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Spirit Don't Ever Die: Apocalypse and Denial in an Infinite Universe

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts in English

by

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University of Arkansas at Little Rock
Bachelor of Arts in English, 2011

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This thesis is approved for recommendation to the Graduate Council.

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Abstract

In *The Great Derangement*, Amitav Ghosh catalogs contemporary fiction's failure to adequately engage with catastrophic climate change. In this thesis, I argue the engagement problem has a century-old analogue in fiction's approach to entropy. Entropy was among the first secular apocalyptic modes in mainstream discourse, and this investigation of authors' approaches to its portrayal provides a model for understanding fiction's denial or acceptance of apocalypse. I first examine William Hope Hodgson's 1912 novel *The Night Land*, a far-future tale set in a post-solar Earth. I contend that Hodgson's centering of the human experience prevents him from portraying a true end and instead lends his work anti-apocalyptic energy. This centering seemingly stems from the nineteenth century episteme, as defined by Foucault, which privileged taxonomy as the guiding epistemological model. I then contrast *The Night Land* with two mid-century stories that more-fully reconcile entropic apocalypse, and which favor a networked "unit operations" approach as described by the contemporary theorist Ian Bogost. First, "The Last Question" by Isaac Asimov envisions a cosmic resetting by framing the universe as protagonist. Second, "Entropy" by Thomas Pynchon looses full-scale entropy on humans both witting and unwitting, framing human consciousness and ultimately inconsequential.

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Dedication

This and all work is for David and Lisa Riggs.

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Introduction – Time Isn't Holding Up

Zbigniew Lewicki, in his study of apocalyptic fiction and entropy *The Bang and the Whimper*, explains that “. . . the concept of *apocalyptic fiction* has never been precisely defined. It is possible that no unequivocal definition can ever be formulated” (xiii). Perhaps that is true in the sense that the twentieth century saw a splintering of apocalypse as an idea, and thus divergent narratives can claim the title of apocalyptic fiction. In recent cultural memory, apocalyptic concern has been passed around from clergy and theologians to physicists, astronomers, cult leaders, political protesters, social critics, and climate scientists. With these many claims to apocalypse, what should apocalyptic fiction even look like?

In my investigation of several signposts of twentieth century apocalyptic fiction, I attempt to give a shape and definition to an *entropic* apocalyptic fiction. Entropic apocalyptic fiction is a mode of the narrative made possible via the understanding of entropy and universal heat death, principles from physics which eventually imprinted on the cultural imagination. In science, an understanding of entropy cropped up in the 1870s. Its portrayal in literature began tentatively, just past the turn of the twentieth century, but strengthened mid-century as information networks and computational complexity began to redefine scientific thought. Entropic fiction was perhaps the first secular, scientifically-grounded apocalyptic mode in mainstream literature, though its portrayal proved a challenge in ways we see anew as fiction now grapples with the reality of climate catastrophe.

In *Apocalyptic Transformation*, Elizabeth K. Rosen suggests two broad categories of apocalyptic fiction. She shows a split between apocalyptic modes which suppose a “New Jerusalem” (1) — such as in works of Alan Moore, Terry Gilliam, and the Wachowskis—and those that do not. In diverse ways, the creators of New Jerusalem fictions all offer possibility an End that leads to a transformed—though not always improved — world. She also, though, chronicles Kurt Vonnegut’s apocalyptic works, namely *Cat’s Cradle* and *Galapagos*, which show other ways to view apocalyptic destiny. In *Galapagos*, mankind’s isolated survivors of plague evolve over one million years into a non-human species. Rosen wonders if “it is the irrevocable end of humankind, or is it, in fact, a New Jerusalem” (61). *Cat’s Cradle*, meanwhile, is unambiguous. The novel’s Ice-9 fueled apocalypse shows only “destruction . . . [making] no suggestion that there is a new or better world to be inherited afterward” (47). Vonnegut’s concern is not entropy, but his result resembles an entropic end in its finality. This second style of apocalypse, that of a total End unconcerned with humanity’s grand narrative, was born of the late-nineteenth century’s scientific discoveries. No matter how rational this style of apocalypse may be, it has proven difficult to reconcile in fiction.

Via three significant works concerning entropy, I will look directly at entropic apocalyptic fiction and explore why and how an entropic end is rejected or accepted in such works. In studying this topic, I will explain the entropic mode in general and also incongruities therein by exploring dominant paradigms of popular scientific thought. First, I will detail William Hope Hodgson’s semi-obscure, far-future epic *The Night Land*. This 1912 novel is an

admirable and baffling early attempt to reconcile emerging evidence of entropic inevitability with heroic, proto-sci-fi storytelling. Though Hodgson ultimately cannot accept true entropy into his storytelling vision, his failure to do so is telling of how such themes simply could not fit into broader turn-of-the-century consciousness, even for the scientifically inclined. Scientific understanding, Hodgson ultimately shows us, does not always move in a single direction and does not easily supersede the inertia of cultural thought and mores—a point made all too clear by twenty-first century cultures sprinting toward self-made environmental destruction.

Amitav Ghosh, in his 2016 study on mainstream fiction's failures to reconcile climate catastrophe, *The Great Derangement*, argues that an "inertia of habitual motion," prevents our acceptance of new truths, however urgent they may be (54). He claims this inertia is rooted at the individual level, as personal experience is the baseline for human understanding. Perhaps this is why Frank Kermode, in *The Sense of an Ending*, describes secular apocalyptic storytelling as a metaphorical mode for the psyche's negotiation of personal end. Ghosh fixates on literary fiction's move toward slice-of-life pieces that prioritize "style and 'observation,' whether it be of everyday details, traits of character, or nuances of emotion" (27). This "realist" style leaves little room for portraying grand, dramatic events and catastrophes. Like Ghosh, Kermode considers fiction's move away from epic narrative to small-scale "realist" storytelling, and believes the move altered the relationship between apocalyptic thought and popular storytelling.

And where Kermode considers apocalyptic storytelling in the twentieth century a metaphor for personal death (and vice versa), Lois Parkinson Zamora even considers some

apocalypse a metaphor *for* apocalypse, as she feels apocalypse cannot be untethered from its longer cultural tradition. In *Writing the Apocalypse*, she addresses Thomas Pynchon, whose “Entropy” will comprise the third section of this discussion. Zamora says Pynchon “reacts against” the “conventional sense and structure of the apocalypse” by “substituting the metaphor of entropy for the apocalypse” (120). Zamora, like Kermode, believes magical realism the only vessel of traditional apocalypse in serious twentieth century fiction. Unlike Kermode, though, Zamora suggests a story of entropy—and, we would then have to assume, exterminating apocalypses—cannot be apocalypse at all, because there is not renewal waiting on the other side. Depending on definition, apocalypse can be a metaphor for apocalypse.

The apocalyptic impulse, Kermode says, made a transition via the novel’s sophistication, realm of epic, mythic storytelling (again, barring magical realism) toward a personal, inward-looking fictive consciousness. Personal death and apocalyptic end became symbols for one another as the scope of consideration in popular storytelling narrowed. “[The] type figures [of apocalypse] were modified,” he says, “made to refer not to a common End but to personal death or to crisis.” Similarly, “literary fictions changed in the same way—perpetually recurring crises of the person, and the death of that person, took over from myths which purport to relate one’s experience to the grand beginnings and ends” (35). In a more secular, scientific world, he says, the mysteries shifted from a divine realm to a personal one. Apocalyptic energies transferred to personal experience and dread. In Kermode’s estimation, by the twentieth century literary fiction was expanding the realm of inner life to a point where personal experience took over for universal myths. This progressive narrowing of scope, as the intensely-personal became

metaphor for broader populations or existence itself, is not well equipped for depicting grand-scale apocalypses, even if scientifically verified and inevitable. At the very moment that secularism narrowed the scope of such investigations, science revealed grand-scale apocalyptic forces which seem almost divine in scope. How can such tension be resolved?

Some entropic fiction of the mid-twentieth century found ways of dramatizing entropy. I will argue that Hodgson represents the cusp in two paradigms of thought, defined by Michel Foucault as Classical and Modern *epistemes* (*The Order of Things* 328-330). Hodgson lived outside an episteme that could allow him to incorporate pure entropic principles into his grand vision, as non-existence was beyond the boundary of the era's thought. Select later authors, living in an era more comfortable with networked-thinking (rather than the taxonomic thinking prominent, Foucault Says, in nineteenth-century style though) would not have the same difficulty as Hodgson in de-centering the human experience and portraying full entropy. Said difficulty in dramatizing full entropy into his novel will be contrasted with two stories from the Cold War era that manage to do so. These stories show that the collective imagination *can* shift in order to reconcile ideas that appear initially irreconcilable. This shift takes more than just time, though—it takes a change in how we think about the systems of nature. And, importantly, we must understand that this shift is not part of a linear movement in social thought. As Amitav Ghosh claims, we are collectively again in a position like Hodgson, struggling to reconcile what is scientifically assured.

To chart the fiction of entropic acceptance, I will first detail Isaac Asimov's 1956 story "The Last Question," a cyclical science fiction narrative that imagines the final showdown—and compromise—between universal entropy and technological progress, trillions of years in the future. I will then look at Thomas Pynchon's 1960 story "Entropy," which portrays the mundane events leading up to an unceremonious, universal entropic halting on a nondescript February morning. These works, from the same era as one another though belonging to slightly different literary schools, dramatize the entropic apocalypse with divergent styles but a similar consciousness. While Pynchon was working in the burgeoning postmodern idiom, Asimov was writing for pulpy science fiction quarterlies. And where Pynchon's story mostly relies on realism to create a sense of dread, Asimov's writing quickly leaves the recognizable behind in favor of space-age speculation. Both works, though, are essential portraits of how fiction can accept and dramatize a secular, scientific apocalypse. Hodgson accepts that the sun will someday expire, but cannot portray a world devoid of some abstract life energy and human spirit, even after the world has "ended." Pynchon and Asimov, meanwhile, model an entropic acceptance made possible by leaning in to a scientific view that gives the human experience no primacy. Both authors' entropic ends are made possible through an emerging, network-focused cognitive paradigm, which has been defined by theorist Ian Bogost as "unit operations" (3).

In pursuing this argument, I first analyze what themes should define apocalyptic fiction. Eschatology has traditionally been tied to grand showdowns of good and evil, heavenly and earthly forces, and sin against virtue. Martin Meisel, in 2016's *Chaos Imagined*, tracks how

anxiety about “chaotic” energies, such as war, the carnivalesque, complexity, and social turbulence, have been tied to ideas of Armageddon throughout history. Frank Kermode describes apocalypse as “an ordered series of events which ends, not in a great New Year, but in a final Sabbath” (5), but maintains that “there are two orders of time,” being the earthly, which stops, and the “eternal” duration, that which supersedes man’s understanding. Those three examples show different strands of thought toward the apocalypse: apocalypse as a divine showdown to extoll God, apocalypse as a general breakdown in the order of man’s institutions, and apocalypse as man’s ending within the context of larger eternal cosmic order. They are all, though, based on dichotomies, without which such models cannot find meaning.

In the most basic sense, these dichotomies are the basis of Foucault’s “discursive formations.” Foucault argues that a sense of “object” emerged post-Enlightenment that is defined by discursive categorization. He famously focuses on the nineteenth century phenomena psychopathological segregation of “the madman” in asylums and the creation of new conceptual objects (i.e. the conglomeration of symptoms into new conditions) (40). For our purposes, a simpler example may be more economical. Think of a dichotomous key. One of the most straightforward tools in natural sciences, a dichotomous key presents series of either-or questions that, when answered, will eventually lead to identification of some plant or animal. For Foucault, a guiding dichotomy was that of sane and insane, a hallmark of post-Enlightenment thinking and categorization. Whether the scope is bark or un-barked, sane or insane, good or evil—dichotomous discursive formations were and are central components of modern thought.

During that same era, *ownership* of apocalypse as an idea has shifted (though maybe not wholly changed hands). Beginning in mid-nineteenth century Europe (Meisel 384), notions of Entropy and the heat death of the universe found their way into popular discourse. By the early twentieth century, apocalypse transitioned from a purely sacred concern to a secular one. As such, the notion of what counts as apocalyptic in literature and art became (and remains) up for debate, and scholarly definitions of “apocalyptic” were open to exploration.

Entropy was not the only scientific notion spawning new mass anxieties. Darwinism and geologic deep time emerged as new intellectual realities as the nineteenth century drew to a close, conflicting with extant creation and destruction myths. Thanks to industrialization, newly-formalized public daily time conflicted with what was historically a personal or municipal measurement. At the turn of the century, paradigms of time, history, and the fate of the universe were all pulled in new directions. Each presented not only uncertainty or change, but a dichotomous conflict between an old truth and a new truth. The scope and limits of universal history were realistically in flux in a new way. “Three versions of nightmare fraught with entropic chaos,” Martin Meisel says, “troubled the spirit of the declining nineteenth and dawning twentieth centuries: ecological, cosmological, and anthropological (413). The universe could now be seen as just a large machine that would run out of steam. Hodgson would attempt to deal with this issue, but could not separate the universe from the broader human spirit and will to carry on. Later, by not framing the universe in terms of hierarchies or human interest, Asimov and Pynchon would show a framework for writing about apocalypse.

Some people can perhaps accept entropy and deep time as trivialities, as they do not seem to directly affect daily life. Others, such as the authors explored in this investigation, fixate on these notions, trying to reconcile them with the human experience. Perhaps because the new scientific propositions emerging with the twentieth century were so mind-bending, many of the artists seriously considering these themes produced the kind of speculative work often looked over by their contemporary critics. Kermode's *The Sense of An Ending* (1966) is perhaps the authoritative piece of mid-century apocalyptic criticism, and it is unconcerned with the speculative genres which were most willingly engaging with entropic apocalyptic themes most directly. Kermode grounds his discussion in Judeo-Christian traditions (5,8, 9,13, etc.) and canonical literary tradition, such as Homer (5), Shakespeare (18), Dostoyevsky (22), and so on, and only engages with acceptably literary fictions. I suggest this is emblematic of a kind of cultural "lag" when approaching apocalyptic fictions of the twentieth century. Regarding an entropic end for the universe, scientific thought outpaced mainstream thought, speculative fiction outpaced mainstream fiction, and literary criticism engaged first with the literature less explicitly fixated on the concerns in question. To clarify by oversimplifying: critical investigation fell behind cultural production and did not engage with the most relevant fictions, thus allowing definiteness to seem confused and blurred.

I suggest a simple definition: apocalyptic fiction is that which dramatizes the absolute end of humanity and/or engages the unstoppable death of the universe. I will argue that "workaround" fictions, of which *The Night Land* is actually a strong early example, are

apocalypse denial fictions. This includes works that fall in the post-apocalyptic genre(s), which show how life goes on after the end. By their very nature, life-after-apocalypse narratives suggest an un-absoluteness to apocalypse, tacitly (or overtly) arguing that the human spirit can overcome any obstacle. The lesson of entropy is that an absolute end is insurmountable, human spirit be damned. Asimov, as we will see, engages elegantly with this tension. Hodgson and Pynchon live at the poles.

For succinctness, I propose two terms to describe the apocalyptic impulses.

“Culmination” is the absolute end of humanity. “Cessation” is the unstoppable death of the universe. Truly entropic apocalyptic fiction engages both impulses, though a work like Kurt Vonnegut’s *Cat’s Cradle* can dramatize culmination to an absolute degree such that cessation will never engage mankind, and thus is irrelevant. It is the absoluteness of these two modes that separates scientific apocalypse, as crystalized by the entropic concept, from Judeo-Christian eschatology. In a story like the great flood, we see humanity re-built. In Revelation, apocalypse leads to the New Jerusalem. In thermodynamics, meanwhile, there is no way to “unring the bell.” That idea, of a finality that encompasses all and is not just a step in some more profound process, is the basis of purely apocalyptic literature on display by the time of Pynchon and Asimov.

Why such absolutism? The turn of the century saw growing acceptance of the second law of thermodynamics and its wide-ranging implications. Put simply, the second law recognizes that no transfer of energy is wholly efficient. In any transfer of energy, some energy is wasted and cannot be recovered, and the process “can be neither stopped nor reversed—and there will be no

regeneration” (Lewicki xv). In one sense, this energy loss is a simple matter, one which the scientist Oliver J. Lodge in 1894 called “nothing more than enlightened common sense” (cited by R.H.T. 24). When examined on a universal scale, however, the implication is clear—at some point, the universe will expend all of its energy. In the same era, “[the] geologist’s discovery of ‘deep time’ extended the life of the universe from thousands past millions into billions of years,” (Morse 40). In the span of a few decades, scientific thought revealed the earth (and thus the universe) to be unimaginably old, but also destined to eventually expend all of its energy and reach a point of stasis. Thus, truly apocalyptic thought should acknowledge a total end (though Asimov still finds a clever way to skirt this, to an extent).

While that absolutism is easy enough to propose in the twenty-first century, it is more difficult to accept and dramatize—especially if coming from an earlier worldview that predated network consciousness (the eventual product, I will argue, of the modern thought paradigm detailed by Foucault) and events like world war, cold war, information technologies, and ecological criticism. To more fully understand the early implications and difficulties of incorporating entropy into fiction, *The Night Land* is an excellent starting point. It is extremely early entropic fiction and actively pursues tension between humanity’s past and future. It is also enthrallingly odd by the standards of any era. *The Night Land* ultimately is too skeptical (or optimistic) to accept entropy as a fully apocalyptic force, but its inability to do so will aid us in appreciating the forces at work in Pynchon and Asimov’s attempts a half-century later.

Chapter 1— *The Night Land: We All Shine On*

Alan Gregory, in 2015's *Science Fiction Theology*, notes a pertinent demarcation in the history of apocalyptic speculation. He posits that the early nineteenth century was a significant turning point toward a secular apocalyptic experience. The era saw the popularization of the “last man” theme via several significant works. As the name suggests, these works fantasize about a sole survivor at humanity’s end surveying what’s left and experiencing what Gregory calls an “apocalyptic sublime” (153). Gregory highlights Thomas Campbell’s 1823 poem “The Last Man” and John Martin’s 1833 painting of the same name, which was probably inspired by Campbell. These works both focus on a single, sole-survivor figure surveying the collapsed remnants of civilization before a fading sun. This apocalyptic image is significant because it “recasts apocalyptic expectation into the temporality of transience and decline” (157). This new apocalypse could only exist due to growing secularization. “Whereas in classical apocalyptic literature, history concludes in the action of God,” Gregory says, “here . . . [h]umanity dies by length of time” (157).

Catherine Redford explains that the trope became a bit of a Romantic fad, highlighted especially by Campbell’s poem and Mary Shelley’s 1818 *The Last Man*. She tracks the theme as running from 1806 to the mid 1830s, singling out 1826 as a year that “saw a flood of Last Man texts hit the market as the theme reached its peak in popularity.” She says it receded quickly, however, as “the genre became increasingly farcical, and the Last Man texts which followed over the next few years tended to be either mocking in tone or wearily derivative” (Redford).

Fad or no, this the vision of apocalypse presented in last man works shows a fracturing of apocalypse that would never be undone. A version of apocalypse based on temporality and the forces of nature had been established, and would return to prominence in the twentieth century as temporality and conceptions of the changed in uncanny ways. Campbell's poem is one in which "the world [as] God's creation is seemingly forgotten" and "the logic of continuity and discontinuity, creation and resurrection, essential to a Christian eschatology" is cast off (Gregory 157). The powerful last man image, when it appeared, was both frightening and evocative. These works seemed to show the spirit of man holding through to the last. The works, according to Gregory, found a way to evoke the sublime of biblical revelation but eschew biblical narrative, transposing the theme to a secular consciousness. In essence, the last man fad set the stage for the kind of secular apocalypse that would be dreamed up in the twentieth century, when scientific advancements revealed natural mechanisms which could, indeed, bring about an absolute end over time.

But what is that apocalyptic length of time? Frank Kermode speaks of an uncertain "*tick-tock* interval" as essential to the modern apocalyptic (55). He draws on the tension of measured time, saying people live in a present between the tick and the tock, or the beginning and end (of the world and of our own lives), with an awareness of each but an indeterminate space between them and ourselves. "Our ways of filling in the interval between the *tick* and the *tock*," he says, "must grow more difficult and more self-critical, as well as more various" in the modern age (63). The *tock* is out there, but we cannot be sure when it will arrive.

Stephen Kern, in *The Culture of Time and Space*, uses the telephone in a similar regard. He explains the tension between caller and (potential) recipient. “The active mode [of communication],” he explains, “is heightened for the caller who can make things happen immediately . . . while the intrusive effect of ringing augments the expectant mode for the person called” (91). Further, “the recipient of the call [is] first suspended in waiting,” which became a new “symbol for loneliness” in the era (91). One can imagine the telegraph office playing the same role in the decades leading up to the telephone. The *possibility* of immediacy did not eradicate the uncertainty of waiting, it but infused into waiting a new tension. Everything in a life could now change in an instant, and until then one could wait, lonely and impatient, on the phone to ring and do just that.

In essence, time itself transitioned from an intuitive or personal force to an uncanny force. Amitav Ghosh defines the uncanny feeling as “the presence and proximity of nonhuman interlocutors . . . [having] the ability to intervene directly in human thought” and actions (30). At the turn of the twentieth century, time transitioned into one such uncanny force. Stephen Kern makes much of “the introduction of standard time at the end of the nineteenth century” exploring the demise of “[the] heterogeneity private time and its conflict with public time” (11-13). Prior to the standardizing of time—a move to ease logistical issues in commerce and rail travel—time had largely existed in the individual consciousness rather than the public sphere. Municipal time existed, but was subject to the whims of localities and largely non-binding. Now, with geologists redefining time in the macro and governments and companies redefining time in the micro, a

new message merged: time exists without, not within, you. This message ran counter to what people had experienced for thousands of years, and it upended both biblical and personal truths. Time, previously a divine or a personal matter, was becoming a regulated outside force.

Ghosh, when defining the uncanny, is speaking of the human relationship with climate change. The role of climate in our lives has changed radically because of direct human actions. With global warming, humans created a Frankensteinian new force—something we crated but which now affects us in ways beyond our direct control. Time also operates on this level. Once standardized, accepted, and integrated into daily life worldwide, public time became a force which could dictate actions, shape lives for the worse, and thwart human self-determination, despite the human role in its creation. Institutions were built on it, work lives determined by it, and people were disciplined for failing to adhere to it¹. All the while, physicists had now determined that *deep* time would necessarily end the universe, no matter how much people resisted it, no many how many advancements in society were made, and no matter how much technology continued to advance.

It is not for nothing that *The Night Land* was published in 1912. Kern singles the year out. Not only was 1912 the year of the International Conference on Time, but he singles out perhaps the first two significant paintings to portray clocks—*The Watch* by Juan Gris and *The*

¹ Or, in the words of Frank Zappa, people “WORSHIPPED IT as a WAY OF LIFE, and took their little pills by it, and went back 'n forth from work by it, and paid their rent by it, and before long they were even having BIRTHDAY PARTIES IN THE OFFICE by it, because NOW, AT LAST, GREGGERY PECCARY's exciting new invention had made it possible for everyone to find out HOW OLD THEY WERE!” (Zappa)

Enigma of the Hour by Giorgio de Chirico (12, 22-23). It may sound odd, but Kern simply “[had] not been able to find clocks” in art until 1912 (22). One can assume that William Hope Hodgson, a resident of continental Europe during the push for public time, was aware of the movement. We can also assume that, having been born in 1877, Hodgson must have read some last man fictions, as he demonstrates an enthusiasm for speculative and romantic work in his own fiction. And one can solidify these assumptions by looking at his deeply weird, space-time obsessed, horror-romance novel *The Night Land*.

Published about a century after the last man fad and in the heart of the public-time debate, the novel married themes of last survivors and an entropic earth defined by the passage of time. The introduction of entropy is a significant twist on last man storytelling. In Campbell’s last man poem, the causes of man’s end were war, plague and famine (Campbell 15-18). In Shelley’s novel, too, war and plague hasten humanity’s fall (Redford). These themes, of course, recall the Four Horsemen of the Apocalypse, catalysts of change “wherein the familiar world . . . is turned or returned to chaos” (Meisel 273). These are events of great scale—a scale that would require a cataclysm even beyond the great disasters history had already eclipsed, such as grad wars and the black plague. That is, the war, famine, or plague that could wipe out humanity were necessarily on a fantastical scale that had no real-world grounding. When it was Hodgson’s turn to tackle the last man themes, he grounded his tale in *time*, not calamity. He was transposing new concerns of his day: an obsession with time and its scientifically-ensured exhaustion—even if he ultimately rejected entropy’s fullest implications.

***The Night Land* — The Unnamable Artifact**

The Night Land, perhaps owing to its bizarre prose style, dubious length, and spotty publication history, is not often discussed by mainstream critics. China Miéville, a contemporary weird fiction author, is one critic who has given the novel a detailed analysis. He classified *The Night Land* as “abcanny,” generally meaning “non-normal,” focusing on its monsters as “teratological expressions of that unrepresentable and unknowable, the evasiveness of meaning” (381). He makes no attempts, though, to codify the “abcanny” into a genre, and only tangentially mentions one other author (Lovecraft) as employing “abcanny” elements. In 1985, Brian Stableford grouped Hodgson in with about a dozen pre-war British science fiction authors, who he said wrote in a “Scientific Romance” genre (Hughes 78), essentially meaning works with a science fiction impulse, but before the widespread influence of American science fiction authors. George P. Landlow, in 1979, simply called the novel a “darker” fantasy (37), without a more concrete genre tag. Other critical definitions are difficult to find, if they are out there at all. Without a critical consensus on the novel’s classification, readers provide a definition. A cursory roundup of reader descriptions shows the novel tagged as horror (goodreads.com), apocalyptic horror (desustorage.org), post-apocalyptic (librarything.com), science fiction horror (alt.books.ghost-fiction), creature horror (besthorror novels.com), fantasy (goodreads.com), dying earth fantasy (wikipedia.org), dystopian science fiction (goodreads.com), weird fiction (besthorror novels.com), and “more Lovecraft than Lovecraft” (reddit.com/printSF). Owing to the novel’s telepathy, monsters, and far-future landscape, these descriptions all at least land in the neighborhood(s) of speculative fiction, as some mix of horror-science fiction-fantasy-adventure with seemingly apocalyptic currents. The novel avoids straightforward classification wherever it

can, and it ultimately operates as a philosophical meditation on skepticism of definite societal constructions.

The question of genre is important to understand the novel's significance in the lineage of entropic fiction. In 2015, Dover reissued the novel as part of its "Doomsday Classics" line. Other novels in that line are classically "postapocalyptic." Richard Jeffrie's 1885 *After London* explores England in the wake of cataclysm, when "towns have collapsed and given way to forests, and the few scattered survivors have descended into barbarism." Jack London's 1912 *The Scarlet Plague* is a piece of contagion horror, in which a toxic disease kills millions and "[art], science, and learning die with them while the few survivors degenerate into feral clans." In George Allen England's 1914 *Darkness and Dawn*, "[Manhattan's]architecture isn't all that's crumbled—humanity has degenerated," fifteen hundred years in the future, "into roving tribes of murderous, misshapen creatures" (amazon.com). Each of these novels follows a similar formula: Disaster strikes, population drops, society revert to barbarism, and a lone survivor or two band together to rebuild humanity. These novels are typically cataclysmic, dystopian, and follow the eschatological "rebirth" model of apocalypticism. Superficially, *The Night Land* may belong with this group of novels, but it is actually an outlier; the cataclysm of *The Night Land* isn't disaster or disease, but the deep-time dilemma of entropy. If there ever were major disasters that ravaged the population (which is suggested by legend but unverifiable), it occurred millions of years prior. Hodgson's world is orderly rather than chaotic, and while there is a "lone hero," his quest is personal rather than for broader human salvation. Even within the specific sub-genre of apocalyptic horror novels clustered around the turn of the twentieth century, *The Night Land* is a contrary, singular work that squirms its way out of easy categorization. It denies the apocalyptic

impulses of its “companion” novels, instead presenting an ambivalent, skeptical worldview that doubts the possibility of annihilation, rebirth, or progress.

Published in 1912, the novel does not have many immediate stylistic peers, and even Hodgson’s other fiction never quite entered into the same territory. Much of Hodgson’s work is more straightforward: the adventure stories of “Captain Gault” and “Captain Jat,” the nautical tales of the “Sargasso Sea” stories, and the supernaturally-tinged “Carnacki the Ghost Hunter” series, which skews more toward detective fiction than horror or sci-fi (as in the case of “The Thing Invisible,” in which the presumed specter haunting a chapel is revealed to merely be a hidden spring that propels knives through the air.) Hodgson’s novels are weirder. *The Boats of the “Glen Carrig”* (1907) and *The Ghost Pirates* (1909) blend nautical adventure with supernatural creatures. 1908’s *The House on the Borderland*⁷ is *The Night Land*’s closest relative—a frame narrative fixated on grotesque monsters and a pervasive atmosphere of the uncanny, and its narrator describes an interdimensional travel to a world of monsters. Hodgson, like any author, definitely has identifiable go-to devices that show up in multiple works. *The Night Land* is unique, though, in two important ways.

First, its pseudo-archaic prose style is largely without precedent (or, really, successor), though we could perhaps call it “futuristically-biblical.” The novel, around two-hundred thousand words long, contains no dialogue. Nearly every paragraph begins with a conjunction (usually “And”), the language is full of odd capitalization and terminology, and syntax is often inverted. Reading the text is an almost Borgesian experience, like having found an unmarked, ancient tome in the basement of a long-shuttered library. The novel does not just describe a mutated world, but also tries to give the reader an unsettling artifact of that world by introducing a prose style wholly contained to the telling of this single novel. Combined with the utterly

strange subject matter, the novel provides an otherworldly reading experience. From the second chapter:

And, presently, alone in all the miles of that night-grey road, I saw one in the field of my glass—a quiet, cloaked figure, moving along, shrouded, and looking neither to right nor left. And thus was it with these beings ever. It was told about in the Redoubt that they would harm no human, if but the human did keep a fair distance from them; but that it were wise never to come close upon one. And this I can well believe.

And so, searching the road with my gaze, I passed beyond this Silent One, and past the place where the road, sweeping vastly to the South-East, was lit a space, strangely, by the light from the Silver-fire Holes. And thus at last to where it swayed to the South of the Dark Palace, and thence Southward still, until it passed round to the Westward, beyond the mountain bulk of the Watching Thing in the South—the hugest monster in all the visible Night Lands. My spy-glass showed it to me with clearness—a living hill of watchfulness, known to us as The Watcher Of The South. It brooded there, squat and tremendous, hunched over the pale radiance of the Glowing Dome. (24)

This style continues, without variation, for more than five-hundred pages. It is as hypnotic as it is perplexing, and disrupts attempts to place the work neatly within the confines of any single genre or literary context. Its closest equivalent in Hodgson's canon is *The Boats of the "Glen Carrig,"* but even that densely-styled novel contains dialog and a more modern syntax. With *The Night Land*, Hodgson uses a unique textual style to defy any sense of being anchored to an extant literary era or genre. Dealing with unimaginable subject matter (i.e. a post-Sun world), Hodgson constructs an alien storytelling style to match the subject's weirdness and irreconcilability.

Secondly, the novel creates an unrecognizable second world (somewhat like *Borderland's* monster realm), but claims the landscape is in fact our same Earth, millions of years hence. There is no sun, there are unmoving monsters the size of mountains, and glowing mists drift through the land—but this is our world. Legend holds that the Great Redoubt is situated in a deep seismic canyon created millions of years after our time, but millions of years

before *The Night Land*. The narrator recounts that an “earthquake did burst the world up, along a certain great curve where it had weakness; and there fell into the yawning furnace of the world, one of the great oceans; and immediately made of itself steam, and so brake upwards again, and tore the earth mightily in its swift uprising” (87). Hodgson claims this unrecognizable landscape is the result of natural processes—that our own world may one day resemble the world of *The Night Land*. While his other works suggested mysterious supernatural forces at work in our world, *The Night Land* emphasizes the radical malleability of mankind and our planet, by stripping away almost all recognizable characteristics of contemporary culture and habitat. In this novel, Hodgson suggest that all elements of historical western life are not just arbitrary, but ultimately insignificant, and that the true scope of humanity is nearly incomprehensible.

These two factors create, to borrow a term from the novel, a “monstrous futureness” for the reader (21). Both the unusual prose and the radically transformed Earth it describes leave the work a step removed from recognizable time and space, and incongruous with most genre tags. The science fiction scholar Chris Morgan calls this mode of literature “predictive fiction.” His survey covers works from 1800 to 1945, grouping together works from various genres and styles that take advantage of the “wide open spaces of the dynamic future” that captivated the public imagination in the eras of exploration and colonialism (6, 15-16). *The Night Land*, with its far-future setting and mutated vision of geography and humanity, fits comfortably within the style Morgan describes. However, Hodgson’s novel complicates the discussion once we try to pin down its intent or general worldview. Morgan catalogs roughly six aims of predictive fiction: dire warnings, satire, escapism, wish fulfillment, serious prediction, and philosophical discussion. In my estimation, these six aims fall into two camps: didactic futurism and broad futurism. Dire warning, wish fulfillment, and serious prediction are didactic, in that they offer

firm acceptance or rejection of a future seen as consequential to present human actions. Satire, escapism, and philosophical discussion are the broad aims: they draw contrast to the present via actions set in the future, but do not guarantee a value judgement about the present or the future. Hodgson resists using his predictive story to make direct, good-or-bad value judgments, leaning instead toward far-reaching skepticism and ambivalence.

According to Morgan, most predictive fiction fits into the “dire warning” category, whether “the warning is explicit and unmistakable,” or “[offering] implicit cautions” (17). Frequently, he says, the warnings “are those of political dystopias” and “the misuse of science” (18). The society of the Redoubt is oddly apolitical. While life is rigidly ordered—people spend their whole lives in one profession, whether farmer or scholar or teacher, and live within one city (i.e. one story) the entire time—there is no mention of a governing body. The narrator describes “Law” and “Lesser Law,” enforced by a Master Watchman and his subordinates, but, as with the scholars or farmers, they seem to perform this task simply because it is their job (66, 69). The law can be harsh. For instance, any who leave the pyramid without permission and survive the adventure are publicly flogged upon their return, so as to “[make] human signposts of pain for the benefit of others,” even if there is a noble reason for venturing out (55). There is even a flayed skin posted near the outer gate, in view of the entire pyramid, as warning against violating the Law. However, there is no sign of any urge for rebellion within the Redoubt. The populace seems fully content with the Watchmen and the Law. The society is portrayed as simultaneously draconian and content. Hodgson’s world is brutal but ordered. There seems no impetus to call *The Night Land*’s world either utopian or dystopian. It simply exists as it is—neither dire warning nor wish fulfillment.

Commentary on science, wither via its misuse or perfection, is also missing. In fact, the word only appears in the text once. The narrator, speculating about the origin of monsters, says

“The evil must surely have begun in the Days of the Darkening (which I might liken to a story which was believed doubtfully, much as we of this day believe the story of the Creation). A dim record there was of olden sciences (that are yet far off in our future) which, disturbing the unmeasurable Outward Powers, had allowed to pass the Barrier of Life some of those Monsters and Ab-human creatures, which are so wondrously cushioned from us at this normal present. And thus there had materialized, and in other cases developed, grotesque and horrible Creatures, which now beset the humans of this world” (25).

The statement is vague and brief. It does imply that the night land’s horrors were unleashed in part because of a misuse of science, though the narrator implies also that the story may be apocryphal. The Redoubt—a miles-high pyramid providing shelter and sustenance to millions of people for millions of years— is itself a massive feat of scientific wisdom. The narrator presents simultaneous examples of how scientific learning may destroy *or* save us, with no definitive commitment to either view. Once again, Hodgson’s novel evades taking a stand on a central issue in predictive fiction.

The Night Land certainly is not wish fulfillment, beyond the default assumption that “most of mankind has an insatiable desire to know what will happen tomorrow, next month, next year, next century” (Morgan 111). But most wish fulfillment fiction, according to Morgan, is based on some longed-for *positive* outcome for humanity (or one segment thereof). Hodgson indulges in our desire to see the future, and taps into morbid fascination about how life on Earth may go wrong, but his world is not one anyone would hope for. Morgan points that some wish fulfillment fictions may not strike readers as such because our contemporary worldview is so divergent from that of the author. For instance, he cites W. D. Hay’s *Three Hundred Years Hence*, which is ultimately a fantasy about white, British imperial dominance after centuries of

strife. While it would strike a modern reader as vile, the novel was overt wish fulfillment for its author's intended audience. There is at best a limited clear audience who would long for Hodgson's future, however. He imagines a brutal, scientific-primitive era in which life is ordered and a bit romantic (to those who crave heroes, damsels in distress, and monsters for man to conquer), but which is defined by confinement and constant fear. His world is a parallel of adventure during the dark ages, with a literal emphasis on the darkness of such an era. So, while *The Night Land* does not reject wish fulfillment outright, the novel is only the most perfunctory entry in the wish fulfillment bibliography, balanced by fear and horror.

Hodgson's world is set so far in the future that serious prediction is off the table (we will have to check back in a few million years to see how he did.) As established earlier, serious prediction, dire warning and wish fulfillment the more didactic of the predictive aims Morgan describes. That is, each of these three predictive types declares something like "it would be good/bad if x happened," or "if we aren't careful/because of our present actions, x will happen." Because of our present actions, x will happen." Hodgson proves hesitant to latch onto anything so concrete. Morgan's three remaining moves of predictive fictions—escapism, satire and philosophical discussion, are all more broadly focused, and come into play in *The Night Land*. Owing to the inherent dramatic irony of predictive fiction, the novel is escapist and satirical essentially by default. Regarding satire, Morgan explains that "[because] all predictions of the future must relate somehow to the present in which they were written, any changes or progressions envisaged by their writers are, whether intentionally or not, satirical comments upon the present" (74). That built-in contrast with the present also gives *The Night Land* a de facto escapist component, showing the reader a world that is necessarily alien.

Of philosophical predictive fiction, Morgan says “[the] idea may be as restricted as a single scientific theory . . . or it may be an all-embracing philosophy and outlook” (180). Hodgson’s work embraces the latter. Throughout the novel, Hodgson’s philosophy is one of overwhelming skepticism towards almost all belief and knowledge outside of immediate personal experience. Born in 1877 and writing in the early twentieth century, Hodgson’s work is influenced by the rapidly changing nature of authoritative, concrete knowledge in the west. By the mid twentieth century, authors like Pynchon or Asimov had accepted a universe beholden to entropy and a general scientific framework. Hodgson, living on the cusp of two eras, was not so ready to accept (or reject outright) knowledge emerging in the late nineteenth and early twentieth centuries. Instead, *The Night Land* often reflects *both sides* of any piece of definite knowledge. Whether Hodgson accepts or rejects a rational concept, he leaves the possibility open that accepted knowledge is incorrect. Throughout the novel, Hodgson avoids committing to absolutes—absolute history, absolute knowledge, or an absolute end. The narrator does show, though, absolute confidence in his knowledge of his own experiences. Describing his split consciousness early on, he tells us,

I waked not to ignorance; but to a full knowledge of those things which lit the Night Land; even as a man wakes from sleep each morning, and knows immediately he wakes, the names and knowledge of the Time which has bred him, and in which he lives. And the same while, a knowledge I had, as it were sub-conscious, of this Present—this early life, which now I live so utterly alone.
(17)

Later, contradicting the future’s ancient poet Aesworpth, who spoke of the night land’s monsters as eternal, he reiterates his “amazement at perceiving, in memory, the unknowable sunshine and splendour of this age breaking so clear through my hitherto most vague and hazy visions; so that

the ignorance of, Aesworpth was shouted to me by the things which now I *knew*" (20). The narrator's own perceptions are never in doubt, though most other knowledge is.

Throughout the novel, there are numerous mentions of the Redoubt's vast libraries, and nearly as many indications that the record is not fully trusted by either scholars or general citizens of the redoubt. Concerning, for instance, the existence of the Lesser Redoubt, the narrator reports that "the libraries were full of those who would look up the olden Records, which for so long had been forgotten, or taken, as we of this day would say, with a pinch of salt" (41). Once the Lesser Redoubt's existence is established, the scholars try to determine its location. Again, the narrator says that "neither the Records and Histories of the World give us that knowledge, only that there was general thought among the Students and the Monstruwacans that it lay between the North-West and the North-East. But no man had any surety" (48). Later, reflecting in the vast graveyard of the Redoubt, the narrator recalls the "unremembered generations" of builders "who lived and laboured and died, and seen not the end of their labour" (66). And in the scope of "lonesome Eternities" (151) of the far-future, even detailed and accurate records are of no use, because of those who inevitably "build Fancy upon the tellings of the Records, and make foolish and fantastic that which had groundings in the Truth; and thus is it ever" (90). As a predictive work, *The Night Land* adopts a philosophy of skepticism for any seemingly definite knowledge outside of that which is immediately perceived by the individual. Hodgson carries the certainty of individual experience to such an extreme that narrator's perception is even supernatural, arriving by way of telepathy and unexplained shared consciousness. The narrator's telepathy affords him a certainty in knowledge of the Lesser Redoubt, and his double consciousness shows him the folly of both contemporary and far future learning. The implication is that, barring supernatural perception resembling divine intervention,

accumulated human knowledge is at best limited and temporary, and in most instances probably just wrong.

***The Night Land* — The Emerging Vision**

A confluence of cultural developments in the mid-to-late 19th century laid the foundation for the odd vision of *The Night Land*. New perspectives and trends in western science, religion, mathematics and literature variously suggested uncertainty, impermanence, dread and incomprehensibility regarding humanity's place in the universe. These developments were also fixated on what I have established as the two apocalyptic impulses—culmination, via the study and redefinition of ultimate states and long-form history, and cessation, in the forms of both scientific and spiritual theories about the ultimate fate of the universe. In science, “the geologist's discovery of ‘deep time’ extended the life of the universe from thousands past millions into billions of years” (Morse 40). Existentially, this shift radically redefined the scale of individual lives as measured against history, while also suggesting the remarkable durability of the planet. The revelation also revealed how limited human history was compared to planetary history. Realizing that the earth was *thousands* of times older than previously realized must have made time feel infinite, or close enough to infinite to count. Within a few decades, mathematicians were also fixated on infinity because of the work of Georg Cantor. In the last decades of the nineteenth century, Cantor began trying to define mathematical infinity by grouping the *set* of all numbers into one mathematical unit. This simple move created a tangible mathematical unit with which mathematicians could begin testing the functions and boundaries of infinity. The move toward sets also revealed that mathematics allows *multiple infinities* of *varying size*, triggering “some very disturbing paradoxes” which destabilized the seeming

sturdiness that had been the cornerstone of mathematics for centuries (Chaitin 7). Of course, his ideas also suggested that infinity—once a purely abstract concept—could be made concrete, allowing mathematicians to actually study it in definite ways for the first time. Beyond mathematics, Cantor’s theories suggested not just a single concrete infinity, but infinite infinities. Like so many other upheavals near the turn of the twentieth century, Cantor’s work was not just a gradual adjustment of an existing knowledge base, but an unsettling mutation proving how fragile established certainty could be.

Roughly concurrent with the geologists and mathematicians were broadening the scope of history and infinity, Darwin’s *On the Origin of Species* (1859) was popularizing the notion of evolution in the natural world. If geologists suggested time was practically infinite, Darwin’s work implied that it also lacked linearity. Though often misunderstood as a mechanism of ascent, evolution actually implies that, in the long term, life instead is simply a series of never-ending lateral changes. The notion of an infinite, non-linear universe is captivating, and implies endless possibility. But just as this set of discoveries revealed an ancient, constantly evolving Earth, the discovery of entropy suggested an unavoidable endgame, as energy converted to heat via physical work could never be recovered. “As early as the mid-nineteenth century, almost before the ink had dried on the second law of thermodynamics” Joshua Raulerson tells us, “the long-range implications of physical entropy had begun to sink in among the Victorians” (183-184).

Universal “heat death” rapidly gained acceptance as the long-term rational outcome of energy consumption. Experimental science, once a hopeful force for delivery from ignorance, was now inspiring dread as it revealed phenomena like entropy and mass extinction. By the late nineteenth century, the scientific view of the universe was complicated and paradoxical. In one

sense, the scope of existence ballooned thanks to deep time. However, entropy suggested a definite, linear endpoint.

As time both expanded and became more finite, early information technologies both expanded and shrunk the world. Namely, the new scientific revelations coincided with the emergence of electric telegraphic technologies. By introducing near-instantaneous long-distance communication, the telegraph, in the words of its contemporaries, threatened to “annihilate space and time” completely (Sconce 87, Menke 7)⁸. Meanwhile, Darwin suggested that the notion of linear directionality was fallacious. Pynchon and Asimov had clearly internalized these seeming contradictions by the time of their writing, and navigate them in spirited ways. Hodgson, though, writing in the early twentieth century, is less willing to accept—let alone *resolve*—these conflicts, instead presenting a novel that is perpetually skeptical and unsettled.

Donald E. Morse identifies a similar paradox at the intersection of the era’s religious thought and its broader social mythology. “The work of nineteenth-century historians,” he says, “reflected their passionate commitment to recording human progress, English supremacy, and the positive goodness of science” (34). In this sense, the prevailing attitude among colonial powers was that history was the story of perpetual progress. At the same time, a widespread rise in eschatological theology (particularly, though not exclusively, in the United States) caused a spread of doomsday prophecy and apocalyptic religion. Millions of people believed the divine end was not only guaranteed but would happen *soon*. Thus, competing narratives emerged. For some, humanity seemed destined for continual upward progress with no sign of an end. For others, the time was nigh to prepare for the coming rapture. “Throughout the nineteenth century,” Morse says, “‘reality’ became, for many, the widespread belief in Apocalypse joined with an increasing belief in human progress” (40). These disparate attitudes melded into one

simultaneous state of cognitive dissonance. *The Night Land* basks in this unresolved tension. In its world, human extinction and entropic apocalypse feels imminent—but has felt imminent for scores of millennia, to no avail. A steady dread hangs over *The Night Land*, but never resolves. While the narrative ends with the narrator returning to the Redoubt a hero, the nature of the land continues, unchanged. Our end is guaranteed, imminent, and impossible.

Meanwhile, British and American horror fiction had reached, in the perspective of Hodgson's contemporaries, a sort of end point. As discussed, *The Night Land* bucks straightforward genre classification. But in an era before science fiction or weird fiction were formally established, *The Night Land* would probably fall in with horror tales and romances. Edith Birkhead, in her 1921 survey *The Tale of Terror*, charts the progression of horror and romance fictions. She claims that by the turn of the century, “[the] limit of human endurance has been reached—and passed. Emphasis and exaggeration have done their worst. Battle, murder, and sudden death—even spectres and fiends—can appall no more. If the old thrill is to be evoked again, the application of more ingenious methods is needed” (157-158). If Hodgson is part of the horror tradition, he is definitely of the extreme school of horror authors Birkhead describes here, if not beyond it entirely. Later in the chapter, she laments that readers in the early twentieth century “miss the vulgar blatancy of an honest, old-fashioned spectre” (184). Hodgson's mutated monsters, bizarre setting, telepathic communication, and brutal violence are as far away from blatant and old-fashioned elements as one can imagine, utterly strange even today. It is noteworthy that Hodgson is working within a genre that Birkhead thinks had reached its logical endpoint by the late nineteenth century, and that he pushes his work far *beyond* that endpoint. Today, readers sometimes categorize *The Night Land* as post-apocalyptic—a story that continues on beyond society's end. In the same way, the novel itself is determined to defy any

end of the genre in which it operates, showing how a form can evolve into an unrecognizable, unclassifiable *new thing* entirely. Hodgson's novel is, in a sense, *ab-horror*—a barely-recognizable mutation of a narrative mode once mundane, twisted into a new, undefinable form. In the world of genre, it is the same kind of beast as those that stalk his characters.

We see that Hodgson was writing in an era when the very notion of definite realities must have felt remarkably unstable. All eras are eras of change, but the late nineteenth century was laying a baseline view of the rational universe which in many ways is still in operation. Many people now accept a four billion year old earth, populated by species always in flux according to randomness and natural selection, as simple fact. Set theory is no longer the frontier of mathematics, but instead the general building block for theoretical approaches to the infinite. Universal heat-death is still seen as the logical endpoint of the universe (if not of humanity). Instant, worldwide communication is not just common, but mundane. In Hodgson's era, these conceptions were radical and emergent, reshaping the popular sense of the universe in just a few decades. And while many of these ideas have since been *refined* in the century since Hodgson's time, they now have had a steady presence in the collective consciousness for multiple generations. These once-radical upheavals are now givens in daily life.

As such, we have collectively had time to build a cultural mythology around these conceptions, as seen in "Entropy" and "The Last Question." In Hodgson's era, these conceptions—scientific discoveries that both expanded and limited the universe's life, mathematical theories that revealed multiple infinities, near-instant trans-continental communication, and so on—were too uncanny to easily accept. In each case, such advancements seemed to break down established cognitive frameworks for interpreting the space and time around us.

The predominant worldview during Hodgson's lifetime was constantly shifting, often contradictory, and radically different from that even a half century earlier. As a means of exploring and processing these changes, Hodgson wrote a novel defined by uncertainty, in which no definite human knowledge can be trusted beyond that which is immediately perceived by his narrator, a supernatural hero. Hodgson's generation watched as truths were overturned one after another, replaced by new concepts which were held up as equally authoritative as what they were replacing. Rather than accepting these developments without question, or rejecting them outright and doubling down on older views, Hodgson reacts with a pervasive skepticism toward *any* definite truth, outside of that which he can immediately know. If his burnt-out sun suggests acceptance of entropy, he undercuts it with a world that carries on without sunlight. If his ab-human mutant monsters accept (however grimly) a belief in human evolution, his throngs of traditionally human millions suggest evolution can halt. Hodgson routinely extrapolates *both* viewpoints of the new cultural phenomena he encountered, ultimately suggesting that no knowledge is certain, that no viewpoint is definitive, and that the larger universe will never be truly understood. The apocalypse is a mechanism of revelation—an ultimate state that reveals truths and absolute natures of the living and their world. It is a culminating societal moment, a collective movement “toward the light,” which narratively postulates our true natures. At every turn, Hodgson portrays but denies the mechanisms of apocalypse, and he ultimately denies the ability of humanity to discover or reveal meaningful, absolute truths about an end. All that is certain, he decides, is the human will to carry on.

Chapter II – Asimov & Pynchon: The Center is Missing

Perhaps *every* half-century, no matter how you slice it, reshapes the world in immense ways, depending on what is singled out for inspection. That said, the not-quite-fifty years between *The Night Land* and Isaac Asimov’s 1956 “The Last Question” (1956) was monumental. That window produced, among other things, two world wars and the explosion of information technologies that continues to define contemporary life. For instance: Around *The Night Land*’s 1912 publication, the company that would become IBM had just formed and was making high-tech devices like time clocks, scales, and meat slicers (Campbell-Kelly, Aspray 37-39). By “The Last Question,” IBM had introduced the hard drive and the first computer capable of synthesizing speech (IBM), and early supercomputers were only five years off (Swedin, Ferro 57). As Lisa Vox notes, “[u]ntil World War I, most Americans were not familiar with the term ‘technology’ as we use it—the mechanical objects produced by scientific knowledge and engineering techniques” (19). Within a half century, Asimov was already hypothesizing uploaded consciousnesses and singularity, and advanced computing was becoming part of everyday reality for millions of people worldwide. A drastic change in popular mindset, especially as it related scientific understanding, was inevitable. And with that change, some authors, including Asimov, found ways to dramatize the entropic apocalypse.

“The Last Question” is one example of how changes in technology and scientific understanding allowed an author to move past the apocalyptic world that never really ends toward a universe that completes its circuit. I argue that a shift in scientific consciousness—from a model based on systems to a model based on the network—allowed Asimov’s scientifically-inclined imagination to write about non-human subjects and plots. In *The Night Land*, for all its far-future oddity, Hodgson’s subject is actually a typical romantic hero, and the plot is a standard

damsel-in-distress rescue mission. An entropic universe, as much as the story seems to be “about” it, is more setting than focus. Like so much post-apocalyptic fiction, apocalyptic elements color the tale, but do not present a new kind of narrative. In “The Last Question,” though, the subject is not a hero but is the universe itself, and the plot *is* entropy, not a human story told in the face of entropy. Asimov tells stories of people in “The Last Question,” but they operate essentially as side characters for as the universe.

Asimov tells his story by following two concepts, entropy and computational progress, toward their most distant reaches. Across trillions of years, entropy and technology move way from abstraction and speculation toward being immediate realities. In Asimov’s mind, reckoning must come, and he aims to show it. The two eventualities stare each other down throughout the story, forcing the reader to wonder which will blink first, only for Asimov to unite the two in the

The tension begins in 2061, when two engineers of Multivac, a vast supercomputer already complex beyond human comprehension, begin speculating about technology’s limits. Multivac’s artificial intelligence has engineered a way to harness the sun’s power for unlimited free energy, which not only can power earth, but which can fuel long-distance spacecraft, unlocking the whole galaxy for human exploration. After a public celebration of the announcement, the engineers, drunk, contemplate the implications. ““It’s amazing if you think of it,”” says the engineer Adell, “All the energy we could possibly ever use for free . . . forever and ever”” (1-2). Lupov, a contrarian literalist, counters “Not forever” (2). Though it will last billions of years, the sun is a limited resource. So, too, are all stars in the universe, even if they outlive our sun a dozen times over. “[G]ive us a trillion years,” Lupov says, “and everything will be dark. Entropy has to increase to maximum, that’s all” (2).

Stirred by this dilemma, the two turn to Multivac. Multivac, by 2061, has taken on the job of solving problems too large or too complex for humanity to handle. While reconciling that step could perhaps be the entire plot for a post-apocalyptic story, as in the cyberpunk genre or the *Terminator* series, Asimov uses that step as the beginning, which he will quickly breeze by. Ever the idealist, Asimov recognizes the vast potential for both human and non-human advancement afforded by the rise of computer technology. He is also rationalist, thoughtful, and sees that entropy ensures progress cannot *truly* be infinite, even if it may appear so against limited human consciousness. Asimov brings this awareness to life in Adell and Lupov's conversation about Multivac. The engineers, through code, ask the machine some variation of "How can the net amount of entropy of the universe be massively decreased?" (3). Multivac computes and gives the answer that become the refrain of the story: "INSUFFICIENT DATA FOR A MEANINGFUL ANSWER" (3). The two are unsettled and retreat, and then forget the incident in the haze of their hangovers.

At this point in the story, Asimov is pointing toward important features that separate his apocalyptic work from one like Hodgson's, even if both are concerned with entropy. By the beginning of his story, technology has already taken on a role separate from humanity. Whereas even the most advanced computers of Asimov's day were tools for human use (and crude by today's standards), Multivac is established in the first scene as its own, non-human character via the scientists' attempt at conversation with it. Though the scene is not rendered in especially dramatic fashion, Asimov's characters are having an encounter with what Amitav Ghosh pegs as the uncanny.

As is the focus of his study, Ghosh speaks of the uncanny in climate change. Ghosh says uncanniness is generally that "something" we feel in extreme or dreadful circumstances, the

factor that rattles us. It comes from a recognition of “something we had turned away from: that is to say, the presence and proximity of nonhuman interlocutors” (30). Ghosh speculates that the nonhuman uncanny of climate change is different from “[the] ghosts of literary fiction,” acceptable in serious fiction because they are “projections of humans, who were once alive” (32). Meanwhile, the environmental uncanny is separate “because it pertains to nonhuman forces and beings” though it “[is] animated and cultivated by human actions” (32). By Ghosh’s definition, Multivac would seem of an ilk with the environmental uncanny. A human creation, it becomes a nonhuman force which, via its energy harvesting technology, shapes future human experience. However, Asimov’s story is not human-focused. Ghosh’s definition, like most fiction, depends on the centrality of humans characters and concerns. As “The Last Question” advances, it becomes clear that the fate of the universe is related to, but separate from, the fate of humanity.

After the last question is asked for the first time, the story flashes forward unspecified thousands of years in the future, into an era of everyday planetary travel. Computer technology has passed multiple stages: Multivac first had grown to planet-size “Planetary ACs,” until molecular components reduced those ACs to a portable, half-spaceship size, still solar powered. Phase two of the story introduces a family migrating from one planet to another aboard a spaceship with an on-board AC. The children, inquiring about the Microvac’s power source, also learn about entropy and the certain death of stars. The revelation that stars die and entropy increases awakens the same fear of finite resources, and thus finite time, that faced the children’s counterparts in 2061. To calm the children, their father asks Microvac how to “turn the stars on again” (4). He tells the children the computer has said it will take care of things when the time comes, but its true answer was the same as in 2061: “INSUFFICIENT DATA FOR A MEANINGFUL ANSWER” (4).

In this parallel episode, Asimov is displaying a kind of networked consciousness that sets his storytelling approach, as well as his worldview, apart from that of Hodgson or so many others. We again see that the human characters in the story are serving their role in about entropy and technology. We also see that this set of human characters, though unphased by interplanetary travel and computation beyond the imaginations of Multivac's creators, are essentially non-distinct from human characters in wildly different eras and circumstances. Human characters in the story are separate but interchangeable units (to borrow a term from Ian Bo of contemplation, allowing the AC to grapple with the question but not responsible for "moving" the story along. Asimov this point of interchangeability home with the naming of characters in this second episode. The parents are Jerrodd and Jerrodine, the children both Jerrodette, I and II. For Hodgson's hero, his distinctness was essential to his character and the plot overall. Only he had the power, instincts, knowledge, and abilities to contact the Lesser Redoubt, traverse the Night Land, and save his true love. The deeper we get save into Asimov's story, the more we see that human individuality is inessential for telling this tale.

The story next jumps twenty-two thousand years. The galaxy, because of growth potential provided by ACs, is five years away from being full, and humanity (now immortal) is consuming two "sunpower units" yearly for energy. Far-future humans MQ-17J and VJ-23X contemplate a map of the cosmos. MQ-17J asks the Galactic AC, now a pocket-sized unit, if entropy can be reversed. The answer, of course, is the same. The cycle continues. First, humanity transcends the body and occupies hyperspace consciousness, asking the question to a Universal AC. Then, humanity transcends individual consciousness and becomes one mind, asking the question to a Cosmic AC. Ten trillion years hence, once all "stars and Galaxies [haved] died and

stuffed out” (9), the final human mind asks AC the question. There is still no answer, and the human mind fuses with AC in hyperspace.

Having exhausted all delays, the Asimov makes the apocalyptic turn: “Matter and energy had ended and with it space and time. Even AC existed only for the sake of that last question that it never answered” (9). After a timeless interval (because even that force has reached its end), AC learns the answer, but with no one to reveal it to. It’s stumped. Finally, AC settles on the method, and says “LET THERE BE LIGHT,” and there is light. Asimov’s apocalyptic vision, in “The Last Question,” is one of cyclical cosmic renewal. As entropy increases, the potential for work is gradually lost, until a system reaches total static equilibrium. Asimov equates the fact of entropy increase with technology’s ascending capacity for more output with less energy consumption and physical space. Though entropy’s increase theoretically hampers the potential for high-powered work, computer technology consistently does more with less.

Foucault & Bogost: Transcending the System

Asimov’s approach is wide-ranging. In telling a story across trillions of years, he marries geologic time, entropy, and technological singularity to imagine an ouroboric creation/destruction cycle that both transcends and creates the universe. In doing so, he challenges many of the dichotomies—creation vs destruction; past vs. future; science vs. religion; progress vs. oblivion—that made an entropic apocalypse so difficult to portray for Hodgson. Asimov’s story is driven at the beginning by human characters. By the end of the story, sentient computation at (or beyond) a universal scale have taken on the role of a main character—and we realize computation was the main character all along. This transition is both functional and symbolic. Asimov saw a world of rapidly expanding computational

sophistication, and could picture no endgame that did not end with machine surpassing mankind as its power grew. At the same time, he needed a style of storytelling appropriate to a computational, networked model—if computers surpassed humans, the logic of computation should guide the story. In essence, Asimov leaves behind the paradigm of taxonomic thought that, according to Foucault, defined human scientific thought after the Enlightenment, in favor of a networked model spurred by computational models.

Taxonomy thrives on dichotomies. Within a taxonomy, all *things* can (and must) be sorted based first on similarities, then by differences. And sorting is the key. Foucault, in *The Archaeology of Knowledge*, says that such thinking “individualizes and describes discursive formations,” which are the basis for sorting, and thus thinking, in the era of biology. To sort things out, and to distinguish each thing as unique and thus categorizable (and thus understandable), taxonomy “must compare them, oppose them to one another in the simultaneity in which they are presented, distinguish them from those that do not belong to the same time-scale, relate them, on the basis of their specificity, to the non-discursive practices that surround them and serve as a general element for them” (157). In taxonomic thinking (which Ian Bogost calls systems thinking), knowledge is a product of discourse which necessarily categorizes through dichotomous analysis.

Systems thinking tends to conflate knowledge with understanding. If discursive systems can reveal the underlying system guiding experiences, that system can reveal a unifying knowledge. Ian Bogost explains that “[systems] operations are . . . totalizing structures that seek to explicate a phenomenon, behavior, or state in its entirety.” The sense in much inquiry is that *entirety* itself is based in one “initial state” in which “chaotic systems are deterministic, even if unpredictable” (93). Systems are, in a sense, a branch of what Kermode calls “concord

fictions”—structural narratives built to “cover . . . disquieting gaps [and] intervals in the human experience” (62). That is not to say concord fictions are not sometimes based in fact. Rather, they offer ways for objective facts or observations to be added to the human knowledge base without changing assumptions which are the foundation for that base.

Kermode bases his idea in the wave-particle duality of quantum mechanics. Quantum mechanics observed that light, and by extension any quantum, functions as both wave and particle—in conflict with classical physics. Kermode noted that many scientists were hesitant to accepting a “natural discontinuity” in systems, in which “propositions may even yet be true and false at the same time” (60, 62). Heisenberg’s “special case” approach to the problem was thus a significant concord fiction of twentieth-century thought (60). In the special case interpretation, “classical mechanics,” which had been the foundation of inquiry for centuries, “was a special case of quantum mechanics,” rather than a separate (or a false) system. This concord fiction fit conflicting models together in one system that simply made room for both, rather than challenging the flaws of systems models themselves as conceptual models. Such a move is essential in systems thinking, because, as Bogost claims, “systems seek to explain all things via an unalienable order” (6).

The end goal in this model is to sort all things into categories, sub-categories, sub-sub-categories and so on until each thing is distinct and separate from all others. In *The Order of Things*, Foucault describes these continuous sub-categories as “unencumbered spaces in which things are juxtaposed,” (131) suggesting an ultimate model of one giant table on which all things are continuously subdivided into their own boxes. Essentially, total understanding could come from a glimpse at the divine spreadsheet. In such a model, “beginning” and “end” could not be

more distinct. On the divine spreadsheet, existence is the broad, universal category, underneath which all categories subdivide. Any end to existence is incompatible with the model.

A network model is related to, but opposed to, a system model, which finds its meaning and functionality in an orderly sorting of all things to understand the relationships between—and characters of—all things. A network consists of the same *things* as systems, be they people, actions, ideas, and so on (in Ian Bogost's terms, these various *things* are called *units*). In the network model, these units both operate independently of one another and build various totalities that can include, overlap with, or contradict other systems and totalities. Systems instead see a totalities within which other things play a part.

In a system, for example, smaller flora and fauna are part of larger families and a larger ecosystem. Each living thing is tied together to give life to the biome as a whole. Clear-cut a forest, for instance, and animals will die or relocate, causing further loss of species that made the ecosystem function. The ecosystem is a totality in which the smaller things are subsumed by the larger one. By removing one component, the totality suffers. In such a model, thought “climbs the ladder” easily, and focused shifts to “the big picture.” That is how environmentalists see clear-cutting and implore others to “save the rainforest” or, even better, “save the Earth.” The scalability of the issue *becomes* the issue, because the larger totalities carry the most weight in a system.

In Bogost's networked unit operations, those “larger” and “smaller” tags fall away, or at least lose their primacy. Like an ecosystem, an insect within it consists of components—in the bug's case, cells, limbs, instincts, an exoskeleton, etc.—that together compose a living entity. The cell within is also a living entity composed of parts. The colony of ants is a living entity composed of parts. The colonies of ants are each components in the living entity of the

ecosystem. And so on. The move of unit operations, or the networked consciousness, is to *not* scale these entities. Each entity described—the cell, the insect, the colony, the ecosystem—can be viewed as a *unit* of the phenomenon of *composition*. Each unit is equally representative of this phenomenon, and each can be studied alone or together to better understand it.

Again, while systems thinking is a viable model for generating knowledge, the very scalability which defines it can sometimes impede the understanding of that knowledge. To return to “save the Earth” appeals in environmentalism, granting primacy to the upper-reaches of the global system may hurt the appeal. Perhaps it sounds simplistic, but people resistant to “save the Earth” arguments may look around and see, well, the Earth, still intact, seemingly unchanged on any existential level. In truth, environmental destruction, like climate catastrophe itself, is a network of changes. These changes are neither uniform nor simultaneous. When Paradise, California burns down, or when counties of farmland are flooded away, or when a reservoir dries, or when glacier breaks apart and melts, each event can be framed as a solitary event and a freak occurrence when the encompassing system are so large their nature seems unchanged.

What Asimov presents instead, when he wraps the end and beginning of time together as the same moment, is a kind of mission statement for the network model of thought. In fact, Asimov dramatizes the growth of a computer network, called the AC (eventually the galactic AC and the universal AC) as a central component of his story. In tandem, he portrays the movement of life toward a unified, networked consciousness with each progressive societal iteration. New forms of living being and new social structures are the definition of what would be separate in a taxonomy—though sharing traits and background, each iteration is so wholly new and distinct as to not be mistaken for the others. Eventually technology, consciousness, and spacetime unify. One realizes, then, that this unification is not the end on a linear scale, but also the beginning.

Thus, unification is not the end point of the story, but an inborn component from the beginning and throughout the duration. Asimov seems to argue that networking is not just a technological principle, but a universal principle.

Where the Wind Don't Blow — “Entropy” and the Full Vision

Is Asimov's universal reset a New Jerusalem? If the next world is simply this one again, is it a next world at all? Asimov leaves such questions open, perhaps not really addressing them at all. His aim seems more to break down the dichotomy of divine versus worldly itself. Just as he equated sentient technology with the sentient mind, or the future with the present, the divine and the worldly are both units of creative potential. The difference between them, to Asimov, is irrelevant, if it is even there at all.

Thomas Pynchon has no specific interest in bridging such a divide. His 1960 story “Entropy” considers the ramifications of a truly ambivalent entropic apocalypse. Asimov's human characters were curious, contemplative, and often in awe of the universe. Most of Pynchon's “Entropy” characters are aimless and hedonistic, showing no awareness of or reaction to an encroaching apocalypse. For these characters the end—which arrives in 1957 rather than beyond the reach is sudden and carries no specific significance. However, the two characters who *are* aware of the end are terrified, but through their horror achieve a sublime state, though such transcendence affords them no more transcendent fate. Intertwining two narratives, Pynchon shows that the end *may* have meaning for individuals, but only if that meaning is ascribed to it by those who meet it. Whether meaningful or meaningless, noticed or ignored, entropy, an unstoppable constant in our universe, will reach a maximum and halt all things indifferently.

The story is set in February, 1957, on two floors of a Washington, D.C. apartment house. Downstairs, 50s hipster Meatball Mulligan is throwing a multi-day “lease-breaking party” (277) for a motley crew, including jazz musicians, college students, beltway professionals, and Navy officers. Upstairs, Callisto and Aubade, a couple, monitor the weather from their apartment, which they have converted to miniature hothouse. Pynchon establishes a chaotic tone early, filling the story with abundant narrative threads that can never resolve, overcrowding his story with tension, and steadily building a sense of dread. He also establishes parallel groups of characters, as Asimov did, with wide-ranging motives and concerns who ultimately occupy the same human space in the story of apocalypse.

The story opens, “Downstairs, Meatball Mulligan's lease-breaking party was moving into its fortieth hour. On the kitchen floor, amid a litter of empty champagne fifths, were Sandor Rojas and three friends . . . staying awake on Heidsieck and benzedrine pills” (277). For two pages, the party’s chaos grows. The focus then turns to Callisto’s apartment. The noise downstairs wakes him, and he holds the ailing bird on his chest. “He wondered how many more nights he would have to give it warmth before it was well again. He had been holding the bird like this for three days: it was the only way he knew to restore its health” (279). Callisto’s bird is near death from the outset, and its heartbeat weakens from scene to scene.

We soon learn, via Aubade, that the temperature has remained a constant 37° Fahrenheit for three days, about the same time span as Meatball’s party. While the characters in Meatball’s plot are unaware of this oddity (and would pay no mind if they knew), Callisto is monitoring the event obsessively. “The cosmologists,” the narrator says “had predicted an eventual heat-death for the universe (something like Limbo: form and motion abolished, heat-energy identical at every point); the meteorologists, day-to-day, staved it off by contradicting with a reassuring

array of varied temperatures” (280). In a sense, Pynchon is presenting a metaphor for reading his own story via the tension between cosmologists and meteorologists. In the cosmologist’s sense, entropic halting would be a normal event, but meteorologists, focused on day-to-day life on a much smaller scale, would see such an event as extraordinary and implausible.

That dichotomy of interpretive framing brings us back to Amitav Ghosh. The tension in framing the unchanging weather aligns with the tension Ghosh explores between genre fiction and serious literary fiction in portraying climate change. While Ghosh is concerned with more recent fiction than “Entropy,” his understanding of genre conflict is prescient. The Anthropocene, he says, “consists of phenomena that were long ago expelled from the territory of the novel—forces of unthinkable magnitude that create unbearably intimate connections over vast gaps in time and space” (63). Hodgson, Asimov, and Pynchon were writing about time and entropy as such phenomena. And while Hodgson was writing wildly speculative fiction and Asimov was writing for branded science-fiction publications, Pynchon’s genre tag is more difficult. Is he writing science fiction in “Entropy”?

Eric Rabkin would seem to say so. His understanding of science fiction as a genre, while one definition of many, is instructive. In his 1979 book *The Fantastic in Literature*, Rabkin says the genre kicks in when “habits of mind and their associated bodies of knowledge determine the outcome of events, regardless of which science most obviously informs the narrative world” (121). “Entropy” is clearly focused on how the mind handles scientific knowledge and how the body of scientific understanding should influence narrative. But his world is not fantastical in the sense of exotic technologies, alien locales, anthropomorphized technology, or any noteworthy tropes of science fiction as a genre. Instead, with “Entropy,” Pynchon creates tension by asking readers if universal extinction is extraordinary or in-fact mundane. Such an event affects the

totality of existence and necessarily only happens once, like a spectacular cataclysm, but is also as natural as a soft breeze in spring. It is impossible to tell a realistic story without implied scientific understanding and consideration, as such a knowledge base has informed the core of society for centuries. So where is the threshold between scientific consideration that pushes us into sci-fi, and scientific consideration that grounds the everyday?

The world of “Entropy” is recognizable, ordered, and rational—it does not seem different than our own. But by adding one odd element—a persistent 37° temperature—Pynchon gives the story an uncanny undercurrent, which is essential to both science fiction and apocalyptic literature. What’s more, Rabkin says “a good work of science fiction makes only one assumption about its narrative world that violates our knowledge about our own world and then extrapolates the whole narrative world from that difference” (121). Pynchon does just that. Pynchon’s readers know entropy is a real phenomenon, but it should not shut down our universe for trillions of years. In “Entropy,” however, heat death, somehow, is right on our doorstep. Regardless of genre, Pynchon uses a science-fiction to create uncanny dread which carries throughout his story. Having established this tension, Pynchon then shifts his focus back downstairs. The revelers grow increasingly disordered, failing to advance any kind of plotted action, while our uneasy curiosity about the static temperature, and its potentially entropic nature, lingers.

Pynchon’s characters have disparate concerns and few goals. The downstairs guests pursue only pleasure, unconcerned with any disorder they leave in their wake. Some guests crash on couches or pass out in the bathroom, while others take uppers to stay awake, talking jazz and getting high. One character, Saul, arrives unannounced through the window, the first in a wave of uninvited guests. These are not people, the narrator tells us, who typically accomplish

their goals. Pynchon describes some guests as would-be expats who haunt DC, “[talking] every time they met you about how someday they were going over to Europe for real but right now it seemed they were working for the government” (278). These are in-the-moment characters, whose focus on temporary satisfaction stifles personal or collective growth. Their motivations are different: Saul is fleeing a fight with his wife, the Navy men (who burst in like it’s a military raid) are looking for a brothel, and most just want to get wasted and be wherever the party is. Collectively, they seem temporary pleasures. Thus, the party is disorganized and destructive, and each new guest’s arrival further destabilizes the situation.

Callisto’s goals are more definite than those of his downstairs counterparts. Unlike the partiers, who are at peace with disorder and self-destruction, Callisto makes every effort to rid his life of those properties. In contempt of chaos, he has spent seven years working with Aubade to perfect an intra-apartment ecosystem, complete with both plant and animal life, in a meticulously controlled climate. While Callisto fears stasis outside, he cultivates balance within his living space. The apartment is “a tiny enclave of regularity in the city’s chaos, alien to the vagaries of the weather, of national politics, of any civil disorder” (279). The couple does not even leave their apartment anymore, afraid it would alter the order that keeps their closed system running. They have succeeded in their goal of creating a habitable, balanced living space amid the chaos of the city. Having done so, Callisto endeavors to save the bird, and maintain an atmosphere of life in the habitat.

“Entropy” does not set up a large-scale cultural culmination in the way we might expect from apocalyptic fiction, but Pynchon employs a dynamic to show us what personal culmination could look like in an apocalyptic setting. Writing in a postmodern style, it’s not surprising to see Pynchon fracturing the group dynamic of apocalypse, transforming it into a confrontation with

the self. Callisto and Aubade afford a view of characters who recognize the apocalypse approaching, who must fear it or try to accept it. Meatball's partiers do not see the end coming, and thus spend their last moments idly, drinking and arguing as the end creeps up on them. In a culture of individualism, the nature of culmination is transformed to personal experience. For the aware, culmination may be an ultimate understanding of the ambivalence of the universe. For the unaware, culmination may instead be a sudden halt without conscious individual meaning. "Entropy" show readers how each may come to be, and readers are left to wonder which model of culmination may someday prove more universal.

And even though short-term individual pleasure is the goal for most of the story's characters, there are still discussions of collective cultural progress. After all, the entropic exterminating force in "Entropy" is deceptively subtle—there's no hulking comet hurtling through space toward earth or escalating nuclear war. The world has had, it seems, a three-day warning, and not everyone has even noticed. So, progress soldiers on, even if the micro view does not reveal a society overall building toward a crescendo of collective group achievement (i.e. an attempt at utopia). Saul, the guest who earlier came in through the second story window, discusses MUFFET, the "the Multi-unit factorial field electronic tabulator" with Meatball at the party. He says his wife "has been reading science fiction again. That and *Scientific American*. It seems she is, as we say, bugged at this idea of computers acting like people. I made the mistake of saying you can just as well turn that around, and talk about human behavior like a program fed into an IBM machine" (285). Saul's reference is timely. Published in 1960, "Entropy" is from an era when stories about the merging of man and machine—and the loss of humanity in the process—were becoming a cornerstone of the science fiction genre. Authors latched onto this idea and used it to presage man's salvation or downfall. Rather than go that

route, Pynchon uses the conversation to introduce further entropic concepts, such as signal-to-noise ratio and informational entropy. The focus on informational entropy is appropriate, as “none of the characters in Pynchon's story demonstrate any sustained capacity to engage in dialogue” (Seed 147). Importantly, this discussion also merges notions of information technology and the apocalypse.

There is a disconnect between where the conversation starts and where it ends up. Saul’s commentary on MUFFET introduces his discussion of signal loss¹, but the topics are not explicitly related. The “idea of computers acting like people,” about which his wife is “bugged,” reminds the reader that society is on the verge of revolutionary technological breakthroughs, the kind that could substantially alter human life. Signal loss, meanwhile, emphasizes the loss of meaning between “input” (motivation) and “output” (action) for many of the stories characters. In the conversation, Pynchon highlights the disconnect between cultural advancement and personal achievement. Even as American technology progresses, people within Pynchon’s America feel no connection to the progress. Of course, the entire conversation will be moot, as there are only a few hours until universal entropy draws human (and universal) action to a close².

The story’s dramatic tension depends on apocalyptic ironies, as the narrative itself only has small suggestions of plots. The big plot-action is Callisto’s attempt to save the bird’s life, but even that only requires him to lie still with it and feel its heartbeat. Beyond that, the conflicts driving the mini-plots include: Meatball trying to find a mixer for a drink, a girl looking for a good place to pass out, and the Navy men killing the party’s vibe. The apocalypse will cut off these small conflicts and any larger attempts at progress with equal ambivalence. Late in the story, the jazz quartet begins playing in through their set in pantomime (even starting over after

false starts), suggesting human actions and goals in Pynchon's universe are something like shadow boxing—we are simply punching the air while entropy takes its toll.

We only see entropy take over in the Callisto plot, at which point the story concludes. David Seed proposes, then, that the party downstairs is a foil to the entropy taking place upstairs (page citation). Near the end of the story, Meatball begins reigning the situation in. He “figured there were only two ways he could cope [with the party]: (a) lock himself in the closet and maybe eventually they would all go away, or (b) try to calm everybody down, one by one . . . So he decided to try and keep his lease-breaking party from deteriorating into total chaos,” (291) and began putting out the various fires the party had started. According to Seed, “[the] very fact that Mulligan can choose to restore order and does so, contradicts a superficial fatalism which the notion of entropy might create” (146). In contrast, I posit that, rather than undercutting the “superficial fatalism” of entropy, Pynchon is playing on a common misunderstanding of entropy to add another level of irony here, which indeed adds to the story's fatalism.

The notion that entropy equates to disorderliness arises from a fluke in the wording of its early observers. Craig Callender explains, “the canonical example [of entropy is] of a gas confined by a partition to a section of a container. Remove the partition. In a short span of time, the gas will relax to equilibrium: that is, it will spread evenly throughout the box, possessing a uniform pressure and temperature” (349). This exchange is best described as dispersal. One component of dispersal is the equalizing of temperature between the two gasses. As the lower temperature gas equalizes, its molecular velocity increases. Ludwig Boltzmann, an influential 19th century physicist who studied entropy, described this increased velocity as “disorder,” which was simply one part of the entropic process. The wording stuck to the discourse of entropy, even if the its connotations were misleading. It has since been said that the “most

egregious errors in the past century of associating entropy with disorder have occurred simply because disorder is a common language word with non-scientific connotations” (Lambert 189).

So, Meatball is not acting *against* entropy. Instead, by countering the “total chaos,” he is actually moving the party toward a state of balance, or equilibrium, which mirrors the actual entropic process. Meatball spends the end of the party’s second day mellowing everyone out, resolving the tension in the system. “This is what he did until nightfall,” Pynchon says, “when most of the revelers had passed out and the party trembled on the threshold of its third day” (291-292). The party, which had been dynamic and alive, is resolved to a calmer, balanced state, one in which most people are sleeping. In other words, he has created a situation wherein the disparate guests—who once had arrived in a staggered order, and were each in a different stage of the partying “process”—have reached consistent “velocity.” Meatball isn’t reversing or denying entropy. Meatball is entropy’s agent, accelerating its path toward final stasis. This scene is the end of the downstairs plot, and immediately precedes the entropic conclusion of the upstairs plot. Meatball and Callisto, Pynchon shows us, are *both* moving the systems of their apartments toward equilibrium, symbolically participating in entropy’s inevitable creep.

And what reason would Pynchon have to undercut the fatalism of entropy? Entropy is an empirically suggested endgame for the universe. Scientific frameworks accept that, rationally, the universe is a system that will eventually conclude. As such, a secular apocalyptic framework must explore the apocalypse unflinchingly. Barring humanity’s destructive intervention, the end must eventually arrive via universal equilibrium of entropy, whether or not humanity expects, welcomes or fears it. Seed may say Pynchon avoids fatalism to rid the story of “gloomy fatalism” (137), but a rational, secular apocalyptic story has neither a reason nor an option to look away from or to soften the blow of an entropic end. Pynchon is of a wave of growing

[[networked]] thought. The ending is not only “baked into” the beginning in a networked consciousness, but the end is not even a discreet state. Rather, beginning, middle, and end are all equally parts of the same entity that is existence (and *nonexistence*).

This does not mean Pynchon himself personally denies the value of hope or human achievement or whatever Seed wants him to not be doing. But his story is aware of apocalyptic frameworks, and through it he actively wonders what one may look like in a secular culture guided by hedonistic utilitarianism. So, with no guiding collective principle, there is no culmination of human achievement, and entropy creeps up in its time to conclude human activity. The story is gloomy because Pynchon’s characterization and plotting is so recognizable and realistic, engaging a palpable dread of the end. Pynchon’s “Entropy” shows that end with humor and irony, but without obfuscation or denial.

“Entropy” portrays an ambivalent apocalypse. For most in Pynchon’s world, the end is unceremonious. People in this apocalypse are cut off mid-sentence, so to speak, unaware of the end they suddenly encountered. Meatball’s plot doesn’t end; one can imagine his guests passed out on couches for eternity. For a select few, like Callisto and Aubade, the encroaching end is the root of a transcendent horror. Callisto and Aubade see the moment approaching and understand its nature. The description of their awareness conveys a sense of the absolute: absolute stillness, absolute calm, and absolute end—life’s symphony resolving.

[Callisto] sank back, terrified. [Aubade] stood a moment more, irresolute; she had sensed his obsession long ago, realized somehow that the constant 37 was now decisive. Suddenly then, as if seeing the single and unavoidable conclusion to all this she moved swiftly to the window before Callisto could speak; tore away the drapes and smashed out the glass with two exquisite hands which came away bleeding and glistening with splinters; and turned to face the man on the bed and wait with him until the moment of equilibrium was reached, when 37 degrees Fahrenheit should prevail both outside and inside, and forever, and the

hovering, curious dominant of their separate lives should resolve into a tonic of darkness and the final absence of all motion (292).

The moment evokes terror and a final outburst, but also the sublime moment of comprehension. Their end is reminiscent of what David Edward Shaner, evoking Kenji Nishitani, calls “absolute nihilism,” confronting “the principles of selflessness [and] impermanence . . . and a perspective of non-discriminating experience” (115). Pynchon equates the “darkness” and “final absence of motion” with the tonic of a composition, the final note on which the piece resolves. The final step into absence isn’t loss—it is resolution. The story of entropy, we see, is not ultimately a human story, but a story of the universe. In making this distinction, Pynchon is able to introduce a tangible apocalypse that does not deny the fact of an end. The end hits on its own terms both for those who see it coming and those who do not. And the end—non-existence—is not in conflict with existence itself. Ending is simply one *unit* of change within the history of a universe, on the same field as a universal beginning in the big bang, or each of the infinite moments of expansion in between. Pynchon’s final moment of entropy brings the “separate lives” in the story together, indicative of the universal move toward equilibrium which entropy ensures. Humans are like any other units of matter in the universe, all facing end through equilibrium in the same way. Pynchon’s characters inhabit a universe of disconnected individuals, each looking for some kind of fulfilled identity, but each subject to the same forces and timescale as one another. Culmination of their experiences, then, comes in the form of equilibrium found in universal cessation. Pynchon shows how the indifferent, entropic apocalypse can not only be portrayed in fiction, but can be shown as a force of harmonious resolution that treats all objects in the universe as equal entities.

Conclusion – Fireworks and Hurricanes

In 2015, Richard Grusin edited *The Nonhuman Turn*, a collection of “recent and current critical, theoretical, and philosophical approaches to the humanities and social sciences...engaged in decentering the human” (vii). As humanity sprints full-speed toward self-prescribed climate catastrophe, and perhaps broad annihilation, it seems the twenty-first century condition has awakened cultural impulses to examine the nonhuman, and even non-corporeal, forces or worlds that exist in the same universe. As Ian Bogost asks in *The Nonhuman Turn*, “[would] it really be so daft to admit that the world is simply full of interesting, curious things, all living their own alien lives, bumping and jostling about, engulfing and destroying one other every one of them as secretive and withdrawn as any other?” (“The Aesthetics of Philosophical Carpentry” 87).

Bogost’s proposition is interesting in that it does not erase the human experience— concepts like living, being interested, curiosity, and so on are not exclusively human but are deeply human regardless— but rather re-frames the human experience as part of *the experience*, a conglomeration of individual existences and non-existences and events and non-events that characterize a de-centered, networked approach to existential interpretation and experience. Importantly, networked consciousness does not focus on classifying things through separation as in a discursive formation, but considers how things are alike and different simultaneously. In Bogost’s unit operations approach to networked interrelations, birth and death are not necessarily opposites, but rather units of what one may call *transition*, as each is a liminal phase that a living thing passes through. Even existence and non-existence themselves case opposition, becoming two units of what may be called *existential possibility*.

In the discursive taxonomy described so often by Foucault, the end game of scientific study is categorization—finding the one true classification of each thing. “[A] grid,” he says, “can be laid out over the entire vegetable or animal kingdom. Each group can be given a name . . . Its complete name will cross the entire network of characters that one has established, right up to the largest classifications of all” (*The Order of Things* 141). Species emerged from such categorization and so do castes, genres, and other units of isolation. The move is ultimately to define similarities and differences in a linear way, with differences as the most defining characteristics. Foucault argues that such formations were the basis for the episteme of scientific thought following the era of the natural history. One is not surprised, then, that scientifically aware fiction from the taxonomic episteme, like Hodgson’s *The Night Land*, cannot find ways to portray entropy that contradicts the natures of concepts like the hero, the Earth, time, and civilization. Each of these concepts is superficially changed via deep time and entropy, but in so changing only reveals an essential, irreducible core—the goal of taxonomy itself. The Earth is dark but lives. Humanity is reduced by indestructible. The hero is near-divine in his power and will, transcending time itself to rescue his heroine. All things in the taxonomy have an essential character, and in the divine spreadsheet have a box in which they can and must ultimately be placed.

By de-centering the human experience in a networked, non-linear model of scientific thought and broader analysis, the possibility of “unboxing” *things* reveals itself. A shortcoming of utility in taxonomic boxing is that we must move from absolute uniqueness at the individual level to absolute similarity at the largest group level. “[A] knowledge of emperical individuals,” Foucault explains, “can be acquired only from the continuous, ordered, and universal tabulation of all possible differences” (*The Order of Things* 144). In the inverse direction, all things

implicitly must be understood as stemming from one umbrella category, and the most universal common trait in *things* seems to be existence. As such, non-existence goes against the character of *things* in a taxonomic episteme. For Hodgson, writing in the 1910s, there seems not to have been a workaround for dramatizing the action of non-existence.

One way that Ian Bogost explains networked consciousness, as opposed to a system consciousness such as taxonomy, is through film analysis. Analyzing Steven Spielberg's 2004 movie *The Terminal*, Bogost explains its failure as a storytelling "system"—its plots underdeveloped, its characters one-dimensional—but its utility as "a framework of general figures for" examining concepts of waiting (*Unit Operations* 18). To simplify Bogost's approach, we can say system thinking prioritizes story while networked thinking prioritizes themes. We can see this approach manifesting itself in "The Last Question" and "Entropy." In "The Last Question," Asimov creates a loop in which the story's ending sets up its beginning, and so on forever. Pynchon meanwhile creates dueling scenarios in which nothing truly "happens" in a plot sense, despite an abundance of action in the downstairs party. Instead, he sets up habitats of theme, exploring chaos, order, computation, human nature, and so on, while realizing no amount of human inputs can affect the outcome of entropy, thus disrupting the notion of the universe as a system. The universe *has* beginning and end for Pynchon, but the universe eludes system-ness via the inability of any input to alter it. Things happen *within* the universe, not *to* it. No input in a networked universe—not even the triumphant, heroic, enduring human spirit that even the universe cannot conquer in *The Night Land*—can change the fundamental fact of total entropy.

Life since the mid-twentieth century has involved increasing amounts of computation and network-mediated activities and interactions. As such, the emergence of nonhuman-focused critical approaches seems a natural epistemic shift. And while object-oriented ontology,

ecocriticism, new media theory, and so on are, to varying degrees, emerging critical trends, their emergence does not make their impulses explicitly new. Asimov and Pynchon show how such concepts were influencing creative thought as early as the 1950s. Their work managed to dramatize total entropy by de-centering the human experience within narrative frameworks. Entropy as a secular, verifiable apocalypse had existed well before the twentieth century, but the network-influenced thinking on display in these stories allowed a more faithful reckoning with its implications.

These stories also disavow notions of linear progress, and that lesson is vital for understanding the dilemma that Amitav Ghosh explores in *The Great Derangement*. I argue that Asimov and Pynchon tackled the secular apocalypse problem sixty years ago. Ghosh describes the secular apocalypse problem today. The issue is not simply that only two authors found a way to deal with the problem. Rather, the larger issue is that thought does not follow a linear path. When Ghosh describes “serious literature,” he describes a literature that, while “uniformly disdainful of plot and narrative” nevertheless centers the human experience wholly, exploring “everyday details, traits of character, or nuances of emotion” (27). Despite such literature emerging alongside network-informed work discussed in this thesis, the work is fixated on the character of humanity—the most essential component of a Foucauldian taxonomy. And, as Ghosh argues, the extreme-feeling events of climate catastrophe feel uncanny, as though contradicting the character of the human experience through their indifference towards it. William Hope Hodgson could not tell the story of entropy because he could not de-center the human experience in his storytelling. Isaac Asimov and Thomas Pynchon explored the human experience within a universe indifferent to that experience, governed by its own laws and forces.

Apocalyptic forces are similarly indifferent to the human experience, and only by de-centering humanity can fiction successfully tell the story of the apocalypse during which it now is written.

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