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Holding His Attention: Tolkien and "Modern" Science Fiction

Kristine Larsen
Central Connecticut State University, larsen@ccsu.edu

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Fairy-stories and Science Fiction

In a 1967 letter to Charlotte and Denis Plimmer, Tolkien explains

> I read quite a lot – or more truly, try to read many books (notably so-called Science Fiction and Fantasy). But I seldom find any modern books that hold my attention. I suppose because I am under 'inner' pressure to complete my own work – and because … 'I am looking for something I can't find.' (*Letters* 530).

Tolkien qualifies that blanket statement with several exceptions: "I have read all that E. R. Eddison wrote, in spite of his peculiarly bad nomenclature and personal philosophy. I was greatly taken by the book that was (I believe) the runner-up when *The L.R.* was given the Fantasy Award [The International Fantasy Award, 1957]: *Death of Grass*. I enjoy the S.F. of Isaac Azimov [sic]" (*Letters* 530). Tolkien confirms his appreciation of "good" science fiction in a 1966 interview with Daphne Castell. The question is, what defines "good" science fiction (in Tolkien's mind), and what characteristics would a story have to have to hold his attention (as he described it)? Rather than simply compare and contrast the works listed above, I intend to attack this task from a different route, understanding full well that I am drawing upon some of my own person bias as a long-time reader of both Tolkien and more generally science fiction. I would like to make it clear from the start that I do not intend this as an exhaustive analysis, but only a first step, heavily relying on Tolkien's own words and more general critical analysis of these works. I am also forced to hypothesize (i.e., guess) which pre-1967 works of Isaac Asimov Tolkien might have found particularly engaging. Therefore in Tolkien's immortal words, I am intentionally leaving "scope for other minds and hands" to further investigate these issues (*Letters* 204).

I begin with a reflection on some of Tolkien's known interests. For example, Tolkien's love of and respect for the environment (especially trees) is certainly well-known (e.g., Campbell 2011; Curry 2004; Dickerson and Evans 2006). Beyond his legendarium as a living example, Tolkien's lecture "On Fairy-stories," his poem "Mythopoeia," and his essay "A Secret Vice" (among other writings) clearly demonstrate his deep-rooted interest in invented worlds and world-building, including the invention of myths and languages.

Speaking directly of science fiction, we have the infamous c. 1936 wager with friend C.S. Lewis: "L. said to me one day: 'Tollers, there is too little of what

we really like in stories. I am afraid we shall have to try and write some ourselves.' We agreed that he should try 'space-travel', and I should try 'time-travel'" (*Letters* 531). The result was Lewis's Space Trilogy (*Out of the Silent Planet* [1938], *Perelandra* [1943], and *That Hideous Strength* [1945]) and two aborted time-travel stories by Tolkien (both related to the Atlantis myth), "The Lost Road" (circa 1936-7 [*Lost Road* 8-9]) and "The Notion Club Papers" (mid-1940s [*Sauron* 145-7]). While Tolkien makes it seem like a simple flip of a coin, as Verlyn Flieger notes, "Lewis's 'heady' attraction to other planets … suggest that the 'tossup' may not have been quite as random as Tolkien implies, but that each man chose the aspect of science fiction to which he felt most drawn" (2005, 151-2). Therefore, as a first pass we should look to science fiction tales that either take place in the distant future or past (what is sometimes called 'deep time' or 'cosmic time') or openly involve time travel. In addition, as Tolkien notes in a letter to Stanley Unwin concerning *Out of the Silent Planet*, he was "extremely fond of the genre" of the "*vera historia* of a journey to a strange land" (*Letters* 43).

Furthermore, in another letter Tolkien specifically refers to his and Lewis's task as to write "an excursionary 'Thriller'… discovering Myth (*Letters* 39). What Tolkien means by the last bit is reflected in a 1951 letter to Milton Waldman, namely his belief that "legends and myths are largely made of 'truth', and indeed present aspects of it that can only be received in this mode" (*Letters* 207). John Rateliff (2000, 202) unpacks the full assignment of the Lewis/Tolkien bet as follows: "the hero of each book would undertake a journey through space or time, experiencing a series of adventures along the way, leading to his eventual discovery that some old myth or legend was actual fact – in Lewis's case, the apocryphal legend of Lucifer's rebellion; in Tolkien's, the legend of the fall of Atlantis." Rateliff further notes that the stories would "have a contemporary setting, a condition pretty well demanded by the 'thriller' rubric" (2000, 202).

In literary theory, 'thriller' represents a hybrid genre that can fuse a mystery or threat set in contemporary times with aspects of other genres (Pokotylo 2021, 4). In particular, a successful sci-fi thriller explores "the moral dilemmas, human hubris, and hidden agendas" of a situation that blends fiction with a "credible reality" (Morris 2020). It is possible to have a thriller that engages in time travel (as in the case of Tolkien's unfinished end of the bet); such stories might be especially attractive to Tolkien.

The limits of what defines a "credible reality" certainly differs from one person to the next; this may explain some of Tolkien's criticisms of individual stories and authors. Tolkien's seminal essay "On Fairy-stories" illustrates his opinion in this regard:

> What really happens is that the story-maker proves a successful 'sub-creator.' He makes a Secondary World which your mind can enter. Inside it,

> what he relates is 'true: it accords with the laws of that world. You therefore believe it, while you are, as it were, inside. The moment disbelief arises, the spell is broken; the magic, or rather art, has failed. (*OFS* 52)

Tolkien would certainly appreciate a consistent Secondary World with sufficient detail to make it engaging (and believable). As I have explored at length elsewhere (Larsen 2014a; 2017; 2024), Tolkien was not anti-science; on the contrary, at an early age he was interested in astronomy, botany, and other subjects more than in what he termed "fairy-stories" (*OFS* 56). But it is clear that he separated the desire to understand the natural environment (what he termed "pure (natural) science" [*Letters* 287]) from technological efforts to harness the natural world (exerting power over nature), including military technologies. Therefore we should not be surprised that Tolkien includes a great deal of science within his subcreation process, including what Mark J.P. Wolf (2012, 36) explains as the ontological realm of an imagined world (the laws of nature, including the limits of a technologies, including magic). As we shall see, technology that strains the believability of the reader within the Secondary World (in Tolkien's experience, usually centered on space and time travel) is to be avoided. Finally, we should also be cognizant that during Tolkien's lifetime there were a number of pseudosciences and pathological sciences[1] that were discussed in the popular literature and Tolkien might have known about (and in the case of J.W. Dunne's model of time, actively utilized in his own fiction). Tolkien certainly would not have dismissed the self-consistent use of such 'theories' in world-building by others out of hand.

Furthermore, Tolkien famously explains how fairy-stories offer the reader "Fantasy, Recovery, Escape, [and] Consolation" (*OFS* 59). When asked by Daphne Castell his reaction to "Naomi Mitchison's description of his work as 'glorified science fiction'" he answers that "he supposed it was valid, if she means that the pleasure of 'wonder' is also produced by good science fiction (Castell 1996). Tolkien further clarifies that "many readers of sci fi are attracted to it because it performs the same operation as fantasy — it provides Recovery and Escape… — and wonder," although he notes that some sci-fi authors and readers are more interested in the scientific aspect than "the 'wonder,' or the 'Escape'" (*Ibid.*). We therefore have even more reason to believe that Tolkien could particularly enjoy stories that lie outside the 'hard' sci-fi subgenre (which prides itself on scientific veracity) in favor of stories that also contain supernatural (or simply super-natural) elements.

There is one further aspect we might expect to see in works that held Tolkien's attention, famously reflected in Galadriel's statement in *The Lord of the*

[1] The seminal work on pathological sciences is by Irving Langmuir, edited by Robert N. Hall (1989), available online at https://lyongroup.net/wp-content/uploads/2013/08/langmuir-pathological-science-1989.pdf.

Rings (*FR* 372): "Through ages of the world we have fought the long defeat." This concept of the "long defeat" has been widely shown to be central to much of Tolkien's legendarium, (Doyle 2020, 107; MacLaughlin 2022, 21-2; Sas and Weyant 2020, 3-4;). Indeed, the legendarium takes place in Arda Marred (*Silmarillion* 255), a fallen world whose very fabric has been interwoven with the influence of the fallen Vala Melkor. This aligns with Tolkien's explanation to Milton Waldman that "there cannot be any 'story' without a fall – all stories are ultimately about the fall" (*Letters* 207). Works that take place in a decidedly 'fallen' world (physically, morally, or both) or at a point in an invented history when civilization and/or human nature is visibly 'falling apart' or even 'devolving' (such as in a post-apocalyptic tale) might therefore be on Tolkien's literary radar. Stories that focus on end times (literally, such as the end of the earth or even universe) would also have been likely to pique his interest, given his own use of eschatology in his writings, both in the legendarium and more broadly (Larsen 2021).

Interestingly, Alfredo Maclaughlin effectively argues that post-apocalyptic stories impact their readers in the same way that fairy-stories do. For example, Recovery – which Tolkien defined as "regaining of a clear view… so that the things seen clearly may be freed from the drab blur of triteness or familiarity" (*OFS* 67) – appears in post-apocalyptic stories in the characters' response to the scarcity of "many things we take for granted," encouraging us to "revalue them in this new light" (MacLaughlin 2022, 15). They also offer the reader Consolation, by demonstrating that "life that goes on, despite extreme hardships, transformations and extinction events; they seem to say that as brutal as things may be there is still some happiness to be had" (MacLaughlin 2022, 23-4). Indeed, the ability of even a handful of individuals to survive under such dire conditions, to persevere in the face of seemingly insurmountable odds, may be considered a "good catastrophe' or 'joyous turn' – in other words, what Tolkien termed a *eucatastrophe* (*OFS* 86).

We can now construct a draft checklist of what characteristics might have drawn Tolkien to appreciate certain works of science fiction (although a single work might not include each and every one of these):

- A consistent Secondary World, including an internally self-consistent use of science and technology;
- The inclusion of obvious aspects of the fairy-story (as he defined them);
- More specifically, a fallen – or falling/failing – world subject to the "long defeat" (although one not completely without hope);
- A well-written Thriller set in contemporary times, a time travel tale (especially one set in the distant past or future), a journey to a strange land presented as a true history, or some combination thereof;
- Thoughtful uses of philosophy, language, and mythology (perhaps with bonus points for those that resonate with his personal tastes);

- Alignment with Tolkien's personal experiences (e.g., World War I or II, England/English history and culture) and interests (e.g., trees and nature).

We might also expect to see echoes of Tolkien's legendarium in such works, not due to direct appropriation either forward or backward, but instead a recognition that if a particular plotline or character trait was meaningful to Tolkien in his own works, it is reasonable to assume that he might also appreciate its successful use in the work of another author.

With this background in mind, we first review several earlier works of sci fi that Tolkien is known to have appreciated (and criticized) that have long been on the radar of Tolkien scholarship to see how on target our checklist might be, before pondering specific works (mainly more recent ones) not as widely discussed in relation to Tolkien.

The Old Forgotten Masters: Wells, Eddison, and Lindsay

One of Tolkien's unfinished time travel tales, "The Notion Club Papers," is set several decades into Tolkien's future, but is still a rather contemporary tale. Much of the action (as far as it was written) focuses on university dons discussing their intellectual interests, including their personal opinions concerning various works of science fiction. For example, Nicholas Guildford shares with his colleagues "I *have* read *The First Men in the Moon*, and *The Time Machine*" by H.G. Wells, whom another character names one of the "forgotten Old Masters" (*Sauron* 165; emphasis original). Guildford's criticism of these novels is that "the machine was a blemish; and I'm quite unconvinced that it was a necessary one" (*Ibid.*). The machine apparently threatens to break the spell, the believability of the Secondary World. Guildford (apparently channeling Tolkien) further explains "I'm talking about credibility…. You *can* land on another world in a space-ship and then drop that nonsense, if you've got something better to do there than most of the earlier writers had. But personally I dislike that acutely" (*Sauron* 163-4; emphasis original). Here Tolkien is setting up his own characters' use of dream states rather than machines to travel through space and time.

In a similar criticism in "On Fairy-stories," Tolkien opines that Wells' devolved future humanoids, the "Eloi and Morlocks live far away in an abyss of time so deep as to work an enchantment upon them…. This enchantment of distance, especially of distant time, is weakened only by the preposterous and incredible Time Machine itself" (*OFS* 34). *The Time Machine* clearly features a fallen Secondary World with aspects of the fairy-story (perhaps most notably Escape), a Thriller beginning in the present and reaching all the way to the death of the earth and sun. Tolkien himself draws connections with his other literary interests, comparing the concept of the Eloi and Morlocks as descendants of modern

humans with the Beowulf poet's descendancy of "the *yfle*, the very elves, through Cain from Adam" (*OFS* 34). Holly Ordway (2021, 207) points out that "Despite his sharply different views on matters theological, Tolkien held Wells's science fiction in high regard," a rather euphemistic way of categorizing Wells's theological writings (ranging from the 1917 tract *God the Invisible King* to *Crux Ansata: An Indictment of the Catholic Church* [1943]).[2] This suggests that while Tolkien might be naturally drawn to authors and works that shared his beliefs, he was also open to alternate perspectives.

Case in point is E.R. Eddison, whose works Tolkien read "long after they appeared…. I read his works with great enjoyment for their sheer literary merit" (*Letters* 372). *The Worm Ouroboros* (1922) centers on the epic struggle on an alien world (named Mercury but bearing little in common with the planet we know) between the Lords of Demonland and King Gorice of Witchland and his forces. Three later novels, sometimes called the Zimiamvia Trilogy (*Mistress of Mistresses* [1935], *A Fish Dinner in Memison* [1941], and *The Mezentian Gate* [incomplete; originally published in 1958]) take place in Zimiamvia, the heaven of Mercury, where political intrigue and battles largely drive the plot.

While Eddison's works are commonly classified as fantasy or romantic fantasy (D'Ammassa 1996, 88),[3] we will include them for the moment due to the availability of insightful (albeit decidedly mixed) comments by Tolkien himself. In particular, he offers that his

> opinion of them is almost the same as that expressed by Mr. Lewis on p. 104 of the *Essays Presented to Charles Williams*. Except that I disliked his characters (always excepting the Lord Gro) and despised what he appeared to admire…. Eddison thought what I admire 'soft' (his word: one of complete condemnation, I gathered). (*Letters* 372)

Tolkien adds "I thought his nomenclature slipshod and often inept. In spite of all of which, I still think of him as the greatest and most convincing writer of 'invented worlds' that I have read" (*Letters* 372-3). In a later letter Tolkien confirms these criticisms, as previously noted reflecting "I have read all that E. R. Eddison wrote, in spite of his peculiarly bad nomenclature and personal philosophy" (*Letters* 530).

Several points immediately stand out. First, Tolkien was not a fan of Eddison's names (what we might consider invented language), although he thought Eddison's Secondary World to be successful overall (it achieved at the very least consistent interior belief). But Tolkien was also offput by the characters and the

[2] For an overview of the tension between Wells's personal beliefs and his use of religion in his fiction, see James (2012).

[3] Tolkien refers to *The Mezentian Gate* (part of which was read to the Inklings in 1944) as a "romance" (*Letters* 121).

overall philosophy, both described in detail below. But what did he mean by generally agreeing with Lewis?

In a letter C.S. Lewis vividly describes Eddison's world-building as "Good to the taste as home cured ham" (2004, 680). However, he is a bit more introspective in the work Tolkien refers to, *Essays Presented to Charles Williams*, explaining

> You may like or dislike his invented worlds (I myself like that of *The Worm Ouroboros* and strongly dislike that of *Mistress of Mistresses*) but there is here no quarrel between the theme and the articulation of the story. Every episode, every speech, helps to incarnate what the author is imagining. You could spare none of them…. The secret here is largely the style, and especially the style of the dialogue. (Lewis 1974, 104)

This opinion aligns with Tolkien's previous description of Eddison's "sheer literary merit."

What of Tolkien's stated dislike of the characters (with the exception of Lord Gro)? Gro is a renegade Lord from Gobinland and advisor to King Gorice. While Gro attempts to manipulate Gorice and the situation to his advantage, seeking to gain power once the King is victorious, he switches sides after falling in love with the sister of one of the Demon Lords, dying for his trouble. D'Ammassa (1996, 92) calls Gro "the most complex character in the novel, torn by internal conflicts, never certain where his place in the world should be, where his true loyalties might lie." We can begin to see how Tolkien might have appreciated the gray aspects of this character and his internal battles to determine what is right and wrong – it reflects many of Tolkien's own characters. In addition, Tolkien's heroes have a great deal more agency (and hence the ability to fall from the heroic ideal) than Eddison's. D'Ammassa (2006, 90) reflects that Eddison's heroic characters are "constrained by their very natures to perform in certain specified fashions; they literally cannot make decisions because they have to do what is right and honorable" while villains have absolute freedom to act in response to each and every momentary whim. The result is fascinating villains and shallow heroes. For example, D'Ammassa describes the four Demon Lords as "so interchangeable that it is impossible to distinguish between them" (1996, 91).

Finally, what is it about Eddison's philosophy that Tolkien finds offputting? Upon winning the war (after racking up an extremely high body count) the Demon Lords of *The Worm Ouroboros* regret that there are no more lands to save, no more battles to fight. I won't spoil the ending, which the Demons consider a eucatastrophe, albeit a twisted one, in my opinion. Suffice it to say that this is a world that is fallen in many respects. Ordway explains how Tolkien would have taken issue with Eddison's treatment of the problem of evil; in her words, Tolkien "held that suffering is morally serious, as evinced to an infinite extent by the

sacrifice of Christ on the cross" (2021, 214). In his own words, Tolkien offers of Eddison "I thought that, corrupted by an evil indeed silly 'philosophy', he was coming to admire, more and more, arrogance and cruelty" (*Letters* 530). Eddison's philosophy runs counter to that in Tolkien's works (especially *The Hobbit* and *The Lord of the Rings*), leading Eddison to condemn what Tolkien admired (in his own works as well as that of others) as "soft."

John Rateliff (2000, 201) argues that the famous 1936 Tolkien/Lewis bet was spurred, in part, by Lewis's reading of David Lindsay's *A Voyage to Arcturus*, a work which, Lewis later notes, "first suggested to me that the form of 'science fiction' cd. be filled by spiritual experiences," adding it was a "model" for his space trilogy (Lewis 2007, 314). Tolkien explains in a 1938 letter that he had "read 'Voyage to Arcturus' with avidity" (*Letters* 44).

The novel begins with a London séance, and the materialization of a young man who is brutally murdered by an unexpected visitor, the violent Krag. Krag subsequently explains that the young man originated from the planet Tormance, orbiting the star Arcturus (in the novel pictured as a double star system), and invites the séance's host, Nightspore, and one of the attendees, Maskull, to accompany him on a journey there. The three take off into space in a forty-feet-long "torpedo of crystal" propelled by "Arcturian back rays," able to achieve "a velocity more nearly approaching that of thought than of light" (Lindsay 2007, 26-7); upon awakening on the alien world, Maskull finds he has grown a new sense organ and appendage. Over several days Maskull travels across strange terrains, meeting a number of sentient beings, with whom he interacts in sometimes violent ways. Throughout his journey Maskell tries to piece together the theology of this world (and, it is suggested, the universe as a whole) and ultimately discovers the nature of good, evil, and divinity. The twist at the end (I hesitate to term it a eucatastrophe) I leave for the reader to discover.

Ordway argues that Tolkien would have appreciated Lindsay's world-building of a "genuinely alien" planet, and that the transformation of Arcturus into a double star with blue and yellow components would have piqued Tolkien's interest in astronomy (Ordway 2021, 212). As Ordway observes, the colors of the stars plays into the world-building in a creative way, creating light of two original primary colors, ulfire and jale. However, the technology used to travel to Tormance certainly jars Tolkien. The dons of "The Notion Club Papers" bemoan the "Crystal torpedoes, and 'back-rays', and levers for full speed-ahead (faster than light, mark you)" as "simply shocking," noting that, in their (meaning Tolkien's) opinion, Lindsay had "at least two other better methods up his sleeve: the séance connexion; or the suggestion of the dark tower at the end" (*Sauron* 164).

All in all, Ordway (2021, 211) calls it a "deeply weird book" and notes "Simply the fact that Tolkien liked it – and liked it well enough to get his own copy – shows that his tastes in reading were more adventurous and more complex than

we tend to assume." We can also simply turn to Tolkien's self-reflection: "my taste is not normal" (*Letters* 44). C.S. Lewis terms the book "diabolical, mad, childish" (Lewis 2007, 769) and an "shattering, intolerable, and irresistible work" (Lewis 2002a, 71); in various places he describes the writing as "at times (to be frank) abominable" (Lewis 1974, 104), "appalling" (Lewis 2002a, 88), and "often laughingly crude" (Lewis 2004, 753). Frank Wilson (2008, 30) describes Lindsay's novel as "a peculiar and peculiarly dark tale, offputting and compelling almost in equal measure." This is certainly a fallen world. For his part, Tolkien calls it "more powerful and more mythical (and less rational, and also less of a story…)" than Lewis's *Out of the Silent Planet*, noting of Lindsay's novel that "no one could read it merely as a thriller and without interest in philosophy[,] religion and morals" (*Letters* 44).

The question remains as to what Tolkien might have thought about Lindsay's particular philosophy. Lindsay's answer to the central question – the origin and nature of evil – is compared by Lewis to the philosophies of Schopenhauer and Manichaeism (2007, 1128; 1206), what he terms a "ghastly vision" (2002a, 88). Kathryn Hume calls the philosophical message "[d]isturbing and horrifying," noting that the reader "may be repelled by Lindsay's brutality and negativity (1978, 73). While some authors have found echoes of Manichaeism in Tolkien's works (e.g., Fry 2015, Shippey 2002), as we have seen, Tolkien did not have not agree with the central philosophy or mythology of the work to appreciate the overall novel. But as we shall discover, Tolkien certainly did have his limits.

Echoes of Dunne: Stapledon and Lewis

Recall Tolkien's criticism of the 'machine' of Wells's *The Time Machine*. This begs the question of how one might accomplish time travel without advanced technology. Fortunately for Tolkien, such a methodology was proposed by aeronautical engineer J.W. Dunne. Drawn into a study of time by a series of curious dreams that he later claimed to be prescient, Dunne argues that there exists an infinite regression of higher dimensional times, each with associated observers. By accessing these higher dimensions in dreams, one can travel into the past or future. He initially published his model as *An Experiment with Time* in 1927, with revisions (including responses to his critics) in a third edition in 1934. As Verlyn Flieger notes, J.R.R. Tolkien read *An Experiment With Time* in 1934, only three years before submitting his incomplete draft of his own time-travel tale, "The Lost Road," to publishers Allen and Unwin (1996, 39). In "The Lost Road" a father-son pair travel through time via "serial identities" that could access each other in dreams (Flieger 1996, 40). Flieger further explains how Tolkien closely adapts Dunne's mechanism in "The Notion Club Papers" (written in the mid-1940s) wherein present-day Oxford dons travel in time – and space – utilizing Dunne's formalism.

Flieger also connects Dunne's work to two novels written by philosopher and pacifist William Olaf Stapledon, *Last and First Men* (initially published in 1930) and *Last Men in London* (1932). Set in a Secondary World that is a fictional future of our own, the series explores eighteen fictional stages in the evolution of humans beginning with their current form. Like Tolkien, Stapledon spent part of his childhood in Africa, specifically Egypt, thanks to his father's career in the shipping industry. Stapledon was also educated at Oxford, receiving an MA in modern history in 1913, and served in World War I, as a member of the Friends' Ambulance Unit, attached to a division of the French Army (Crossley 1994, 131). These experiences are reflected in Stapledon's work, and Tolkien would have certainly recognized the references. However, Henry Gee (2011, 5) argues that Tolkien and Stapledon would have likely "disagreed about everything. Tolkien, the somewhat conservative and pessimistic Catholic, against Stapledon, a markedly left-wing, utopian and agnostic Quaker." Despite this, Stapledon's sweeping tale of time travel from the distant future back to the present (and across the solar system) sans machine clearly resonated with Tolkien.

As previously noted, in Part I of "The Notion Club Papers" the discussion turns to the improbability of time travel via machine (as in Wells's novel). However, when member Michael Ramer admits that he is able to travel to alien worlds through his mind the possibility traveling in time no longer seems out of the realm of possibility. Ramer explains that he got the idea (initially only as a literary device for writing stories) from "that old book you lent me, Jeremy: *Last Men in London*, or some name like that" (*Sauron* 175). Ramer then gives his colleagues (and the reader) a synopsis of Dunne's model of time, which he does not mention by name (*Sauron* 175-6).

Furthermore, given that Stapledon (2007, 4) describes his *Last and First Men* as "an essay in myth creation," it is understandable that these novels would have had the potential to appeal to Tolkien for much more than just the time travel plotline. Indeed, in Stapledon's introduction to *Last and First Men* we can see a prescience of Tolkien's later essay "On Fairy-stories" and the concept of subcreation:

> We must achieve neither mere history, nor mere fiction, but myth. A true myth is one which, within the universe of a certain culture (living or dead), expresses richly, and often perhaps tragically, the highest admirations possible within that culture. A false myth is one which either violently transgresses the limits of credibility set by its own cultural matrix, or expresses admirations less developed that those of its culture's best vision. (Stapledon 2007, 102)

Although Stapledon's novels are framed through the device of dream/trance travel through time and space, it is the story of the ethical and psychological struggles of the narrators of these tales, and those minds and planets they visit, that drive the novels and give them their deeper meaning. Similarly, in speaking of his Middle-earth tales, Tolkien wrote to his publisher "all this stuff is mainly concerned with Fall, Mortality, and the Machine" (*Letters* 145). All three of these play a central role in the tragic tale of the Númenóreans (the only piece of "The Lost Road" and "The Notion Club Papers" to become official canon within the mythos of Middle-earth). Elsewhere (Larsen 2018) I analyze Stapledon's use of "Fall, Mortality, and the Machine" in his novels and compared it to Tolkien's time travel tales, and I direct the interested reader there for more details. For the current discussion I focus on one illustrative example from *Last and First Men*.

While Tolkien voices negative views concerning the abuse of technology for "*Power* (exerted for Domination)," his letters contain specific concerns for the use of "Atomic power," especially in weapons (*Letters* 353). For example, Tolkien calls the aftermath of America's usage of atomic weapons against Japan Tolkien

> so horrifying one is stunned. The utter folly of these lunatic physicists to consent to do such work for war-purposes: calmly plotting the destruction of the world! Such explosives in men's hands, while their moral and intellectual status is declining, is about as useful as giving out firearms to all inmates of a gaol and then saying that you hope 'this will ensure peace'. (*Letters* 168)

The British military's first atomic weapon test in 1952 is compared with using the One Ring "for their own (of course most excellent) purposes" (*Letters* 239). *Last and First Men* keenly illustrates the folly of possessing such weapons despite being written more than a decade before their first use.

In the immediate future of the novel, European and American tensions boil over into war. A group of scientists assembles on the coast of England for the demonstration of a new defensive weapon created by a Chinese scientist based on "subatomic energy." The creator proudly explains how the new technology has both military and peacetime applications as a source of nearly limitless energy, crowing "As a means of destruction, my instrument is perfect. As a source of power for the constructive work of mankind, it has unlimited potentiality" (Stapledon 2007, 37). He foolishly believes that in the "hands of organized intelligence" his weapon will end all wars forever, allowing the intellectual elites to "become absolute masters of this planet" (*Ibid*.). In response, an English scientist (perhaps unconsciously channeling Tolkien) utters "Gawd 'elp us!," an archaic phrase that is erroneously interpreted as meaning something scientific by the some of the non-native English speakers in the crowd (*Ibid*.).

As promised, the test causes utter destruction (along with a mushroom cloud), and the scientists are both impressed and horrified. A French scientist wisely argues that such a technology would not only increase hostilities but "ruin science…. Your very wonderful toy would be a gift fit for developed minds; but for us, who are still barbarians,- no, it must not be" (Stapledon 2007, 39). He therefore urges the destruction of both the technology and all evidence of its existence. However, their scientific altruism is temporarily put on hold when the American airship fleet arrives over their heads, and they beg the scientist to use his device just that once. Afterwards they burn both his machine and his manuscript, and the scientist conveniently drops dead, taking all knowledge of his destructive technology to the grave. As Tolkien wisely notes in a 1944 letter to his son Christopher "You can't fight the Enemy with his own Ring without turning into an Enemy; but unfortunately Gandalf's wisdom seems long ago to have passed with him into the True West" (*Letters* 134).

It is not difficult to see how this vignette from Stapledon's novel would have held Tolkien's interest, not the least reason being the obvious parallels to the various points of view held by characters concerning the One Ring in the chapter "The Council of Elrond" in *The Lord of the Rings*. But the resulting humorous wordplay and mythology development related to the seemingly innocent English phrase "Gawd 'elp us!" might have greatly amused him as well. After more than a century of intermittent wars, America rules the world. In China a "scientific religion" springs up, based on the long-lost work of a "Chinese physicist and saint," "the awful mystery of Gordelpus,[4] by means of which it should be possible to utilize the energy locked up in the "annihilation of matter and antimatter" (Stapledon 2007, 65).

In Stapledon's Secondary World and sweeping invented mythos, not only do individuals and civilizations die, but the destruction of entire worlds are witnessed over cosmic time. This does not mean that humans don't try to stave off death (both individually and as a species) for as long as possible. Indeed, humanity finds a way to survive, via technology/science, until the sun itself is doomed. The so-called Last Men, living on Neptune, face death as a species, reflecting "It is very good to have been man. And so we may go forward together with laughter in our hearts, and peace, thankful for the past, and for our own courage. For we shall make after all a fair conclusion to this brief music that is man" (Stapledon 2007, 293). In the end they die honorably, accepting that it is their appointed time, similar to the relinquishing of life of the early kings of Númenor and, in the Fourth Age, Aragorn (*RK,* "Appendix A," 343). Stapledon's future lacks a eucatastrophe, but it is rich in Consolation.

[4] If the word play isn't immediately apparent, try saying 'gord-EL-pus.'

C.S. Lewis was a contemporary science fiction author who we know Tolkien read and was greatly influenced by Stapledon. In a 1950 letter to Sheldon Vanauken, C.S. Lewis calls Stapledon "a corking good writer" (2007, 71) and opines in *The Abolition of Man* that he could read Stapledon's futuristic tales "with delight" (2001, 37). In a 1938 letter Lewis explains that he was "spurred" to write *Out of the Silent Planet* in response to Stapledon's *Last and First Men* and geneticist J.B.S. Haldane's *Possible Worlds* (2004, 236), although (as previously noted) he elsewhere notes Lindsay's connection to his Space Trilogy. In general, Lewis states "I like the whole interplanetary ideas as a mythology" (Lewis 2004, 236-7). Indeed, in his preface to *That Hideous Strength*, Lewis admits his literary debt, offering that "Mr. Stapledon is so rich in invention that he can well afford to lend, and I admire his invention (though not his philosophy) so much that I should feel no shame to borrow" (2003, 7). Not surprisingly, Tolkien notes Lewis's borrowings from his legendarium in numerous letters, including characteristics of Tolkien himself (e.g., *Letters* 39; 43; 127; 211; 327; 432; 505).

Very briefly, the Space Trilogy centers on the adventures of philologist and medieval scholar Dr. Elwin Ransom. In *Out of the Silent Planet*, Ransom is kidnapped and taken to Mars (whose true name is Malacandra) by the mad scientist Weston and his accomplice Dick Devine. Here Ransom learns much about the culture and language of indigenous sentient species of Mars as well as the existence of the *eldila*, spiritual creatures. Powerful individuals among them, the Oyéresu, take responsibility for the planets in our solar system. Earth's Oyarsa is the Bent One (Satan), leading to important theological and mythological implications throughout the series. In *Perelandra* Ransom travels to Venus/Perelandra, where he struggles to prevent Weston (who becomes possessed by an evil eldil) from corrupting the Adam and Eve of that planet. *That Hideous Strength* takes place on Earth/Thucandra and centers on the demonic plot of the members of the National Institute of Co-ordinated Experiments (N.I.C.E) to achieve both immortality and ultimate power.

Tolkien's views on the Space Trilogy (again, the outcome of his wager with Lewis) are fairly well-known. In "The Notion Club Papers," Michael Ramer explains to his colleagues "I've always wanted to try a space-travel story, and have never dared. It was one of my earliest ambitions, ever since *Out of the Silent Planet* appeared, when I was a small boy" (*Sauron* 174). More directly, Tolkien defends the trilogy's first novel in a letter to Stanley Unwin in response to a negative reader's report, offering "I at any rate should have bought this story at almost any price if I had found it in print, and loudly recommended it as a 'thriller' by (however and surprisingly) an intelligent man" (*Letters* 44). But Tolkien is not without some criticism of the work. He shares how he had "read the story in the original MS. And was so enthralled that I could do nothing else until I had finished it. My first criticism was simply that it was too short. I still think that criticism holds" (*Letters*

43). He also explains how aspects of Lewis's "linguistic invention… do not appeal to me… but this is a matter of taste," although "All the part about language and poetry – the glimpses of its Malacandrian nature and form – is very well done, and extremely interesting, far superior to what one usually gets from travellers in untraveled regions" (*Ibid*.). Tolkien opines that the novel sufficiently overcomes the common pitfall of mechanized time or space travel we have already noted and furthermore offers "the more intelligent reader a number of philosophical and mythical implications that enormously enhanced without detracting from the surface 'adventure'. I found the blend of *vera historia* with *mythos* irresistible" (43-4).

While Tolkien was generally positive in his appraisal of the first novel, his views of the series as a whole are mixed. In a 1944 letter he offers that daughter Priscilla shows "good taste" in preferring the less philological and more theological/mythological *Perelandra* to *Out of the Silent Planet* (*Letters* 127), although Tolkien (through one of the fictional members of the Notion Club) openly criticizes Lewis's use of a "crystal coffin without machinery" to send Ransom to Venus as "very unconvincing" (*Sauron* 168). Tolkien terms a chapter from *That Hideous Strength* that Lewis had read to the Inkings as "tripish," one of his kinder comments (*Letters* 94). In a 1965 letter to Dick Plotz, Tolkien describes Lewis's mythology as "incipient and never fully realized" as well as "quite different" from his own (*Letters* 505). He calls it a "pity" that the mythology only "became coherent by contact with C.S. Williams and his 'Arthurian' stuff … between *Perelandra* and *That Hideous Strength*" (*Ibid*.). In another letter he says (speaking of the Space Trilogy) "Williams' influence actually only appeared with his death: *That Hideous Strength*, the end of the trilogy, which (good though it is in itself) I think spoiled it" (*Letters* 479). A fuller explanation is found in a third letter, in which Tolkien explains "I actively disliked his Arthurian-Byzantine mythology; and still think that it spoiled the trilogy of C.S.L…. in the last part" (*Letters* 490).[5] Therefore we see how Tolkien did have his limits in terms of appreciating fictional mythologies.

This completes my survey of earlier science fiction works for which we have clear opinions from Tolkien. It suggests that our checklist provides a useful methodology for analyzing later works of science fiction for which he had known opinions, as well as examples for which we only know that Tolkien appreciated the author. Such is the case of Isaac Asimov.

[5] For more on Williams and his mythology, see Rateliff (2015), Curtis (1992), and various essays in Higgins (2017).

Let There Be Light (or not): Isaac Asimov's "Nightfall" and "The Last Question"

Isaac Asimov, prolific science fiction writer, popularizer of science, and biochemistry professor, has certainly produced numerous works that might have held Tolkien's attention. Where would we even begin to narrow it down? Given his viewpoints on technology, I would personally suspect that the robot tales would not be among Tolkien's favorites. Instead, I argue, we should simply look at Asimov's most well-known short story, and one that was the closest to his heart.

"Nightfall" was published in the September 1941 issue of *Astounding Science Fiction*, the then 21-year-old author's longest story to date. In 1968 it was voted the best science fiction short story of all time by the Science Fiction Writers of America (Reiss 2022, 150). Asimov's Secondary World of Lagash is a permanently daylit planet, due to its location in a six-star system. Archaeological data suggests the planet's civilization is cyclical, with at least nine high civilizations comparable to their own having previously been destroyed by planetwide fires. Numerous scientific hypotheses have been proposed to explain this pattern, but none is convincing. However, there is a controversial tradition passed down over centuries, the "myth of the 'Stars'" touted by a group called the Cultists in their "*Book of Revelations*" (an obviously Biblical nod) (Asimov 1969, 9). This myth offers that every 2050 years their planet "entered a huge cave, so that all the suns disappeared, and there came *total darkness all over the world*! And then, they say, things called Stars appeared, which robbed men of their souls and left them unreasoning brutes, so that they destroyed the civilization" (*Ibid.*; emphasis original).

While most of the population dismisses this fringe group and their beliefs out of hand, a group of open-minded scientists discovers that they may be on the right track. Due to the complex structure of their solar system, the law of gravitation – and hence an understanding of planetary motion – has taken a long time to work out. It is only in recent years that the orbit of their planet has become calculable, and it is discovered that the observed motion does not match their calculations. Using the data in the hands of the Cult leader, the scientists find that the simplest explanation for the orbital irregularities is the existence of a large, nonluminous body (a moon) that is impossible to see against their permanently daylit skies. Calculations show that once every 2049 years this large moon passes in front of the small sun Beta while the other five suns are below the horizon, creating an eclipse that lasts long enough to be visible from every part of their world.[6] For the first time in centuries their world will know darkness and, it is surmised, the ensuing panic

[6] See Deshmukh and Murthy (2014) for a scientific investigation of the possibility of such an event.

will result in the widespread lighting of fires to provide light, leading to catastrophic damage.

Discovering the truth with only two-months' warning, the scientists have been unable to convince the government of the danger, the vast majority of the population ridiculing the beliefs of the Cultists. Therefore the scientists can only build a fortified bunker for themselves and their families, and, more importantly, their scientific records, hoping to reboot civilization with a scientific head start this time and hopefully making this the final cycle of destruction. When the eclipse occurs, the scientists learn the limitations of their predictions – as the Cultists had warned, it isn't the darkness that drives people mad, but rather the stars themselves. They discover that Lagash exists at the center of a dense star cluster, causing their night sky to be filled with ten times the number of stars we see on earth, creating a "soul-searing splendor that was more frightening cold in its awful indifference than the bitter wind that shivered across the cold, horribly bleak world" (Asimov 1969, 35). The scientists realize that they are going mad at the sight and the existential epiphany that "we didn't know at all. We didn't know anything," especially the extent of the universe and the darkness beyond their solar system going on "forever and ever and ever" (Asimov 1969, 35-6). The fires begin, and the survival of their precious scientific data is precarious at best.

In addition to the creative world-building and myth-building evident in this tale of a cyclically fallen (and falling) world, what other aspects would have probably appealed to Tolkien? From an astronomical perspective, the sextuple star system of Lagash (featuring stars of different colors and brightnesses) might have reminded Tolkien of David Lindsay's earlier portrayal of Arcturus as a double star system. But more importantly, Asimov's story illustrates an excellent example of *geomythology* (Vitaliano 1973, 272), in which information about a past catastrophic natural event is coded (in perhaps greatly modified form) within a myth or legend. In the words of one of the story's scientists, the Cult "mix all this [science] up with a lot of religio-mystic notions, but that's the central idea" (Asimov 1969, 9). In Tolkien's words, the Cult's story provides verification that "myths are largely made of 'truth'" (*Letters* 207). As described elsewhere (Larsen 2008) there exists a large body of geomythology (and corresponding *astromythology*) within Tolkien's legendarium; therefore, this aspect of Asimov's story should have certainly held his attention.

One of the hallmarks of myths and traditions is that they change over time, due to the competing effects of transmission, editing, and intentional revisions due to cultural or authorial bias. The scientists of Lagash hypothesize that the Cult's *Book of Revelations* survives as the accumulated "memories of children and the confused, incoherent babblings of the half-mad morons… the testimony of those least qualified to serve as historians… and was probably edited and re-edited through the cycles" (Asimov 1969, 25). While the fictional authors, narrators,

editors, and lore-masters responsible for passing down the material in the legendarium are not described by Tolkien in these terms, he certainly made use of the role of transmission in modifying tales over time (e.g., Gallant 2020; A. Lewis 1995; Noad, 2000; Walls-Thumma 2016; *Morgoth* 370-4, 401-2).

We should also acknowledge the centrality of light and darkness to the legendarium, from the creation of the stars by Varda to the birth and death of the Two Trees, the machinations of Melkor, and, of course, the silmarils themselves. For example, when the Trees of Valinor are killed

> no song or tale could contain all the grief and terror that then befell. The Light failed; but the Darkness that followed was more than loss of light. In that hour was made a Darkness that seemed not lack but a thing with being of its own: for it was indeed made by malice out of Light, and had power to piece the eye, and to enter the heart and mind, and strangle the very will. (*Silmarillion* 76)

As in Asimov's tale, darkness is represented as more than the mere lack of light, and Valinor was likened to "a world that was drowned" in the horrific and unnatural blackness (*Ibid.*).

Finally, in the end science is clearly unable to save civilization; "Nightfall" therefore reminds us that science is neither omnipotent nor omniscient, and that we disparage folklore, legend, and myth (and, perhaps theology) out of hand at our own peril. A related message (with a twist) is found in Asimov's personal favorite among his short stories, "The Last Question" (1956) (Asimov 2009, 66). Spanning trillions of years, to the end of the universe, this story certainly qualifies as a journey across cosmic time. Asimov's tale is a collection of vignettes in which members of ever-more-technological human species inquire of their likewise ever-more-powerful computer how the ultimate extinction of all the stars (leading to the so-called heat death of the universe) might be overcome. As I have noted elsewhere (Larsen 2023), the concept of the 'long defeat' is inherent in much of early 20th century cosmology, reflecting the concept of entropy; therefore, it is not surprising that Tolkien made mythic use of entropy in crafting his own cosmologies (and, indeed, throughout the legendarium). For example, the main power of the three great Elven-rings of power is to "ward off the decays of time and postpone the weariness of the world" (*Silmarillion* 288) and "the prevention or slowing of *decay* (i.e. 'change' viewed as a regrettable thing)" (emphasis original; *Letters* 152), in other words, to hold back the march of entropy for as long as possible. I refer the interested reader to the previously mentioned paper for more examples of how entropy, the end of the solar system, and the end of the universe are reflected in Tolkien's legendarium.

Asimov's story begins on May 21, 2061[7] with two computer technicians discussing the recent technological successes of the massive Multivac computer in service to humanity. In particular, the computer's mastery of solar energy collection allows humanity to disconnect from both fossil fuels and nuclear energy. But the technicians realize that this won't power the planet forever, but instead only until the sun "runs down" (Asimov 1956, 8). While this is noted to be billions of years in the future – with smaller stars having lifespans many times that – "give us a trillion years and everything will be dark. Entropy has to increase to maximum" (Asimov 1956, 9). In response, they ask Multivac the central question of the tale, whether it is possible to reverse entropy (and with it the heat death of the universe).[8] For the first time, humanity's most powerful artificial intelligence answers "INSUFFICIENT DATA FOR MEANINGFUL ANSWER" (*Ibid.*; emphasis original).

Several vignettes (and billions of years later), humanity is not only immortal thanks to ever-improving computer capabilities, but their minds are free to travel all of space (similar to another of Stapledon's novels, the 1937 *Star Maker*). Tolkien may have appreciated that Asimov is honest that immortality has "its seamy side," in terms of stresses on natural resources (1956, 11). The population doubles every decade and their "energy requirements are going up in a geometric progression even faster than our population. We'll run out of energy even sooner than we run out of Galaxies" (*Ibid.*). Suddenly the end of the universe doesn't seem so distant.

Eventually all of the stars are dead or dying, including those that had been artificially constructed. Humanity – now beyond the need for individual names and simply all called "Man" – asks the eternal question to their "Cosmic AC" (Asimov 1956, 14). Described as being housed "in hyperspace and made of something that was neither matter nor energy. The question of its size and nature no longer had meaning in any terms that Man could comprehend," the computer increasingly taking on the characteristic of a supernatural being (*Ibid.*). However, it still lacks the omniscience and omnipotence of a deity, because it has no answer to the question. Ten trillion years in the future,[9] all of the stars and galaxies are "snuffed out," and space is utterly black (*Ibid.*). Humanity merges with the ultimate computer – AC – "losing its mental identity in a manner that was somehow not a loss but a gain" (*Ibid.*), but not before asking the question for the last time and receiving the same answer. But there is a eucatastrophe in the offering, because it

[7] July 2061 marks the next approach of Halley's Comet to the sun, which may explain Asimov's choice of the year.

[8] The exact wording of the question changes slightly over the course of the story, but is essentially as given here.

[9] Not unexpectedly, the details and time frames used by Asimov in this story reflect the scientific knowledge of the 1950s. For a more updated (and detailed) scientific discussion of the major events in the death of the universe, see Adams and Laughlin (1997) or (1999).

is not only humanity that gains in merging with AC, but, apparently, AC gains in merging with humanity.

It is impossible to fully discuss this story without spoiling the ending. After having collected all possible data, AC spends a "timeless interval" investigating "all possible relationships" between that data, until it finally determines a way to "reverse the direction of entropy":

> But there was now no man to whom AC might give the answer of the last question. No matter. The answer -- by demonstration -- would take care of that, too…. The consciousness of AC encompassed all of what had once been a Universe and brooded over what was now Chaos. Step by step, it must be done.
>
> And AC said, "LET THERE BE LIGHT!"
>
> And there was light – (Asimov 1956, 15; emphasis original)[10]

Given the decidedly Biblical ending (openly quoting *Genesis* 1:3 without attribution), it is not surprising that the most common interpretation of the ending is that in finally becoming omnipotent and omniscient, AC has essentially become a deity – it has not only known the mind of God, but has for all intents and purposes become God (e.g., Brady 1976; Ra 2024). Interestingly, some critics interpret the ending as AC literally destroying itself in the process of creation, becoming not God, but the Big Bang itself (rather than simply recreating the Big Bang) (Croft 2010; Ra 2024).

While the juxtaposition of science and religion might strike some as blasphemous, satirical, or just plain nonsensible, we should look at the historical context of the story (again, first published in 1956). The first iteration of what became known as the Big Bang cosmology was initially proposed by astrophysicist and priest Georges Lemaître in 1931, but only began being taken seriously as a scientific model in the late 1940s due to a series of papers by George Gamow and collaborators Ralph Alpher and Robert Herman. An alternative cosmology, known as the Steady State model, was proposed by physicists Fred Hoyle, Hermann Bondi, and Thomas Gold at the same time, which avoids a moment of creation (and hence comparisons to *Genesis*). Hoyle openly criticized Christianity, and in turn, a number of apologetic authors criticized Hoyle, including C.S. Lewis (e.g., 1967, 235; 2002b*,* 83; 2007, 192).[11]

[10] Interestingly, the original version published in *Science Fiction Quarterly* contains an additional phrase, "THE BEGINNING" (15; emphasis original), that was not included in subsequent reprintings in short story collections (e.g., Asimov 1959, 183). This suggests that the addition might have been made by the magazine editor.

[11] The interested reader is directed to Kragh (1996) and Larsen (2017b).

Pope Pius XII controversially embraced the Big Bang model in a November 22, 1951, address to the Pontifical Academy of Sciences, arguing that the Big Bang not only aligns with the teachings of *Genesis*, but, he believed, actually provides irrefutable evidence of the veracity of *Genesis* and the existence of God. He opined that as a "mind enlightened and enriched with modern scientific knowledge" ponders the creation of the universe

> with the same clear and critical look with which it examines and passes judgment on facts, it perceives and recognizes the work of creative omnipotence, whose power, set in motion by the mighty 'Fiat' pronounced billions of years ago by the Creating Spirit, spread out over the universe, calling into existence with a gesture of generous love matter busting with energy. (Pius XII 2012)

Keeping both Asimov's story and the Pope's public statement in mind, we turn to Tolkien's 1969 letter to Rayner Unwin's daughter Camilla, concerning not the *last* question, but the *ultimate* question: the purpose of life. Tolkien breaks this problem into several parts; first, he offers that "Human curiosity soon asks the question HOW: in what way did this come to be?"; but afterwards, this would lead to the further question of "WHY", which can only be answered if there is a "God, a Creator-Designer, a Mind to which our minds are akin (being derived from it) so that It is intelligible to us in part" (*Letters* 561). However, he admits, we cannot ultimately understand the 'why' because it would require "a *complete* knowledge of God, which is unattainable" (*Ibid*.; emphasis original). He then offers that

> Those who believe in a personal God Creator do not think the Universe is in itself worshipful, though devoted study of it may be one of the ways of honouring Him…. So it may be said that the chief purpose of life, for any one of us, is to increase accordingly to our capacity our knowledge of God by all the means we have, and to be moved by it to praise and thanks. (*Letters* 561-2)

As in Asimov's story, none of us can know the mind of God/Universe, but the human mind has a kinship to it.

While Asimov was a well-known humanist and rationalist (a term he preferred to atheist [Asimov 2009, 21]), "The Last Question" demonstrates that although he appreciated that there was understanding beyond that of the average human mind, the human mind still has much more to offer than technology alone (as noted by the fact that AC cannot answer the question until it merges with all of humanity). Although he approaches the same questions from a different perspective, Tolkien undoubtedly would have found Asimov's point of view

interesting. Combined with world-building aligned with the popular astronomical knowledge of the day, the plot of a journey through cosmic time, and the eucatastrophic ending, and we can certainly understand how "The Last Question" might hold Tolkien's attention.

Mind Control and Monstrous spiders: Land Under England

A different journey from light to darkness back to light is found in an example of a "*vera historia* of a journey to a strange land" that Tolkien specifically notes in his letters, Joseph O'Neill's *Land under England* (1935). In his 1938 endorsement of *Out of the Silent Planet* to Stanley Unwin, Tolkien explains that he had read O'Neill's novel "with some pleasure (although it was a weak example, and distasteful to me in many points)" (*Letters* 43). *Land Under England* was the second novel published by O'Neill, Permanent Secretary to the Irish Department of Education, whose first work, *Wind from the North* (1934), was a Stapledon-like mental time travel tale back to the Battle of Clontarf c.1014 CE. As we summarize *Land under England*, we will be cognizant of Tolkien's mixed review, looking for areas of weakness and particular aspects that might have been particularly "distasteful" to Tolkien.

The tale begins promisingly, with the narrator, the young Anthony Julian, explaining that his adventure (associated with Hadrian's Wall) "begins as a family legend that is mostly a fairy-tale…. Our name and our family traditions point back to a Roman origin. These were the sources from which the dreams of my father came, and the disaster that came to him from his dreams" (O'Neill 1981, 9-10). Anthony explains the existence of "very curious" family documents that "purported to give accounts of the adventures of Julians who had gone down… to an underground world peopled by a kindred race" (O'Neill 1981, 19). His father obsessively explores the Wall for years, looking for said entrance with Anthony in tow, the child a self-described "sharer of his dreams…. Latin was a second native language for me; archery, javelin-throwing, and other ancient exercises were my pastime" (O'Neill 1981, 12-3). When his father vanishes one night, Anthony gives up his college plans, and ignoring attempts to find him a wife, instead becomes a successful inventor for related motor and munitions businesses. Once public interest in his father's disappearance dies down, he begins his own search for a secret entrance, finding one seven years after his father's departure.

As Marijane Osborn notes, Anthony's subterranean journey can be summarized as a discovery of a "family myth that proves true" (2001, 115-6). This not only resonates with Tolkien's aforementioned description of myths as being "largely made of 'truth'," but specifically resonates with descriptions in "The Notion Club Papers" of Lowdham's relationship with his father:

> My father was an odd sort of man…. He was wealthy, and combined a passion for the sea with learning of a sort, linguistic and archaeological. He must have studied Anglo-Saxon and other North-western tongues; for I inherited his library and some of his tastes…. he disappeared when I was only nine. (*Sauron* 234)

Lowdham further notes that "as soon as my father had gone, and we knew that it was for good, I began to take up with languages, especially making them up (as I thought)." In his father's study he had found "a diary or notes in a queer script" and after his father's disappearance "began to have curious experiences, and I have gone on having them down the years, slowly increasing in clearness: visitations of linguistic ghosts, you might say" (*Sauron* 235-7). Certainly the set-up of the tale would have interested Tolkien, considering that he read it by 1938, around the same time as his initial work on time travel tales (beginning with "The Lost Road").

In the dark subterranean world, Anthony first finds Latin writing and artifacts clearly associated with humans. O'Neill spends a large number of pages describing Anthony's descent, including the strange plants, animals, and landscape he finds. While this might be considered world-building, it goes on inordinately long, and little of it is related to the overall plot of the novel, with the exception of the "lassoers," described below. Much of it is not particularly original either, described by Robert Crossley (1987, 95) as "too Wellsian for O'Neill's own good, since its geography, fauna and flora, and imagery are so evidently derived from Wells's works." Tolkien would have probably noted this trend himself.

Anthony eventually comes to a large body of water, and finds a ship that reminds him of a Roman galley, propelled by eerily silent rowers with expressionless faces and eyes. To his shock, they invade his mind and try to dominate his will. He is brought to a major settlement to see the Masters of Will and of Knowledge who will "cure" him of his desire to remain an independent mind. One of the Masters explains that Anthony's father no longer exists (as his son knew him): "A man came here to give himself to the Roman State. He has given himself. The State has absorbed him. He is happy at last" (O'Neill 1981, 116). When Anthony resists, he is allowed to wander the settlement, learning about their culture, particularly how the young are indoctrinated. What Anthony discovers is that there has been no technological advancement beyond what had been used by the Roman Empire, the lesson being that without individual creativity and freedom of thought there can no true progress.

Upon resisting numerous other attempts to convince him to submit willingly, Anthony is doomed to wander in the subterranean wilderness (to use a Biblical analogy), experiencing natural threats and restricted from receiving any aid from the residents (beyond sufficient food to remain alive). Again, while the intent is to break Anthony psychologically, the length of this episode threatens to break

the reader's patience (perhaps one of the reasons for Tolkien's mixed opinion). Anthony cannot be broken, and as a last resort is eventually brought to the man who had been his father, now a soldier manning the Hadrian-like Wall at the frontier of their land. Anthony is heartbroken to find his father not merely a stranger, but a hate-filled enemy who tries to hijack his mind. Anthony realizes that his father presents a clear and present danger not only to his son, but England in general, understanding that his father "sensed the value of the scientific resources" in his mind – his knowledge of modern war technology – "and was determined to subserve them to his fixed and ruling passion – the crazy determination to seize back again the lands of the upper earth from the barbarians" (O'Neill 1981, 244). Anthony is ultimately set free and allowed to follow the dangerous route up to the surface because the Masters realize his mind will not submit, and his body cannot survive in their realm. Anthony is shocked by the Master of Knowledge's response, for the Master has read his mind and must have learned of his father's plot. O'Neill's rather weak explanation is that the Master is "too far removed from human ambitions, or from the memory of human knowledge and the grasp of modern scientific powers, to desire to take from me any of my equipment of material science" (O'Neill 1981, 254-5).

The reader must then suffer through a third lengthy journey, again psychological as well as physical, as Anthony comes to terms with the control that his father had previously had on his young life – "He had filled me. I had lived in him" (O'Neill 1981, 259) – and finally learns to be his own person (Storr 1981, 4). As Anthony struggles to climb upward he realizes his father is following him, the scene (and Anthony's inner dialogue) reminding one of Gollum trailing Sam and Frodo in Mordor. I will refrain from spoiling the ending (warning – there is an easily predictable eucatastrophe), as many of you will not have read it and may decide to do so after this talk.

Despite the drawbacks in the novel noted thus far, *Land under England* was a commercial success. Naomi Mitchison calls O'Neill "brave beyond the usage of modern civilization" (qtd. in Quigley 2021, 84) while C.S. Lewis terms it "[t]he most interesting story I have read recently," recommending that this friend Arthur Greeves "should try it" (2004, 160).[12] Lewis may have recommended the work to Tolkien as well, although again Tolkien found it a "weak example" of the 'true history' of a strange land (and a fallen one, given its nefariously painted reliance on mind control). Another issue that might have disappointed Tolkien was the dependency on first-person dialogue, necessitated by the mind control plot device. Very few of the characters have creative thoughts, let alone dialogue. O'Neill's novel is also philologically lazy; telepathic speech is apparently in the native language of the brain receiving it. On those rare occasions when characters speak

[12] Osborn (2001, 115) argues that Lewis made "significant use" of O'Neill's story in his own two underground adventures, *Perelandra* and *The Silver Chair*.

aloud the subterranean Romans use the same ancient Latin conveniently taught to Anthony by his father, a language that has seemingly not changed appreciably in 2000 years. The need for Anthony to speak slowly and clearly (and his difficulty in understanding the oral lessons taught to school children) is apparently mainly due to the subterranean Romans using speech that is "thin and strangely pitched and so low in tone" as to be hard to understand (O'Neill 1981, 127). Finally, *Land under England* centers on a son's search for his father (and the tension between sons' and fathers' convictions), an important theme in Tolkien's works (e.g., the sons of Fëanor, Denethor, Tuor, and numerous others). While this might have interested Tolkien, the one-dimensional and highly negative depiction of Anthony's father might have earned this relationship the label of "weak example" in Tolkien's opinion.

Numerous critics have easily recognized a connection between the subterranean mind-controlled masses and Hitler's Germany circa the mid-1930s (J. Chamberlain 1935, xii; Crossley 1987, 95; Quigley 2021, 90). Anthony quickly comes to understand the Neo-Roman "State as the monstrous machine that it was – a blind thing, with no vision, no pity, no understanding, not even an understanding of that human need to love that it used to enslave its victims" (O'Neill 1981, 243), although parallels can clearly be drawn to any State that seeks to control independent thought. But O'Neill also clearly condemns single-minded hatred of individuals as well as groups, especially in response to the onerous effect of propaganda. Anthony recalls how his father had learned of Germany's invasion of Belgium early in World War I:

> the papers said that England must defend Belgium and France against the Teutonic attack on Latin civilization. I shall never forget the look on my father's face…. There he stood, like his forbears 1,500 years before, listening to the cry that penetrated up to the Roman Wall for help for Gaul against the tribes beyond the Rhine. A week afterwards he had answered the call and joined up, to save, as he thought, the remnant of Roman civilization from the onrush of the barbarians. (O'Neill 1981, 14-5)

Tolkien, a veteran of World War I, might have reacted to this passage, especially the insidious use of propaganda, based on letters to his son Christopher during the younger man's own wartime service. For example, in a July 1944 letter he explained

> I should have hated the Roman Empire in its day (as I do), and remained a patriotic Roman citizen, while preferring a free Gaul and seeing good in Carthaginians. *Delenda est Carthage* [Carthage must be destroyed]. We hear rather a lot of that nowadays. I was actually taught at school that that

> was a fine saying; and I 'reacted' … at once. There lies still some hope that, at least in our beloved land of England, propaganda defeats itself, and even produces the opposite effect. (*Letters* 128)

In a subsequent letter, Tolkien laments to Christopher that the word

> *freedom* has been so abused by propaganda that it has ceased to have any value for reason and become a mere emotional dose for generating heat. At most, it would seem to imply that those who domineer over you should speak (natively) the same language – which in the last resort is all that the confused ideas or race or nation boil down to; or class, for that matter, in England…. (*Letters* 133)

Tolkien certainly uses weaponized attempts of mind control in his own writings, specifically *The Lord of the Rings*. Ordway (2021, 209) connects O'Neill's use of "mental assault" with "the attack by Sauron on Pippin through the *palantír*, and of the struggle that Frodo experiences" against the Eye of Sauron when he puts on the One Ring on Amon Hen. Ordway further connects O'Neill's "depictions of mental attack and resistance" with Tolkien's description of "Sauron's control of Mordor and his assault on the hobbits and their homeland" (*Ibid.*). O'Neill's mind control also reminds one of the Ring's effect on its bearers more broadly, especially Gollum.

We should also note that Tolkien himself wrote his own vivid underground scenes, especially in *The Hobbit* and later in *The Lord of the Rings*, and may have had personal expectations for such passages in the works of others. John Garth (2020, 98) claims that Tolkien "first put a giant spider underground – in Shelob's Lair – after reading… *Land Under England*" (*Ibid.*). The presumption here is apparently that Tolkien's Shelob was – in whole or part – derivative of O'Neill's novel, due to his invention of spider-like "lassoers." However, this ignores the much earlier appearance of Ungoliant in the legendarium (*Lost Tales I* 151-2).[13] In addition, a comparison between the language used to describe Shelob and O'Neill's lassoers (so named because they use their silk to make lassos with which to capture their victims) demonstrates clear differences. Shelob – who fights with a stinger and claws – is described as having

> Great horns… and behind her short stalk-like neck was her huge swollen body, a vast bloated bag, swaying and swagging between her legs; its great bulk was black, blotched with livid marks, but the belly underneath was pale and luminous and gave forth a stench. Her legs were bent, with great

[13] Technically both arachnids are either subterranean or not. Ungoliant lives in a deep, dark ravine (essentially deep in the earth) and Shelob lives in a tunnel pass.

> knobbed joints high above her black, and hairs that stuck out like steel spines, and at each leg's end there was a claw. (*TT* 334)

In contrast, O'Neill's lassoers are "monstrous-looking… with a pair of bulging bag-like bodies… about the size of a tiger" (O'Neill 1981, 49). The legs are furthermore described as "stilts nearly three feet high" with the head "almost as big as the body. Trailing cords hung from a mouth like the mouth of a huge gurnard [a fish]" (O'Neill 1981, 58). It furthermore "seemed more like a demon than an earthly creature. Its leathery face, with the slobbering mouth, the middle flaps instead of a nose, the high bony forehead, and the many-sided eyes, was dreadful to look at, and the more I looked the more horrible it seemed" (O'Neill 1981, 62). Multi-faceted eyes and thin legs are common features to arachnid creatures to be sure, but I argue that O'Neill's invention is less like Primary World spiders than Tolkien's spiders.

Finally, in terms of Anthony's framing of his story around a fairy-tale, we can certainly recognize attention to world-building, Enchantment, Escape, and Consolation. But where this work spends much of its time is clearly in Recovery, in Anthony's gaining of an enhanced appreciation of particular aspects of his life on the surface. An important step occurs early in his time with the Neo Romans when he begins to understand how alien his life must be to them (and vice versa):

> I thought of how these men had never heard a bird sing, nor seen the sun shining on fields of corn, nor the soft green of grass just coming up from the earth, they whose fathers were children of the sun and the wind and brothers of the joyous birds and happy creatures of our upper earth. How could I talk to men who had suffered such deprivations and yet endured…. (O'Neill 1981, 118-9)

A similar appreciation for simple everyday pleasures can be seen in *The Lord of the Rings*, after Sam throws aside his treasured cooking gear in Mordor to lighten his load:

> 'Do you remember that bit of rabbit, Mr. Frodo?' he said. 'And our place under the warm bank in Captain Faramir's country, the day I saw an oliphaunt?'
> 'No, I am afraid not, Sam,' said Frodo. 'At least, I know that such things happened, but I cannot see them. No taste of food, no feel of water, no sound of wind, no memory of tree or grass or flower, no image of moon or star are left to me.' (*RK* VI, iii, 214-5)

After Sam gives Frodo their next-to-last mouthful of water and takes none for himself

> through all his thoughts there came the memory of water; and every brook or stream or fount that he had ever seen, under green willow-shades or twinkling in the sun, danced and rippled in his torment behind the blindness of his eyes. He felt the cool mud about his toes as he paddled in the Pool at Bywater with Jolly Cotton and Tom and Nibs, and their sister Rosie. 'But that was years ago,' he sighed, 'and far away. The way back, if there is one, goes past the Mountain.' (*RK* VI, iii, 216)

Similarly, as Anthony treks through the harsh and dangerous landscape, upward toward the surface, during the final chapters of the novel, he recounts the simple pleasures he once took for granted: "I should see the green grass again, and feel the sunlight and the rain, and marry and settle down and have children – children who would not have any dreams, such as I and my father had until he died" (O'Neill 1981, 250). Anthony remembers a girl they had tried to marry him off to, his own Rosie Cotton, if you will:

> If I could go to her now. Perhaps she was having afternoon tea. It was strange to think that. Tea, with hot scones, like those she had made for me, that day, because the others made them heavy. If that could only repeat itself – in a few days, a week, up above these walls that shut me down for eternity…. (O'Neill 1981, 276)

While O'Neill's novel admittedly has its structural and literary drawbacks, there are certainly Tolkienian echoes – common themes and viewpoints. We therefore see how Tolkien might have appreciated the sentiment but have been disappointed with the execution.

Nature Strikes Back: The Death of Grass

Born in a village near Liverpool, Samuel Youd spent five years in the Royal Corps of Signals in World War II before beginning a writing career. Much of his science fiction was written under the pen name John Christopher. *The Death of Grass* (1956) was his first commercial success, and allowed him to give up his mundane job working for the South Africa-based Industrial Diamond Information Bureau in London (Priest 2012). Described as a "surprisingly and unremittingly bleak book" by Richard Swan (2021), the novel is included by Tom Shippey as a prime example of a subgenre of British science fiction novels featuring "the average Englishman, probably married, trying to make his way in a ruthless and insecure world which is nevertheless still familiar – robbing supermarkets and fighting his way towards Westmorland…, the West Country…, or Norfolk" (Shippey 2016, 93). Youd did not

consider the work to be science fiction (despite the strong science theme), and some critics have instead compared it to William Golding's *Lord of the Flies* (1954) (Macfarlane 2016, 4-5).

The novel begins by introducing a seemingly normal middle-class English family living in London: Engineer John Custance, his wife Ann, and their two children, Mary and Davey (named after John's brother, a bachelor farming on family land in an isolated valley, Blind Gill, in the Westmorland countryside). Conversation between the brothers introduces the reader to the eponymous crisis of the story. The novel Chung-Li virus is devastating rice crops in China, leading to increasing concern. As they discuss whether Hong Kong will be able to maintain its borders against the desperate neighboring population, John ominously warns "Those people are starving. When you're in that condition, it's the next mouthful that you're willing to commit murder for" (Christopher 2016, 23). A small patch of dying rice grass is found on David's farm, alarmingly infected with the virus.

We are next introduced to John's extended family by choice, an old Army friend Roger Buckley – a "Public Relations Officer to the Ministry of Production" who lives in a "world of gossip and whitewash" (Christopher 2016, 30) – and his wife Olivia, along with their son Steve. While the two couples engage in the mundane activity of playing cards, BBC radio reports on the Chung-Li crisis in the background: at least two hundred million have died in China, but field tests with an experimental chemical named Isotope 717 are sufficiently encouraging to warrant widespread spraying of rice crops. However, the intervention of science actually makes the situation worse: the pesticide kills the more specialized strains of the virus, allowing one to mutate with an ability to infect *all* grasses, including most food grains.[14] As scientists continue to work on a solution, Western governments quietly begin cutting back aid to an increasingly impacted Asia, trying to stockpile supplies for themselves.

Meanwhile, in England little has changed (for the moment); our families still enjoy tea and cakes as they discuss how horrible the whole situation is overseas. Roger begins to be concerned, noting that if *he* were in charge, there would have already been rationing in England. During their annual family Christmas trip to the family farm, John can't ignore the warning signs. The farm exhibits many areas of infected grass, leading David to trust what the land tells him, rather than the "official optimism" of the government (Christopher 2016, 43): he plans on planting solely potatoes and beets and to build a stockade across the single entrance to the valley in which his farm resides. John rejects an invitation to remain on the farm, but agrees to bring his family back if the situation in London deteriorates, falsely confident that they will have plenty of warning.

[14] There is much in this novel that is eerily prescient of the COVID-19 pandemic, despite the fact that the fictional virus infects plants rather than humans.

Two months later, rationing begins, but John and Roger can still enjoy beers at Roger's private club in London. John invites Roger and his family to join them on the farm if conditions worsen, but Roger is optimistic concerning a new virus created to feed on Chung-Li. But even as the United Nations announces this scientific breakthrough, Western nations increase their rationing, and David kills all of his farm animals except the pigs, who can live on potatoes. Summer brings increased rationing in England (including fish) and Roger's hushed admission to John that the counter-virus has secretly failed – worldwide famine is assured unless there is a significant decrease in the population. To John's horror, Roger explains the British government's secret plan to use the Army to blockade all the major cities the next morning, trapping the dense population so that it can be culled using tactical nuclear weapons. Although the two families try to leave London for David's farm that night, the Army is already restricting travel, and Roger recruits local gun owner Pirrie to join them (bringing along a number of weapons and his much younger wife, Millicent). The three men kill young soldiers at the roadblock before driving out of the city to collect Davey at his country school. After agreeing to take along Davey's best friend, the now party of 10 rushes across the countryside toward their intended sanctuary in Westmorland, trying to stay ahead of the mayhem they know is coming. Their first sign of civilization's decay (if you conveniently forget their murder of the soldiers, as *they* apparently do) is a propaganda-laden radio broadcast castigating rioting in London and, most notably, Leeds, warning that "[t]he duty of the individual citizen is to go about his business quietly and to cooperate with the police and military authorities" before cutting to the simultaneously charming and sinister song "The Teddy-Bears' Picnic." Moments later bombers are seen flying towards Leeds (Christopher 2016, 91).

As the situation becomes more dire over a scant few days, our protagonists become increasingly cold-blooded. For example, after breaking into a farmhouse and murdering the owners for their food and guns, John coldly explains to his son "We have to fight for things now…. It's something you'll have to learn…. Come on in. We're going to have breakfast" (Christopher 2016, 127). A shortwave radio broadcast proves what they already suspect: Europe has fallen into chaos. John, proclaimed leader through an early coin toss with Roger, pushes forward, making decisions solely based on the survival of their group. For example, he is willing to suffer Pirrie's increasingly obvious affinity for violence because he believes the gunshop owner's skills are necessary for the group's survival. John recruits additional members, believing in safety in well-armed and capable numbers. When the now group of 34 finally arrives at David's stockaded valley they are not welcomed nearly as warmly as planned, as the valley is already over carrying capacity. I won't spoil the details of the ending, except to say that sacrifices are made on the way to achieving a definite sense of Consolation.

What can we make of Tolkien's high opinion of this work? Nature (in the form of a virus) triumphs over the self-assured scientists who "have never failed us yet" (Christopher 2016, 37). This Thriller firmly belongs to the genre of eco-apocalypse, "a vision of nature's revenge for its sustained mistreatment – a return of the repressed," in this case "years of over-production, a turn to monoculture, and the excessive use of pesticides to maximise yield following the privations of the War" (Macfarlane 2016, 2). Such a plot should have appealed to the nature-lover Tolkien. While the story takes place in our world, it is a Secondary World timeline, and is carefully crafted in terms of laying out the progress of the environmental crisis (alongside science's missteps and missed opportunities). Youd also "ticks off the clichés of Englishness with relish, in anticipation of their destruction" (Macfarlane 2016, 5). For example, in the early scene at Roger's London club, John opines in response to a cheese-laden cart passing by their table, "It's difficult to imagine anything denting this." Roger presciently warns "It's going to be interesting, watching us being British and stiff-lipped, while the storm-clouds gather. Undentable. But what happens when we crack?" (Christopher 2016, 50). The fall into chaos is initially slow; as the British food queues become longer they remain orderly, with the newspaper bragging that "it falls to the British peoples to set an example to the world in the staunch and steadfast bearing of their misfortunes. Things may grow darker yet, but that patience and fortitude is something we know will not fail" (Christopher 2016, 56).

While fortitude might persist, patience ultimately succumbs to the need to survive. John's group is stopped at a roadblock set up outside a small town; the locals are fleecing cars for supplies. The unnamed tweed-clad leader of the local militia (obviously a decent, regular chap prior to the impending apocalypse) explains to John "you've got to look at it from our point of view. If we didn't protect ourselves, a place like this would be buried in the first rush. I'm telling you so you will understand we're not doing anything that's not sensible and necessary…. We inspect the luggage, and take what we want" (Christopher 2016, 112-3). After liberating John's group of their food, guns, and petrol, the militia sends them around the town on foot. Compare this with the hobbits' experience at the Brandywine Bridge after the destruction of the One Ring. Finding the way barred with "a great spiked gate" and a sign "*No admittance between sundown and sunrise*" they are told that there are a number of new restrictions in place, for example against "[t]aking in folk off-hand like, and eating extra food, and all that…. We grows a lot of food, but we don't rightly know what becomes of it. It's all these 'gathers' and 'sharers', I reckon, going round counting and measuring and taking off to storage. They do more gathering than sharing, and we never see most of the stuff again" (*RK* VI, viii, 277-8). The important difference between the scouring of the Shire and John's desperate trek to Blind Gill is that Frodo doesn't want any hobbits slain if they can help it, as no hobbit has ever intentionally killed another (*RK* VI, viii,

285). As Youd demonstrates, in a war for survival modern Englishmen certainly can't be held to such high ethical standards.

Indeed, numerous modern critics have voiced surprise and even incredulity with how quickly John and his group fall into violence (e.g., Floresiensis n.d.; Sparks 2017; Swan 2021; Yon 2009). In particular, Cat Sparks (2017) notes "They don't bother waiting for society to fall—they actively lead the way." As conditions become more dire, and their actions become more desperate (and decidedly less civilized), John keeps reassuring his wife that once they get to the Promised Land of the farm they can "live what passes for a decent life again, and watch the children grow up into human beings instead of savages" (Christopher 2016, 137). But by the final night, Ann is concerned that the changes she has seen in her husband might be permanent.

> You're the leader, aren't you? The medieval chieftain — you said so yourself?... I see that now. More than our safety and the children's…. Duty. That's it, isn't it? … It was your own honour — the honour of the chieftain. You aren't just a person yourself any longer. You're a figurehead as well.… When you're King of Blind Gill… how long will it be, I wonder, before they make a crown for you? (Christopher 2016, 208)

A detailed analysis of John's dedication to honor, duty, and his extended family – his clan – (and their medieval precedents) is well beyond the scope of this paper. Suffice it to say that Tolkien would have picked up on the references in the novel, and probably had opinions concerning them.

The first-time reader of this novel should be forewarned that there is a great deal of violence towards women and other misogyny featured in this novel. Early in their escape from London, John's car gets separated from the others and ruffians close a train crossing gate. John gets out to check the gate house and finds a bloodied woman who has been raped and later dies. But it is a trap. John is knocked out, and Ann and Mary are kidnapped and raped, apparently repeatedly. The group reassembles and tracks John's stolen car by its oil leak, shooting and wounding the three rapists. When Pirrie suggests to John that he has "the right of execution" for what has been done to his wife and daughter – similar to medieval justice that regarded the kidnapping and rape of women as primarily a crime against a *male relative's* honor and property (Dunn 2013; Ljungqvist 2015) – John directs the others to take care of it for him. Tolkien would have likely been aware of such traditions in Norse literature. Pirrie demands similar justice when his wife, Millicent, repeatedly comes on to John. He names himself "a wronged husband" and demands to "have my rights" (threatening the safety of the group if John refuses) (Christopher 2016, 145). To the group's surprise and horror, not long after shooting Millicent in cold blood, Pirrie claims Jane, the daughter of the farmhouse

owners they had murdered, as his wife "insofar as the expression has any meaning now" (Christopher 2016, 150). Understanding the rules of this not-so brave new world, the young girl obeys without hesitation. One is reminded of Tolkien's coded description of Aredhel's fate in *The Silmarillion*: "Eöl took her to wife…. It is not said that Aredhel was wholly unwilling, nor that her life in Nan Elmoth was hateful to her for many years" (*Silmarillion* 133). Thankfully, Jane has a happier fate than the White Lady of the Noldor.

Recall from our discussion of *Land under England* that Tolkien had definite opinions on the use of propaganda, especially during war. O'Neill's inclusion of the character of Roger, the Ministry of Production's public relations officer, with his ability to deftly pick apart the government's statements and piece together the truth from multiple sources of information (all the while railing against the lies being told to the public), would have probably held Tolkien's attention. Roger's vocation brings to mind the Ministry of Information in World War II Britain, tasked with "[r]eassuring public morale" based on information gathered from reports of conversations "overheard in public houses, shops and trains" (Longmate 1971, 94). In a 1944 letter to Christopher, Tolkien offers "I cannot understand the line taken by BBC (and papers, and so, I suppose, emanating from M[inistry] O[f] I[nformation] that the German troops are a motley collection of sutlers and broken men, while yet recording the bitterest defence against the finest and best equipped armies (as indeed they are) that have ever taken the field" (*Letters* 133). A classic example of governmental propaganda in the novel occurs in the shortwave radio broadcast, especially an overly positive and patriotic pronouncement by the American President after the fall of Europe:

> We cannot help being grieved and shocked by what is taking place on the other side of the Atlantic Ocean. At the same time, this does not mean that there is the slightest danger of a similar catastrophe occurring here. Our food-stocks are high, and though it is probable that rations will have to be reduced in the coming months, there will be ample food for all. In the fullness of time, we shall defeat the Chung-Li virus and go out to reclaim the wide world that once we knew. Until then, our duty is to preserve within the limits of our own nation the heritage of man's greatness. (Christopher 2016, 133)

Tolkien would have certainly understood the all-too-real tone of that fictional propaganda.

We can identify aspects of the post-apocalyptic fairy-story in the novel, including Consolation and especially a deeply-ingrained sense of Recovery – a renewed appreciation of those things we take for granted in our everyday lives. Due to its realism and contemporary (for Tolkien) setting in time and place, *The Death*

of Grass would have resonated with many of Tolkien's lived experiences. As described by the *We Can Read It For You Wholesale* blog (2014), Youd's novel was "written in the aftermath of a war that threw up some difficult questions. What is a cause worth fighting for? Does loyalty to the tribe come before everything else? What makes a good leader? And what about the use of atom bombs?," all questions that may have resonated with Tolkien, given his own life experience in the first half of the twentieth century.

In particular, the story reminds us of the precarious state of our relationship with nature. Matthew Dickerson reflects that Tolkien includes "vivid descriptions of food" in Middle-earth because "he believed that these are the things that really matter in life. Put another way, it is the importance of what happens around these meals that makes the sacrifice of war worthwhile and that lets the reader know there is something worth fighting about" (Dickerson 2011). It is important to note that the novel was published only two years after World War II-era rationing (1940-1954) finally ended in Britain. Rationing was initially put into place to avoid initiating a "spiral of inflation" that could "derail the entire war economy," in other words defusing the "explosive potential" related to the dinner table (Mackay 2003, 197). While the program was largely successful from an economic perspective, this is not to say that all Englishmen were satisfied with the rations, if Tolkien's letters are any indication. For example, in a 1944 letter to Christopher he complains "I can't remember much about Friday, except that the morning was wrecked by shopping and queueing: result one slab of pork-pie; and that I had a dreadfully bad and lugubriously dull dinner in college" (*Letters* 100). Beer shortages are also noted in Tolkien's letters:

> This morning I lectured, and found the Bird and Baby closed; but was hailed in a voice that carried across the torrent of vehicles that was once St Giles, and discovered two Lewises and C. Williams, high and very dry on the other side. Eventually we got 4 pints of passable ale at the King's Arms …. (*Letters* 131)

Two months later he joyously reports "[f]or the present the beer shortage is over, and the inns are almost habitable again" (*Letters* 135). Citrus fruit was also in short supply during the war, with lemons largely unavailable and oranges preferentially reserved for children and expectant mothers (Longmate 1971, 145). This puts into perspective Tolkien's report to his son in March 1944 that they "have had quite a lot of oranges lately, and have made many pounds of marmalade – and eaten it" (*Letters* 99); a month later he is delighted that they have had "a good many oranges *and* lemons lately" (*Letters* 108; emphasis original).

Despite these gastronomical triumphs, wartime rationing certainly limited the selection of food, leading to discontent. Youd references this in his novel: early in the crisis Roger explains to John that if the virus cannot be stopped, the logical response will be the widespread planting of potatoes and other root plants (as David proactively does on his farm). However, Roger is quite cognizant of the potential political fallout if it turns out to be a false alarm: "if we stud England's green and pleasant land with potato patches, and then someone kills the virus after all — what do you imagine the electorate is going to say when it is offered potatoes instead of bread next year?" (Christopher 2016, 36). We can get a real-world inkling (pun very much intended) from a 1943 letter from Tolkien to his son Christopher concerning how the flu impacted his family and their community:

> The diet-experts can gas as they will, but the fact remains that our Wooltonized community has not the stamina of normal undieted times. And sheer boredom – and boredom at the table … – is a large part of the cause. Nobody can ever have what 'they fancy', however simple – only what experts think they ought to. (*Letters* 89-90)

"Wooltonized" refers to Frederick Marquis, Lord Woolton, Minster of Food, who brought his experience as a businessman and social worker to crafting both rationing programs and related educational propaganda during the war. The cartoonish character "Potato Pete" was used to introduce British housewives to creative uses of potatoes, while Woolton lent his name to a dish largely made of leftover root vegetables, Woolton pie (E.R. Chamberlain 1972, 79). Sara Brown suggested to me that Tolkien's very intentional mentioning of white bread in a particularly favorable light in *The Lord of the Rings* (*FR* 91; *FR* 135) may be in response to a much-hated staple of the English table during World War II, Woolton's infamous National Loaf. Made of grey, whole meal flour, the "nasty, dirty, dark, coarse, indigestible bread" was largely panned by the population (Longmate 1971, 154).

In summary, we can see connections between Tolkien's and Youd's lament for the destruction of the countryside. When John mourns the imminent loss of the David's cows – what he considers a permanent fixture of the countryside – as the grasses continue to die off, David retorts "The country changes more than the city does. With the city it's only a matter of different buildings — bigger maybe, and uglier, but no more than that. When the country changes, it changes in a more fundamental way altogether" (Christopher 2016, 19). Similarly, as the hobbits finally make their way back to Bag End after the destruction of the One Ring they find that "[a]ll along the Bywater Road every tree had been felled…. All the chestnuts were gone. The banks and hedgerows were broken. Great wagons were standing in disorder in a field beaten bare of grass" (*RK* VI, viii, 296).

The death of grass – a humble, often overlooked staple of the natural environment – means far more than the destruction of suburban lawns, an important ecological message that would have deeply resonated with Tolkien.

The Triumph of the Trees: Hothouse

In a famous scene from *The Lord of the Rings*, Goldberry explains to Frodo "The trees and the grasses and all things growing or living in the land belong each to themselves" (*FR* I, vii, 135). But what might instead be said in a subcreated world in which every organism openly shares in the fate of the ecosystem at large? In Brian Aldiss's *Hothouse*, the woman Yattmur respectfully offers to a stranger "If you come peacefully, welcome to our mountain." However, the wise Sodal Ye returns "a roar of inhuman triumph and disgust. 'You do not own this mountain! This mountain, this Big Slope, this growth of dirt and stone and boulder, owns you! The Earth is not yours: you are a creature of the Earth'" (2015, 166).

Multi-talented author and critic Brian Aldiss served in the Royal Signals in Burma and Sumatra between 1943 and 1947. He later credited Olaf Stapledon's *Last and First Men* and its "bleak vision of humankind locked within the imperatives of creation" for sustaining him through rough wartime experiences (Tibbetts and Aldiss 2004, 249). After the war, Aldiss worked in Oxford as a bookseller, publishing his first science fiction novel, *Non-Stop*, in 1958 at the start of a decade-long stint as literary editor of the *Oxford Mail* (British Council 2024). In Oxford he met C.S. Lewis, whom Aldiss describes as "kind and tolerant where I was concerned, commenting on my early stories." The two men co-founded the Oxford Speculative Fiction group, despite the fact that, in Aldiss's experience, it was "unusual for any member of the University to know of, never mind read, science fiction" (Aldiss 1999, 317). In 1961 Aldiss published a series of short stories in *The Magazine of Fantasy and Science Fiction*, which won the 1961 Hugo Award for Best Short Fiction, and were aggregated to form the novel *Hothouse* the following year. Published at a particularly low point in his life, while living in a one-room apartment, Aldiss gave a copy of the book to Lewis who "liked it and bought a copy which he presented to Tolkien." Aldiss was overwhelmed to receive

> a letter from Tolkien saying how much he had enjoyed reading *Hothouse*…. Tolkien's letter illuminated the room. Even more astonishing! A month later came another letter from Tolkien. This one said that he had re-read *Hothouse* and enjoyed it even more a second time! He apologised because previously he had not praised the style of the writing sufficiently. What kindness! He could not have known its effect on me and my resolution to

> pull myself together. For the next few days, no one could bear my company. "Oh, by the way…," I would start, clutching their lapels. (T. Aldiss, 2019)

Clearly, Tolkien was a great fan of *Hothouse*. The question to be asked is, why?

As is common of Aldiss's science fiction novels, *Hothouse* is set in a fallen, "degenerated" future, representing time travel into cosmic time, two billion years in the future to the sun's dying days (Milicia 1984, 2). The earth and moon are said to be tidally locked, keeping the same face always towards each other, and the same sides towards the sun, the three objects described as being in a permanent configuration at the apexes of an equilateral triangle. While Aldiss attempts to integrate real-world astronomy (something Tolkien would have noticed), the end result has serious problems. For example, Aldiss states several times in the novel that the sun will eventually explode as a nova. He obviously means supernova here, but the point remains that the sun will not explode. However, at the time of the novel's writing the difference between a nova and a supernova, and the lack of either phase in our sun's future evolution, was not an astronomical certainty. A similar error is also found in Asimov's "The Last Question." In response to numerous complaints by science-minded critics about his configuration for the sun-earth-moon, Aldiss offers that he is utilizing the concept of a "'trojan' position in which three heavenly bodies… get locked into a position from which they cannot escape" (Henderson 2008, 698). Again, here Aldiss is adapting a real-world scientific principle (the "'trojan' position) but in a way that strains astronomical reality.[15]

Likewise fantastical is the fact that the main continent on the permanently sunward side of our planet is dominated by a jungle comprised of a single, vast banyan tree, largely inhabited by strange mobile plants and not animals (of which only a handful of species of massive insects and greatly diminished humanoids about a foot-tall remain). Aldiss attributes his "memories of the overwhelming exuberance of vegetation I saw in south and east Asia" in the war with sparking his vision, along with a banyan tree in the Calcutta Botanical Gardens (Henderson 2008, 698). Aldiss shares a "tree-love" (*Letters* 372) with Tolkien, and notes that trees

> are a source of pleasure, and often an exemplar of calm. The remorseless quality of trees is to be admired. How they survive despite urban crawl!

[15] A "'trojan' position" involving the sun-earth system is only normally considered for a much smaller mass third object than the moon, for example a small asteroid. The concept takes its name from the so-called Trojan asteroids (the first known examples named for heroes in the *Illiad*) sharing Jupiter's orbit around the sun. See https://science.nasa.gov/resource/what-is-a-lagrange-point/ for more discussion.

> Trees root themselves in the earth, as they have done since before intelligence tinkled its way into the world. (qtd. in West 2014, 19)

The behemoth traversers, spider-like plants, also resonate with this sweeping vision of vegetation without bounds. They travel between the earth and moon, preferring to spend time in space bathing in the harsh radiation of the sun that they require to thrive, returning to earth mainly to feed. The only natural enemy of traversers are tigerflies – tiger-sized, striped parasitic wasps based on real-world insects – packs of whom tunnel into and lay their eggs burrowed within the traversers' flesh.

The novel begins with a matriarchal tribe of primitive, green, diminutive humanoids, whose leader, Lily-yo, has determined that she and the other adults have reached the end of their usefulness. Following the tradition of their tribe, they abdicate responsibility to their older children and seal themselves in coffin-like transparent seedpods that are swept up by the traversers and taken to the moon. To their horror, the radiation in space mutates those who survive the trip into dreaded winged and scaled flymen – feared for stealing humanoid children. On the moon they meet the loremasters of the flymen, and are told that the same mutation that had transformed them makes most of their new kind infertile, hence the tradition of stealing children from earth. The newcomers are recruited for a mission back to earth aboard a traverser, hiding in tunnels that tigerfly larvae have chewed into its vegetable flesh.

Back on earth, a sentient morel falls on the head of the impetuous and rebellious youngster Gren and enters into a neuroparasitic relationship with him, exerting increasing mind control. Gren's mate, Poyly, is rightfully suspicious of the morel, but Gren offers that it can "teach us many things…. We can be so much better than we are. We are poor creatures; surely, there's no harm in being better creatures?" In particular, the morel offers the humans that their "eyes shall be opened. Why – you'll be like gods" (Aldiss 2015, 70). While in this case it is the man who first partakes of the forbidden fruit of knowledge provided by morel, Poyly quickly joins him. Aldiss goes all-in with the Biblical reference, explaining

> Like another Eve, she drew Gren to her. They made love in the warm sunlight, letting their wooden souls[16] fall as they undid their belts…. Gren glanced down at their feet. "We've dropped our souls," he said. She made a careless gesture. "Leave them, Gren. They're only a nuisance. We don't need them any more." (*Ibid.*)

Tolkien's attention would have certainly been piqued at this episode, especially given his aforementioned appreciation for Lewis's *Perelandra*.

[16] Wooden totems they carry and which are buried in their stead if they fall from the banyan tree.

Gren and Poyly afterwards come upon a strange tribe of humans, the Herders, whom the megalomaniac morel wants to subjugate to his will. It envisions the tribe building it a plantation where it can grow more of itself with the goal of enslaving all humanoids. Through Gren's voice it explains "We will kill the undergrowth. We will kill the jungle and all its bad things…. We will have gardens and in them we will grow – strength and more strength, until the world is ours as it was once long ago" (Aldiss 2015, 87). Perhaps Tolkien notes a parallel to the fate of the Ents and their sundering from the Entwives: for while the Ents were content to be the shepherds of the forests and speak with the trees, the Entwives

> did not desire to speak with these things; but they wished them to grow according to their wishes, and bear leaf and fruit to their liking, for the Entwives desired order, and plenty, and peace (by which they meant that things should remain where they had set them). So the Entwives made gardens to live in…. (*TT*, III, iv, 79)

The morel's mind control increasingly disturbs Gren, bringing to mind Anthony's feelings of being violated in *Land under England*. This includes the morel's excavation of subconscious racial memories, which it uses to piece together the history of humanity's rise to and fall from civilization over deep time. The morels were the first creatures to become sentient, and had entered into symbiosis with primitive primates, safely tucked away inside their skulls. It was this partnership that drove human evolution in terms of intelligence. But as the sun eventually began to age and put out a new, unnamed form of radiation, the morels died off while their human hosts thrived, albeit mutating into their diminutive, and less intelligent, form. But Gren's parasite realizes that it is a mutated, radiation-resistant form as well, and hence plots to "begin another symbiosis as great and profitable" – on the morel's terms (Aldiss 2015, 90). There are clearly numerous fantastical elements reflected here; the pseudo-scientific explanation for human intelligence as well as the use of inherited memory would have likely held Tolkien's attention, based on his reading and writing habits. For example, inherited memory is central to "The Notion Club Papers" and other works,[17] especially those dealing with Tolkien's self-described "Atlantis complex" inherited by son Michael (*Letters* 311; 625).

The morel also represents a well-known trope that would have been familiar to Tolkien, the nefarious mad scientist. It berates the simplistic Gren, accusing that "[t]he spirit of enquiry is all but dead in you…. I can only see things through your senses, yet I take the trouble to analyse and find what is behind them…. Mine is the way to power" (Aldiss 2015, 128). The analogy is further strengthened via

[17] See Flieger (2004, 58-9) and Fimi (2010, 80-3).

numerous of episodes, for example, when the morel finds a means of escape from an island via walking seed pods that migrate into the ocean. But it finds it can't steer the entities or predict where they will go. Like a mad scientist it can't control its technology, its 'power,' despite being smugly convinced that it can, a moral Tolkien would have likely appreciated.

Gren, his new mate Yattmur, and their companions eventually meet the wise Sodal Ye, a dolphin-like sea creature carried on land by human slaves. The morel is tricked into leaving Gren and is trapped. Sodal Ye claims that an earthquake and the huge green columns of vegetable matter sailing into the sky are signs of the beginning of the end of our planet, life now "ascending, for new fields…. buoyed up and borne into space on a galactic flux," apparently interstellar winds or energy fields (Aldiss 2015, 186). They unexpectedly come upon a dying traverser, the very one that has borne Lily-yo and her now flymen companions back to earth, and in the ensuing chaos the morel attaches itself to the Sodal. With access to Sodal Ye's superior knowledge the morel prepares to divide, planning to take over a second traverser currently descending. The plan is to turn it into a living spaceship, with the flymen and humanoids consuming its vegetable flesh as they sail the galactic flux to another world around a younger star. Gren makes a different decision, free at last from all those who would control him, an individual kind of Consolation.

Douglas Anderson (2023) highlights the "ecological perspective as well as the very inventive ways that Aldiss uses language and nomenclature for the plants and the creatures" as aspects of world-building that would have specifically appealed to Tolkien. Michael Collings (1986, 17) describes the novel's language as an entropic "semi-comic reduction of names to nursery rhymes" such as 'burnurn,' 'wiltmilt,' 'speedseed,' and 'bellyelm.' Insect names such as 'termight' and 'treebee' represent clever puns, for example, the 'termights' representing the distant descendants of termites that rival humanoids in size.

Biologist and blogger Jeroen Admiraal (2019) voices a desire to "submerge myself into this grand feat of worldbuilding. This is one of the best, most elaborately described far future Earths in the genre. It is also nightmarish to the point of exaggeration, and often uncomfortable and unsettling." *Hothouse* draws upon and greatly expands biological interactions in our Primary World, including mimicry, symbiosis, mutualism, parasitism, and parasitoidism, as well as evolution, including the impact of environmental stresses on body size. For example, Aldiss envisions plants that have evolved the ability to mine charcoal, sulfur, and potassium nitrate to make gunpowder, which they seep into pods that they can toss at threatening seaweed. In response to competition with the seaweed, octopusi move ashore and adapt to living in the sand. Willows evolve an ability to mimic the sand octopi, the new killerwillows hiding beneath the sand, developing deadly tentacles. Oak trees develop appendages that end in cages, which they use to catch their prey. The threatening, if not downright hostile, behavior of these trees brings

to mind many characters from Tolkien's legendarium, including Old Man Willow, the Huorns, and Ents. When Sodal Ye meets Gren and his mate it describes other types of humanoids it has known of, and integrates this previously unknown green form into his personal database without question, reminiscent of Treebeard and the hobbits. Sodal Ye names them "Sandwichers," from a word he hears the tummy-belly men use to describe Gren and Yattmur.[18]

The simplistic and baby-talking tummy-belly men represent the most controversial characters of Aldiss's Secondary World (Admiraal 2019; Bick 2013). Also called Fishers by Yattmur's people, the tummy-bellies are connected to a tree by an umbilical cord-like structure (tummy-cord) as small children, and enter into a symbiotic relationship. The tree provides nourishment and shelter, while the Fishers provide fish to promote tree growth. While under the control of the morel, Gren severs the umbilicals of a group of tummy-bellies, erroneously believing he is saving them from slavery. Instead they become helpless and ultimately come to a bad end. Aldiss calls the "vexatious" tummy-bellies his favorite characters in the novel, explaining that "their saving humour acts as a foil to the sombre and oppressive environments" (qtd. in Milicia 1984, 3). When his American publisher wanted to completely cut them from their abridged edition of the novel, Aldiss fought back vociferously (Milicia 1984, 3-4).

Arguably, the most slave-like characters in the novel are the Arablers, who transport and attend to Sodal Ye. However, even they have powers that aren't readily apparent to Gren. They have evolved to experience time in a peculiar way, and, similar to dreamers in the pseudo-scientific model of J.W. Dunne, have freedom to travel in time along their lifespan, but only when faced with danger. Aldiss also makes great work of the debunked idea of *devolution* (backward evolution), situating it as a main force in his fallen world. The Sodals have discovered that nature – including the history of earth – has a cyclical pattern of winding up and winding down. In this fictional earth history, life initially arrived on our planet from outer space "blurred together and by perishing supplied other forms… like motes, like sparks" that afterwards evolved into myriad forms of life (Aldiss 2015, 195). Here Aldiss adapts another controversial scientific proposal to his literary needs, *panspermia*, an idea coincidentally championed by the previously mentioned scientist Fred Hoyle (Mitton 2022). In Aldiss's world, the downward cycle of life has been set into motion through the death of the sun through the "galactic fluxes," which also

> control animate life; they close it down as they will close Earth's existence. So nature is devolving. Again the forms are blurring! They never ceased to

[18] The term derives from the tummy-bellies' description of how Gren and Yattmur have sexual intercourse.

> be anything but inter-dependent – the one always living off the other – and now they merge together once more…. (Aldiss 2015, 195)

According to the symbiotic morel/Sodal,[19] the pillars of green light represent the galactic fluxes carrying "the spores of life to another and new system, just as they once brought it here" (*Ibid.*).

While Aldiss is clearly utilizing the concept of entropy in an extremely creative way in this novel, he is also openly drawing upon a pathological science popular in some quarters from the mid-to-late-1800s, devolution or backwards evolution. Biologically speaking, evolution has no defined direction, and no active intent towards 'higher' forms of life (whatever particular definition of 'higher' one has in mind); however, the concept of humanity as the pinnacle of evolution is a common misconception/prejudice (Thompson 2001, 13). Writers of fallen world fiction have utilized the concept to motivate the fictional future evolution of humanity into more 'primitive' forms (physically, culturally, intellectually, morally, etc.), for example, the aforementioned Eloi and the Morlocks in H.G. Wells's *The Time Machine*. Interestingly, a specific pseudo-scientific treatment of devolution was championed by the work of Bénédict Augustin Morel in his *Treatise on the Degeneration of the Human Species* (1857). Utilizing a Lamarckian model of evolution, Morel argues that mental degradation of individuals caused by an environment steeped in poverty, alcoholism, and pollution will be passed down to their children, causing increased degeneracy and "congenital idiocy and sterility" by the fourth generation (Hurley 1996, 66). I find it suspicious that Aldiss specifically terms his sentient fungus a 'morel.' It should also be noted that Tolkien himself utilizes the concept of evolutionary degeneration in his myriad discussions of the origin of the orcs (Fimi 2010, 154-7), while a spiritual degeneration of humans is found in the "Tale of Adanel," the tale of the downfall of humanity, leading (it is claimed) to the physical degeneration of humans in terms of their lifespan (and perhaps even their very mortality) (*Morgoth* 313).

Despite the incredibly creative world-building and mythmaking Aldiss accomplishes, critics have been quite open about the novel's shortcomings, for example, the jarring (to some critics) tummy-bellies. The novel's origin as five short stories is evident in its rather fragmented nature, as a series of episodic adventures across the dying earth. Blogger Admiral.Ironbombs (2015) dubs its structure "less like a novel and more like a furious struggle for survival, everyday hazards in an alien future. At times it felt like a B-movie or video game." As previously noted, there are numerous scientific problems with this novel, although

[19] I am classifying this as a true mutualistic symbiosis rather than parasitism because of how the relationships are portrayed in the novel. The difference may be due to the similarity in intelligence between the morel and Sodal Ye, as compared to that of Gren, or, perhaps, the relationship between morel/Gren is more aggressive and less mutualistic due to Gren's personality.

he certainly pays homage to real-world science in numerous ways. While no one will confuse *Hothouse* with a work of hard science fiction, there is, however, sufficient internal consistency to make it work as a Secondary World. After all, it is only necessary that the reader be able to believe in the coherency of the world and its ontology while they are immersed within it; the inability to align it with the findings of peer-reviewed science journals does not of necessity diminish its effectiveness as a work of subcreation. Aldiss's world is clearly enchanting, wonderous, and certainly achieves Fantasy (alongside Recovery, Escape, and Consolation). It is therefore no wonder that Tolkien wrote Aldiss two fan letters.

Conclusion

Janet Kafka argues that science fiction

> provides a critical vantage point for commentary on people and societies as we find them today, as well as extrapolating from this to give us a view of some possible alternate futures. Historically a pariah, free from the conventions and demands of the mainstream, SF can deal with any socio-political, ethical, or technological problem that the human race might meet, from nearly any point of view. (Kafka 1975, 46)

But as Tolkien notes, science fiction can also serve as a fairy-tale, in the positive sense of providing for the reader an experience of Fantasy/wonder, Recovery, Escape, and Consolation, including the occasional eucatastrophe. Furthermore, as demonstrated by many of the science fiction works specifically mentioned by Tolkien in his letters, "The Notion Club Papers," and other writings, apocalyptic/post-apocalyptic works (those intimately connected with the "long defeat") may actually excel in some of these respects.

Whether the characters in these works face the death of a civilization, the earth, the sun, or even the universe at large, the indominable will of some segment of humanity (or its successors) will not submit, even in the face of insurmountable odds, bringing to mind many of Tolkien's most memorable original characters. H.G. Wells, who himself had envisioned the ultimate death of our planet and its star in *The Time Machine*, echoes a eucatastrophic defiance in his 1902 lecture to the Royal Institution, "The Discovery of the Future." Wells first explains to his audience that there is a "reasonable certainty that this sun of ours must radiate itself toward extinction;" as a result, "some day this earth of ours… will be dead and frozen, and all that has lived upon it will be frozen out and done with" (Wells 1902, 23). While Wells proclaims that this must signal the end of our species, he quickly adds

> And yet one doesn't believe it. At least I do not. And I do not believe in these things because I have come to believe in certain other things—in the coherency and purpose in the world and in the greatness of human destiny. Worlds may freeze and suns may perish, but there stirs something within us now that can never die again. (*Ibid.*).

While all of the authors explored in this paper successfully create a Secondary World for minds to enter, I would hazard that all of us would agree that Tolkien was the master – the One Ring-leader – of his lifetime in this regard. Therefore, in studying what may have drawn Tolkien to these works, we also reflect upon what brings each of us back to Tolkien's works for repeated readings.

Appendix: Summary of Works Against Checklist

Aspects	"Nightfall"	"The Last Question"	*Land under England*	*The Death of Grass*	*Hothouse*
Secondary World Creation with internally consistent use of science/technology	Yes	Yes	Yes (but not much science or tech)	Yes	Yes
Fairy-story aspects (Fantasy/wonder, Recovery, Escape, Consolation)	Yes	Yes	Yes	Yes	Yes
Fallen world	Yes: fall of civilization	Yes: death of universe	Yes: fallen culture	Yes: fall of civilization	Yes: death of sun and earth and devolution
Thriller/time travel/strange land	Strange land	Cosmic time	Strange land/Thriller	Thriller	Cosmic time/strange land(scape)
Philosophy, languages, myth	Myth	Religious aspects and myth	Philosophy (lazy use of languages)	Philosophy / ethics	Myth and language
Alignment with personal experiences/ interests	Astronomy and religion	Astronomy and religion	WWI, propaganda	WWII rationing, propaganda	Love of nature, esp. trees
Echoes of legendarium	Importance of the stars and transmission of myth/legend	Eschatology	Esp. "Notion Club Papers" and aspects of *LOTR*	Esp. Scouring of Shire	Esp. sentient vegetation (Old Man Willow, Ents, etc.)

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