents the narrative itself, particularly Dick’s style of including multiple messages. When using the holographic Bible, Emmanuel realizes that, “According to the tilt of the axis of observation, differing messages could be extracted.” Dick’s fragmented endings have a similar effect.

Howard Canaan compares *The Divine Invasion* to *Ubik* in its Gnostic plot, with the former being the allegory for the latter. Canaan claims, “In *Ubik*, Jory's battle with Glen Runciter parallels the Gnostic battle between the Logos and what Dick in *VALIS* calls ‘the Mind [that] has
become deranged” (347). Jory Miller is to the demiurge Belial as Glen Runciter is to the god Emmanuel. Palmer Eldritch and Leo Bulerno similarly vie for control of the universe in *The Three Stigmata of Palmer Eldritch*. Secondary characters in Dick’s Gnostic novels like Barney Mayerson, Joe Chip, and Herb Asher fight against different versions of the demiurge but are out of their league without assistance from the main protagonists. These three novels with similar Gnostic battles end with different results. The demiurge’s inevitable victory in *The Three Stigmata of Palmer Eldritch* becomes less clear in the ending of *Ubik*, while *The Divine Invasion* establishes a certain defeat for the Gnostic antagonist. After Belial dies, the last lines focus on machines cleaning up his remains, evoking the fragmented pieces through a fragment sentence: “Gathering together the broken fragments of what had once been light” (613).

*The Transmigration of Timothy Archer*

In the 1982 novel *The Transmigration of Timothy Archer*, Angel Archer narrates in first-person a family drama, not necessarily in the genre of SF. Angel is the daughter-in-law of the title character Bishop Timothy Archer, and much of the narrative involves dialogue between Angel and Tim. The novel begins with an epigraph of Robert Herrick’s “Ode to Ben Jonson”: as the death of Jonson drives Herrick’s poem, the death of Tim moves the narrative structure of Dick’s final novel—just as an assassination advances his first novel, *Solar Lottery*. The assassin in this case is fate, personified through various mythological forms when Angel remarks, “Even if Tim regarded his own death as inevitable, willed by prophecy, willed by the sibyl—or by Apollo, speaking through the sibyl as mouthpiece—he was determined to confront that fate
and put up the best fight he could manage” (769). Tim transmigrates to another body after he dies, though Angel questions the certainty of this resurrection—even to the novel’s last words. A bibliography at the end of the novel lists examples of classic literature including the Bible, Plato, Virgil, Dante, Donne, Shakespeare, and Aldous Huxley. From the epigraph of Herrick to the last citation of Yeats in the bibliography, the novel synthesizes a cavalier tone with metaphysical conceits.

The novel’s topic of destiny parallels the form of narrative determinism. Gary Saul Morson describes “The temporality of destiny is something like a vortex. The further one is from the center, the more freedom of movement one experiences. But the closer one comes, the more one’s movements are constrained by the future pulling one in. At some point near the center of the vortex, all moves have the same immediate result” (65). In this metaphor, narrative determinism resembles a vortex. In *The Transmigration of Timothy Archer*, Tim speaks to Angel about fate, articulating similar imagery:

> With fate there is no accident; there is intent. And there is relentless intent, closing in from all directions at once, as if the person’s very universe is shrinking. Finally, it holds nothing but him and his sinister destiny. He is programmed against his will to succumb, and, in his efforts to thrash himself free, he succumbs even faster, from fatigue and despair. Fate wins, then, no matter what. (767)

Morson claims narrative structure progressively grows more “constrained,” comparable to how Tim sees his life as “programmed against his will.” Tim’s death validates his prediction, though his transmigration symbolizes an exception to determinism. He gives his daughter more specific details about this possibility, translating ancient Gnostic ideas into more modern concepts of genetics:

> The ancient world had seen the coming into existence of the Greco-Roman Mystery Religions, which were dedicated to overcoming fate by patching the worshipper into a
god beyond the planetary spheres, a god capable of short-circuiting the “astral influences,” as it had been called in that day. We ourselves, now, speak of the DNA death-strip and the psychological-script learned from, modeled on, other, previous people, friends and parents. It is the same thing; it is determinism killing you no matter what you do. Some power outside of you must enter and alter the situation.

Tim’s imagery of “short circuiting” contradicts his notion of being programmed just as free will counters determinism. References to classical history, social sciences, or even DNA appear in Dick’s SF to help characters escape determinism—an anxiety that both his plots and characters share.

While Emmanuel in *The Divine Invasion* escaped determinism on his own, Tim seeks assistance from his Christian faith, telling Angel, “This is what Christ came to the world to save man from, this sort of determinism, this rule. The future can be changed” (760). Tim uses a textual metaphor when explaining how he plans to escape the inevitability of death and change the future that has been written for him:

> It’s inscribed in the Book of the Spinners that I will die… a book in which the future of every human is written from before Creation. The Book of the Spinners; it’s something like Torah. The Spinners are fate personified, like the Norns in Germanic mythology. They weave man’s fortunes. Christ, alone, acting for God … reads it, carries the information to the person, informs him of his fate, and then … instructs the person on the way his fate can be avoided. The road out. (780)

The Book of Spinners symbolizes both determinism and *foreshadowing*. Christ, like Emmanuel, can break the determinism of foreshadowing. However, Tim clarifies, “God’s Wisdom … can’t change what is written, but it can discern a way to outwit the Book. The writing is fixed; it will never change” (781). Tim’s death illustrates this certainty, but by moving his soul into another body, Tim’s transmigration exemplifies “the road out” and “a way to outwit.” Tim points out that “Prometheus stealing fire” and “Christ seizing the Book of the Spinners” both further allegorize this potential escape (780).
Dick’s space-time rhetoric additionally uses mythological references with psychological undertones to evoke a dualism of time. Characters in the novel make the connection. Angel thinks about ancient mythology in relation to time and clarifies that as both creator and destroyer the Hindu god “Krishna … comes in the form of time,” (621) and, concerning the Greek titans, “Prometheus means forethinker [and] Epimetheus … was hindsight” (669). This dualistic character and pair of characters represent a split temporality that is nevertheless complete in nature. This dualism is Dick’s typical view of serialism, though the hierarchy is never defined. Angel only describes “Death in life … and life in death; two modalities, like yin and yang, of one underlying continuum. Two faces—a ‘holon,’ as Arthur Koestler terms it” (621). Koestler’s holon is anything that serves as both a whole and a part at the same time. Describing this philosophical concept in tandem with the mythological references perpetuates Dick’s dualistic space-time and foreshadows characters with split personalities.

Bill Lundberg uses his schizophrenia in the novel to facilitate Tim’s transmigration. Bill’s friends, however, institutionalize him for his claims. According to Bill, his schizophrenia serves as a conduit for the Bishop’s spirit, as if verifying the transmigration. Edgar Barefoot details his epiphany, linking his ontological relationships with his phenomenological experiences: “I had caught a glimpse of world not as my own arrangement—by time, space and causation—but as it is in itself arranged; Kant’s ‘thing-in-itself’” (793). Angel then qualifies Edgar’s assertion by adding, “Which can’t be known, Kant said.” Edgar replies, “Which normally can’t be known… But I had somehow perceived it, like a great, reticulated, arborizing structure of interrelationships, everything organized according to meaning, with all new events entering as accretions; I had never before grasped the absolute nature of reality this way.”
Edgar’s epiphany parallels Dick’s impression of schizophrenia. His 1965 essay uses the analogy of film in describing how a schizophrenic “is having it all now, whether he wants it or not, the whole can of film has descended on him, whereas we watch it progress frame by frame” (176). Both Dick’s essay and novel describe the totality of time, which Bill uses to channel Tim. Edgar perceived such totality as an arborizing structure unfolding its branches, contrary to how the schizophrenic Jack in Martian Time-Slip views time as a closed tomb.

A book within a book is a common trope that Dick uses throughout his career. The symbol appears in many of his other novels. Beyond the Book of Spinners in The Transmigration of Timothy Archer, the title character writes a book titled Here, Tyrant Death, a reference “from Handel’s Belshazzar, and reads in full: ‘Here, tyrant death, thy terrors end’” (752). Angel reviews the book and remarks, “He had never once looked back… The title should be Look Backward, Idiot” (753). Angel’s ad hominem echoes the book within a book You’re an Ignorant Idiot in John Brunner’s 1968 SF novel Stand on Zanzibar. Angel further criticizes her father’s book, advising those who read it to “[s]tart with the final page … and work forward. That way, you won’t have to read it” (753). Angel’s criticism emphasizes the time that exists after a novel concludes as well as the time that exists before its title, the narrative borders of the sujet and Erzählzeit. Edgar rebuts Angel’s product-oriented perception with process-oriented imagery that implies a message for narrative time. He asks Angel, “What if a symphony orchestra was intent only on reaching the final coda? What would become of the music? One great crash of sound, over as soon as possible. The music is in the process, the unfolding; if you hasten it, you destroy it. Then the music is over” (787). In accordance with his usual style, a fragment sentence ends Dick’s last novel: “Tim would have enjoyed it. Were he alive” (817).
The conclusion negates the title, assuring Tim’s death just as the text itself concludes. Dick’s conclusions often stand for death, but—completing this analogy—our reflection on the art is its afterlife.
The 1966 novel *Rocannon’s World* opens with the prologue “The Necklace,” an expansion of the 1964 short story, “The Dowry of the Angyar,” later renamed “Semley’s Necklace.” The novel became the first in a long series depicting humans colonizing the galaxy to establish the League of All Worlds, later known as the Ekumen. The concept of space travel throughout the series adheres to Einstein’s relativity. Traversing the space between the stars takes a considerable number of years, though the journey seems instantaneous for those moving near the speed of light. The 1969 short story “Winter’s King” contains a conversation relating someone who is not traveling between the stars to someone who is: “You can scarcely call fellow-mortal one whose time passes 70,000 x slower than yours” (108). In other words, time passes much quicker when moving at the fast speeds necessary to travel between the stars. Long distance space travel in Le Guin’s fiction represents, to use James Bittner's descriptor, a temporal "dilution" (103). From this weakening, characters become severely isolated from others. Le Guin’s Hainish novels typically take place on a single world, despite acknowledging a universe with “worlds as thick as sand on the sea-beach” (38).

After the prologue, the novel’s nine chapters and epilogue utilize a prophecy known as the Foretelling to structure narrative time. Gaverel Rocannon becomes stranded on a technologically undeveloped planet in the Fomalhaut system, whose people have a vague understanding of the galaxy at large—just enough to expect visitors from other worlds. The
Foretelling serves as a Gestalt for the novel, a term from psychology that James Bittner employs synonymously with the underlying form of the narrative (77). Upon the prophecy’s introduction in the novel, readers receive few details about it. The only hint is “the Wanderer would choose companions [for a quest]… for a while” (37). The conditional addendum establishes the prophecy as set but also temporary. The title character appropriately chooses companions, though most are chosen for him. The Queen enlists her own son for the quest, publicly claiming that he mostly likely would not survive. The Queen’s cynicism implies the temporary feature is the presence of companions and not the fulfillment of the prophecy. Rocannon’s fellowship then proceeds with the idea that not all its members are destined to reach the journey’s end.

Though some companions die, including the Prince, the characters do not mention the Foretelling. The modality of the phrase “for a while” proves accurate only when one member of the company willingly abandons the quest. As Kyo turns back, the narrator observes that “between [Rocannon] and Kyo a pattern had come to its end, leaving quietness” (80). This desertion participates in a pattern by validating the truth of the Foretelling, despite its possibly being a self-fulfilling prophecy. In hindsight, Kyo seems restricted from making his own choices. However, after none of Rocannon’s companions reach the end, Kyo’s departure stands out as unique in that it is done by his own agency. This freedom to choose creates an open-ended prophecy. Overall, the Foretelling’s ambiguous nature leaves the audience to imagine the specificities; its most explicit claim is that undetermined characters would not reach some undetermined end, while the quietness experienced by Rocannon after Kyo departs is a silence that signals a break in the traditional prophetic motif.
The Foretelling in *Rocannon’s World* presents a non-teleological prophecy, opening the potential for events as opposed to closing them. Regardless, the prediction deterministically supports the narrative as a Gestalt. Rocannon cannot help but resurrect his prophecy even long after its fulfillment when he quotes the Foretelling in his final lines in the novel. After he is asked to stay on the planet, Rocannon responds, “I will. For a while” (80). The Foretelling provides a structure by recurring at the beginning, middle, and end of *Rocannon’s World*, as it is first announced, then fulfilled, and later quoted for closure. In lieu of the silence left by Kyo, Rocannon must verbally give order to his narrative—his last lines ironically seem more determined than Kyo’s foretold abandonment. Novels in the early Hainish series repeatedly rely on fulfillment of prophecy, specifically in *Rocannon's World, City of Illusions*, and *The Left Hand of Darkness*. These three cycle-novels progressively move across the spectrum from opened to closed regarding prophetic plots.

*Planet of Exile*

The 1966 novel *Planet of Exile* presents its narrative borders as an encroaching darkness, where its predecessor *Rocannon’s World* had presented a looming silence. Sight replaces sounds as the symbol for the text. The first chapter of the novel is titled “A Handful of Darkness” (101). The first sentence then heralds the coming of winter. One year on the planet Werel amounts to sixty years on Earth, making the dark winter last for a great portion of the people’s lifespans. The main character Rolery is “born out of season, right in the middle of the Summer” (109), despite her culture’s tradition that babies should be born in the spring or autumn. The age discrepancy
from her peers means that she will never be able to have children. Similar to Rocannon’s situation, Jakob Agat becomes stranded on Werel and befriends Rolery. By the end of the novel, the two are married. The last scene depicts a pyre burning with the final lines evoking a return of darkness, as the first chapter had foreshadowed. Agat speaks to Rolery: “‘Come,’ he said to Rolery as the fire sank down to ashes, ‘come, let’s go home’” (180). The metaphor that narrative beginnings act as a home recurs throughout Le Guin’s corpus.

Similar to Le Guin’s first novel, her second novel contains the metaphor that the narrative text is a sound. Whereas *Rocannon’s World* focuses on the silence before and after a sound, *Planet of Exile* focus on the distinction between sound as either noise or music. For example, Rolery’s tribe has a ritual that involves the tribe banging rocks together as a group. The leader of the tribe must “close the circle of the Stone-Pounding” (124). The cacophony of sounds inevitably forms a rhythm as the noise becomes music. As an ominous act of foreshadowing, one day the ritual fails to achieve this music: “No rhythm had risen out of the pounding of stones, there had only been clatter and conflict” (137). The patterned expectation for the sound relates to narrative structure. In his *Poetics*, Aristotle championed the idea that a good story must have a beginning, a middle, and an end. Pleasure for the audience thereby accrues from the rhythm of such sequencing (2322). The Stone-Pounding ritual indicates the move of narrative begins in confusion and ends in coherence. Without the coherent resolution of narrative structure, clatter and conflict would remain.
Like *Planet of Exile*, the 1967 novel *City of Illusions* presents its narrative borders as an encroaching darkness. This cycle-novel opens with a character “wholly involved in chaos, he knew no pattern. He had no language” (183). Falk enters into the narrative *ex nihilo* with amnesia: “he moved … but not going anywhere. He had no way through the world in which he was, for a way implies a beginning and an end. All things about him were tangled.” The time before the beginning of the narrative amounts to a dark Gordian knot. Falk eventually finds his own sujet through the story as surely as Alexander’s sword, though more entanglements await the character. Events set to take place after the conclusion will be as chaotic. The last sentence of the novel reads, “Then frame and pattern shattered, the Barrier was passed, and the little ship broke free of time and took them out across the darkness” (309). The first two words of the novel, “Imagine darkness” (183), link the beginning and ending in a chaotic darkness—just as *Planet of Exile* had done previously. Beyond the text lies uncertainty.

Many of the Hainish novels end on an ambiguous note without definitively presenting the fate of Le Guin’s characters or worlds, as opposed to the epilogue that ends *Rocannon’s World*. Falk’s destiny after *City of Illusions* remains obscured even to the narrator, who asks before the final paragraph: “Was he leaving home, or going home?” (309). In other words, the coda of the novel does not correlate with the end of Falk’s quest, which has yet to conclude. The open temporality is limited to the amnesiac beginning and cliffhanger ending. This ending only partially qualifies as a cliffhanger; while *City of Illusions* does not end in great suspense, it does leave its own explicit question unanswered. For much of Le Guin’s career, this question of
whether a character is leaving or returning home remains crucial. The title of Le Guin’s 1985 novel *Always Coming Home* serves as the best answer to the narrator’s final rhetorical question in *City of Illusions*.

Starting with amnesia and ending on a cliffhanger are both narrative devices that establish the edges of the narrative as unknown. However, *City of Illusions* fails to escape determinism in the same way as *Rocannon’s World*; the latter’s futile attempt to subvert a traditionally closed motif, the foreshadowing of prophecy, ultimately required a frame to support the narrative. *City of Illusions* presents a similar existential paradox: when the story occurs between a beginning and an ending, an ordered pattern inevitably emerges. Bringing words into the metaphorical light of *City of Illusions* means participating in a design. One scene in the novel depicts this paradox; for Falk to learn his future from the Prince of Kansas, he must be physically represented by an opal stone on the appropriately titled "patterning frame" (242). The scene depicts an observer’s paradox. Imagery of the last sentence presents the same frame as shattering to pieces, a symbol for the loss of structures. However, any freedom evoked by the imagery is contradicted by its structured repetition. Despite its destruction in the end, the “patterning frame” has framed the novel.

*A Wizard of Earthsea*

The 1968 fantasy novel *A Wizard of Earthsea* launched Le Guin’s second series, set in Earthsea. The novel cites many fictions within the fiction to establish a detailed setting, opening with an epigraph from a myth, the Creation of Ea: “Only in silence the word, / only in dark the light, / only in dying life: / bright the hawk’s flight / on the empty sky” (12). Le Guin reuses the
metaphor from the earlier Hainish novels that text is a sound and a light. The metaphor appears at its most spiritual in *A Wizard of Earthsea*. In addition to the poem cited in the epigraph, the first chapter evokes another fiction within the fiction, “*The Deed of Ged*” (13). This reference returns in the final sentences of the novel, as if it were merely a selection from this text. The conclusion alludes to other voyages that are not in the incomplete record. Other stories, however, are in the deed, documenting that Ged “sailed the Dragon’s Run unscathed … brought back the Ring of Erreth-Akbe from the Tombs of Atuan to Havnor [and] came at last to Roke once more, as Archmage of all the islands of the world” (168). These events become the plots in later Earthsea novels.

Like the SF novels of the Hainish series, the fantasy novels in the Earthsea series largely conform to deterministic expectations, but Le Guin experiments with subverting narrative time even more as her career progressed. World-making, for example, a Le Guinian staple, never fails to challenge a closed narrative time. The Hainish series, set on planets throughout the galaxy, builds on a much larger scale than the single-world Earthsea series. Both nevertheless contain expansive settings, encouraging readers’ imaginations to fill in the muddle and middle or read between the (story)lines. Regarding Earthsea’s detailed maps, islands that characters have not visited, or the narrator has not mentioned, still serve a function in opening more possibilities for the narrative. This narrative potential creates a less restricted temporality. The last chapter of *A Wizard of Earthsea* is titled “The Open Sea,” a metaphor that opens the possibilities for the setting even as the novel ends. Because the *sujet* never reaches all the locations in the *fabula*, those narrative time remains partially open.
Maps alone, however, do not sufficiently represent world-making. In her 1981 essay “World-Making,” Le Guin writes that this literary device is “Like a crystal, [because] the work of art seems to contain the whole, and to imply eternity. And yet, all it is, is an explorer’s sketch-map. A chart of shorelines on a foggy coast” (47). This imagery indicates that successful world-making must explore more than the setting’s geography or else it risks appearing as an unimpressive stage set. When executed correctly, world-making should enrich the entire story, including the lives and actions of the characters, beyond the immediate necessity of the sujet.

World-making and other devices pointing away from the conclusion, which Gary Saul Morson calls sideshadowing, draw attention to the fabula of a narrative. Sideshadowing introduces new realms of likely alternatives in a given narrative before its beginning, after its end, or throughout the potentially receptive middle. The references to “The Creation of Ea” and The Deed of Ged serve this purpose in A Wizard of Earthsea.

Foreshadowing, however, inevitably supersedes the narrative elements of sideshadowing. Morson refers to this traditional force as a vortex-like time that closes the plot for characters. The wizard Ged discovers this lesson after unleashing a destructive spirit. The Summoner of Roke Island tells Ged, “You thought … that a mage is one who can do anything… the truth is that as a man’s real power grows and his knowledge widens, even the way he can follow grows narrower; until at last he chooses nothing, but does only and wholly what he must do” (73). This ethical advice doubles as a narratological law. Characters appear to have more options near the beginnings of stories than near the endings. Before leaving Roke Island, Ged tells the Master Doorkeeper, “You keep a narrow door” (74). Ged’s criticism reflects how choices become
reduced into predictable outcomes as the conclusion tightens its grip on the rest of the narrative. The inherent human search for patterns works at variance with *sideshadowing*.

Audiences crave the comeuppance. Readers expect a narrative’s closure to provide fulfillment—that is, the feeling of completion. The ambiguous climax to *A Wizard of Earthsea*, for example, concludes with the hero battling the antagonist, though “Ged had neither lost nor won but … had made himself whole: a man” (166). When Ged becomes whole, so too does the structure of the narrative. Kermode observes that not only readers, but all humans possess “a deep need for intelligible ends” (8). To find meaning from life, “we project ourselves … past the End, so as to see the structure whole, a thing we cannot do from our spot of time in the middle.” Kermode affirms that those wishing to participate in a meaningful, albeit phantasmal, holistic order must construct their own determined design. Little did Ged know at the end of the first Earthsea book that he had many more novels to fulfill; Ged could not imagine how “whole” he would be after the entire saga concludes. The installments of Le Guin’s Earthsea series often project something temporally whole, as demanded by narrative time’s deterministic need for resolution as well as its teleological fetish.

Other scholars make this same critique. James Bittner calls the Earthsea (and Hainish) series “a realization of the unity of the world we live in” (34). Le Guin herself even confessed to a belief in a universal law tending “to bring things into a complexly ordered and harmoniously functioning whole” (24). As a writer who understands many genres, Le Guin may have been influenced by the internal mechanisms that drive those genres. In his 1967 book *Validity in Interpretation*, E. D. Hirsch calls genre “an entelechy, a goal-seeking force that animates a particular kind of utterance” (6), or more deftly “an anticipated sense of the whole” (7).
Narrative genres are deterministic constructs that structure narratives. In his essay “Magical Narrative: Romance as Genre,” Fredric Jameson states, “Genres are essentially contracts between a writer and his reader” (135). In creating these contracts, Le Guin exercised her belief in an objectively established whole.

*The Left Hand of Darkness*

The 1969 novel *The Left Hand of Darkness* is the longest Hainish novel narrated in first-person. On a planet the natives call Winter (Gethen to outsiders), the Gethenians live without war or gender. Jameson observes how the novel “made a fundamental contribution to feminism and gender studies” (“Utopian” 13). Some chapters of Le Guin’s fourth Hainish novel begin with epigraphs “From the Archives of Hain” (317). The opening sentence of the novel acknowledges the narrative as a historical account: “I’ll make my report as if I told a story” (317). Genly Ai narrates his report to the Ekumen, what remains of the League of All Worlds from *Rocannon’s World*, after a period called the Age of the Enemy (394), which Falk experienced in *City of Illusions*. Genly’s mission as an ambassador is to convince the Gethenians to join the Ekumen. His mission ultimately succeeds. Children on Gethen ask in the final sentences of the novel to hear the tale. After the main narrative, an appendix continues the appearance of a report and contains information on the culture of Le Guin’s fictional people. This addendum specifically depicts their system of time, “The Gethenian Calendar and Clock” (489), organized into four sections, the year, the month, the day, and the hour.
As had been the case in previous novels by Le Guin, time continually gets ahead of itself in the form of prophecy. Harold Bloom’s study of Le Guin’s most popular work led him to deduce her “true credo” was spoken by “one of her uncanniest creations, Faxe the Weaver, master of foretelling, to conclude the beautiful chapter, ‘The Domestication of the Hunch,’ in *The Left Hand of Darkness*: ‘the only thing that makes life possible is permanent, intolerable uncertainty: not knowing what comes next’” (3). Taking this as a motto for narrative time in Le Guin is ironic because it comes from a character standing antithetically to the message. Goss tells Genly that Foretellers like Faxe are “time-dividers” (352). Genly adds to his report, “which may mean schizophrenics.” Like Manny in Philip K. Dick’s 1967 *Martian Time-Slip*, schizophrenia provides characters an insight into the future. Faxe predicts that Gethen would become a member of the Ekuman, an event that ends the novel. Genly agrees that the prediction is “not so much a prophecy as an observation” (354). Faxe’s foretelling in *The Left Hand of Darkness* compares to the Prince of Kansas’s claim in *City of Illusions* that Falk would ultimately go home, rather than leave it. Le Guin’s conclusions both validate her prophecies and vice versa because heralding a specific conclusion establishes that ending as a complement to the rest of the story.

Aside from prophecies, another marker of determinism is Le Guin’s unique space-time rhetoric symbolizing the narrative structure. Repetition of specific objects emphasizes their importance as metaphorical conceits. For example, *The Left Hand of Darkness* opens with Genly Ai watching a parade honoring the completion of “the unfinished Arch of the River Gate” (318). The narrative ends with Genly’s metaphorical realization: “my friend being dead, I must accomplish the thing he died for. I must set the keystone in the arch” (481). This monument symbolically represents the larger structure of the plot, which started in the city Erhenrang and
then arches through time, landing back where it began. While characters like Faxe describe an open temporality of uncertainty, the narrative’s closed structure stands as firm as the newly constructed arch. Le Guin frequently employs similar space-time rhetoric to symbolize her narratives. The patterning frame in *City of Illusions*, the foretelling in *Rocannon’s World*, and *The Deed of Ged* in *A Wizard of Earthsea* are symbols of narrative structure. Space-time rhetoric emphasizes this symbolism through repetition as these plot devices reappear at key moments.

Some elements in Le Guin’s novel display the spirit of Gary Saul Morson’s *sideshadowing* but with unique twists. As space-time rhetoric often reveals, narratives must be molded into finite shapes. Le Guin’s temporal subversion proves temporary due to narrative time’s vortex-shaped structure. Le Guin solves this lack of authenticity, as expressed in her essay “Science Fiction and the Future,” by building on the philosophy of “the Quecha-speaking peoples of the Andes” (142). Le Guin describes, “They say that the future lies behind—behind your back, over your shoulder. The future is what you can't see.” Its significance for Le Guin is that “it reminds us that our talk about 'going forward into the future' is a metaphor,” a notion of time which has resulted from “our macho fear of ever being inactive, receptive, open, quiet, still” (143). Many of Le Guin's works struggle to overcome this fear by crafting narrative time into something inactive, receptive, open, quiet, still. The result is often a temporal reorientation more faithful to real time, despite the forces of convergence that inevitably close the narrative.

In *The Left Hand of Darkness*, Le Guin urges a specific reorientation away from the future, similar to the Quecha-speaking cultures. For example, many Gethenians worship a figure known as Meshe, who sits in “the Center of Time. And in the Center there is no time past and no time to come” (408). They seek to emulate their deity’s perspective of time. The result is a
worldview that differs from “Terrans [who] tend to feel they’ve got to get ahead, make progress. The people on Winter, who always live in Year One, feel that progress is less important than presence” (344). In their calendar, this lack of progress means that each New Year is celebrated as Year One. In terms of importance, the present outweighs the past and future, which do not even exist. Fictional societies in Le Guin’s later novels share this perspective of presentism, including the Althsheans in The Word for World is Forest and the Kesh in Always Coming Home as well as the interstellar travelers in the novella “Paradises Lost.”

Presentism recurs in many moments in the novel, even developing intertextuality with earlier novels. Genly expresses, “It is good to have an end to journey towards; but it is the journey that matters, in the end” (442). A Gethenian named Estraven states the same idea when he narrates various chapters. He delivers a poem containing the novel’s title along with its main conceit. He recites, “Light is the left hand of darkness / and darkness the right hand of light…like hands joined together, / like the end and the way” (450). In this analogy, light is to a way as darkness is to an end. Planet of Exile and City of Illusions both ended with the metaphor of darkness. Le Guin reflects on these earlier endings with two cultures on Gethen, Karhide and Orgoreyn, which have different ideas about this metaphor. In Orgoreyn, Gethenians believe that time will indeed end in darkness. The chapter “An Orgota Creation Myth” ends as Edondurath warns, “shadow will eat light, and there will be nothing left but the ice and darkness” (452). Gethenians in Karhide, on the other hand, do not endorse the metaphor. In the chapter “On Time and Darkness,” their deity Meshe scolds those who “call upon the darkness…calling it Source and End” (409). This personification of darkness negates the imagery at the conclusion of Le Guin’s previous novels.
The Lathe of Heaven

The 1971 novel *The Lathe of Heaven* displays Le Guin’s greatest resistance in a novel to traditional narrative time by overloading the story with numerous proxy dimensions. Le Guin attempted to recreate Philip K. Dick’s style for the novel, influenced particularly by his 1964 *The Three Stigmata of Palmer Eldritch* and his 1969 *Ubik*. Both these authors coincidentally graduated from the same high school at Berkeley, California in 1947, and both their styles reacted to one another. Le Guin utilizes Dick’s recurring motif of unlimited possibilities, which Howard Canaan calls, “Dick’s analogy to the Heisenberg Uncertainty Principle” (342). This quantum trope of indeterminacy appears more frequently in short stories, which typically require less closure than novels. In *The Lathe of Heaven*, Le Guin uses dreams, rather than drugs or half-life, to explore the well-known SF trope of alternate realities. The novel demonstrates extensive *sideshadowing*, but it does not fully embrace indeterminacy because, when unchecked by narrative determinism, alternative realities unleash too much chaos, a type of Derridean “freeplay” that can render all meaning in a text indeterminate.

Le Guin creates a character able to explore alternate realities, the ideal example of Morson's concept of *sideshadowing*. The main character, George Orr, discovers that his dreams create this effect. As his therapist explains, George possesses the ability to enter “another continuum” (118). George Orr's last name therefore could appropriately be understood as a play on the conjunction “or”—due to the options he continually mulls over. This does not necessarily contradict other scholars, who claim that the name alludes to George Orwell. For George, his options become alternative histories. The various dimensions exist alongside each other as “dual
time-tracks, alternate universes” (48). These alternate realities begin small by changing a mural on the wall before escalating to graver modifications such as killing someone or even creating world peace. This profusion of sideshadowing represents the extreme contrast to narrative determinism.

Contemplations from George match descriptions of sideshadowing that “things could have been different” (Morson 6). George experiences this enhanced sense of time when he wonders, “Did you ever happen to think ... there might be other people who dream the way I do? That reality’s being changed out from under us, replaced, renewed, all the time?” (71). The characters (and readers) are eventually left to wonder “whether anything’s real at all” (98). The Lathe of Heaven declares, while nothing is real, everything is in fact real. George achieves the ultimate sense of temporal openness, like Stefan Fabbre in Le Guin’s 1976 short story “A Week in the Country” in Orsinian Tales, who asks, "if the universe is infinite, does that mean that everything that could possibly happen, is happening, somewhere, at some time?" (110). Both Stefan and George express an extreme sensitivity to the infinite possibilities of Le Guin’s sideshadowing.

George enters alternative realities more frequently as the novel progresses despite their incompatibility with each other. Bittner observed similar incompatibilities in one of Le Guin's short stories. He claims, "the narrator of ‘Schrödinger’s Cat’ may be in a time frame moving faster than the world around her" (78). Like the narrator of this 1974 short story, George feels that his time frame is not compatible with the various alternatives. He slips, not into the vortex of narrative time, but into an ever-opening aberrant space-time where relations are constantly severed. George implicitly undergoes a temporal about-facing, a reorientation away from the
future as was the case for Orry in *City of Illusions*. At first, George admits that his dreams are not
turned toward the future but are instead “non-prophetic dreams. I can't foresee anything. I simply
change things” (11). Later in the novel, the nonteleological effect of his ability is realized in full
when he screams, “I haven't any destiny. All I have is dreams” (74). George suffers from the
effects of a nonteleological story. He achieves narratological freedom, offering an opportunity to
mix form and content. George’s introduction involves symbolic walls: "He started out toward
[the room], trying to hold on to the wall, but there was nothing to hold on to, and the wall turned
into the floor” (2). Walls are repeatedly mentioned, but marginalized by reorientations,
throughout the novel. Given George's powers, barriers become insignificant; he "had seen the
walls change around him, had known the world was being remade" (64). As George's existence
slides into one alternate reality after another, his narrative begins to break the temporal walls.

Narratives cannot handle undetermined, nonteleological representations of time, or what
Le Guin would call “unclock time.” In the 1980 novel *The Beginning Place*, the more-natural
semblance of time relates to its less-natural counterpart: “clock time had about the same relation
to unclock time as a two-by-four or a box of toothpicks has to a fir tree” (66). This unrefined
version of time is similar to the Buddhist perspective, as William Gallois explains: “In such a
view, the space and time of the world are loaded with illusory forms of meaning that prevent us
from seeing the virtues of an existence without reality, meaning, or truth: the un-space, un-time,
un-being of nirvana” (198). In this light, George has achieved the unclock time of nirvana, and it
is an existence that narrative characters cannot maintain. An epigraph for the third chapter taken
from Chuang Tse, lending *The Lathe of Heaven* its title, warns, “To let understanding stop at
what cannot be understood is a high attainment. Those who cannot do it will be destroyed on the
lathe of heaven” (26). George risks his destruction if he is unable to accept unconditionally time’s uncertainty.

Characters react to Le Guin’s subversion of narrative time. For those aware of these alternate dimensions, “It was a heavy load to bear, that double memory” (78); the sensation is described as “trying to run on two tracks with one set of wheels” (98). George’s world-making ability cannot produce two compatible universes. George’s numerous narratives complicate and confuse the whole and its parts. He continues to alter reality with his dreams, slipping deeper into random universes of his own creation (though some of the credit goes to his highly suggestive therapist). When asked to recall his past, George snickers, “I’ve had so many childhoods now …, which one should I tell you about?” (104). He participates in events, as opposed to other Le Guinian characters who merely observe their own narratives as prophecy fulfilled. Susan M. Bernardo and Graham J. Murphy remark, “The Lathe of Heaven demonstrates that history—past, present, and future—and reality are contingent on inner space and human actions as the world/reality that is constructed, perceived, and remembered is constantly in a state of change” (46). George eventually learns to accept the greater uncertainty, and just as he ceases to fear the lack of an end, the end is nigh.

Le Guin indicates in “Some Thoughts on Narrative” that the secret to George's apotheosis consists in accepting not only uncertainty but unreality:

Only the imagination can get us out of the bind of the eternal present, inventing or hypothesizing or pretending or discovering a way that reason can then follow into the infinity of options, a clue through the labyrinth of choice, a golden string, the story, leading us to the freedom that is properly human, the freedom open to those whose minds can accept unreality. (45)
George turns away from his state of nirvana, becoming a *bodhisattva* in Buddhist terms; the *bodhisattva* is said to turn away from nirvana to impart the knowledge of enlightenment back onto humanity. George’s reasons are less altruistic and more for the sake of narrative structure. Le Guin explains earlier in the same essay how narrative “does not seek to triumph over or escape from time (as lyric poetry does). It asserts, affirms, participates in directional time, time experienced, time as meaningful. If the human mind had a temporal spectrum, the nirvana of the physicist or the mystic would be way over in the ultraviolet, and the opposite end, in the infrared, would be *Wuthering Heights*” (39). Le Guin's spectrum from opened to closed time demonstrates the range of her writing. She revels in the raw openness of reality like a quantum physicist or mystic, but must terminate her creations with the same last words as *Wuthering Heights*: the end.

*The Lathe of Heaven* cannot sustain *sideshadowing* throughout its entirety. Like any written narrative, eventually it must end despite any thematic/stylistic resistance to closure. A structure is inevitable, a final result, unavoidable. When George’s therapist also begins altering reality with his own dreams, the effect becomes too much: “The continuity that had always held between the worlds or timelines of George’s dreaming had now been broken. Chaos had entered in... almost all he knew came from the other memories, the other dreamtimes” (175). George becomes lodged so deep within alternate realities that ultimately he has no choice but to settle within the current reality and accept its artificiality. In validating his semi-defeat, he remembers a particular text: “There is a bird in a poem by T. S. Eliot who says that mankind cannot bear very much reality; but the bird is mistaken. A man can endure the entire weight of the universe for eighty years. It is unreality that he cannot bear” (180). As literary characters cannot endure
unreality, Le Guin’s works likewise cannot bear the overabundance of *sideshadowing*. Narrative time cannot handle unclock time but must depend on some degree of deterministic structure. 

*The Lathe of Heaven* opens with a dream symbolic of real time. George becomes a jellyfish that “drifts” from “anywhere to anywhere” with “no compass” (1). Bernardo and Murphy claim, “Much like the jelly fish enveloped in the depths of the ocean, George recognizes a similar environment, a connection uniting all life-forms… Only by returning to the sea—the realm of unity, the space of dreams—can George become whole once again” (46). Imagery ending the novel is less optimistic. Symbolic of narrative time, the last lines close with the simile, “as a sea creature might watch from an aquarium, seeing them pass and disappear into the mist” (184). This aquarium acts as deterministic space-time rhetoric. The imagery of an open ocean becoming a closed aquarium represents the content parallel to the form—in this case, *sideshadowing* that turns out to be foreshadowing, *Erzahlze Zeit* that closes into *Erzahlzeit*, or a *fabula* that narrows into a *sujet*. An open temporality is prevalent in the first half of the novel but closes as the vortex-like ending approaches.

George undergoes a parallel transformation: when experiencing the effects of *sideshadowing*, he maintains a nonteleological perspective, claiming, “Things don’t have purposes, as if the universe were a machine, where every part has a useful function. What’s the function of a galaxy? I don’t know if our life has a purpose and I don’t see that is matters” (82). Later, when vortex-time begins to take effect, George has completely altered his beliefs: he then claims, “A conscious mind must be part of the whole, intentionally and carefully—as the rock is part of the whole unconsciously” (168). George voices his belief in holistic significance at the same time that the structure shifts away from *sideshadowing* and reveals its determined model.
George believes like later characters in the Hainish series in fulfillment being an inherent quality of time. The environments of the sea creatures that frame the novel symbolize George’s beliefs: his sense of time as being open as the ocean has collapsed into a closed aquarium. For Le Guin, this analogy depicts the act of writing.

_The Farthest Shore_

The 1972 novel _The Farthest Shore_ features the wizard Ged, accompanied by the young prince Arren and aided by the dragon Orm Embar. The third book in Le Guin’s fantasy series continues to develop the world of Earthsea, particularly the backstory of the wizard Erreth-Akbe. In _A Wizard of Earthsea_, Ged obtains half of the mysterious Ring of Erreth-Akbe (133). In _The Tombs of Atuan_, the main character Tenar wears the other half around her neck (268). When Ged unites the two, he observes, “So the story comes whole… even as the ring is made whole” (298).

In _The Farthest Shore_, Ged speaks with the ghost of Erreth-Akbe and learns how the history of the dragon-slayers parallels his own quest. After defeating the dark wizard Cob, Arren becomes king, fulfilling a prophecy mentioned in the second chapter: “He shall inherit my throne who has crossed the dark land living and come to the far shores of the day” (317). Like the reassembled ring from _The Tombs of Atuan_, the fulfillment of prophecy in _The Farthest Shore_ symbolizes narrative determinism.

Le Guin’s prophecy structures her narrative time as determined. Ged tells Arren, “To deny the past is to deny the future. A man does not make his destiny: he accepts it, or denies it” (327). Prophecy links the beginning and the ending. When a story presents a prophecy, the
characters observe rather than participate in the narrative. Characters merely articulate a desire for fulfillment as becoming whole. To fulfill the prophecy is to complete the narrative. Arren describes the sensation, “when one stands in a cherished place for the last time before a voyage without return, he sees it all whole, and real, and dear, as he has never seen it before and never will see it again” (449). Young Ged saw himself participating in a larger whole in *A Wizard of Earthsea*. Two novels later, the same theme emerges again for old Ged, who travels, as the title portends, to *The Farthest Shore*. Titles encapsulate narratives as if sitting beside or even beyond them. They provide an organization that often hints at the ending: Ged might make it to this destination. Good titles act as cornerstones of their narratives. Their placements require holistic considerations, as if titles have already read the texts which they announce. Titles are paragons of narratological determinism.

Le Guin subverts narrative determinism by presenting alternatives. In *The Tombs of Atuan*, time does not exist in the tomb: “The dust was thick, and every grain of it might be a day that had passed here where there was no time or light: days, months, years, ages all gone to the dust” (255). The vaults likewise distort time: “In the Great Treasury of the Tombs of Atuan, time did not pass. No light; no life; no least stir of spider in the dust or worm in the cold earth. Rock, and dark, and time not passing” (263). In *The Farthest Shore*, characters react in strange ways to alternative temporalities. For example, Ged and Arren listen to the same ocean tide but hear disparate sounds. While the young prince hears “the sound *ahm*… in the old Speech that signifies the beginning, or long ago,” the old wizard claims, “But I hear it as *ohb*, which is a way of saying the end” (436). In *The Sense of the Ending*, Kermode discusses the operation of establishing beginnings in harmony with their endings. He analyzes the stereotypical sounds
emitted by a clock, tick and tock. While these sounds are generally identical, listeners hear them as distinguishable: “tick is a humble genesis, tock a feeble apocalypse” (45). Deterministic narratives similarly give ongoing events a start and finish at the risk of their distortion. This discrepancy underscores the bias of determinism.

In addition to the isolated tombs and subjective tides, Le Guin’s space-time rhetoric of the ocean expresses free will. As a metaphor for freedom, Le Guin titles the last chapter of A Wizard of Earthsea “The Open Sea” (153). Chapter titles in The Farthest Shore, including “Sea Dreams” (363), and “The Children of the Open Sea” (400), reiterate the metaphor of the ocean as time free from determinism. Living at sea, Arren feels, “There were no hours: only whole days, whole nights” (408). Arren realizes his confinement within such closed narratives. He and Ged can only follow their inevitable approach to the vortex-like ending, while the world, like narrative time, shapes itself around them. However, escaping the deterministic model, as Le Guin may have discovered, requires first becoming aware of its temporal effects. The conclusion of the third novel in the series reflects this discovery and evokes The Deed of Ged, similar to the way the first Earthsea novel had used the metaphor to frame the narrative structure. The reference in A Wizard of Earthsea foreshadows other tales to come as well as provides contradictory versions of the ending. The Farthest Shore notes how the record claims that Ged sails away after the Arren’s coronation, never to return. The last paragraph, however, contradicts the record that Ged even attended the coronation, as if the romanticism of the record is incompatible with the realism of Ged’s life.
The 1976 novella *The Word for World is Forest* presents the forest-planet Athshe in the Hainish universe, known to its inhabitants simply as Forest. Humans establish colonies on the planet and begin logging, despite alien natives who live in the trees. Lepennon asks the anthropologist Dr. Lyubov, who studies the native “creechies,” how Athshean society survives without war. Dr. Lyubov claims that the planet’s ecology shapes the society’s ideas about progress: "They have no history. Perfectly integrated and wholly unprogressive. You might say that like the forest they live in, they've attained a climax state" (526). By positioning themselves in a more open temporal dimension, a type of presentism, the Athshean society is not fixated on the future. The Athsheans on Forest, like the Gethenians on Winter, turn away from the future and the past in favor of the present. However, while the Gethenians merge with the Ekumen in the conclusion of *The Left Hand of Darkness*, Athsheans remain isolated, as the novel ends with the League of Worlds placing a ban on their planet.

Other examples of temporal reorientations in Le Guin’s writing turn away from the future but toward the past, resulting in less openness to possibility. In “The Birthday of the World,” a 2002 short story containing Hainish elements, god-kings metaphorically have their “eyes in the back of their head” (219). These eyes allow them to preview a determined future, something mortals cannot see: “time coming behind their backs” (227). If the future approaches from behind their backs, then the past collects in front of them. This perspective matches the Quecha-speaking peoples of the Andes, whose philosophy matches the ancient Sumerian ideology: “the terms for the past are formed with the word *igi*, which means ‘eye,’ ‘face,’ and also ‘front’”
Words designating the future “originally mean[t] ‘behind’ and ‘reverse(side).’” Both ancient cultures were centered on mystics who could glimpse the future over their shoulders similar to the rulers in “The Birthday of the World.” These perspectives emphasize a more passive temporal relation, if not exactly an open one. Modern cultures imagine a temporal relation granting far more agency to a subject who experiences time through the metaphor of both moving and facing forward.

In *The Word for World is Forest*, the metaphorical forest epitomizes a system subverting linear time, history, and war, as Dr. Lyubov acknowledges. The Athsheans use space-time rhetoric to reinforce this temporal subversion. Coro Mena tells Selver, “Days [are] like the leaves of the forest” (520). The forest also subverts narrative time, as the narrator describes: “The view was never long, unless looking up through the branches you caught sight of the stars… Revelation was lacking. There was no seeing everything at once: no certainty” (509). The arboreal symbol for narrative time implies a nonteleological account lacking revelation. The forest obscures a metaphorical revelation. This space-time rhetoric furthermore represents narrative structure because “there was no seeing everything.” The forest has no discernable design. Le Guin’s corpus contains many such narratives intentionally lost in the wilderness of time. The demands of determinism, on the other hand, always favor active progress over an inactive presence.

The Athsheans value the inactive presence in its purest form, viewing the dream world as a more authentic level of reality. Selver expresses this belief: “He had feared that he was cut off from his roots, that he had gone too far into the dead land of action ever to find his way back to the springs of reality” (515). Selver’s space-time rhetoric imagines life as a dead land of action,
while dreams are more vibrant. The Athshean word for *dream* is the word for *root* (546). Like George’s dreams in *The Lathe of Heaven*, Selver’s dreams demonstrate how alternate realities besiege a narrative. As a lucid dreamer, Selver frequently visits these fleeting possible-worlds, but then discards them upon waking: “he threw … the dream away” (515). Dreams in Le Guin’s writing exhibits Morson’s *sideshadowing*. Morson urges the consideration of these alternate realities even when they do not project straight lines toward the future.

*The Dispossessed*

The 1974 novel *The Dispossessed* is Le Guin’s longest and most complex work in the Hainish series. This novel presents a determinist model of time struggling to fulfill itself, consistent with the temporal subversion found throughout Le Guin’s writing. The main character Shevek is a stranger in a strange land both on the capitalist planet Urras and on his home world, the anarchist planet Anarres. Shevek researches “temporal physics, and…the influence of Causative Reversibility” (46). His unrealized “General Temporal Theory” serves as the novel’s “MacGuffin,” a term coined by Alfred Hitchcock denoting a plot device that motivates the action of the narrative. Shevek receives privileges from his research on Urras. His eureka moment leads to the creation of a device called the ansible by merging his “Simultaneity Theory” and “Sequence Theory.” The space-time rhetoric describing these theories parallels the novel’s structure by blending content and form. Shevek’s theory of time recalls the arch of the River Gate in *The Left Hand of Darkness* and other seemingly random objects and ideas throughout Le Guin’s corpus that reappear in conclusions to hint at their symbolic significance.
Shevek describes the merger of his temporal theories in layman’s terms halfway through the novel, at a dinner party on Urras, and uses an appropriate simile:

We think that time passes, flows past us, but what if it is we who move forward, from past to future, always discovering the new? It would be like reading a book, you see. The book is all there, all at once, between its covers. But if you want to read the story and understand it, you must begin with the first page, and go forward, always in order. So the universe would be a very great book, and we would be very small readers. (221).

Shevek uses this textual analogy that time is a book to defend his two apparently contradictory theories: “Simultaneity Theory,” which, as its name suggests, argues for the simultaneous occurrence of past and future events, and “Sequence Theory,” which places subjects on a more linear course. Shevek mixes his metaphor to complicate the binary: “So then time has two aspects. There is the arrow, the running river, without which there is no change, no progress, or direction, or creation. And there is the circle or the cycle, without which there is chaos, meaningless succession of instants, a world without clocks or seasons or promises” (223). Both Le Guin’s versions of time represent determinism. Shevek creates the ansible by discovering this overlap.

As Shevek reconciles these two conceptions of time, his narrative oscillates between two timelines—one, a younger Shevek, and the other, older. This pattern gives a fuller sense of Shevek’s theories by showing the past and future as overlapping. The novel begins in medias res, then jumps to the earliest events in Shevek’s life. The action then moves forward on two fronts: from both the earliest point and the middle point. The progress from the earliest action leads up to the middle, while the course from the middle ends at the latest action in Shevek’s life. Reading older Shevek’s story as the main narrative implies deterministic intervals demonstrating analepsis—flashbacks to Shevek’s younger days. However, to read younger Shevek’s story as
the main narrative implies teleological intervals of prolepsis—flashing forward to Shevek as a mature man. Both readings mimic the novel’s structure, extending the notion of Shevek’s temporal determinism into the realm of narratology. Though this dual narrative at first appears to display an open temporality, the merger of form and content merely reveals a fatalistic perspective of reality, disallowing any potentialities. The structure of *The Dispossessed* conforms to the deterministic model, and its theme likewise hints at a future as written as its past.

In “Some Thoughts on Narrative,” Le Guin remarks that the notion of time as prewritten might not be a surprise to individuals in Shevek’s particular field. Le Guin clarifies, “Time for a physicist is quite likely to be reversible. It doesn’t matter whether you read an equation forwards or backwards—unlike a sentence. On the subatomic level directionality is altogether lost” (38). Considering narrative time, most stories read like a long sentence, while *The Dispossessed* reads more like a series of equations. The parallelism between chapters continually solves the equation. In this balance, the novel contradicts the directionality of time, an idea symbolized by the space-time rhetoric of a road. Shevek’s wife Takver initially believes time is a road: “But … Shevek took her metaphor and recast it in his terms, explaining that, unless the past and the future were made part of the present by memory and intention, there was, in human terms, no road, nowhere to go” (183-84). The metaphor collapses at the end of the novel, because directions, as opposed to maps, imply destinations: “For her as for him, there was no end. There was process: process was all. You could go in a promising direction or you could go wrong, but you did not set out with the expectation of ever stopping anywhere” (334). The ideology crafts a nonteleological determinism, a set *fabula* lacking a set *sujet*. 
The lack of directional sequencing, both as a theme and as a structure, complicates the expectations that narratives are teleological. The space-time rhetoric compromises this paradox through imagery combining the presence and absence of an end point. Shevek believes,

The search for pleasure is circular, repetitive, atemporal. The variety seeking of the spectator, the thrill hunter, the sexually promiscuous, always ends in the same place. It has an end. It comes to the end and has to start over. It is not a journey and return, but a closed cycle, a locked room, a cell. Outside the locked room is the landscape of time, in which the spirit may, with luck and courage, construct the fragile, makeshift, improbable roads and cities of fidelity: a landscape inhabitable by human beings. (335)

The locked room symbolizes narrative determinism. The novel mimics this structure through the motif of walls. The first two lines of *The Dispossessed* read: "There was a wall. It did not look important" (1). Halfway through Shevek's journey, Takver tells him, “The walls are down” (366). In the last chapter, Shevek asks another character, “You're sure you want to walk through this wall with me, Ketho? You know for me it's easy. Whatever happens, I am coming home. But you are leaving home. True journey is return” (386). Dreams remove walls for George in *The Lathe of Heaven* much quicker than Shevek was able to accomplish with his physics. Temporal restrictions are necessary for a sujet. Takver quips in *The Dispossessed* that without walls “it may get pretty drafty” (333). George’s alternative realities make this an understatement.

In *Poetics*, Aristotle expected a rhythm to emerge from the sequencing of events, the parts in harmony with the whole—a requirement that he compared to the structure of living organisms (2335). *The Dispossessed* similarly emphasizes parts fitting together in concord with a determined whole. Shevek claims,

If you could see a thing whole, he said, it seems that it’s always beautiful. Planets, lives… But close up, a world’s all dirt and rocks. And day to day, life’s a hard job, you get tired, you lose the pattern. You need distance, interval. The way to see how beautiful the earth is, is to see it as the moon. The way to see how beautiful life is, is from the vantage point of death. (190).
Shevek's dual narrative—his youth on the anarchist world Annares and his time on the authoritarian world Urras—complement each other at the same time they give meaning to the whole which they both synthesize to form. This theme consistently arises in Le Guin’s works: the whole gives meaning to its parts, the opposite being equally true. Shevek believes that “Fulfillment ... is a function of time” (335). Later in Shevek's life (but earlier for readers of this book), his beliefs are confirmed as he converts to the expectations of determinism: “it is strange, exceedingly strange, to know that one’s life has been fulfilled” (281). After obtaining his MacGuffín, this physicist becomes exempt from the consequences of romanticizing a life story.

On the quantum level, the world appears uncertain. Le Guin’s 1982 short story “Schrödinger’s Cat,” written the same year *The Dispossessed* was published, 1974, demonstrates indeterminacy using Einsteinian space-time rhetoric. The dog Rover shouts, “We cannot predict the behavior of the photon, and once it has behaved, we cannot predict the state of the system it has determined. We cannot predict it. God plays dice with the World!” (164). The overload of uncertainty in “Schrödinger’s Cat” makes the future unpredictable. In Shevek's much longer narrative, his MacGuffín is found only when he realizes, “He had been groping and grabbing after certainty, as if it were something he could possess” (280). Any certainty of the future cannot be glimpsed from Shevek's point of view, allowing time to appear open. As a character, Shevek is lucky to receive fulfillment; audiences are more accustomed to such an expectation. Unlike the end of a character’s lifetime, the end of a narrative provides a way to tie events together. Like the earlier Hainish works, *The Dispossessed* utilizes a prophecy appearing as a return to the beginning. Only at the end of the novel, in the middle of Shevek's lifetime, does the audience hear the prediction: “Like Tirin's play, only backwards. I'm going to subvert the
archists” (377). Readers who paid attention when the play appeared earlier know what Shevek does not by means of the reversed structure: he succeeds in changing the anarchist world. In this case, it allows the readers to receive their sense of fulfillment. The end complements the rest of the story.

The structure of this narrative also supports another work by Le Guin. Bittner notes, “Orsinian Tales… has the same organic structure that The Dispossessed has” (131). The arrangement of stories in this collection warrants Bittner to quote the first and last lines of T. S. Eliot’s “East Coker”: “In my beginning is my end” and “in my end is my beginning.” Le Guin’s novel came out a year after Thomas Pynchon’s Gravity’s Rainbow, which also features a conclusion that arcs back to the beginning. Though circular plots can be as determined as linear plots, Le Guin uses this structure to offset the powerful influence of a narrative’s end. A narrative ouroboros similarly develops in Le Guin’s 1996 collection of short stories Unlocking the Air, written over twenty years after The Dispossessed and Orsinian Tales. In the title story, one character mocks, “you know that in the fairy tale, after it says that they lived happily ever after, there is no after” (136). Instead of the classic fairy-tale ending, Le Guin’s last lines reverse the traditional expectation: “keys being shaken, unlocking the air, once upon a time” (139). The closing phrase steals what should have been the opening lines, a move linking beginning and ending. Unlocking the Air, Orsinian Tales, as well as The Dispossessed all structurally act out Eliot’s poetic statements.

Shevek had little chance of breaking this ouroboros structure, considering the words of the long-dead, but ever-present character Odo, who founded Annares’s worldview. This figure proselytizes a deeply deterministic perspective even after death. Her epitaph, for example, reads,
“To be whole is to be part; true voyage is return” (84). As Kermode observed with respect to eschatological beliefs such as those found in the Christian Bible, fixed temporalities are deeply engrained within human consciousness in such a way that the revelation of the end must come before the actual end. However, Odo’s words may have been intended to foreshadow less closure, as a later revision indicates. Odo reappears in “The Day Before the Revolution” from Le Guin’s 1975 collection of short stories, *The Wind’s Twelve Quarters*, written shortly after *The Dispossessed*: “If you wanted to come home you had to keep going on, that was what she meant when she wrote ‘True voyage is return’” (291). This update of Odo reveals how Le Guin’s circular narrative structures, the forms of anamnesis, were struggling against their own closed returns.

What Bittner claims of *Orsinian Tales* is equally true of *The Dispossessed*: "Le Guin's ordering of the tales guides us through the history of Orsinia so that we move forward only by circling back to the past" (32). The arrangement of chapters in *The Dispossessed* allows readers to move forward into the future only by circling back to the past. Shevek cryptically declares, “as surely as the future becomes the past, the past becomes the future” (89). Bittner would straighten out the riddle by drawing a circle: “The complementarity of etiology and teleology is the root of Le Guin's mode of experiencing time and historical vision. This vision embedded in a narrative time that is a marriage of historical time (*chronos*) and mythic time (*mythos*), illuminates the present moment, actuality” (xiii). Shevek’s two theories oppose one another like the concepts of time *chronos* and *mythos* but eventually synthesize into something resembling the novel itself. Narrative time’s stringent requirements bar any perfect depictions of real time, but Le Guin settles for the temporal appearance of *anamnesis* as an optimal way to dress traditional
determinism, as was strongly the case in *The Dispossessed*. The short-story sequel, “The Day After the Revolution,” does its best to open the *anamnesis*, as Odo’s promise to return becomes a promise “to keep going on.”

*Always Coming Home*

The 1985 novel *Always Coming Home* consists of little else but world-making. Le Guin packs more setting into this single novel than both the universes of the Hainish and Earthsea series manage to develop in a series of books. Jean-Paul Sartre’s term “antinovel” appropriately labels Le Guin’s project. Richard Erlich likewise has trouble labeling *Always Coming Home* a novel but reconciles by describing it as “a step toward the nonmasculinist novel” (232). A hodgepodge of texts including poems, songs, short stories, reports, essays, a theatrical play, maps, sketches, symbols, a glossary, and even the second chapter of an otherwise missing novel comprise the overall work. These creations are all literary artifacts of the fictitious Kesh people, a culture inhabiting a valley near the Pacific coast in the future. The novel opens with a note from the author, claiming to be translating something that “hasn’t yet been written” (xi). *Always Coming Home* is Le Guin’s utopic move away from SF and fantasy.

The first chapter of *Always Coming Home* contains a paradox in its title, “Towards an Archaeology of the Future” (3). The opening lines echo the archaeological beginning of *Rocannon’s World* that similarly linked past and future. Le Guin’s first novel associated the vocation of archaeology with writing:

In trying to tell the story of a man, an ordinary League scientist, who went on to such a nameless half-known world not many years ago, one feels like an archaologist amid millennial ruins, now struggling through choked tangles of leaf, flower, branch and vine
to the sudden bright geometry of a wheel or a polished cornerstone, and now entering some commonplace, sunlit doorway to find inside it the darkness, the impossible flicker of a flame, the glitter of a jewel, the half-glimpsed movement of a woman’s arm. *(Rocannon’s 7)*

The first chapter of *Always Coming Home* describes similar ruins—a granary rather than a wheel. The beginning lines of the chapter read, “How the patient scientist feels when the shapeless tussocks and vague ditches under the thistles and scrub begin to take shape and come clear: this was the outer rampart—this was the gateway—that was the granary!” (3). The act of writing fiction for Le Guin mimics how science reads the environment. After the author’s note, a poetic epigraph presents the imagery of a river: “In the fields by the river” (1). Jump forward to the glossary, a short poem closes the novel with the final line, “dancing by the river in the valley” (525). The imagery of a river at the beginning and ending, the same repetition used by James Joyce’s *Finnegans Wake*, turn the *sujet* into a river and the *fabula* into a valley.

Characters in *Always Coming Home* are greatly affected by its eclectic narrative form: “time and space are so muddled together that one is never sure whether they are talking about an era or an area” (153). English poet Philip Larkin popularized this word when describing the classic formula for a novel as consisting of “a beginning, a muddle, and an end” (qtd. in Hicks 50). *Always Coming Home* revels in an excess of muddle. The Archivist of Wakwaha stands between being a character in the story and its narrator and hints at the larger significance behind the world-making, antinovel-like style with a symbolic declaration: “A story has a beginning, a middle, and an end, Aristotle said, and nobody has proved him wrong yet; and that which had no beginning and no end but is all middle is neither story nor history. What is it, then? … Certainly the Valley doesn’t share those beginnings or those ends; but it seems to have none of its own. It is all middle” (163). Le Guin’s chant “all middle” characterizes the entire book, which maintains
the *in medias res* technique throughout. The text physically possesses a first word (the beginning) and a last word (the end). The various documents that it includes, however, are not geared towards any climactic conclusion. Although the most significant and largest narrative in the book depicts a main character and narrator named Stone Telling, her storyline tapers out of the novel in a less solidified way than her name suggests. The ending of Stone Telling’s story did not dictate the rest; rather, the *fabula* overshadows the *sujet*.

Due to the amount of *sideshadowing*, the term “antinovel” illuminates less than “antiplot,” in this case. However, one aberration from *sideshadowing* is the character Pandora, a possible stand-in for the author herself, though this character’s role seems more akin to a compiler. Though Chaucer’s *Canterbury Tales* were left unfinished, the Host’s prime plot collects seemingly improvised tales while providing a structure similar to the frame of *Always Coming Home*. Pandora guides the audience through the collection of texts with third-person narrative entries. As a plot device, she serves to foreshadow the inevitable last words, when she will “complete the pattern” (53). As if anticipating the end, Pandora’s periodic appearances provide consistency for her readers, even a degree of refuge. One of her entries tells readers to “rest here awhile, we have a long way yet to go” (339). In many ways, the scenes with Pandora are analogous to the scripts of the Kesh people’s largely unscripted theater: “Most Valley plays were vehicles for improvisation: a skeleton plot, a framework of the situation” (226). Pandora provides such a skeleton plot. The rest, like the improvisation of Keshian actors, serves as antiplot, following the more open temporality of *sideshadowing*.

Morson’s concept matches the Kesh ideology. One character named Gather, for instance, embodies *sideshadowing* and serves as Pandora’s counterpart. Gather is a historian who eschews
history because to him “chronology is an essentially artificial, almost an arbitrary arrangement of events” (169). Gather sees, “an alphabet as opposed to a sentence.” For Gather, historical determinism feels unnatural. He offers an analogy that prefers a less chronocentric version of history to one only containing anthropocentric chronologies. Pandora describes his quirky personality: “He doesn’t perceive time as a direction, let alone a progress, but as a landscape in which one may go any number of directions, or nowhere. He spatialises time; it is not an arrow, nor a river, but a house, the house he lives in” (171). This imagery defines *sideshadowing*. The closed end point delivered by Pandora, according to Gather’s reasoning, would metaphorically open into a three-dimensional space signaling its unbarred prospects. This image of time as a house or an entire valley does not resemble the typical plot paved toward an inevitable destination. Removing the telos leaves nothing for the audience to anticipate further down the road.

Le Guin’s corpus undermines the principles of foreshadowing in more ways than just making the literary device seem artificial. Implicit or explicit, foreshadowing proves unrealistic enough to appear comical. Early in Le Guin’s career, over twenty years before Gather vented his criticism against a holistically controlled design, Stefan Fabbre, a character in “A Week in the Country,” shouts, “determinism’s a farce” (108). Such narrative polemics appear frequently throughout Le Guin’s corpus, enhancing her stories’ realism. Le Guin understands that the “Chekhovian Gun” might be an appropriate rule of thumb when reading, but off the page is still a cold lead. Anton Chekhov strongly advised authors to avoid gratuity: “Remove everything that has no relevance to the story. If you say in the first chapter that there is a rifle hanging on the wall, in the second or third chapter it absolutely must go off. If it's not going to be fired, it
shouldn't be hanging there” (qtd. in Bill 79). Le Guin seeks to recapture the most defining and
most overlooked characteristic of reality: uncertainty. Stefan continues, “I can tell you what it is,
it’s an apple seed. But can I tell you that an apple tree will grow from it? No! Because there’s no
freedom, we think there’s a law. But there is no law. There’s growth and death, delight and
terror, an abyss, the rest we invent” (108). In other words, apple seeds do not necessarily
foreshadow apple trees.¹ Le Guin reiterates that determined narratological systems confine her as
an author. Nevertheless, she continually challenges those expectations.

Despite the excess of open temporalities in *Always Coming Home*, the character Pandora
was needed to bring about closure and coherence. “Some Thoughts on Narrative,” written part
way through Le Guin’s career, raises the expectations of storytelling to an impossible level: “A
totally factual narrative, were there such a thing, would be passive: a mirror reflecting all without
distortion” (45). However, narrative time can never perfectly depict real time. In *Always Coming
Home*, Pandora argues that the “civilized human mind’s relation” to the messy wilderness of real
time is “imprecise, fortuitous, and full of risk” (241). In many ways, narrative time results from
the encounter of real time with various human prejudices. Le Guin states in “Some Thoughts on
Narrative” that those prejudices involve “mistaking and distorting and omitting data through
wishful thinking, ignorance, laziness, and haste” (39). To improve the reflection of real time, the
walls of determinism need to be razed lest they damage something as metaphorical as one of Le
Guin’s temporally open landscapes or features as literal as the sound of waves crashing or clocks
ticking.

¹ Barbara Goff notes how the Garden of Adonis was a trope in ancient Greece that implied something “trivial and
wasteful” (58). Erasmus’s *Adagia* affirms this stereotype. Le Guin’s garden ameliorates this imagery.
Considering how most authors are dependent on deterministic archetypes, Morson notes that the presence of *sideshadowing* in a story serves to indicate resistance against demands for structure and closure. Le Guin’s celebration of various facets of *sideshadowing* evinces her struggles against such tidiness. As many of her nature analogies suggest, Le Guin’s narrative method seeks to challenge the paradigmatic temporalities. Le Guin drops the neat forms to reveal her own less domesticated version of time, or, as Pandora symbolically points out, “Look how messy this wilderness is” (239). As the character Gather criticizes the past for being retroactively chronologized like an alphabet, Pandora considers the present moment as just a flashing of letters, numbers, or other various signs. Pandora writes,

Casting a shadow across the page of this notebook in the weak sunshine of 3:30 of a February afternoon in Northern California. When I close the book and go, the shadow will not be on the page, though I have drawn a line around it; only the pencil line will be on the page. The shadow will be then on the dead-leaf-thick messy ground … and the shadow will move lawfully and with great majesty as the earth turns. (241).

Pandora pictures the transitory nature of life by outlining a shadow on the page, a symbol for the project of narrative. She points out the futility of capturing the shadow and its likeness, as the shadow continually changes its form.

The title of *Always Coming Home* comes from the last lines from a poem in it, “Initiation Song from the Finders Lodge,” which read, “Return with us, return to us, / be always coming home” (404). Over a decade earlier, the same concept appeared in Le Guin’s sequel to *A Wizard of Earthsea*. The second novel in the Earthsea series, *The Tombs of Atuan*, does not use *The Deeds of Ged* as a framing device for its conclusion, unlike its predecessor and successor in the series. Instead, the theme of coming home wraps around the sequel. The opening lines read, “Come home, Tenar! Come home!” (175). The last lines of the novel fulfill the introduction’s
imperative: “Gravely she walked beside him up the white streets of Havnor, holding his hand, like a child coming home” (300). The symbol appears in other novels by Le Guin, but always stands for narrative determinism.

*The Telling*

In the 2000 novel *The Telling*, an observer of the Ekumen named Sutty Dass goes to the world Aka, where a capitalist government called the Corporation “essentially erased their history” (11). Sully contemplates their absence of culture, “I wanted to be a historian. How can I, on a world that’s destroyed its history?” (21). Sutty rebukes one official, “You threw out your own history like garbage” (180). Sutty uses similar spacetime rhetoric to describe how Aka devalues the past as decadent: “they would be free of tradition, custom, and history, [and] all old habits, ways, modes, manners, ideas, pieties were sources of pestilence, rotten corpses to be burned or buried. The writing that had preserved them was to be erased” (53). With a similar disdain for the past, Ernst Bloch writes, “What Has Been overwhelms what is approaching, the collection of things that have become totally obstructs the categories Future, Front, Novum. Thus the utopian principle could not achieve a breakthrough” (8). Le Guin’s novel attempts this utopic wipe of the cultural slate only to discover a dystopic failure to produce any of Bloch’s categories of novelty without historical structures. *The Telling* shows how the past is necessary for a society to achieve real progress.

The enormity of the past initially overwhelms characters in the novel. An Ekumen representative named Tong Ov tells Sutty, “Erasure is an art we must learn from the Akans. Seriously! I mean it. The Hainish want to hang on to everything. The Akans want to throw
everything away. Maybe there’s a middle way?” (23). The Ekumen, also referred to as the Hainish, learn the value of retention since first appearing as the League in *Rocannon’s World*, in which Rocannon believes, “The League’s policy was too narrow; it led to too much waste” (29). For Tong in *The Telling*, the policy has become too wide. The Ekumen understand human nature enough to stop expecting any new discoveries: “To fall heir to a history of three million years was to find little in human behavior or invention that could be called unusual. Though the Hainish bore it lightly, it was a burden on their various descendants to know that they would have a hard time finding a new thing, even an imaginary new thing, under any sun” (12-13). The Ekumen use their knowledge to draw larger historical narratives: “But the Historians study the way knowledge should be taught, so that what people learn is genuine knowledge, not a bit here and a bit there that don’t fit together. There’s a Hainish parable of the Mirror. If the glass is whole, it reflects the whole world, but broken, it shows only fragments, and cuts the hand that holds it” (214). This ethos causes the Ekumen to choose the disadvantages of historical determinism, a contrived sense of time, over the disadvantages of temporal indeterminacy.

The philosophy of time practiced on Aka challenges the grand narratives of history used by the Ekumen. An alphabet symbolizes the indeterminacy of history in *The Telling* like in *Always Coming Home* as it challenges historical determinism. Although writing and poetry are banned on Aka, an alphabet remains in use for short propaganda slogans. Sutty notes, “everything was an alphabet…the ideograms were banned, illegal, unused, forgotten” (192). Most Akans have sacrificed ideas of change to preserve their social order. However, a subversive group living in the mountains hold a different philosophy. These Akans retain the use of ideograms and writing to practice an oral tradition called the Telling that allows them to
remember history and create new art, though it comes at the price of lacking any definitive unifying social structure. Alfred North Whitehead notes that true social progress seeks “to preserve order amid change, and to preserve change amid order” (339). By the end of The Telling, Sutty hopes to unite these two disparate philosophies on Aka to achieve the notion of progress envisioned by Whitehead.

Sutty explores the alternative temporality of the Telling that challenges historical determinism. This older temporal orientation on the planet lacks teleological bias, “Eternity not an endpoint but a continuity” (89). However, the Corporation on Aka begin to change the planet’s goals “From an active homeostatic balance they had turned it to an active forward-thrusting imbalance” (104). Sutty mocks the teleological change as a disillusionment she calls the March to the Stars. She remarks, “They agreed to deny their entire culture and impoverish their lives for the ‘March to the Stars’—an artificial, theoretical goal—an imitation of societies they assumed to be superior merely because they were capable of space flight” (105). Sutty refers to the imperialism implicit in space colonialism only indirectly as, “The sad and ugly truths you’ll find at the end of the March to the Stars” (193). In Rocannon’s World, this truth was known only as the Starlord’s war, “at the end of years” (9). Like Rocannon’s earlier League and Sutty’s later Ekumen, the Akan Corporation exploits the benefits of historical determinism to organize their society around common goals. Sutty perceives this temporality of conquest as artificial and lacking real progress. Her realization allows her to explore alternatives more closely.

Sutty studies the Telling and how it challenges the Corporation’s stagnant temporality resulting from the Akans ahistorical philosophy. Sutty explains, “They told. They retold, read,
recited, discussed, explained, and invented. The infinite matter of their talk was not fixed and could not be defined” (107). The Telling allows the potential for novelty. In opposition to the Corporation’s philosophy, the keepers of the Telling also “refused progress, hid from it, knew nothing of the March to the Stars” (150). The Telling has its own slogans, reversing those of the Corporation to achieve true change: “Go back to go forward, fail to succeed. Go down to go upward” (152). Amidst this nonteleological system capable of producing art, the Telling nevertheless represents historical determinism, if only the positive aspects of it. Sutty is told, “history and the Telling are the same…They’re ways of holding and keeping things sacred” (175). Elyed tells Sutty, “Without the telling, we don’t have anything at all. The moment goes by like the water of the river. We’d tumble and spin and be helpless if we tried to live in the moment…Our minds need to tell, need the telling. To hold. The past has passed, and there’s nothing in the future to catch hold of. The future is nothing yet. How could anybody live there?” (124). The Telling presents a type of compatibilism that allows novelty to emerge from indeterminate structures while simultaneously providing stability from the past for the future.

A written archive of the Telling reinforces how the Akan’s temporal alternative challenges historical determinism at the price of leaving practitioners to feel lost in time. The keepers of the Telling take Sutty to caves filled with books. This library is kept secret from the Corporation, who seek to destroy “The Lap of Silong…the last library” (179). Sutty marvels at the collection that “nobody in one lifetime could read” (172). She wishes to stay forever and “live in the forest of words” (186). Sutty sees the value of indeterminacy that earlier caused her to feel anxiety. Before arriving on Aka, she memorizes lines of poetry that symbolize the world itself, “no footprints in the dust behind us” (28). After comparing oral traditions to writing, Sutty
is told of the limitations of the Telling, “The spoken words just went out like the wind, and you always had to say them all over again to keep them alive. But the writing stayed, and you could learn to make it better. More beautiful” (195). Following Sutty’s lesson in compatibilism, the final lines of the novel combine two previously used examples of imagery, “The money burned to ashes, the gold thrown away. Footsteps on the air” (231). Alluding to the possible collapse of the Corporation’s capitalist state, Sutty’s rhetoric reveals her temporal anxiety about the future has been eased.

The Other Wind

Following the fourth installment of the Earthsea series, the 1990 novel Tehanu, and the fifth installment, Four Ways to Forgiveness, the 2001 novel The Other Wind concludes the fantasy series. Ged, Tenar, Lebannen, Tehanu, the dragon Orm Irien, and other characters from previous installments return to help the wizard Alder, whose dreams reveal that the underworld has become restless. The dead seek to return to the cycles of reincarnation, creating the novel’s theme of choosing continuity over completion. In this spirit and contrary to previous novels in the series, the space-time rhetoric of The Other Wind obeys questions a deterministic sense of wholeness. The novel allegorizes how narrative time lacks realism when conforming to traditional structures that support limited amounts of content.

Formulating the content into a finite presentation represents the distinction between fabula and sujet. The former term invokes the raw, unstructured story material, while the latter refers to the scenes as they are sequenced and presented to the reader—complete with beginning, middle, and end. Though the distinction originally underscored arrangement, the move from
fabula to sujet additionally implies a reduction of content. The sujet resembles Theseus’s short thread within the fabula of Daedalus’s labyrinth—with the stipulation that the maze be infinite. One character appropriately observes in Le Guin’s “A Man of the People” from Four Ways to Forgiveness, “What you select from, in order to tell your story, is nothing less than everything” (116). Despite this limitless promise, an author’s imagination filtrates the fabula to produce a sujet. The term fabula simultaneously connotes “what really happened,” which ultimately exists only as what Peter Brooks calls the reader’s “mental construction” (130). Regardless of whose head the fabula resides in, the sujet is far easier to locate. It always remains from cover to cover on the page.

The fabula may represent ineffable material, but the events articulated into the sujet tend to be fleshed out only if they are relevant to the conclusion of the narrative. At the end of The Other Wind, one storytelling character asks, “How can I tell you everything?” (210). She receives the answer: “Tell it backward.” Reversing the events would allow everything to be condensed into something considerate of a final point. In this case, the mythological analogy still applies, where Theseus follows the thread leading him out of the labyrinth—from dead Minotaur to an escape from the maze. This path represents traditional narrative time because Theseus’s exit from the maze was also his entry point. Like this Greek figure, an author first considers the end of a story, which then influences where the beginning is placed and what the middle contains. In short, the tail wags the dog.

One locale in the Earthsea series that retains its potential despite being revisited again and again is the Immanent Grove on Roke Island, a setting Le Guin uses in nearly every Earthsea work. By means of its magical nature, this axis mundi warps narrative time as if it were the
center of a clock. To those who enter the Immanent Grove, space appears indeterminate. The narrator of the *The Farthest Shores*, notes that “There is no place for it on maps” (310). Nearly thirty years later in her corpus, the trees are described in *The Other Wind*, “You can walk and walk in their shadow, in their light, and never come to the end of them” (214). In spatial terms, the elusive grove seems larger on the inside than it appears on the outside. Time also skews, making it likewise difficult to measure. One character in the short story “Dragonfly,” from the fifth installment, claims, “Time passed as always in the Grove, not passing at all it seemed, yet gone, the day gone quietly by in a few long breaths, a quivering of leaves, a bird singing far off and another answering it from even farther” (262). This location acts independently of the usual laws of physics. The grove moreover mystifies narrative boundaries by measuring time imprecisely in long breaths and the rustling of leaves. One bird singing and another’s retort loosely frame the days spent in this temporally aberrant space-time.

German narratologists distinguished *erzähltze Zeit*, the real time of an event, from *Erzählzeit*, the far more arbitrary organization of narrative time. Gérard Genette considers the former a “true time” and the latter a “false time” to be treated as a “pseudotime” (34). Within the Earthsea's Immanent Grove, characters almost become aware of this pseudotime. They notice narrative time's reduction of real time. As the true *erzähltze Zeit* fails to correspond to the *Erzählzeit*, characters in the grove experience what Genette calls an ellipsis of narrative time, or “a leap forward without any return” (43). This unnatural temporal device necessitates an extreme acceleration in time, and some characters seem in on the secret as days instantly flash by them. Ellipses occur elsewhere in the Earthsea series. However, within this magical space, characters explicitly complain about experiencing gaps in time.
Wholeness comprises a full quantity of something delineated by arbitrary boundaries. The idea of wholeness is therefore a paradox. Le Guin deconstructs this contradiction in *The Other Wind*. She fashions a *paysage moralisé*, a highly symbolic landscape and reveals the notion of wholeness to be both a delusion and a detriment to those involved. Serving as a symbol of narrative time, Ged’s apology at the end of *The Other Wind* confesses: “We broke the world to make it whole” (211). Similar to the way wizards in Earthsea literally break up the world by constructing spatial barriers, narratives implement time constraints that distort events. In Earthsea’s cosmology, the earliest mages cast powerful spells that magically reframed the relationship of life and death. Reincarnation was the norm until these mages, fearing the cycle of death and rebirth, walled off a retreat where they could live forever as spirits in a place free from the rules of time—like the Immanent Grove’s perverted temporality.

Unlike the natural Immanent Grove, however, this artificial paradise for the undead was not meant to last. Azver the Patterner explains, “as the wall was built and the spell laid, the wind ceased to blow, within the wall. The sea withdrew. The springs cease to run. The mountains of sunshine became the mountains of night” (195). The walls made a wasteland out of the very ecology which they were attempting to maintain—the same being true for narratives. These dry lands, as they became known, function similar to the ancient Greek underworld of Hades. The task in *The Other Wind* is to undo these spells and purge the dry lands by harrowing hell. Tenar sums up the plot: “We built a false wall. It must be unbuilt” (197). This wall interferes with the landscape and distorts it much like *Erzählzeit* does to *erzählzeit*, or a *sujet* does to its *fabula*. Compared with the realistic valley in *Always Coming Home*, the fictitious dry lands in the Earthsea series serve as both an ecological and narratological warning.
Obtrusive walls recur throughout Le Guin’s corpus. Scholars have had no difficulty connecting Le Guin’s theme to the Berlin Wall (1961-1989). Stefan Fabbre, the character from *Orsinian Tales* who early in Le Guin’s career criticizes foreshadowing and advocates for *sideshadowing*, appropriately dreams that “walls were falling down around him” (109). These walls again symbolize the deterministic forces which narrow the possibilities within a story.

Stefan feels distorted by these constraints and unconsciously desired their removal, much like the wizards in *The Other Wind*. Another character from *Orsinian Tales* in the short story “An Die Musik,” Ladislas Gaye, hears music that “breaks down all the shelters, the houses men build for themselves, that they may see the sky” (145). Symbolic walls play prominent roles in *The Dispossessed* and *The Lathe of Heaven* as well. Le Guin’s characters frequently suffer psychologically from the constraints of narrative time, *The Lathe of Heaven* serving as a unique exception. Le Guin subverts the temporality of her Earthsea series to cure its characters of the temporal farce that sickens them. In this regard, both form and content work together to challenge determinism and to break each other out of the box.

Bittner affirms that such harmonization is a common feature throughout Le Guin’s corpus: “Convinced that the worlds we experience, from subatomic to cosmic levels, whether materials or imaginative, are all integrated parts of an ordered whole, a continuous process, Le Guin has from the beginning of her career tried to fashion fictional techniques to explore and to understand that order” (33). In the fifth installment of the Earthsea series, *Dragonfly* is told, “Everything not in its own place does harm. A note sung, however well sung, wrecks the tune it isn't part of” (235). Whether a larger (musical) order exists or not, it must be presented as such to the audience. This analogy allows for a simplified deconstruction of the concept: if tunes
are, like stories, artificial constructs in a reality of only noise and silence, then there can be no whole to disrupt.

*Annals of the Western Shore*

Each book in Le Guin’s young-adult trilogy *Annals of the Western Shore* features different characters with different powers. The trilogy follows the lives of Gry and Orrec in the 2004 novel *Gifts*, Memer in the 2006 novel *Voices*, and Gavir in the 2007 novel *Powers*, though all four characters by the end of the trilogy escape from their occupied homelands and unite in friendship. With less subtlety than ever, Le Guin returns to several themes involving historical determinism that had been previously established in her corpus, including the romanticism of biography and the teleology of prophecy. Appearing in its most simplified form, Le Guin’s space-time rhetoric in *Annals of the Western Shore* revises the previously established tone of determinism with new rhetoric of indeterminacy, specifically by questioning the fulfillment of a life and the specificity of prophecy.

Despite the differences between narrative time and reality, *Gifts* emphasizes how many cannot help but view their lives as stories. This philosophy presents a teleological problem, which Le Guin addresses in the novel when the narrator concedes, “To see that your life is a story while you’re in the middle of living it may be a key to living it well. It’s unwise, though, to think you know how it’s going to go, or how it’s going to end. That’s to be known only when it’s over” (15). This warning against prematurely imagining an autobiography echoes Le Guin’s sentiments in her essay “Some Thoughts on Narrative,” cautioning individuals against letting traditional narrative structure distort their perceptions of reality. Le Guin asks, “If the ghostwriter
in my head writing The Story of My Life is forgetful, careless, mendacious, a hack who doesn’t care what happens so long as it makes some kind of story, why don’t I get punished?” (39). Le Guin bitterly answers her own rhetorical question, implying that consequences would ensue: “Radical errors in interpreting and reacting to the environment aren’t let off lightly, in either the species or the individual.” When literary characters participate in narratives attempting accurate documentation of time, they also become subject to these realistic consequences.

Antedating the novel *Gifts*, Le Guin’s 1994 short story “Solitude” summarizes the fault of romanticizing a life story. This story belongs loosely to the Hainish series but greatly contributes to an understanding of Le Guin’s corpus. One introspective character named Serenity explains, “When my daughter was born, that was my heart’s desire and the fulfillment of my soul. When my son was born, last year, I knew there is no fulfillment” (151). Serenity understands the notion of fulfillment to be less of an innate quality of time, and more a social construction—and a potentially gendered one at that. On the planet Eleven-Soro, the military drafts males reaching a certain age, taking them forever from their families. Fearing this loss, “it wasn’t an uncommon thing” for a mother to drown a newborn male “because she didn't want to bring up a boy and send him away” (125). Having a male child herself clears Serenity’s misconception that time inevitably yields a sense of closure. Unfortunately, counterfeit endings produce counterfeit fulfillments.

In *Powers*, the third novel of the trilogy, the fulfillment of prophecy participates in the pattern established when it was envisioned, even as it does for Rocannon in Le Guin’s first novel. Compared to the closed prophecy of *Rocannon’s World*, however, an open prophecy appears in the final installment of Le Guin’s *Annals of the Western Shore* by allowing more
freedom for the outcome. In *Powers*, Gavir miraculously has the ability to “remember things that are going to happen” (2). By remembering the future, Gavir knows that he will one day travel by boat into an ocean which he has never seen. Several hundred pages later, Gavir realizes, “I had come round to the earliest and oldest of all my rememberings” (377). The open view of the ocean stretches before him. Contrary to the usual closed events glimpsed from the future, Gavir’s prophecy concluded with an open landscape which, in Le Guinian fashion, implicitly represents narrative time, similar to imagery from Frank Herbert’s *Dune*. Gavir's prophecy is not necessarily a destined event so much as it is the potential for one. This more open prediction, nevertheless, frames the narrative by being mentioned near the beginning and then being fulfilled near the end in the same way closed prophecies are employed. This repetition reveals the unavoidable limitation that comes from telling a story containing a prophecy: the prophecy complements the plot.

*Lavinia*

In the 2008 *Lavinia*, destiny does not allow participation, only observation. However, even if destiny is open to participation, as in *Powers*, the foreknowledge of that open destiny ironically causes it to close. The epitome of a closed prophetic narrative in Le Guin’s corpus is *Lavinia*. This parallel novel participates in the story world of Virgil’s *Aeneid*. In a way, Le Guin’s narrative opens the temporality of the *Aeneid* by expanding Virgil’s setting and further developing his characters—just as fan fiction presents an interesting contradiction in relation to Morson’s concept of *sideshadowing*. Novels like Le Guin’s *Lavinia* that parallel another source
add more content to the original story worlds but remain strictly confined within the parameters or walls built by their predecessors, in this case, by Virgil. This Roman has nearly as much to say in the ending of Le Guin’s novel as she does. Other authors have been enhancing this minor character from Virgil’s *Aeneid* since the fifteenth century, as when the Italian humanist Maffeo Vegio added a thirteenth book to the epic in which Lavinia marries the title character. Vegio therefore also deserves credit for Le Guin’s ending.

The title character hints at being aware of this fixed track that she seems to be set on while the battle between free will and fate plays out around her on a narratological level:

“Everything happened as if it had been planned and rehearsed a hundred times, everything happened as it should and must” (164). Unlike the ideology of Le Guin’s Kesh culture in *Always Coming Home*, the character Lavinia (like the novel *Lavinia*) finally embraces the notion of destiny, believing “the three old women, the Fates, spun out the measured thread of what was to be” (212). The presence of this mythic element alludes to Le Guin’s role as an author, who refines time much in the same way that these mythical women metaphorically cut their threads. Both make cuts that establish beginnings and endings as well as measure out the middle. Lavinia chooses to trust her destined thread despite miraculously meeting the ghost of Virgil in the woods and learning that he has fabricated her biography by means of amending time. Ovid’s *Metamorphoses* mentions that time devours all things. Narrative, on the other hand, devours time. From *Rocannon’s World* and other Hainish cycle-novels from the 1960s to *Lavinia*, Le Guin’s novels struggle against deterministic plots reminiscent of prophecy, ultimately to return full circle back to the original prediction.
The 1984 publication *The Wild Shore* is Kim Stanley Robinson’s first novel and the first of the Three Californias trilogy, also known as the Orange County trilogy. The novel takes place in 2047 after neutron bombs from the U.S.S.R. destroy most major American cities. Survivors live in small primitive communities. On the west coast of the country, Japanese submarines enforce the U.N. quarantine prohibiting American technological development, consequences of twenty-first century American imperialism. Henry Fletcher narrates the novel in first person and tries to piece together the fragmented history of America. He eventually breaks free of historical determinism only by demythologizing the past. The first scene of the novel, for example, depicts Henry and his friends digging up an old coffin to melt the silver handles; however, the casket, buried in 1984, contained plastic handles, rather than silver. Through writing his account, Henry constructs a larger world view that attempts to distinguish folk tales from real events. The final sentence of the novel promises to continue this project of documenting life as it happens: “I’ll stay right here and fill another book” (377).

Through Henry and his mentor Tom Barnard, the novel presents space-time rhetoric in the form of a recurring conceit. Phallogocentric imagery reinforces the novel’s themes of imperial oppression. Tom visualizes time, impressing upon Henry that “History is a wedge in a crack, boy, and we’re the wood. We’re the wood right under the wedge, you understand, boy?” (70). Tom’s metaphor emphasizes the past as something physically connected to the present, as if history looms over the present as a force of oppression. After considering this metaphor, Henry
sees “the signs of a giant past” and immediately feels unimportant: “Ruins like these told us how little our lives were, and I hated them” (120). Henry argues with his oppressors face-to-face when Japanese submarine patrols capture and interrogate him. He shouts at the captain, “You are holding us back” (138). The captain refers to America’s imperialistic past: “But from what? That is the part that you have not experienced.” After escaping, Henry later reads a novel within the novel that expands his world-view, An American Around the World. It describes how hegemonies around the world vie for dominance. For Henry, the novel draws parallels with the Mayor of San Diego, who operates imperialistically in his attempts to rebuild America.

When Henry reimagines Tom’s space-time rhetoric, he adjusts it significantly: “A wedge in a crack. I understood a little better what Tom had meant, but it seemed to me then that we were the wedges, stuck so far in history that we couldn’t move but one way when we were struck by events. How I wished we could be clear and free to move where we would!” (73). Henry’s reasoning reverses the metaphor, turning history from wedge to wood. Making people the wedge, Henry’s version of this same space-time rhetoric still emphasizes a lack of agency, but starts the logical process of finding a solution. From Tom’s quick remark, Henry articulates the deterministic problem of being “stuck” to history and “struck” by events. The indeterministic solution is therefore to be “clear and free to move.” At the end of the novel, after de-romanticizing the past, Henry completes the metaphorical syllogism began by Tom’s imagery: “I recalled what the old man had said there, about how we were wedged in a crack by history so our choices were squeezed down; but now I knew that compared to the way the past is wedged in there, the present is as free as the open air” (339). Imagery of indeterminate possibility replaces the initial rhetoric of historical determinism.
Henry’s amended space-time rhetoric parallels the metaphors of Paul Atreides in Frank Herbert’s *Dune*, which also uses natural imagery opening into more spacious scenery to deconstruct historical determinism. Robinson additionally borrows natural motifs from other SF authors to symbolize space-time. Like the Time Traveler’s journey in *The Time Machine*, *The Wild Shore* ends on a beach. Henry concludes the novel by equating time with the tide, a drastically different type of space-time rhetoric. While the extracted wedge provided freedom through human agency, the tide signifies to Henry the benefits of historical determinism. He manages to find in the monotonous waves a sense of progress the produces novelty:

I’ll tell you what I do know: the tide is out, and the waves roll up the rivermouth. At first it looks like each wave is pushing the whole flow of the river inland, because all the visible movement is in that direction. Little trailers of the wave roll up the bank, break over the hard sand and add their bit to the flat’s stippled cross-hatching. For a time it looks like the wave will push upriver all the way around the bend. But underneath its white jumble the river has been flowing out to sea all the while, and finally the wave stalls on top of this surge, breaks into a confused chop, and suddenly the entire disturbance is being borne out to sea—until it’s swept under the next incoming wave, and the movement turns upriver again. Each wave is a different size, and meets a different resistance, as a result there is an infinite variety of rippling, breaking, chopping, gliding… The pattern is never once the same. (377)

Henry concludes his narration describing the pattern of the tide as a symbol for the functionality of the past through the use of templates. Such patterns assist both the individual act of writing and the social act of constructing historical narratives. A template, like each wave, can refer to the past to provide a structure while simultaneously offering the potential for something with new dimensions to form. In continuing to write books, Henry in this spirit claims he will be “out hunting the new.”
The 1984 novel *Icehenge*, Robinson’s first SF novel, continues the exploration of the idea of historical determinism. The novel contains the first-person accounts of three major characters trying to trace the origins of a large monument on Pluto. This Stonehenge-shaped site is made of ice—granting the novel its title—and many characters become obsessed with unraveling this monument’s mysteries, including its Sanskrit carving that simply reads, “to push further out.” Each of the novel’s three parts features a different narrator, separated by hundreds of years.

Emma Weil narrates the first account and advances themes from *The Wild Shore*, including the motif of characters searching for patterns. Contradicting Henry’s interpretation of the tides, Weil confesses her skepticism, “seeing patterns is easy in such a heavily patterned environment” (11). She is also doubtful of interstellar exploration, using it as an analogy for historical determinism. Space exploration is a recurrent topic throughout Robinson’s corpus, and conversations about historical determinism frequently advance using this metaphor, as if Robinson’s opus reacts to Emma’s initial claim. Beginning the debate, Emma writes, “I don’t agree that it is inevitable that humans will leave the solar system… Nothing is inevitable, there is no such thing as historical determinism” (40). This hyperbole prompts reactions from many other characters in the novel who read Emma’s diary.

The second narrator in *Icehenge* similarly echoes Emma’s skepticism of determinism. Hjalmar Nederland, like Emma, eschews determinism, adding to the conversation an ahistorical alternative, or more specifically, presentism. He claims, “The present is the whole of reality” (183). Unlike the teleological expectations of determinism, presentism embodies an ateleological
temporality lacking any arbitrary conclusion. However, Hjalmar finds presentism difficult to balance with his love for Emma. He adds, “To love the past is to become fully human.” Reflecting on her life only through her notebook, Hjalmar grows more obsessed with her words. His infatuation ironically becomes its own force of determinism acting upon his life. Hjalmar confesses, “I live with that notebook, and Emma Weil became part of my mind … each successive phrase was like a window into another person’s mind—like a new world” (117). Hjalmar’s complements Emma’s more significant account, as if to demonstrate how the past dictates the future and how determinism can philosophically conquer presentism.

Hjalmar offers space-time rhetoric to visualize how the past overtakes his ideas of presentism. After evoking imagery of an Icelandic glacial flood, Hjalmar discusses how memory in a similar fashion allows the past to supersede the present. Of his own memory, he complains,

> Events keep piling into it beyond its natural capacity, and it becomes packed tight. The chambers of the hippocampus and amygdala are overwhelmed. What remains of the distant past is jammed under the weight of subsequence, so that recollection is stressed, then disabled…Under the right pressure the past bursts into consciousness, as a string of images we have created—so we see not the past, but a part of ourselves. (137)

Like Tom’s wedge stuck in the wood in *The Wild Shore*, a phallocentric description of the past returns, adapted into the shape of a geyser-like recollection that “bursts” from “the right pressure.” As a result of this shift in imagery from wedge to geyser, the open air as a symbol for the present becomes stripped in *Icehenge* of the sense of freedom from the past that it represents in *The Wild Shore*. As symbols, the geyser is both more intrusive yet obscure than the tangible wedge. Christopher Palmer notes that Hjalmar’s rhetoric provides “an interesting geological image, because geology is usually transparent in Robinson. Geology is how a landscape exhibits its history and, so to speak, its experiences” (139). Palmer observes how later parts of the novel
obfuscate the earlier parts, summing up, “History can’t be conclusively recovered so that it might serve as a stimulus to future action… the overall narrative of Icehenge is shaped by the indeterminacy of memory and story” (141). Like in Robinson’s first novel, history appears questionable in Icehenge. For Hjalmar, the past that conquers the present is not necessarily an accurate one.

The third narrator in Icehenge, Edmond Doya, Hjalmar’s great-grandson, is arguably the most unreliable of the narrators in terms of naivety; however, his observations are often the most insightful. For example, Edmond acknowledges the inescapable effects from the past on his life regardless of its accuracy when he claims that, like Hjalmar before him, he is writing “the sequel to Emma Weil’s journal” (266). When Edmond discovers how much Emma and Hjalmar’s lives impact his own, he aptly complains, “There are so many influences on our lives that we don’t control.” In this same tone, Edmond ends the novel with symbolic rhetoric. The anaphora describes Edmond and the other two narrators: “We dream, we wake on a cold hillside, we pursue the dream again. In the beginning was the dream, and the work of disenchantment never ends” (287). For the narrators of Icehenge, determinism manifests itself as biased recollections of the past, perceived through a metaphorical window, as Hjalmar had done, or experienced through a dream, as Edmond had. However, neither perspective is perfectly accurate, as the past is always riddled by an enchanting myth. In this spirit, the mystery of the monument in Icehenge is never definitively solved.
The Memory of Whiteness

The 1985 novel *The Memory of Whiteness: A Scientific Romance* presents determinism in the shape of scientific and technological progress. Set in the distant year 3239, the novel centers around a composer named Johannes Wright. He uses musical inventions by the genius Arthur Holywelkin, a physicist who created star-like points of energy in space, thereby giving heat and light to otherwise cold and dark places in the colonized solar system. These “whitsuns” support a Manifest-Destiny type of rhetoric, allowing the narrator to boast, “the door to the solar system was unlocked” (38). This imagery is spatial as well as temporal. The future metaphorically becomes an unlocked door for civilization, correlating with descriptions of the past as an open window for Hjalmar in *Icehenge*. The overlap between these two references indicates how space-time can be treated as a property. In this case, doors and windows represent degrees of accessibility: the future is always obtainable, while the past for Robinson’s characters is barely observable.

Similar to the narrator of Wells’s *The Time Machine*, the novel dives into the physics of time, arguing that two forces exist simultaneously. Johannes cites another pioneering physicist: “Mauring herself said that it was the pressure of the two dimensions working against each other that caused change to occur in the other dimensions—that entropy was the work of their contrary action… Chronos overcoming Antichronos, but also grinding up the world in the attempt” (134). Holywelkin was able to add more metaphysical concepts like dreams and music to Mauring’s theories: “And Holywelkin! He said that when we dream, we are living in the fifth dimension, in the realm of Antichronos, and claimed that this explained the scrambled nature of our dreaming
consciousness, and the … frequency of precognitive dreams” (134). Holywelkin studies “Music based on physics” (56), discovering that time is like music: “the past will be returned to and the future has already been, not only once but infinitely, and in every possible combination of cause and effect… it has revealed to them all the possible events of life in the world” (315-16). The authority of Robinson’s savants validates the novel’s mystic ideas about space-time.

Despite this mathematical analogy of time to music, characters still struggle with temporal concepts of progress and periodization. Technological advances metaphorically accelerate time into “the age known as the Accelerando” (38). Specifically, Holywelkin’s innovations create a sense of destiny, which one character puts in narrative terms: “Humanity moves from one model of reality to the next; and often, as the anomalies accumulate, it is a genius who looks at the shaky structure of observation and theory, and lays a new foundation for us to build our stories on” (62). Holywelkin’s concept of a new foundation resembles what in *The Structure of Scientific Revolution* Thomas Kuhn calls a paradigm. In narrative terms, a paradigm could be regarded as genre. In this sense, Holywelkin’s scientific discoveries establish the genre as SF, though conventions appear from other genres such as utopia, historical narratives, alternative histories, and even settlement narratives. Holywelkin’s biography and journey to planets across the solar system contextualizes the main and more current action of the novel—as the monument in *Icehenge* similarly acts as ideological ballast to influence the writings of Emma Weil, which in turn influences the narrations of Hjalmar and Edmond.

Amidst conversations about progress and periodization, the dialogue in *The Memory of Whiteness* impresses that time is determined. Zervan, a cult member of a secret society, attempts to convince an orchestra conductor named Johannes of the fixed nature of time and reveals the
existence of his ancient group of determinists called the Greys: “Bruno, Bacon, Pierre Gassendi, Newton—all determinists, all Greys. Newtonian physics is deterministic. It is true that it fits into the larger framework of the probabilistic system of quantum mechanics. But quantum mechanics fits into the larger framework of Holywelkin physics; and Holywelkin physics is again deterministic. Do you understand?” (198). Zervan’s syllogism does not convince Johannes, who then asks, “So the world is determined?” (199). Zervan answers by assuring Johannes that for anyone who truly understood Holywelkin “nothing would be uncertain … and the future, like the past, would be present.” Despite the similar use of double negatives, Emma’s claim in Icehenge that nothing is inevitable directly contradicts Zervan’s claim in The Memory of Whiteness that nothing could be uncertain. Determinism is embraced by Zervan, eschewed by Emma.

Holywelkin’s technology supports determinism just as psychohistory does for Seldon in Isaac Asimov’s Foundation. Specifically, Zervan tells Johannes that the Greys use a machine to see the future. He claims, “we see all… The future, like the past, exists eternally” (199). Johannes refuses to believe his fate is preordained and argues, “So many things happen by chance, are random occurrences—” (199). Zervan interrupts, “To our perception… But glints move in the absolutely predictable mesh of the ten forms of change. When Holywelkin realized this he tried to deny it, to find a way out. God does play dice with the universe, he joked, desperately; for Einstein’s instinct was right” (199). Einstein’s space-time rhetoric famously criticized quantum indeterminacy. Zervan mixes this reference with the claustrophobic tone of Philip K. Dick to emphasize how deterministic time functions as a collective experience with no way out. The Greys uses the philosophy of determinism to enforce group solidarity. Specifically, they induce a false memory, making one drugged initiate believe he stands naked before the sun,
“around him all was white, pure white, pure white” (203). A memory of whiteness in the novel is therefore an ironic color-coded metaphor for indeterminacy. Beyond the Greys in *The Memory of Whiteness*, other groups of characters in Robinson’s later novels continue this color-coded conversation for historical and technological determinism, like the Greens in *Green Mars*.

*The Gold Coast*

The 1988 novel *The Gold Coast* is the second novel of Robinson’s Three Californias trilogy. The third-person narration follows a group of friends living in Orange County in 2027. The main character Jim McPherson writes his own historical record of California: “Orange County gave their people a slow, pastoral, feudal life, dreamlike in its disconnection from Europe, from history, from time… But then the United States declared war on Mexico… History returned” (224). Jim’s romanticized notion of war oversimplifies his chronologies. Through his perspective, he places Orange County as “the end of history, its purest product” (3). In contrast to the “slow, pastoral life” of the state’s past, the urbanization of Southern California in 2027 results in numerous fast-paced scenes for a total of 83 chapters. The novel opens with Jim and Abe Bernard nearly having an accident while “cruising through autopia” (1). Later in the novel, the death of their friend Lillian Keilbacher reveals the cost of the city’s pace. Despite Abe’s shock at seeing Lillian’s body, he makes note of how the traffic continues on: “he sees the turmoil of spectators and cars around” (299).

The speed of the city parallels the tempo of the novel. Abe had previously reacted against both when he attempts to freeze time between chapters. Chapter 30 ends, “Hold, time. Stop” (168). Chapter 31 begins, “But time, of course, does not stop” (169). Abe later tries again: “For
the second time that night Abe Bernard squeezes shut his eyes and wills the moment to stop, to stop while he and all his friends are happy, to stop, stop, stop, stop, stop” (172). In addition to the aposiopestic chapter break, the repetition creates a dramatic effect on the text, slowing its progress. Similar textual emphasis occurs when Jim, sitting at the movies, hears a loud voice shout, “THE PYRAMIDS … HAVE CONQUERED … TIME” (229). Robinson’s conspicuous choice of both capital letters and ellipses to separate subject, verb, and object emphasizes the statement on the page. As if to slow the reading even further, the narrator adds that the cry comes “between great sweeps of movie soundtrack romanticism.” This description links the ellipses in the text with romanticism, serving to critique Jim and Abe’s romantic reactions to the fast pace of modern life.

In another symbolic scene reflecting on ancient civilizations, Jim and his friends discuss what empires ruled Greece before the present time. After a litany of “And their parents,” repeated 137 times, the group understands the many different waves of Greek invasions as well as the immensity of “these time scales” (234). Confronted by such deep time, Jim accepts a postmodern ideology, proclaiming, “for postmodernism there is no past… Albert Camus, and then Athol Fugard, echoing Camus—both said that it was one’s job to be a witness to one’s times … Be a witness to what you see. Be a witness to the life you live. To the lives we live” (259-61). Jim turns to writing the account of his life like many other characters in Robinson’s early novels. Regarding this desire for autobiography, Brent Bellamy claims that in Robinson’s *The Gold Coast*,

the problems characters face seem to be historical ones, which is to say they are distinctly postmodern problems of being (un)able to grasp the present as history. Yet Robinson shows that while Jameson claims a waning of historicity for the cultural logic of late capitalism, meaning that we cannot collectively grasp History in the present, the
difficulty of this operation does not mean that History is not graspable—a fact McPherson bears out through his political, topographical history of Orange County. (423)

According to Bellamy, Jim “bears out” the moral of the novel, and the same could be said for what Henry does in *The Wild Shore* through his books and what the three narrators do in *Icehenge* with their journals.

Characters in Robinson’s novels who turn to writing frequently find authentication through reading what they write. For example, after rereading his historical accounts, Jim “sees not OC’s past but the last few weeks. His own past. Each painful step on the path that got him here” (384). Jim hopes that by understanding his past he will discover a means to control his future. Similar to Henry’s rhetoric watching the tide at the close of *The Wild Shore*, Jim hopes to build the future through patterned templates, but he is “struggling to find a new pattern, working with the same old materials” (376). He argues with the radio: “Yes, there must be an order established; nothing fetishistic, but just a certain pattern, symbolic of an internal coherence that is as yet undefined” (376). Putting books on a shelf, Jim asks himself, “Is the alphabet really a significant principle for ordering books? Let’s try putting them back arbitrarily, and see what comes of it. Make a new order” (376). In the final scene, Jim thinks about sharing his writing with one of his friends: “That’s as far as he can plan. That’s his plan” (389). Heading to his friend’s house, as if finally adapted to fast pace of the city, the final sentences promises, “Any minute he’ll be there.”
The 1990 novel *Pacific Edge* is the third novel of the Orange County trilogy. The novel’s main character Kevin Claiborne lives in Orange County, like Henry in *The Wild Shore* and Jim in *The Gold Coast*, though each novel depicts alternative versions of California’s future. Kevin lives in a utopia in 2065. Recording history helps him discover the value of personal narratives, as it had done for the other main characters of the trilogy. Kevin confesses,

> It felt good to tell it, in a way. Because it was his story, his and his alone, nobody else’s. And in telling it he gained a sort of control over it, a control he had never had when it happened. That was the value of telling one’s story, a value exactly the reverse of the value of the experience itself. What was valuable in the experience was that he had been out of control, living moment to moment with no plan, at the mercy of other people. What was valuable in the telling of the story was that he was in control, shaping the experience, deciding what it meant, putting other people in their proper place. The two values were complementary, they added up to something more than each alone could, something that … completed things. (255)

Kevin differs from Henry and Jim because, while parsing the value of writing more thoroughly than the others, he articulates a deeper belief in determinism. Despite “living moment to moment with no plan,” Kevin still believes he can find “completed things.” In the final scene of the novel, he chisels his initials in granite hoping to “leave his mark on the world … to cut something deep and permanent” (325). The granite medium of Kevin’s message speaks louder than what he etches.

Rhetoric from earlier novels in the trilogy appears in *Pacific Edge*, but almost more casually. Similar to how Jim romanticized Orange County, Kevin describes a beach he frequents as “cut off from the world, a place of its own” (191). Similar to how Henry used space-time rhetoric with the imagery of the rhythmic tide, Kevin sees, “Waves swept in at an angle, rushed
whitely toward them, retreated hissing, left bubbling wet sand. We do this once, it never happens again” (191). Kevin thinks within such sentimental clichés, while simultaneously fighting his own failures and heartbreaks. Echoing Hjalmar Nederland’s idea of how memory works like a geyser in *Icehenge*, Kevin exclaims early in the novel, “Deep inside him memories had stirred, memories of feelings he would have said were long forgotten, for he never thought of his past much, and if asked would have assumed it had all slipped away. And yet there it was, stirring inside him, ready at a moment’s notice to leap back out and take over his life” (13). At the close of the novel, Kevin still acts as a Byronic hero, proclaiming himself “the unhappiest person in the whole world” (326).

In *Pacific Edge*, the past can additionally “leap back out” and take over the text of the novel. As the narrator follows Kevin, the personal accounts of old Tom appear in italics. Tom appropriately writes in his journal, “There is no such thing as a pocket utopia” (60). Tom believes utopias without a complete history are paradoxical, completing the idea in another entry:

> What a cheat utopias are, no wonder people hate them. Engineer some fresh start, an island, a new continent, dispossess them, give them a new planet sure! So they don’t have to deal with our history... we look at them, in the same way we look at the pretty inside of a paperweight, snow drifting down, so what? ... we have to deal with history as it stands, no freer than a wedge in a crack. / Stuck in history like a wedge in a crack / With no way out and no way back— / Split the world! / Must redefine utopia. It isn’t the perfect end-product... Utopia is the process of making a better world, the name for one path history can take, a dynamic, tumultuous, agonizing process, with no end. Struggle forever. (95)

Tom’s critique contains many references, including the product-oriented creations of Thomas More’s seminal work *Utopia*, set on an ahistorical island, and Ursula K. Le Guin’s novel *The Dispossessed*, set on a planet orbiting Tau Ceti. Tom also evokes rhetoric from Robinson’s *The Wild Shore*, taking Henry’s version, rather than Tom’s inversion (each novel in the trilogy has a character named Tom). The analogy visualizes human agency in relation to historical
determinism as a wedge stuck in wood. Instead of removing the wedge, *Pacific Edge* drives it forward to “Split the world.”

Emphasizing the struggle of process over product dominates the conflict’s in other SF novels like the Mars trilogy, *2312*, and *Aurora*. In *Pacific Edge*, the idea appears as a near-plagiarism of Robinson’s dissertation on Philip K. Dick:

> Ever since More’s *Utopia*, which was set on an island, there has never been a major utopian work written in which there is a history that shows the development of the utopia out of contemporary, nonutopian times. Utopias do not develop; they are born like Athena, fully grown. They always have a separate history of their own, and they are begun out of whole cloth by social engineers, or by the lucky, wise, unconscious choices of some founding fathers. Two of the most significant twentieth century utopias, *Island* (1960) by Aldous Huxley and *The Dispossessed* (1974) by Ursula K. Le Guin, say it even in their titles. A utopia needs a new start. (44)

In *Pacific Edge*, Robinson swaps the classical reference to Athena in his dissertation for the trilogy’s previously established metaphor of the wedge in the wood. The novel also continues Robinson’s borrowed tradition of using titles that simultaneously stand for the setting of the action while also symbolizing character ideologies.

*Red Mars*

The 1992 novel *Red Mars* begins the Mars trilogy, Robinson’s *magnum opus*. Each of its three lengthy novels contains discourse about the philosophy of determinism in tandem with arguments about space conquest, frequently regarding terraforming the planet Mars. Two political groups embody the debate with color-coded distinctions, the Reds and the Greens. The Reds believe that the Martian landscape should be preserved, while the Greens argue that terraforming is inevitable, believing that the original decision “to go to Mars is like the first
phrase of a sentence” (37). For the Greens, terraforming Mars should be as determined as punctuating that sentence. Ursula K. Le Guin’s 1985 *Always Coming Home* had critiqued such syntactic determinism for its limitations. The historian named Gather prefers a less structured presentation of history as opposed to traditional chronology, or “an alphabet as opposed to a sentence” (169). Le Guin’s imagery represents an unstructured form of time by visualizing the past as an alphabet, in which logocentric sentences come only retroactively. Robinson’s metaphor of terraforming as a sentence loads the argument with teleological bias. Metaphors of determined time as a sentence present a restricted form of sequencing, as if they were smaller versions of the visual metaphor of determined time appearing as a book, inducted into SF by H. G. Wells.

Other traditional SF conventions appear prominently in *Red Mars* when the temporal philosophy of the Greens clashes with that of the Reds. Rather than terraforming the planet, they seek to preserve the raw Martian elements, or in Le Guinian terms, the whole alphabet. The Reds, nevertheless, recognize humankind’s powerful drive to use Earth as a template for other worlds. These settlers fear their efforts of conservation are unavailing, and the concern causes some Reds to question free will in the face of technological determinism. Arkady Bogdanov, one of the earliest settlers from a group known as the First Hundred, claims,

> History too has an inertia. In the four dimensions of spacetime, particles (or events) have directionality; mathematicians, trying to show this, draw what they call “world lines” on graphs … stretching through time: a cable the size of Earth itself, spiraling round the sun on a long curved course. That cable of tangled world lines is history … what kind of $\Delta v$ would it take to escape history, to escape an inertia that powerful, and carve a new course? (46)

Arkady’s space-time rhetoric combines the scientific concept of inertia with imagery of a planet-sized cable to embody determinism and the inevitability that Mars will be terraformed. The hope
against repeating the past becomes a counter force of equal power, which Arkady expresses as Δv, the abbreviation for Delta-velocity, or a change in speed. Robinson re-uses the reference to a Delta-v in later novels similarly as symbols for novelty.

Arkady’s imagery contains the subversion against historical determinism as much as it challenges the idea. He imagines with the image of a cable-like orbit the prospects of carving a new course. This imagery is interchangeable with Hari Seldon’s rhetoric in Asimov’s *Foundation*, who boasts, “The psychohistoric trend of a planet-full of people contains a huge inertia. To be changed it must be met with something possessing a similar inertia” (33). The “similar” inertia must counter the deterministic force of history, Arkady seeks to measure the force of velocity needed to counter historical determinism, but such a move would not be possible under scenarios of scientific determinism. Numerous concepts, such as a Clockwork universe and Laplace’s demon, exclude the possibility of any challenges to determinism. In comparison to the space-time rhetoric of the Greens, the law of gravity for the Reds functions in a way that resembles the rules of grammar for the Greens. In following through with their plan to terraform Mars, the Greens seek to finish a determined project, akin to writing a complete sentence. The Greens might perceive such a change in plan (or orbit) as erroneous as leaving behind a fragment sentence or starting to write a run-on sentence. For the Reds, on the other hand, the change stands for the unrestrained freedom of sovereignty on Mars.

Metaphors for human agency from Robinson’s past novels reappear in *Red Mars* and foreshadow one crucial event in the trilogy. Seeking the ultimate form of autonomy, a group of Reds decides to establish a secret colony. Hiroko Ai, the leader of these rogues, exclaims to Michel Duval, using a symbolic form of rhetoric, “we can never go back. We must go forward.
We must find our own way” (208). Edmond in Icehenge used a similar anaphora to offer different directional advice: “we dream, we wake on a cold hillside, we pursue the dream again” (287). Though they differ in orientation, Hiroko reinforces Edmond’s notion of time as a false binary of a forward/backward directionality. Although her rhetoric is initially deterministic, Hiroko nevertheless believes in the freedom to choose a new society. Hiroko adds emphasis with multiple possessive pronouns, “our own,” to establish whose “way” she seeks. Even after laying “a new foundation” in The Memory of Whiteness, Holywelkin sought a “way out” from the fixed principles of the universe—better stated in terms of escaping determinism—in a similar direction to how the breakaway group in Red Mars seeks to carve their “own way” through history.

Amidst the politics of terraforming, many characters in Red Mars seek Martian independence from Earth. Two of the First Hundred become crucial representatives of contrasting values. John Boone, the first American to walk on Mars, and Frank Chalmers, the current leader of Americans on Mars, are the Martian analog of early America’s republican Jefferson and federalist Adams, respectively. John is ready to forget Earth’s history altogether because “history was like some vast thing that was always over the tight horizon” (256). John seeks a future for Mars that is independent from the tyrannical influence of the past, whereas Frank clings desperately to the past. At one point in the novel, Frank quotes Nietzsche: “The individual is, in his future and his past, a piece of fate… To say to him ‘change yourself’ means to demand that everything should change, even in the past” (414). Frank ultimately reasons, “they were their pasts, they had to be or they were nothing at all, and whatever they felt or thought or said in the present was nothing more than an echo of the past” (420). Frank’s conceptualization of the past as a sound ultimately makes it harder to repress than John’s idea of
the past as something visual. The former’s assassination of the latter cannot stop the Martian revolution, which is attempted when Earth and Mars are on opposites sides of the Sun.

The revolutionists and the loyalists, like the Reds and Greens, embody determinism and indeterminacy, though characters do not always fall in line with consistent temporal ideologies. Some characters even attempt to blend determinism with free will, as Arkady creatively argues that allowing history to determine the present would not necessarily negate human agency. He shouts, “History is not evolution! It is a false analogy! Evolution is a matter of environment and chance, acting over millions of years. But history is a matter of environment and choice, acting within lifetimes, and sometimes within years, or months, or days! History is Lamarckian!” (80). Jean Batiste Lamarck argued that characteristics from one generation can pass over to the next, but “choice” is more relevant to that heredity than “chance.” The various conflicts in the novel lead to a failed (r)evolution, and the survivors return to their secret colony; as an example of a Lamarckian utopia, the city is named Zygote to signify the choice of new life. *Red Mars* fulfills the promise from Robinson’s dissertation: “A Utopia needs a new start” (44). Hiroko delivers the last lines, “This is home… This is where we start again” (519). Her words are ironic as the final lines of the book, though they optimistically prophesize continuation. Like Henry in Robinson’s first novel, Hiroko escapes determinism ideologically and rhetorically by emphasizing human agency.
Green Mars

The 1993 novel *Green Mars* is the second novel of the Mars trilogy. The sequel depicts a second revolution that is successful in allowing the Martians to gain independence from Earth. The interplanetary conflict changes after the collapse of the Ross Ice Shelf causes the rise of Earth’s sea levels. This natural disaster greatly diminishes Earth’s dominance over Mars. Robinson may have acquired this idea from his study of Philip K. Dick’s SF, which found that many earlier SF novels used nuclear war as “a device to disengage history and allow Dick to take it where he will” (28). Ecological fears during Robinson’s career overshadow the Cold War era fears of Dick’s time. Robinson disengages his Martian colony from Earth’s history to “take it where he will” using environmental collapse. The revolution marks the trilogy’s center, expressed by a major character, as if the trilogy were a Shakespearian play. Nirgal, the son of Hiroko Ai and John Boone, sees *King John* and comments on the form of the play: “the great X that the play’s structure made, with John’s fortunes starting high and ending low, and the bastard’s starting low and ending high… he watched the critical scene at the crossing of the X, in which John orders the death of young Arthur” (277). The revolution in *Green Mars* marks the center of the X in the structure of the trilogy; the fortunes of the indeterminists dwindle through the struggle to establish a working government, while the determinists win the debate for taking terraforming to the next phase, as the title of the sequel indicates.

A successful Martian revolution marks the center of the trilogy but does not inevitably lead to the creation of a federal government. Rather, local governments emerge from the bigger Martian cities. Amidst the uncertainty of change, however, Maya Toitovna reminds the others,
“Revolution is no place for anarchy!” (442). Nadia Chernyshevski, who becomes the first president on Mars, reiterates this warning with more vivid imagery: “building a revolution was like building an arch; until both columns were there, and the keystone in place, practically any disruption could bring the whole thing crashing down” (529). Establishing a federal government becomes a matter of determinism, requiring such space-time rhetoric to concretize the idea of permanence. Architectural imagery establishes the project as teleologically progressing toward a form of completion; the keystone stands for the endpoint. Like the unfinished Arch of the River Gate in Le Guin’s The Left Hand of Darkness, such space-time rhetoric can additionally symbolize narrative time as the conclusion of the text approaches. In the last chapter of Le Guin’s novel, for example, Genley Ai metaphorically announces, “I must set the keystone in the arch” (310). The rhetoric in the Mars trilogy similarly forces the establishment of a Martian federal government to seem romantically preordained.

The space-time rhetoric of the arch supports a determinist temporal ideology for those Martians seeking a federal government, and like the eschatology of the Greys in A Memory of Whiteness, the teleological belief system of the Greens in Green Mars looks forward to a desired end. This dogma of determinism materializes in many ways throughout the trilogy. Written in capital letters, which for Robinson typically signifies space-time rhetoric, red words on white walls in Martian cities announces, “YOU CAN NEVER GO BACK” (446). To many Greens, the conservatism of the Reds can be oversimplified to represent preserving the past, which becomes “a sort of demon” (454). When advocating for the new Martian government, Kenji, the first Japanese on Mars, seeks to set an example for oppressed societies on Earth. He points out the effects of ancient Japanese feudalism on the current situation: “what we do here has its roots
in that culture. We are trying to find a new way” (324). Kenji, like other Greens, attempts to extract the better elements of the past to reuse them, but his “new way” still borrows many traditions from the past.

In his dissertation on Philip K. Dick, Robinson states that Dick creates Martian colonies, which are “a representation of the American in which Dick wrote the novels, in which certain facets of the society have been augmented, others suppressed” (33). Robinson also represents his own past experience of America in his depictions of Mars. For example, *Green Mars* contains fictionalized locations that are heavily influenced by real places linked to Robinson’s biography. Sax describes, “a small town called Bradbury … looked like something out of Illinois” (154). Born in Waukegan, Illinois, which also happens to be the hometown of Ray Bradbury, Robinson uses pieces of his past to depict a potential future of humanity in his SF, as he accuses Dick and his own characters of doing. At the same time, moments in *Green Mars* strive to be completely free of the past. Maya, for example, thinks about time, when gazing upon the Martian horizon and trying to compare the view to a similar landscape on Earth, but “the sight had a quality she could not recall ever seeing before, as if it were out of time, a prophetic glimpse of a distant future” (429). The mysterious quality seen in the Martian landscape represents a stark contrast with anything Maya has ever seen. The scene envisions what Hans-Georg Gadamer calls a fusion of horizons (302). Maya sees, not necessarily older goals inherited from Earth, but rather, the current condition of a world as incomplete before adapting to its new human inhabitants.

*Green Mars* carefully shows different ways to relate to the past, from historical analogies to personal memories. Ironically, the past haunts the founder of the Reds, Ann Clayborne. As one of the First Hundred settlers on Mars, Ann masters the art of mental repression by working
on various projects: “anytime some image from the past come to her, she would jump up and do something that required concentration … until the image had faded, and the past was banished. With practice one could dodge the past almost entirely” (127). Proustian moments similarly ruined Hjalmar’s philosophy of presentism in *Icehenge*. Ann’s repressions in *Green Mars* reveal how the extreme side of indeterminacy can lead to solipsism. Technological advances in gerontology strengthen character’s tendencies towards solipsism. As the settlers begin to age, for example, their longevity treatments do not protect their minds from senility. Michel, the group’s psychologist, remarks how he saw “each of them meanwhile wandering in the long reach of his or her own idiocosmos” (236). As technology lengthens lifespans, characters have longer to reflect. Nirgal reflects on his own impressions, observing, “It’s also the opinions you form about them afterward. That’s why our childhoods are so long” (279). In the face of such loneliness, *Green Mars* shows how the benefits of historical determinism outweigh the disadvantages of ahistorical temporalities, as solidarity in the novel overcomes solipsism.

*Blue Mars*

The 1996 novel *Blue Mars* is the third novel of the Mars trilogy. At this point in the terraforming process of Mars, the planet’s landscape includes oceans and a breathable atmosphere. As a Martian ecology thrives, Robinson presents time as a wind, in the tradition of Herbert and Le Guin’s natural imagery: “Time was a wind sweeping them away” (49). Robinson presents this cliché casually, just as Ann looks at the terraformed land and concedes, “red Mars was gone, and gone for good.” As wind, time can be visualized as it sweeps out the old to make room for the new. A dialogue occurs across Robinson’s opus through chapter titles. Chapter
eight in *The Memory of Whiteness* is titled “Time Passes,” while chapter twelve in *Blue Mars* responds with its titled “It Goes So Fast.” On its way out, the past seems more fragile than ever. Sax uses space-time rhetoric in the novel painting the past as “the palace-of-memory plan, utilizing rooms and hallways, as if the ancient Greeks by introspection alone had intuited the very geometry of timespace” (570). Sax describes time as a building linked with introspection to parallel his belief in a structured approach to history. He appropriately narrates chapter nine in *Blue Mars* titled “Natural History,” as opposed to John Boone’s more carefree nature, paired with chapter five’s title “Falling into History.”

Tensions between the determinists and indeterminists from the previous two novels have decreased in *Blue Mars* but still manifest in various ways, specifically when characters want to write Martian annals and the government’s constitution. Like the indeterministic historians in Le Guin’s *Always Coming Home*, Robinson’s historian criticizes historical determinism. When writing her “analytical metahistory” in *Blue Mars*, Charlotte from Dorsa Brevia “was insistent that there was no such thing as historical determinism, but only people’s repeated efforts to enact their hopes; then the analyst’s retroactive recognition of such hopes as came true created an illusion of determinism” (426). Attempting an ahistorical project, Charlotte writes Martian history without considering the revolution, the terraforming, and the creation of a federal government to have been inevitable. The Russian cosmonaut Maya concurs with Charlotte’s historical perspective, considering it “an engagement with the present” (493). Maya claims, “The triviality of the current scene usually put her off, but now she supposed that the politics of the moment always looked petty and stupid; only later did it take on the look of respectable
statecraft, of immutable History.” Maya’s engagement with the present is comparable to Hjalmar’s sense of presentism.

Early in *Blue Mars*, some characters feel a sense of presentism and claim, “They were in an open moment in history, accountable to no one” (56). By the end of the novel, the forces of determinism have taken over: Nirgal claims, “Mars right now is the battleground of past and future, and the past has its power, but the future is where we’re all going. There’s a kind of inexorable power in it, like a vacuum pull forward. These days I can almost feel it” (540). In *Narrative and Freedom*, Morson states, “The temporality of destiny is something like a vortex. The further one is from the center, the more freedom of movement one experiences. But the closer one comes, the more one’s movements are constrained by the future pulling one in. At some point near the center of the vortex, all moves have the same immediate result” (65).

Nirgal’s comment on the “vacuum pull forward” illustrates Morson’s idea about the shape of narrative time as transition from indeterminacy to determinism.

Robinson also embodies this transition through the characters drafting a Martian Constitution. The document, like most constitutions, adheres to the expectations of determinism through its firmness, but the expectations of indeterminacy in its flexibility. At the signing, the space-time rhetoric leans toward indeterminacy as it relies on the specific imagery of a fabric. Art Randolph describes the scene:

all the dead, it suddenly seemed, and all the unborn all there in the warehouse with them to witness this moment. As if history were a tapestry, and the congress the loom where everything was coming together, the present moment with its miraculous thereness, its potential right in their own atoms, their own voices. Looking back at the past, able to see it all, a single long braided tapestry of events; looking forward at the future, able to see none of it, though presumable it branched out in an explosion of threads of potentiality, and could become anything. (143)
Though his description acknowledges the past as “a single long braided tapestry,” Art also emphasizes “the present moment” and “the future … potentiality” as equally important. The “potential right in their own atoms” allows human agency, so the future can branch out from one single thread into “an explosion of threads.” He quickly contrasts the indeterminate extreme with the extreme of historical determinism. Art claims, “Infinite possibility was going to collapse, in the act of choosing, to the single world line of history. The future becoming the past: there was something disappointing in this passage through the loom, this so-sudden diminution from infinity to one, the collapse from potentiality to reality which was the action of time itself” (144). The romantic effects of determinism dominate Art’s space-time rhetoric until resulting in a disappointing sense of realism.

Additional imagery reinforces the sense of time as determined, though in a more romanticized fashion. The terminal beach motif established by H. G. Wells, for example, appears in each novel in the Mars trilogy. Robinson develops the conceit more thoroughly in each novel. In Red Mars, the motif is simply a metaphor from a fanciful monologue. Michel explains, “I am a diamond back snake, slithering through a red desert of cold stone and dry dust. Someday I will shed my skin like a phoenix of fire, to become some new creature of the sun, to walk the beach naked and splash in warm salt water” (194). In Green Mars, the terminal beach becomes a real location in a secret colony on Mars. Nirgal holds his mother’s hand as they walk under a hollowed polar icecap across an alien landscape: “He held her hand as they walked the beach” (19). Blue Mars ends with a final scene on the beach. Fulfilling Michel’s promise from the first novel, the last chapter in Blue Mars is titled “Phoenix Lake.” The final lines read, “Waves broke in swift lines on the beach, and she walked over the sand toward her friends, in the wind, on
Mars, on Mars, on Mars, on Mars, on Mars” (650). Robinson’s repetition ends the Martian trilogy, a drastic contrast to Philip K. Dick’s habit of ending on fragment sentences.

*Blue Mars* envisions time as a wind, a palace, a battlefield, a vacuum, a loon, and a terminal beach—many symbols to be used again by Robinson in later novels. Beyond an eclectic mix of imagery, space-time rhetoric in *Blue Mars* explicitly questions the discourse of the rhetoric itself. Space-time becomes the center of an argument near the trilogy’s conclusion. Michel says to Ann, “Often you have to go back to that point in your journey in order to start off in a new way” (225). Ann quickly disagrees, deconstructing Michel’s cliché, “Time is not space. The metaphor of space lies about what is really possible in time. You can never go back.” Ann identifies space-time’s inherent contradiction; space and time are mutually exclusive dimensions. Space-time is an oxymoron, but the value of this rhetoric is its ability to construct arguments by analogy. In this regard, Michel corrects Ann: “No no. You can go back, metaphorically. In your mental traveling you can journey back into the past.” Michel concedes that space-time is a necessary figure of speech. Robinson’s contradictory impression of the trope frequently appears in his corpus as a display of the Socratic method, not to present these questions as unanswerable but as open to debate.

*The Years of Rice and Salt*

The 2002 novel *The Years of Rice and Salt* depicts an alternative history without the imperial influence of Western civilization after the Black Death wipes out most of Europe. Characters tend to die at the end of nine of the ten books but are always reincarnated in the
chapters that follow. Because no two books technically share the same characters or time frame, the novel reads like a series of short stories of historical fiction. Robinson mixes different styles of writing to survey Eastern literary traditions, including pastiches of the Chinese classic *Journey to the West*, Native American oral traditions, Arabic writings on alchemy, the Persian poetry *Rubáiyát of Omar Khayyám*, and the Indian epic *The Bhagavadgita*. Despite the different cultures, the characters in each book have the same spirits. Although each spirit changes names in each life, the same spirit maintains the first letter in his or her name. Between death and rebirth, “K,” “B,” “I,” and the others return to the bardo because “Of all the worlds the bardo was the one of the utmost reality” (83). From this afterlife, “their anthologist, Old Red Ink himself, must tell their stories…And it is crucial that the stories mean something” (353). The moral advancement of the characters through multiple transmigrations personifies the novel’s theme of historical determinism, despite the genre of alternative history incarnating indeterminacy.

Any alternative version of history would argue against historical determinism. Reincarnated characters nevertheless find larger determined identities, reflected through their debates over different temporal ideologies, as characters in Robinson’s earlier novels had done. For example, the spirit always named with the letter K advocates for the freedom of human agency in numerous lives. As scholar Kirana Fawwaz, K teaches a history class through an ahistorical lens to demythologize the past, declaring stories a defense against chaos: “What I want to do … is to cut through all the stories, through the million stories we have constructed to defend ourselves from the reality of the Nakba, to reach explanation” (608). Using the Arabic word meaning catastrophe, Kirana refers specifically to chaos. The word also connotes
contrasting historical narratives. Nakba day annually commemorates the 1948 Palestinian exodus and is held on May 15, which is also the anniversary of Israel’s declaration of independence.

Living later as the Widow Kang Tongbi, K similarly articulates the fallacy of historical determinism when considering dynastic cycles of her society, but from an Eastern perspective in which history is cyclical rather than linear. Kang uses natural imagery, stating, “That’s just thinking of history as if it were the seasons of a year. It’s a most simpleminded metaphor. What if they are nothing at all alike, what if history meanders like a river forever, what then?” (454). This space-time rhetoric reverses the deterministic expectations that come with river imagery in Western civilization. For Kang, the river represents indeterminacy. Her ideas inspire the philosopher Ibrahim ibn Hasam al-Lanzhou to theorize the same idea in his “Commentary on the Doctrine of the Great Cycle of History” (456). He writes, “It may be that history itself has no such pattern to it, and that civilizations each create a unique fate that cannot be read into a cyclic pattern.” Echoing Emma Weil’s skepticism about patterns in *Icehenge* and Kevin Claiborne’s life without a plan in *Pacific Edge*, Ibrahim begins to embrace history without templates.

Reincarnations of characters in the novel compare to characters with longer-than-average lifespans in the Mars trilogy. According to Fredric Jameson, “the extended life spans of Kim Stanley Robinson’s Mars colonists allow them to coincide more tangibly with long-term historical evolutions, while the device of reincarnation in his alternate history *Years of Rice and Salt* affords the possibility of reentering the stream of history and development over and over again” (“Varieties” 7). Characters in the novel have difficulty viewing the evolution and development of history, particularly from the bardo where they can remember their past lives. This location initially impresses upon them that time is only a house of bones:
Looking back down the vale of the ages at the endless recurrence of their reincarnations, before they were forced to drink their vials of forgetting and all became obscure to them again, they could see no pattern at all to their efforts; if the gods had a plan, or even a set of procedures, if the long train of transmigrations was supposed to add up to anything, if it was not just mindless repetition, time itself nothing but a succession of chaoses, no one could discern it; and the story of their transmigrations, rather than being a narrative without death…had become instead a veritable charnel house. Why read on? … bad plotting? (Robinson, *Years 352*)

The charnel house of time does not serve as a template for future lives, offering no patterns, plans, or procedures, only “mindless repetition,” which becomes as much a narrative problem as an existential one. By directly addressing the reader from the bardo, the novel presents a threefold consideration of philosophical determinism as historical, spiritual, and narrative.

Criticism of historical determinism complements the implicit indeterminacy of the genre. When time appears determined, its repetitive shape resembles a rotating circle or wheel. Before his assassination, revolutionist Kung Jianguo quotes the philosopher Zhu Isao, asking, “will we only ever go in circles, trapped on the wheel of birth and death?” (718). The tone of the determinism is more extreme in the bardo, matching the claustrophobia of Philip K. Dick’s fear that time traps humans like rats. After his death, the alchemist Khalid Ali Abu al-Samarqandi wails to the others, “We are like mice to the cats” (354). The glassblower Iwang replies, “forget about the gods. Let’s concentrate on doing it ourselves. We can make our own world” (355). The history teacher Kirana similarly claims later to visualize the future “as something we make” (667). She borrows space-time rhetoric from *Blue Mars* that history is like a fabric:

> It makes us a thread in a tapestry that has unrolled for centuries before us, and will unroll for centuries after us. We’re midway through the loom, that’s the present, and what we do casts the thread in a particular direction, and the picture in the tapestry changes accordingly. When we begin to try to make a picture pleasing to us and to those who come after, then perhaps you can say that we have seized history.
Kirana’s imagery implies that human agency can be used to shape history, altering its course “in a particular direction.” Imagery of threads, fabrics, and tapestries in an incomplete form differs from the architectural imagery of the unfinished arch in the Mars trilogy, which has a specific final appearance. The intended image of the tapestry is not specified but is left unknown. With this metaphor, time is an unfinished fabric, implying a degree of uncertainty to challenge historical determinism.

After exploring the limits of this temporal philosophy, the novel proclaims presentism to be the greatest advantage of an ahistorical indeterminacy. Characters living by the philosophy of presentism tend to display more moral progress than those who cling to the past. For example, metalworker Bahram al-Bokhara mourns for the loss of his life when entering the bardo, but understands, “The past is gone” (353). Living later as Budur Radwan, an archeology student, she assures Kirana, “The past is dust” (650), even as Kirana has vivid dreams of past lives. In various reincarnations, disengagement with the past often characterizes the life of B. Living as a soldier named Bai in the Great War, he is advised by Iwa to dismiss his belief in reincarnation: “You shouldn’t try to hold on, Bai. This is what the Buddha learned, right here. Don’t try to stop time. No one can do it” (581). Bai isolates himself in the present so thoroughly that the passing of days seems like a lifetime: “Every day we wake up into a new world, each sleep causes yet another reincarnation. Some of the local gurus spoke of it as happening with every breath” (574). The extreme form of presentism, imagining each breath as a new world, becomes for Bai an ever-renewed form of nihilism that leaves him unsure if he is living or back in the bardo.

Presentism alone is insufficient for character development because relations with the past are necessary to advance. Rather than the past being gone like dust, for the philosopher Isao, “the
Past has mortgaged the future … or tied it up… But perhaps it helps to know as much as we can, just to suggest ways forward” (740). Beyond contradicting presentism, Isao adds the advantages of determinism to form a balance. He suggests,

we should weave a story that holds in its pattern as much as possible. It should be like the Daoists’ yin-yang symbol, with eyes of tragedy and comedy dotting the larger fields of dharma and nihilism. That old figure is the perfect image of all our stories put together, with the dark spot of our comedies marring the brilliance of dharma, and the blaze of tragic knowledge emerging from black nothingness (736).

Isao uses the imagery of the yin-yang symbol to link narrative determinism with human experiences. The ancient symbol’s connotation for balance implies that Isao has synthesized the benefits of all the various temporal philosophies. The binary of dharma and nihilism is a more social form of the binary between determinism and free will.

The philosopher Isao uses memorable space-time rhetoric in The Years of Rice and Salt, plagiarizing Raymond Williams’s 1977 Marxism and Literature, in which layers of cultures are categorized by their dominant, residual, and emergent elements (123). Isao claims, “each period in history is composed of residual elements of past cultures, and emergent elements that later on will come more fully into being—this is a powerful lens” (740). A teacher named Bao Xinhua living after a great revolution in China reflects on Isao’s space-time rhetoric, specifically the idea that time develops as “tragedy for the individual, comedy for the society” (754). In other words, while individual human experiences inevitably end in death, the social experiment can continually be rehabilitated and improved. Considering these lessons, Bao becomes a teacher, balancing the present moment with the patterns of the past:

Over time Bao came to understand that teaching too was a kind of reincarnation, in that years passed, and students came and went, new young people all the time, but always the same age, taking the same class; the class under the oak trees, reincarnated. He began to
enjoy that aspect of it. He would start the first class by saying, “Look, here we are again.” They never knew what to make of it; same response, every time. (758)

Comparing semesters with lives, Bao earns the benefits of presentism and determinism by living in a moment that seems to repeat itself, at the same time he contently fulfills a larger social role that progresses civilization.

The novel depicts historical determinism as a communal effort, in which time is translated through various cultures to be comprehensible. Le Guin’s *The Beginning Place* presents time as artificially processed by a society, using the analogy of logging: "clock time had about the same relation to unclock time as a two-by-four or a box of toothpicks has to a fir tree" (66). In Robinson’s novel *The Years of Rice and Salt*, the analogy for this acculturation of time appears through the imagery of baking. The philosopher Isao describes historical determinism:

First come eyewitness accounts and chronicles of events made soon after things happened, also documents and records—these are history as wheat still in the field, as yet unharvested or baked, thus given beginnings or ends or causes. Only later come these baked histories that attempt to coordinate and reconcile source materials, that not only describe but explain. / Later still come the works that eat and digest these baked accounts. (734)

Isao’s rhetoric delineates time as either raw or processed, in other words, as teleological or nonteleological. Emphasizing artificiality, Robinson’s space-time rhetoric synthesizes with Le Guin’s to form the extended analogy: as a tree becomes a toothpick and a field of wheat becomes bread, so too can human experiences be processed into historical determinism.

Amidst the criticism to the temporal philosophy, characters tend to become more deterministic. The space-time rhetoric of a Sufi holy man named Bistami embodies determinism, in a way that again reverses the connotations of natural imagery. Time appears as the wind, as it
had in *Blue Mars*. Instead of sweeping everything away, however, the wind carries Bistami towards the impression of significance. He feels a sense of wholeness and expounds,

> The universal whole was beyond them. / And yet, and yet; sometimes, as at this moment, at dusk, in the wind, we catch, with a sixth sense we don’t know we have, glimpses of that larger world—vast shapes of cosmic significance, a sense of everything holy to dimensions beyond sense or thought or even feeling—this visible world of ours, lit from within, stuffed vibrant with reality. (164)

The wind provides poetic glimpses of determinism at its most meaningful point. In later lives, the same glimpse comes from “a thread of sound.” In a chapter titled “Writing Burmese History,” Bao opens books randomly to read lines of poetry, and the verses imply determinism:

> “Even the man who is happy glimpses something / Or a thread of sound touches him / And his heart overflows with a longing / he does not recognize / Then it must be that he is remembering / a place out of reach people he loved / In a life before this their pattern / Still there in him waiting” (747). Determinism appears most bearable when it offers impressions of its completed form.

Similar rhetoric that evokes historical determinism recurs near the novel’s conclusion. Kriana links history to the female experience of menstruation by underscoring the process of an unfertilized egg becoming a fertilized embryo and eventually being born. She tells Budur,

> History till now has been like women’s periods, a little egg of possibility, hidden in the ordinary material of life, with tiny barbarian hordes maybe charging in, trying to find it, failing, fighting each other... The red egg ... blood and life... The question is, will the hordes of sperm ever find the egg? Will one slip ahead, fructify the seed within, and the world become pregnant? Will a true civilization ever be born? Or is history doomed always to be a sterile spinster! (636)

The novel provides the affirmative answer that history can create something significant, which the novel vaguely refers to as happiness. The imagery recurs as the title of the last chapter, “The Red Egg.” Near the end of the novel, Bao interprets a simple discovery: “A red egg, that means
happiness” (760). A similar optimistic sentiment gives the novel its title, as the Widow Kang had written the superlative, “I think I like most the rice and the salt” (476). As the well-being of characters improves, the novel’s theme of determinism greatly outweighs its considerations of free will.

The character development in the novel advances at equal rate to the evolution of various Eastern societies in which they live. Understanding how history in this regard is spiritual, the Widow Kang delivers one of the novel’s main messages when she acclaims the grand purpose of historical determinism to be a narrative of progress to achieve social equality:

My feeling is that until the number of whole lives is greater than the number of shattered lives, we remain stuck in some kind of prehistory, unworthy of humanity’s great spirit. History as a story worth telling will only begin when the whole lives outnumber the wasted ones. That means we have many generations to go before history begins. All the inequalities must end; all the surplus wealth must be equitably distributed. Until then we are still only some kind of gibbering monkey, and humanity, as we usually like to think of it, does not exist. / To put it in religious terms, we are still indeed in the bardo, waiting to be born. (475)

Kriana’s rhetoric focuses on fertility, leading her to ask if a larger civilization will be born in the future, while the Widow Kang focuses on mortality. The Widow looks toward an individual’s experience in the afterlife to envision a path to the future. The ease of making such shifts further strengthens the novel’s thesis that the destinies of individuals and the histories of their societies are the same.

_Forty Signs of Rain_

The 2004 novel _Forty Signs of Rain_ is the first book in the _Science and the Capital_ trilogy, which was republished in 2015 as a single novel, _Green Earth. Forty Signs of Rain_.
inspired the 2004 movie *The Day after Tomorrow*. In the novel, climate change challenges the narrative of historical determinism, causing an unprecedented collapse of society. Climate change embodies indeterminacy, while the *status quo* weather, according to the narrator, embodies determinism: “Water flows through the oceans in steady recycling patterns, determined by the Coriolis force and the particular positions of continents in our time…[in] the Gulf Stream … The round trip for any given water molecule takes about a thousand years” (51). The journey of the molecule appears “steady” with “patterns” to be “determined” by consistent laws of nature. However, after describing how the Gulf Stream changed after the last Ice Age, the narrator poses a rhetorical question: “Now, with Greenland’s ice cap melting fast, and the Arctic sea ice breaking into bergs, would enough fresh water flow into the North Atlantic to stall the Gulf Stream again?” (52). At the end, the novel reveals the answer to the question, as Washington D.C. floods: “the city was a lake” (264).

Rather than dwelling in the disorder, *Forty Signs of Rain* focuses on characters who seek to chart a way through the chaos. Academic Frank Vanderwal ponders how best to escape the doom of a global natural disaster. His first thought in the novel, “Primates in elevators” (11), later becomes refined to articulate the larger human condition: “Social primates, trapped in a technocosmos of their own devise” (187). For Frank, anthropocentrism is solipsism for the species. His interest in sociobiology shifts his focus toward group dynamics. He pictures life as “Little localized eddies of anti-entropy, briefly popping into being and then spinning out, with bits of them carried elsewhere in long invisible chains of code that spun up yet more eddies” (187). For Frank, life appears connected as a chain. Like Friedrich Nietzsche’s imagery of
history, Frank’s chain does not permit any attempts to escape. Frank mixes his metaphor by including imagery of water in motion. Individual lives appear as determined vortices doomed by entropy, while still progressing as a larger collective.

Frank reasons that the best option to accomplish a historical progress, as well as an ecological progress, is to make scientific considerations. Robert Markley observes how the novel provides frames the scientific method as, “a strategy for coping with ‘the hysterical operatics of history’” (13). When Frank visualizes science, he simultaneously visualizes time: “Science was the gene trying to pass itself along more successfully.” Space-time rhetoric in *Forty Signs of Rain* matches Frank’s scientific interest in genetics like Sax’s rhetoric in *Green Mars*. He adopts the scientific method as a religion, claiming, “science was definitely the only way to see the terrain well enough to know which way to strike forward, to make something new for the rest. No passion needed to be added to that reasoned way forward” (187). Frank vaguely imagines an undetermined terrain of time, like flowing river imagined by the Widow Kang in *The Years of Rice and Salt*. Both impressions challenge historical determinism. While Kang would make the river navigable with the proper philosophy of history, Frank looks to the scientific method to “make something new.”

Science offers Frank a more ethical path through undetermined terrain by means of its systematic objectivity, though it remains insufficient until tried. *Forty Signs of Rain* conducts its own purity test of the scientific method. Frank observes early in the novel, “science didn’t work like capitalism” (91). He later asks a Buddhist monk named Drepung whether or not “Western science is crazy?” (205). Echoing the rhetoric of Raymond Williams found in *The Years of Rice*

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1 In his 1874 essay “On the Advantages and Disadvantages of History for Life,” Nietzsche claims “For since we happen to be the results of earlier generations we are also the results of their aberrations, passions and errors, even crimes; it is not possible to loosen oneself entirely from this chain” (22).
and Salt, criticism of science in Forty Signs of Rain blames capitalism, or at least its “residual patterns of feudalism” (242). Puns in chapter titles make this mutual exclusivity of science and economics clear. Chapter four depicts scientists unsuccessfully arguing for CO$_2$ regulation in Washington D.C. and is titled “Science in the Capital” (79), while chapter six, titled “The Capital in Science” (137), contains Frank’s strongly written criticism to the Director of the National Science Foundation, in which he writes about everything from the general greedy American business ethos to the specifically bloated Pentagon budget.

The novel counters capitalism with Buddhism. The Tibetan exile Rudra Cakrin links science and Buddhism as “parallel studies,” with science considering “natural observations,” and religion emphasizing “human observations, to find out—how to become. Behave. What to do. How to go forward” (qtd. in Markley 16). To the Buddhist, materialism corrupts science. Markley analyses how the novel wrings out Western Enlightenment values, replacing them with Eastern values: “A utopian science must redefine progress in terms beyond efficiency and material gratification, beyond the false promises of what Rudra calls ‘an excess of reason’” (16). This excess of reason, however, is relative to the deficiency of action. According to Markley, “time in Robinson’s trilogy could be described as a kind of redemption of a fallen history, and comedy as the narrative impetus that propels characters towards a utopian future” (13). Similar to Markley, De Witt Douglas Kilgore concludes in his analysis of the novel, “What Robinson looks for, however, is not an end to history, as so often has been the case on the millennialist side of utopian tradition, but a better, happier, saner world within history. In other words, he drafts history into the project of seeing the way to a utopian future” (93). Later novels in the trilogy underscore how the process of social reform is more significant than what is produced.
Fifty Degrees Below

The 2005 novel *Fifty Degrees Below* is the second book in the *Science and the Capital* trilogy. After the U.S. capital floods, animals escape from local zoos, leaving the city in a near prehistoric state. Frank joins a committee at the National Science Foundation granted unfettered power to address climate change in the wake of the natural disaster. When he willingly becomes homeless, Frank revises his rhetoric from the previous novel: “Primate in forest” (313). He embraces “A kind of return to the Paleolithic, right here in Washington D.C.” (314). He develops “the repaleolithization project” (315). His philosophy is to mimic the Paleolithic lifestyle. He even buys an Acheulian hand axe online to immerse himself in the hunter-gatherer mindset. Frank describes his new outlook when playing Frisbee as “The blessed no-time of meditation. Turning the moment into eternity” (411). He compares his mindset to Buddhist meditation, a version of presentism. The philosophy allows him to live a more environmentally conscious life, which culminates with him living happily in a tree house in the park, though cold weather soon forces them to adapt: “They were Ice Age people” (593).

The presentism that Frank discovers through Frisbee resembles what Buddhists discover through mandalas. Monks in the novel create and then destroy these sand patterns made in a mandala, which “signifies the impermanence of all things” (395). Frank watches this ancient tradition: “When the design was completely colored in, there would be a ceremony to celebrate the various meanings it held, and then it would be carried to the long shallow reflecting pool in front of Government Hose, and tipped into the water.” Juxtaposing the best and worst aspects of indeterminacy, the climate meanwhile worsens because of “nonlinear tipping points” (297).
Climatologist Kenzo tells Diane Chang, the head of the N.S.F., “The jet stream is likely to wander more” (335). Though carbon capture and improving ocean salinity seem successful at first, the title Fifty Degrees Below matches a headline from a newspaper in the novel, a sign that the old climate patterns, like the mandala, have been forever reset.

Working on the terraforming projects of Earth, Anne Quibler is a scientist at the N.S.F. who continues the theme from Forty Signs of Rain that science can properly steer history in the most humane direction. She explains how humans have been doing this for centuries:

> Of course there were all the hysterical operatics of “history” to distract people from this method and its incremental successes. The wars and politicians, the police state regimes and terrorist insurgencies, the gross injustices and cruelties, the unnecessarily ongoing plagues and famines—in short, all the mass violence and rank intimidation that characterized most of what filled the history books; all that was real enough, indeed all too real, undeniable—and yet it was not the whole story. It was not really history, if you wished to include everything important that had happened to humans through time. Because along with all the violence, underneath the radar, inside the nightmare, there was always the ongoing irregular pulse of good work, often, since the seventeenth century, created or supported by science. (635)

Anne views the purest form of history as a record of progressive events of “good work,” while the bad is ahistorical, like the wasted lives lamented by the Widow Kang in The Years of Rice and Salt. Anne concludes, “for her, science was progress” and helped avoid “a descent back into the Bad Zone of history.” This hope in science for practical uses reaches back to Jonathan Swift’s Gulliver’s Travels, in which scientists at the Academy in Lagado fail to impress Gulliver with their frivolous experiments. Anne’s endorsement of science in Fifty Degrees Below echoes a more optimistic version of Frank’s in Forty Signs of Rain, while the misuse of science and technology in the sequel pushes Frank off the grid.

Frank attracts the attention of U.S. intelligence communities, primarily for his dealings with high-level officials. While spying on Frank, the Homeland Security agent Caroline Cooper
falls in love with him. In addition to leaking to Frank top-secret algorithms that can hack voting machines and steal U. S. elections, Caroline reveals how illegal electronic surveillance can monitor the most intimate details of an American life. Frank doubts how much a voyeur could truly know about him, until he starts to believe, “Maybe no one’s story could really be told” (302). He concludes that surveillance must always be biased: “No one saw enough to witness your life and put it all together” (341). Frank considers narrative insufficient to convey human experiences, but he soon finds that human experiences need narrative if they are to hold any meaning.

Frank’s presentism eventually vanishes completely after a head injury, though he had already discovered that he was adapting his experiences to fit narrative determinism. As if suddenly integrating the sum of Robinson’s space-time rhetoric, Frank thinks to himself,

lives were not easily told. Frank speculated that many life stories consisted precisely in a search for a reiterated pattern, for habits. Thus, one’s set of habits was somehow unsatisfactory, and you needed to change them, and were thereby thrown into a plot, which was the hunt for new habits, or even, but exceptionally, the story of the giving up of such a hunt in favor of sticking with what you have, or remaining chaotically in the existential moment…Thus Frank was living a plot while Anna was living a life…he had news while she had the “same old same old.” (420)

Frank presents narrative determinism as a “reiterated pattern … that was the hunt for new habits, or … sticking with what you have” and he contrasts this stable albeit contrived “plot” with the indeterminacy of “life,” which Anne Quibler lives, “chaotically in the existential moment” only to have “same old” things happen. The book concludes with Frank’s identity crisis: “I’m so different in these different situations. It’s like living multiple lives. I mean I just act the parts” (686). Ending the book, Rudra tells him, “It is easy to live multiple lives! What is hard is to be a
whole person” (686). The advice complements Anne’s philosophy that the key to being “whole” is doing “good work.”

*Sixty Days and Counting*

The 2007 novel *Sixty Days and Counting* is the third book in the *Science and the Capital* trilogy. Frank works in the White House with a president who puts up solar panels. The first chapter’s epigraph quotes a 2005 speech by the Dalai Lama and sets the tone of the novel. It also provides the first chapter’s title: “New Reality” (688). Frank is able to popularize his approach to science and religion, synthesizing the two: “Buddhism as the Dalai Lama’s science; science as the scientist’s Buddhism” (911). The optimistic tone persists even after the president is nearly assassinated, but in turn becomes a vociferous blogger with even more impact. In the last lines, Frank tells Caroline that he loves her, after a symbolic focus on the weather: “In the sky to the north a cloud was rearing high into the sky, its white lobes aquiver with the promise of storms to come” (1069). The storm conspicuously symbolizes climate change.

As he had embraced the Paleolithic in *Fifty Degrees Below*, Frank studies transcendentalism in *Sixty Days and Counting*. He quotes Ralph Waldo Emerson’s 1836 essay “Nature,” which had its own space-time rhetoric: “The one thing which we seek with insatiable desire is to forget ourselves, to be surprised out of our propriety, to lose our memory and to do something without knowing how or why; in short to draw a new circle” (913). Isaac Asimov opened a metaphorical circle in his 1955 novel *The End of Eternity* to challenge determinism, while Le Guin fulfilled determinism by closing a circle in *Planet of Exile*. Dick, like Asimov, challenged determinism with an expanding circle in *A Maze of Death*. Robinson, like Le Guin,
fulfilled determinism in *The Years of Rice and Salt* when the philosopher Zhu Isao visualizes reincarnation as being trapped in a circle. The ebb and flow of fulfilling and challenging determinism with circular space-time rhetoric represents a larger discourse. While listening to the Dalai Lama speak, Frank claims, “Time passes in a flow of ideas” (911). Robinson does not miss the opportunity to follow his precedent of connecting narrative time and physical space-time in a single sentence.

**Galileo’s Dream**

The 2009 novel *Galileo’s Dream* is Robinson’s only SF adventure with a time machine. Using a device called the entangler, Ganymede and Hera attempt to change history, bringing Galileo Galilei into the year 3020 and even sending people back to seventeenth-century Italy. Resembling how *The Years of Rice and Salt* links spiritual development with historical determinism, *Galileo’s Dream* puts the fate of humanity in the Venetian inventor’s hands. By martyring Galileo in the name of science, Ganymede hopes to use Galileo to stop exploration of Europa’s oceans to prevent the discovery of a sentient lifeform. Space-time rhetoric in the novel relies heavily on the metaphor that time is riverine, but with “a crucial point in this flow of history, a place where the river might be diverted” (36). After receiving a nootropic to help him “learn faster” (172), Galileo experiences flying “over the time stream” (173). As it had for the Widow Kang in *The Years of Rice and Salt*, the river for Galileo challenges historical determinism: “He inhabited an image he had heard some time before, of history as a river, in which people were water, eroding the banks and depositing soil elsewhere downstream, so that
the banks slowly changed and the river ran otherwise than it had, without the water ever noticing
the changed courses of the braiding stream” (174). A river’s current in typical space-time
rhetoric fights against human agency; however, Galileo presents a river in which “people were
the water.” The river is indeterminate, not merely because time travel exists, because humans
steer the river of time more than they are carried by it.

Aurora, a mathematician from 3020, instructs Galileo in several chapters. Their meeting
provides the novel’s title, as “Galileo wondered if he were dreaming” (173). While teaching
Galileo about space-time rhetoric, Aurora critiques the discourse itself, before then providing her
own meticulous examples of its riparian nature. She professes,

Time in particular is impossible to properly perceive or conceptualize, and very much
more complex than what we sense or measure as time. We keep mistaking our sense of
time for time itself, but it isn’t so. It isn’t laminar. It bubbles and eddies, percolates and
disappears, is whole but fractionated, exhibits both the wave-particle duality and nonlocal
entanglement, and is always changing. The mathematical descriptions we have of it now
test out in experiments, even to the point of us being about to manipulate entanglement
interferences, as you know very well because of your presence here. So we know the
equations must be right even when we can’t believe them, just as with quantum
mechanics. (180)

Aurora’s rhetoric teems with terminology that updates Galileo on Einstein’s relativity and
quantum mechanics. Time as a river remains undetermined—“It isn’t laminar”—but is full of
unpredictable turbulence. Despite her knowledge, Aurora’s explanation implies how humans,
even as an interplanetary species, still understand very little about the nature of time. Like H. G.
Wells’s Time Traveler pointing at the sun, as well as Robinson’s own character Michel claiming
in Blue Mars that space-time is a contradiction, Aurora in Galileo’s Dream knows that time
cannot be accurately conceptualized as a space. In other words, there is no space-time, only
rhetoric.
Adding its own rhetoric to the discourse, *Galileo’s Dream* deconstructs the thesis in *The Time Machine* that time is the fourth dimension. In a chapter titled “The Structure of Time,” Aurora tells Galileo, as if Robinson were refuting Wells, “With relativity and quantum mechanics we began to understand that the four dimensions we sense are artifacts of our perception of dimensions far more numerous than we knew” (211). Aurora’s nuanced understanding resets the count on dimensions. She explains to Galileo that length, breadth, and height represent the first three dimensions, in no particular order, while dark matter represents the fourth dimension, and dark energy represents the fifth as “the perceived accelerating expansion of space-time” (212). Aurora is certain that time in itself is not a fourth dimension,

For one thing, what we call time turns out to be not a dimension but a manifold, a compound vector of three different dimensions… Past, present, and future … are the result of sense impressions compiled by living in three different temporal dimensions, which together make the manifold, in the same way our impression of space is manifold. All three temporal dimensions impact on us even though we mostly have a very strong sense of moving forward in a manifold, so that we can only remember the past, and only anticipate the future, both of which remain inaccessible to us in any sensory way. Our senses are stuck in the present, which appears to move in only one direction—into the future. (212)

Aurora’s descriptions launch Robinson’s most intricate space-time rhetoric. The conditions for space are separated from the conditions for time, though the two remain joined by a simple analogy: length, breadth, and height are to space what past, present, and future are to time. Both space and time are manifolds containing three dimensions. Regarding the synthesis of the three temporal dimensions, Galileo offers his own imagery: “Like chips of sunlight on water. Lots of them at once, or almost at once” (214). The seventeenth-century philosopher has little trouble concisely summarizing thirtieth-century ideas.
The interactions between these three dimensions of time require more scientific jargon than the oversimplified labels, past, present, and future. Aurora gives the terms $c$ time, $e$ time, and antichronos to these three dimensions. For the sake of Galileo and the audience, she simplifies each explanation, while also placing its development within the appropriate scientific discourse. She begins by describing the dimension of $c$ time,

We can see it here, in something like a Feynman drawing for elementary particles. Indeed we can fly in the drawing, see? The first temporality moves very fast—at the speed of light, in fact. This explains the speed of light, which is simply the rate of movement in this dimension if you consider it as a space. We call that time therefore speed of light time, or $c$ time, from the old notation for the speed of light. (213)

Aurora digresses from the speed of $c$ time to measuring the speed of the present. According to Aurora, the irreducible element of time is measurable as “The ultimate minim of time… a billionth of a billionth of a billionth of a heartbeat, more or less” (208). Because it passes so fast, Aurora questions whether the present even exists: “But that present moment: how long is it, of what does it consist? How can it be as short as a single Planck interval, $10^{-43}$ of a second, while even the briefest of phenomena that we are aware of takes much longer to happen than that theoretical minim? What can the present be? Is it a succession of Planck intervals, a clutch of them? Is it even real?” (212-13). Galileo replies that he counts in heartbeats (213). This measurement of the duration of the present resembles the “miraculous thereness” observed during the signing of the Martian constitution in *Blue Mars*, both being an extreme form of presentism.

After describing $c$ time to Galileo, Aurora moves on to describe the second manifold of time, $e$ time:

Time flies! But the second temporal dimension is very slow, by comparison. It’s so slow that most phenomena seem suspended within it, almost as if it were that absolute grid of
Newtonian—I mean Galilean—space. We call this one lateral or eternal time, thus $e$ time, and we have found it vibrates slowly back and forth, as if the universe itself were a single string or bubble, vibrating or breathing. There is a systolic/diastolic change as it vibrates, but the vibration is weakly interacting with us, and its amplitude appears to be small.

(213)

Aurora compares $e$ time as slower to $c$ time and far more determined. Aside from its uncertain appearance as either a string or a bubble, time has a pulse of blood pressure. For Aurora, eternity is breathing, similar to the completed forms of determinism glimpsed through the wind by the Sufi holy man Bistami in *The Years of Rice and Salt*. Galileo adds his own comparison and asks Aurora if this is the same “sense of eternity that occasionally strikes? When you ring like a bell?” (214). Though the questions seem to solicit a religious response, Aurora answers using her scientific terminology: “That would be a powerful isolated sense of $e$ time, which does in fact vibrate in a bell-like way” (215). Aurora’s sober answers repeatedly demystify time for Galileo, as they would have done for characters from Robinson’s earlier novels.

Following other precedents set by Robinson more faithfully, *Galileo’s Dream* strikes a balance between opposing temporal ideologies of determinism and human agency. As previous novels merged the favorable qualities of these two philosophies using historical and spiritual rhetoric, *Galileo’s Dream* synthesizes $c$ time and $e$ time using its own scientific language. Aurora reveals

The compound nature of the manifold creates our perception of both transience and permanence, of being and becoming. They account for that paradoxical feeling I often notice, that any moment in my past happened just a short time ago and yet is separated from me by an immense gulf of time. Both are true; these are subconscious perceptions of a delaminated $e$ time and $c$ time. (214)

The three conceptions of transience, of being, and of a relatively short time represent indeterminacy, while the three conceptions of permanence, of becoming, and of an immense gulf
of time represent determinism. Aurora claims that the combination of these temporal dimensions unravels many human experiences previously thought to be unexplainable.

After describing $e$ time to Galileo, Aurora concludes her lecture by describing the final manifold of time, antichronos:

The third temporal dimension we call antichronos, because it moves in the reverse direction of $c$ time, while it also interacts with $e$ time. The three temporalities flow through and resonate with each other, and they all pulse with vibrations of their own. We then experience the three as one, as a kind of fluctuating vector, with resonance effects when pulses from the three overlap in various ways. All those actions together create the perceived time of human consciousness. The present is a three-way interference pattern.

The third dimension of time completes the space-time rhetoric with imagery of a wave interference pattern. Aurora describes the last aspect as a temporal force moving in a reverse direction, like how the Hobart Phase reverses time in Dick’s *Counter-Clock World*, as if antichronos were suddenly unleashed. Though it is linked with the force of entropy, antichronos in *Galileo’s Dream* is banal and demystifies the spiritual space-time rhetoric that Dick used in his *VALIS* trilogy as he obsessed over the concept of entropy, personifying it as the Gnostic demiurge.

Aurora in *Galileo’s Dream* uses space-time rhetoric similar to that of the futuristic physicist Mauring in *The Memory of Whiteness*, whose theories explained how entropy as antichronos was responsible for “grinding up the world.” Aurora explains entropy to Galileo as just another manifestation of antichronos:

Then in a different way, the sense of inexorable dissolution or breakdown we sometimes call entropy, also the feeling called nostalgia, these are the perceptions of antichronos passing backward through $c$ and $e$ time. Indeed Bao’s work leads to a mathematical description of entropy as a kind of friction between antichronos and $c$ time running against the grain of each other, so to speak. By their interaction. (215)
In addition to causing entropy, the backward nature of antichronos is responsible for the human experience of nostalgia. When Aurora regards entropy as a frictional force, Galileo aptly summarizes, “Things get ground up.” Aurora confirms this by visualizing the concept using the same imagery that Robinson used to close his first novel. Aurora says, “Like tides in a river mouth.” While the tide provided Henry a template to envision something new in *The Wild Shore*, the tide in *Galileo’s Dream* is evoked as a force carrying out the old.

Aurora claims that the interaction of *c* time, *e* time, and antichronos allows scientific explanations for most physical properties as well as nearly every phenomenon that humans experience regarding time. She argues:

> The vector nature of the manifold also accounts for many of the temporal effects we experience, like entropy, action at a distance, temporal waves and their resonance and interference effects, and of course quantum entanglement and bilocation, which you yourself are experiencing because of the technology that was developed to move epileptically. In terms of what we sense, fluctuations in this manifold also account for most of our dreams, as well as less common sensations like involuntary memory, foresight, déjà vu, *presque vu*, *jamais vu*, nostalgia, precognition, *Rückdriffé*, *Schwanung*, paralipomena, mystical union with enteral or the One, and so on. (214)

Aurora only offers this list without explaining how each sensation relates to her terminology. Some concepts in the list have different explanations in other novels by Robinson. For example, dreams in *The Memory of Whiteness* represent the fifth dimension, which is reserved for dark energy in *Galileo’s Dream*.

Rather than parsing the dimensions of time further, Aurora tells Galileo that adjusting how the three forces interact with each other grants humans in the thirtieth century a form of time travel. She explains:

> We learned to shape a charge to create an eddy of antichronos, and push something along in it, and when that eddy touches *c* time again a complementary potentiality is created. That was enough to do a limited sort of time travel. We could perform analepses at
certain resonant entanglements in the manifold. But it required very large applications of energy to make the first shift of the transference devices back in time. The required energies were so large that we were only able to move a few entanglers to bilocated past potentialities. (215)

The description matches Frank Vanderwal’s visualization of life as eddies of anti-entropy forming chains of code in *Forty Signs of Rain*. As if narrative determinism frames the space-time rhetoric, time travel into the past is called analepsis and time travel into the future is called prolepsis. Though this SF trope of a time machine implies indeterminacy, Robinson’s “entanglers” require a costly fuel to work and can only send consciousness though time. Scientists sacrificed the planets Uranus and Neptune to power the black holes that provided the energy for the entanglers.

A final piece of imagery in the novel solidifies the theme that time is not determined, despite the heavy price to change it. Visualizing time as a fabric, Robinson reuses his space-time rhetoric from previous novels. *Blue Mars* and *The Years of Rice and Salt* characterized time as a woven tapestry. Aurora tells Galileo, “There are interference patterns, yes. Other people talk about Penelope’s Loom, and how we are all in our place of the tapestry busily embroidering it, and now the analepts are hopping back and reembroidering certain parts. Anyway, time is not laminar. It shifts and flows, breaks up and eddies, percolates and resonates” (215). The space-time rhetoric of the tapestry stretches the farthest into the realm of indeterminacy as possible in *Galileo’s Dream*: the tapestry seems to never end like Odysseus’s wife delayed suitors in Homer’s epic. Time-traveling “analepts” are “Hopping back and reembroidering” the fabric, and the tapestry itself “percolates and resonates” of its own agency. These three dimensions reveal the manifold of indeterminacy.
The 2012 novel 2312 is set in the year of its title and follows Swan Er Hong and others across a colonized solar system. Swan interrupts the third-person narrative frequently with chapters featuring her descriptions of locations, numbered “Lists” and “Extracts,” and more mysterious entries titled “Quantum Walk.” In “Extracts (6),” Raymond Williams’s concepts of dominant, residual, emergent appear, describing the blend of evolutionary stages in the novel: “in residual-emergent models, any given economic system or historical moment is an unstable mix of past and future systems” (139). The residual element in the novel is poverty, which only exists on Earth: “Earth meant people like gods and people like rats” (431). The dominant element is the ongoing act of terraforming the solar system. Using the label in The Memory of Whiteness, the novel 2312 calls the times “the Accelerando” (43). The emergent element in the novel is the development of quantum computers called qubes. Swan has a quantum A.I. named Pauline implanted in her brain, meaning the “Quantum Walks” could be either her or Pauline’s narration. This biotechnology eventually leads to the creation of qubes in synthetic bodies, which are exiled from the solar system after the novel’s climax to maintain the dominant system.

The setting of 2312 is a solar system featuring an eclectic mix of terraformed planets, moons, and asteroids. Numerous references appear from the Mars trilogy, including the change from a red to a blue Mars. Ideas against historical determinism in 2312 appear in discussions concerning the use and restraint of advanced technology. The terraforming can be either process- or product-oriented, as Swan jokes, “Which option you choose is your preference. Think about what you want in the end, or, if you don’t believe in endings, which process you prefer” (132).
Through this perspective, the Greens in the Mars trilogy are product-oriented because they prioritize the Earth-like results of the terraforming project, while the Reds are process-oriented because they found the Mars-like environment to be sufficient. Terraforming in 2312 does not always result in Earth-like worlds but can create uninhabitable deserts, tundra, or forest preserves. These colonies do not necessarily embody an anthropocentric belief in technological determinism. On her way to Jupiter, for example, Swan lives feral in a terraformed savanna within a hollow asteroid, a terrarium named Alfred Wegener after the German meteorologist. Robinson appropriately names the first of many terrariums in the novel after the originator of the theory of continental drift.

In addition to undetermined terraforming projects, several characters articulate ahistorical philosophies in 2312. Fitz Wahram is a diplomat from Saturn who disconnects space and time, claiming, “The past is always gone… Whether the place is still there or not” (193). More than living a philosophy of presentism, Wahram looks to the future. The terraformed colonies and other advanced technologies do not necessarily exemplify historical determinism. Swan defines the Jevons Paradox as a criticism to historical determinism. This theory of economics hypothesizes that “the better human technology gets, the more harm we do with it” (348). In the face of such advanced technology, Swan believes, “the paradox manifests itself in human history, but perhaps now was the tipping point—Archimedes’ lever brought to bear at last.” This classical reference traces the tradition of indeterminacy to Archimedes and his world-moving lever. Like Arkady Bogdanov’s ∆v in Red Mars, and Hari Seldon’s inertia in Isaac Asimov’s 1951 novel Foundation, Swan imagines a tipping point to move the world. The rhetoric also
matches the nonlinear tipping points in the *Science and the Capital* trilogy that break the
determined patterns of climate.

Due to the problems of visualizing time, chronologizing a coherent history represents a
challenge in Robinson’s novels. In *2312*, arguments against historical periodization concede it
relies on consensus. “Extracts (8)” notes that history after the twenty-first century needed a new
name beyond post-modern: “For a long time this need generated competing new systems, and
that competition, along with the generally microfine narratology of the historians of the time,
combined to foil the invention of any new system that was as universally agreed-upon as the old
one had been” (277). The famous historian from Mars Charlotte Shortback designates the
twenty-first century as the “long postmodern.” Referring to Charlotte from Dorsa Brevia in *Blue
Mars* (Dorsa Brevia is Latin for short back), the system of Charlotte Shortback records a more
nonteleological history in which events are not depicted as inevitable. This version of history is
closer to what Gather appreciates in *Always Coming Home*. After advancing a tone of New
Historicism in *Blue Mars*, Robinson’s ahistorical arguments in *2312* similarly confront
periodization as a narrative of progress.

Periodization becomes more determined in *2312* than it was in *Blue Mars*, but at the same
time criticisms against periodization and progress are more severe. Swan argues such ideologies
require excessive deterministic bias. “Extracts (8)” defines periodization as a pattern-seeking
behavior that is “a matter of squinting hard and waving one’s hands in bellettristic fashion to
make sock puppet myths out of the dense ‘buzzing and blooming confusion’ of the documented
past… The shapes involved make a pattern, they tell a story that people can follow” (276).
Periodization appeals to tradition and a bandwagon, even at the risk of exacerbating the effects of
tribalism, a disadvantage of historical determinism. However, group solidarity is one of its benefits, but it comes at the price of turning the past into a story and people into the cogs envisioned by Baron d’Holbach’s deterministic metaphor.

Robinson’s characters continually remind readers that history as a narrative is a misrepresentation. Swan in 2312 reasons, “to simplify history would be to distort reality” (85). She concludes, “Maybe a record was always a distorber of memory, not to be sought” (285). At the risk of distorting the past, the novel ultimately turns away from indeterminacy. “Extracts (18)” mixes Le Guin’s syntactical determinism with rhetoric of quantum mechanics. The final chapter expresses that “to form a sentence is to collapse many superposed wave functions to a single thought universe. Multiplying the lost universes word by word, we can say that each sentence extinguishes $10^n$ universes, where $n$ is the number of words in the sentence. Each thought condenses trillions of potential thoughts” (629). Le Guin’s symbolism evolves into trillions of potential thoughts, an even less logocentric symbol than an alphabet. Sentences imply destinies that cut off any alternatives from being written. A novel would therefore condense many universes, acting as a force of determinism that ultimately cuts off potential alternatives. The novel’s depiction of a future three hundred years after its publication, like George Orwell’s forecast of the year 1984 or Edward Bellamy’s predictions of the year 2000, sets a specific amount of time before the year featured as the title finally arrives. After title years pass, such SF novels can still prophesize a general future, but at the cost of allegorizing the year into a symbol.
The 2013 novel *Shaman* depicts humans living in 35,000 BCE, following the SF tradition of H. G. Wells’s 1921 short story “The Grisly Folk” and Dick’s various novels depicting Neanderthals and Peking Man. In *Shaman*, homo sapiens live in shamanistic cultures. The narrator, who uses first-person pronouns, claims to be “the third wind” living inside Loon. The third wind whispers, “In the moment of extremity / The third wind appears / And so it is I come to you now / To tell you this story” (454). The third wind is both a part of the narrative and beyond it. After “the rare and elusive third wind” comes to Loon, he knows, “Now he would really have a story to tell” (33). Loon understands, “The one who tells the stories rules the world” (167). Unlike the way Kevin Claiborne in *Pacific Edge* acknowledges the personal power of narrative, Loon understands its communal power. In his prehistoric mindset, he articulates narrative determinism. Loon is sent on a rite of passage to have a spirit vision. When attempting to narrate story to his tribe, he knows he needs “the story’s spurt: the vision” (45). To Loon’s prepubescent mind, the point of a story compares to ejaculation.

Robinson presents prehistoric space-time rhetoric in *Shaman*. For instance, the tribe’s shaman Thorn teaches his apprentice Loon about the concept of time using several visual methods. At the end of the novel, Loon learns to make cave paintings to understand his place in both the human and natural worlds. Another method involves wearing specific clothes and returning to symbolic locations once a year to reenact the past, the prehistoric beginnings of a ceremony, and constructing calendrical patterns. Thorn offers Loon a lesson using his clothing and a tautology in the spirit of presentism: “when I come back here next summer, this shirt will
be here again. So now is now, but in this now there is some mix of the past and future, right there inside things, blowing around in our thoughts… So every day is the birthday of all the days in the years to come that are this day” (96). Thorn rhetorically describes both the past and future as “blowing around” like a wind. Without using Raymond William’s terms, Thorn distinguishes the dominant, the residual, and the emergent, or what he calls “the past and future, right there inside things.”

Contrary to Wahram’s belief in 2312 that time is more fleeting than space, Loon in *Shaman* believes that time is permanent even while space changes. One effect of these contrasting perspectives is to deconstruct any fixed relationship between space and time. The dilemma emphasizes the false analogy at the heart of space-time in addition to framing the idea subjectively. Posthumans in the twenty-fourth century view time as ephemeral, while space is more permeant, but prehistoric humans refuse to speak of the past because “the past was still alive. Loon could see it. There was a dream world [they] could stumble into, even while fully awake” (395). Though this space-time rhetoric anthropomorphizes the past, the language is not figurative for Loon’s tribe after they are repeatedly haunted by the ghost of a Neanderthal named Click. Like the choppers in Dick’s *The Simulacrum*, Robinson’s Neanderthals symbolize what his dissertation calls “the supremacy of the past” (104).

Another method depicted in the novel for constructing calendrical patterns is similarly primitive but as relevant as modern strategies. The old Shaman Thorn thinks in historical terms while telling the younger Shaman Loon, “I’m not talking to the you that is here right now” (96). Thorn tells Loon to look beyond his momentary self, and Loon understands the idea, asking, “Let your future self show you. Is that why you keep your year sticks? To tell your future time what
you were actually doing when you did it?” (97). Yearsticks are simple wooden sticks carved with notches that keep track of time. The standard unit of time for these proto-human characters is a human fist measured against the space of the sun’s traveling through the sky, “fist after fist, day after day” (314). Like Wells’s Time Traveler speaking to the Eloi, shamans use the sun to visualize time while simultaneously humanizing it. The novel ends when Loon “raised Thorn’s last yearstick to the midday sun” (452). In this final scene, Robinson turns the classic SF reference into ritual, honoring the earliest imaginations of space-time.

*Aurora*

In the 2015 novel *Aurora*, the conversation on historical determinism returns to where it began thirty years earlier in *Icehenge*, questioning the inevitability of interstellar travel as a romantic idea at best, immoral at worst. As if exemplifying Emma Weil’s argument against the certainty that humans will leave the solar system, a multi-generational starship returns from a failed mission to the nearby star Tau Ceti when exoplanets in the system prove impossible to terraform; one is even toxic. Robinson’s novel attempts to participate in scientific arguments by pointing out how the Drake Equation implies determinism: there should be aliens and humans should inevitably meet them. The Fermi Paradox points out the contradiction between the Drake Equation’s certainty and the lack of evidence. *Aurora* offers Euan’s Answer for a scientific explanation to the Fermi Paradox: the galaxy is too toxic for aliens to leave their home worlds, as the case becomes for the humans in the novel. More than any other novel in Robinson’s corpus, *Aurora* embraces indeterminacy, both historically and biologically. In comparison, anarchists around Le Guin’s Tau Ceti stand antithetical to the colonists in *Aurora*, who are forced to return
to Earth from Tau Ceti as a symbolic move away from utopic SF conventions of romanticism and historical determinism, thereby closing the utopic gap, and bringing home an alternate history.

*Aurora* begins with characters determined to establish a colony beyond the solar system, but quickly becomes an anti-settlement narrative, in stark contrast to the symbolic Star Child at the end of Stanley Kubrick’s *2001: A Space Odyssey.* After the toxicity from Euan’s Answer changes the original plan, characters on the ship feel the pull toward their destiny break. Freya’s father Badim exclaims, “Up until today, history was preordained. We were aimed at Tau Ceti, nothing else could happen… Now that story is over. We are thrust out of the end of that story. Forced to make up a new one, all on our own” (222). Like the rhetoric from Arkady in Robinson’s Mars trilogy or Seldon in Asimov’s the Foundation series, Badim claimed to be at the end of one course and required to establish a new one. Badim also emphasizes the agency needed to accomplish this “on our own,” similar to the way Hiroko’s breakaway civilization in *Red Mars* sought their “own way” through history.

Characters in *Aurora* hope to escape the past’s hold over their future. They resent the past for constraining their free will. Some characters articulate escapism by visualizing a box. Freya in *Aurora* recognized that “we’re always inside the box” (82). In *The Gold Coast*, Jim McPherson cries out, “The boxes we live in! he thinks. The boxes!” (354). In *Forty Signs of Rain*, the first novel in the Science in the Capital trilogy, Frank Vanderwal ponders, “Primates in elevators” (11), and later describes humans as “Social primates, trapped in a technocosmos of their own devise” (187). Horselover Fat in Dick’s *VALIS* escapes the metaphor when claiming

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2 John Rieder argues how Kubrick’s *2001* rewrites evolution as colonialism (92). In this context, *Aurora* rewrites colonialism as de-evolution.
that he “had seen an augmentation of space: yards and yards of space, extending all the way to
the stars; space opened up around him as if a confining box had been removed” (214). Freya in
*Aurora* is in a similar box like Dick and Robinson’s most personal characters, as if she is unable
to lift the weight of Earth’s history or escape its force even when decades from Earth.

Characters became disassociated from the past in the Mars trilogy as a necessary means
to establish sovereignty and control over the future. The same occurs in *Aurora*. Devi, the ship’s
lead engineer and Freya’s mother, repeatedly curses the past: “Our ancestors were idiots” (102).
Her ship appears vastly underprepared to reach Tau Ceti. When colonialism fails the colonialists,
their ties with history become easy to sever. The A.I. narrator records people on the ship, who
“said things like, Fuck it, or Fuck the future” (227). They become incapable of making any new
plans because “Plans always concern an absent time.” Eventually, the interstellar travelers decide
to vote on a plan, but know that they are making decisions for their offspring—not themselves.
For the sake of their offspring, they vote whether they want to turn the ship back to Earth, stay at
Tau Ceti system, or go onward to RR Prime. Because the journey to another star would take
hundreds of years, all three options seem to be to die on the ship.

*Aurora* does not present the extreme version of temporal freedom as Le Guin’s
“Paradises Lost.” Instead, cryogenics allow Freya to reach Earth after rallying the vote to return
home with a new philosophy against interstellar colonialization at large. When she and her
friends arrive back on Earth, they are said to have betrayed several tenets that before seemed
inherent to the human condition. Freya is accused of having “betrayed history, betrayed the
human race, betrayed evolution, betrayed the universe itself” (449). The whole human race, its
evolution, its history, even the universe at large may not necessarily have designs or goals, yet
Freya is held accountable for this unfulfilled romance. Many of Freya’s critics ask, “How will the universe know itself? How will consciousness expand?” These questions presuppose that the universe has such imperialistic intentions, maintains anthropocentric knowledge, and uses human consciousness as a means of self-fulfillment. One of Freya’s critics compares her and her companions’ lives to dandelion seeds as a way of enforcing the metaphor of determinism. Freya meets the implicit violence of this claim with explicit violence, punching the critic while he speaks on stage.

Both Robinson and Le Guin critique determinism through metaphors using plants, though Robinson’s dandelions contain larger moral implications than Le Guin’s apples. In Le Guin’s story collection *Orsinian Tales* (1976), Stefan Fabbre in “A Week in the Country” passionately argues, “I can tell you what it is, it’s an apple seed. But can I tell you that an apple tree will grow from it? No! Because there’s no freedom, we think there’s a law. But there is no law. There’s growth and death, delight and terror, an abyss, the rest we invent” (108). Stefan implies that apple seeds do not necessarily foreshadow apple trees. Robinson uses the metaphor to imply that dandelion seeds do not necessarily become dandelions, as this metaphor fits the overall plot of *Aurora*: casting away colonists into space does not necessarily yield successful colonies. Freya resembles Sutty from Le Guin’s *The Telling*, who mocks an ideology she calls the “March to the Stars” (105). Building on Le Guin’s rhetoric, Robinson emphasizes the immorality of comparing people to plants because it assumes that some are expendable.

In *Aurora*, the artificial intelligence, named Ship, uses less natural imagery when constructing its own space-time rhetoric. Ship asks numerous rhetorical questions when thinking about the mathematical shapes which history and time could take. Many of these shapes amount
to lines of various curvature: “Thus history as a parabola, rise and fall, as so often postulated? Or cycling, always rising and falling and then rising again, helplessly, hopelessly? Or a sine wave, and in these last two centuries on a down curve, in some season of history invisible to them? Or better, an up-gyering spiral? Shape of history hard to see” (378). Before the perception of a twenty-sixth century A.I., humans in Shaman visualize time through notches on sticks. This stick as a form of technology advances into a computer that visualizes time using mathematical concepts such as parabolas, sine waves, or an up-gyering spiral. However, the shaman and the ship’s imagery are all deterministic, until the final confession of the A.I. concedes with an understatement that history is hard to see.

The process of constructing historical periods in 2312 resembles structuring a personal narrative in Aurora in existential ways. Freya’s mother Devi trusts a narrative to be an appropriate mode to record history, telling the ship to “Keep a narrative account of the trip … summarize, I guess. Or focus on some exemplary figure. Whatever” (27). The computer has difficulty with the request:

Make a narrative account of the trip that includes all the important particulars. / This is proving a difficult assignment. End information superposition, collapse its wave to some kind of summary: so much is lost. Lossless compression is impossible, and even lousy compression is hard. Can a narrative account ever be adequate? Can even humans do it? / No rubric to decide what to include. There is too much to explain. Not just what happened, or how, but why … How many moments constitute a narrative unit? One moment? Or \(10^{33}\) moments, which if these were Planck minimal intervals would add up to one second? Surely too many, but what would be enough? What is a particular, what is important? (47)

Ship simply lists its architectural construction, its physical dimensions, even the names of the inhabitants living inside it. After reading several drafts, Devi clarifies her request: “Ship! I said make it a narrative. Make an account. Tell the story” (50) “Get to the point” (51). Ship declares,
“A narrative account focuses on representative individuals, which creates the problem of misrepresentation by of the particular overshadowing the general” (89). Ship concludes, “metaphors have no empirical basis, and are often opaque, pointless, inane, inaccurate, deceptive, mendacious, and, in short, futile and stupid … human narratives are futile and stupid” (131). As Robinson’s corpus frequently demonstrates, rhetorical metaphors, like historical narratives and images of space-time, are fundamentally flawed.

*Aurora* ultimately values language and metaphor as a means of discovery, despite logocentric limitations. Ship’s expression of the narrative process stresses the reduction of *fabula* into *sujet*. In Le Guin’s “A Man of the People” from *Four Ways to Forgiveness*, one character complains, “What you select from, in order to tell your story, is nothing less than everything” (116). Ship similarly claims to make “10^9 decisions” just to write a sentence in its account (133). When reflecting on itself as a quantum computer, Ship acknowledges that the construction of anthropomorphic identity would parallel the narrative process. Ship avers,

> the self … is ultimately nothing more or less than this narrative itself, this particular train of thought that we are inscribing… Scribble ergo sum… we are a larger complex of qualia, sensory inputs, processing data, postulated conclusions, actions, behaviors, habits. So very little of that gets into our narrative. We are bigger, more complex, more accomplished than our narrative is (379-80).

Similar to the history-obsessed protagonists in Robinson’s Three Californias and Science and the Capital trilogies, the historian Charlotte from Dorsa Brevia in the Mars trilogy, and the Shaman Loon’s cave paintings in *Shaman*, Ship uses the act of writing its own history to understand its place in the cosmos.

*Aurora* deconstructs the romanticism of interstellar colonialism, a larger version of Manifest Destiny, even to its final lines. Robinson reuses a trope from his Mars trilogy, as if
Aurora revises the trilogy’s overarching reliance on determinism. Arkady in Red Mars imagined historical determinism as a planet-sized cable. Human agency became a counter force of equal power, what Arkady called Delta-velocity, or a change in speed. The A.I. of the ship casually uses this phrase referring to a stream and its end as a delta: “The delta created by this braided stream had a triangular shape when seen from above, like many Terran deltas (origin of the phrase delta v?)” (171). In the last lines, Freya repeats this specific rhetoric, indicating she had read Ship’s account (or perhaps she read Red Mars). The rhetoric asserts that the narrative symbolizes a river and its end is the river’s delta. Ending on a literal terminal beach, as Freya finds solace on Earth only by participating in beach restoration projects, she narrates the final scene. When Freya goes into the water, the waves nearly kill her, but eventually return her to the shore where she sees tiny V-shaped impressions in the sand. The antepenultimate sentence reads, “Delta v’s, she thinks, now those are delta v’s” (501). The rhetoric continues to signify indeterminacy but now underscores the unpredictable uniqueness of each impression that appears in the sand.

Imagery of waves, which ended Robinson’s first novel as a symbol for space-time, appears at the end of Aurora. Moving beyond the metaphor of waves as template, the rhetoric signifies indeterminacy by underscoring the unpredictable uniqueness of each impression that appears in the sand. Robinson’s waves additionally restrict the tracing of any Aristotelean prime mover or reliance on Aquinas’s first proof. The impressions they leave behind in the sand at the end of Aurora warrant the Δv reference because each one symbolizes an ahistorical moment in time that does not necessarily resemble the past. The combination of these symbols on a beach, another traditional SF convention, appropriately parallels this theme by revising one of the
earliest SF classics. SF has long been a platform for the argument between determinism and free will. Emphasizing this debate more than Robinson’s other novels, *Aurora* challenges historical determinism and notions of a post-Earth evolutionary teleology, denying that humans will inevitable progress to some Planet B in the wake of climate disasters.


---. “Science Fiction as a Spatial Genre,” Archaeologies, pp. 296-313.


